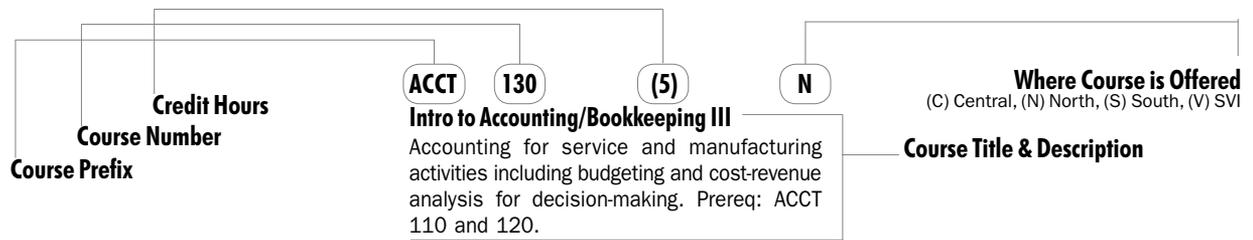


# Combined Campus Course Descriptions



Brief descriptions of courses offered at the Seattle Colleges are listed here. Guides on pages 225-227 contain prefix/course and course/prefix lists to assist you in locating courses associated with a particular program. Courses are updated on an ongoing basis, and the most current course information is available at: [www.seattlecolleges.edu](http://www.seattlecolleges.edu)

## How to Read Course Descriptions



## Common Course Numbering (&)

All Washington community colleges, including the Seattle Colleges, are using a **Common Course Numbering (CCN) System**. The system identifies courses that are equivalent at community colleges across the state to make it easier for students to transfer between two-year colleges.

**Courses identified with an ampersand (&) are part of the CCN system** (examples: ACCT& or HIST&). However, courses without an “&” will continue to transfer between two-year and four-year colleges under individual Direct Transfer Agreements (DTA), as in the past.

For further explanation of the CCN system visit [www.seattlecolleges.edu/coursesSearch.aspx](http://www.seattlecolleges.edu/coursesSearch.aspx).

# Course/Prefix Index

## PREFIX to Course

*NOTE: Prefixes are revised to fit the statewide Common Course Numbering (CCN) system implemented in Summer 2008. See page 4 for further CCN information. Course listings for Central, North and South start on page 190. SVI courses are listed separately starting on page 180.*

<b>ABD</b>	Abroad/Study Abroad
<b>ABE</b>	Adult Basic Education
<b>ABR</b>	Auto Body Collision Repair
<b>ABS</b>	Applied Behavioral Science B.A.S.
<b>ACCT</b>	Accounting
<b>ACM</b>	Aerospace Composite Materials
<b>AD</b>	Application Development B.A.S.
<b>AHD</b>	Dental Assistant (SVI)
<b>AHE</b>	Allied Health/Dental Hygiene/ Emergency Medical Technician/ Medical Assisting/Phlebotomy/ Respiratory Care
<b>AHI</b>	Health
<b>AHL</b>	Medical Assistant (SVI)
<b>AHM</b>	Medical Assisting
<b>AMA</b>	Medical Assisting
<b>AME</b>	American Ethnic Studies
<b>AMT</b>	Aviation Maintenance Technology
<b>ANTH</b>	Anthropology
<b>APPRL</b>	Apparel Design & Development
<b>ARAB</b>	Arabic
<b>ART</b>	Art
<b>ASL</b>	American Sign Language – see Languages & Literature
<b>ASTR</b>	Astronomy
<b>AUT</b>	Automotive Technology
<hr/>	
<b>BAK</b>	Specialty Desserts & Breads – see Culinary Arts
<b>BCT</b>	Business Computers (SVI)
<b>BIOL</b>	Biology
<b>BOS</b>	Business (SVI)
<b>BOT</b>	Botany
<b>BTS</b>	Basic & Transitional Studies (SVI)
<b>BUS</b>	Business
<hr/>	
<b>CCE</b>	Early Childhood Education
<b>CDS</b>	Chemical Dependency – see Social & Human Services
<b>CFS</b>	Child & Family Studies

**CHED** Community Health Education  
B.A.S. – see Respiratory Care

<b>CHEM</b>	Chemistry
<b>CHIN</b>	Chinese – see Languages & Literature
<b>CMST</b>	Communication
<b>COR</b>	Core Employment Readiness (SVI)
<b>COS</b>	Cosmetology (SVI)
<b>CPP</b>	Community Policing
<b>CSC</b>	Computer Science
<b>CTN</b>	Computing Technology
<b>CUL</b>	Culinary Arts
<b>CWE</b>	Cooperative Education/ Work Experience

<b>DES</b>	Graphic Design
<b>DHY</b>	Dental Hygiene B.A.S.
<b>DRMA</b>	Drama

<b>ECED</b>	Early Childhood Education
<b>ECON</b>	Economics
<b>EDUC</b>	Education
<b>EEL</b>	Sustainable & Conventional Energy & Control Technology
<b>EET</b>	Electronics Technology
<b>EFDA</b>	Expanded Function Dental Auxiliary
<b>ENGR</b>	Engineering
<b>ENGL</b>	English – see Languages & Literature
<b>ENV</b>	Environmental Sciences
<b>ESL</b>	English as a Second Language – see Languages & Literature

<b>FAM</b>	Parent Education/ Senior Adult Education
<b>FRCH</b>	French – see Languages & Literature
<b>FSD</b>	Restaurant Production – see Culinary Arts

<b>GED</b>	General Education Development
<b>GEOG</b>	Geography
<b>GEOI</b>	Geology
<b>GERM</b>	German – see Languages & Literature

<b>HDC</b>	Human Development
<b>HDM</b>	Diesel & Heavy Equipment Technology
<b>HEA</b>	Health
<b>HIN</b>	Watch Technology
<b>HIST</b>	History
<b>HMG</b>	Hospitality Management B.A.S.
<b>HOS</b>	Hospitality – see Culinary Arts
<b>HSC</b>	High School Completion – Adult Basic Education
<b>HUM</b>	Humanities
<b>HVC</b>	Heating, A/C, Refrigeration Design Technology

<b>IBN</b>	International Trade B.A.S.
<b>ICT</b>	Computing Technology (IT)
<b>IFS</b>	Industrial First Aid
<b>INT</b>	Industrial Manufacturing Technology
<b>ISC, ISD, ISP</b>	International & Intercultural Studies
<b>IT</b>	Information Technology
<b>ITAL</b>	Italian – see Languages & Literature
<b>ITC</b>	Information Technology

<b>JAPN</b>	Japanese – see Languages & Literature
<b>JRN</b>	Journalism

<b>LAN</b>	Linguistics – see Languages & Literature
<b>LHO</b>	Landscape Horticulture
<b>LIT</b>	Literature – see Languages & Literature
<b>LOG</b>	Logistics

<b>MAS</b>	Medical Administrative Specialist (SVI)
<b>MATH</b>	Mathematics
<b>MET</b>	Mechanical Engineering Technology – see Engineering
<b>MEY</b>	Meteorology
<b>MGO</b>	Marine Deck Technology
<b>MIC</b>	Information Technology
<b>MSC</b>	Material Science – see Science and Engineering
<b>MTA</b>	Building Trades Pre-Apprentice Training (SVI)
<b>MTS</b>	Marine Technology
<b>MUSC</b>	Music
<b>MVM</b>	Automotive Technology

NANO Nanotechnology  
 NME New Media  
 NTR Nutrition  
 NUR Nursing

OCEA Oceanography  
 OPH Opticianry

PEC Physical Education  
 PHA Pharmacy Technician  
 PHIL Philosophy  
 PHO Photography, Commercial  
 PHYS Physics  
 POLS Political Science  
 PSG Psychology (SVI)  
 PST Pastry Arts – see Culinary Arts  
 PSYC Psychology  
 PTE Professional Technical Teacher  
 Education B.A.S.

RCP Respiratory Care  
 REL Religion  
 RES Real Estate

SBST Sustainable Building Science  
 Technology B.A.S.  
 SCI Science  
 SEN Senior Adult Education  
 SHS Social & Human Services  
 SLN Service Learning  
 SMG Supervision & Management  
 SOC Sociology  
 SPAN Spanish – see Languages & Literature  
 SPS Audiology  
 SSC Social Sciences  
 SURG Surgical Technology  
 SUST Sustainability  
 SWF Social Welfare

TDR Drafting: Architectural Engineering  
 Drafting & Engineering Graphics  
 & Design Technology

UGR Undergraduate Research

VIET Vietnamese – see Languages  
 & Literature

WCO Wood Construction  
 WEB Web Design & Development – see IT  
 WFT Welding Fabrication Technology  
 WIN Wine Industry Training  
 WMN Women Studies

## COURSE to Prefix

Abroad/Study Abroad ABD  
 Accounting ACCT  
 Adult Basic Education ABE, HSC  
 Aerospace Composite Materials ACM, AMT  
 Allied Health AHE, AHI, AHL (SVI)  
 Allied Health Dental AHD (SVI)  
 American Ethnic Studies AME  
 American Sign Language –  
 see Languages & Literature ASL  
 Anthropology ANTH  
 Apparel Design & Development APPRL  
 Application Development B.A.S. AD  
 Applied Behavioral Science B.A.S. ABS  
 Arabic ARAB  
 Architectural Engineering Drafting  
 see Drafting TDR  
 Art ART  
 Astronomy ASTR  
 Audiology SPS  
 Auto Body Collision Repair ABR  
 Automotive Technology AUT, MVM  
 Aviation Maintenance Technology AMT

Baking – see Culinary Arts BAK  
 Basic & Transitional Studies BTS (SVI)  
 Biology BIOL  
 Botany BOT  
 Building Trades Pre-Apprentice (SVI) MTA  
 Business BUS  
 Business Office Skills (SVI) BOS  
 Business Computer Technology (SVI) BCT

Chemical Dependency –  
 see Social & Human Services CDS  
 Chemistry CHEM  
 Child & Family Studies CFS  
 Chinese – see Languages & Literature CHIN  
 Communication CMST  
 Community Health Education B.A.S. CHED  
 Community Policing CPP  
 Computer Science CSC  
 Computing Technology CTN, ICT  
 Cooperative Work Experience CWE  
 Core Employment Readiness (SVI) COR  
 Cosmetology (SVI) COS  
 Culinary Arts BAK, CUL, HOS  
 Culinary Arts FSD, PST

Dental Assistant (SVI) AHD  
 Dental Hygiene B.A.S. AHE, DHY  
 Diesel & Heavy Equipment Technology HDM  
 Drafting – Architectural/Engineering  
 and Engineering Graphics &  
 Design Technology TDR  
 Drama DRMA

Early Childhood Education CCE, CFS, ECED  
 Economics ECON  
 Education EDUC  
 Electronics Technology EET  
 Emergency Medical Technician AHE  
 Engineering ENGR, MET, MSC  
 Engineering Graphics &  
 Design Technology – see Drafting TDR  
 English – see Languages & Literature ENGL, ESL

English as a Second Language – see Languages & Literature	ESL	Landscape Horticulture	LHO	Real Estate	RES
Environmental Sciences	ENV	Languages ARAB, ASL, CHIN, ENGL, FRCH, GERM, ITAL, JAPN, LAN, RUSS, SPAN, VIET		Religion	REL
Expanded Function Dental Auxiliary	EFDA	Library Information Research	INFO	Respiratory Care B.A.S.	AHE, CHED, RCP
<hr/>					
French – see Languages & Literature	FRCH	Linguistics – see Languages & Literature	LAN	Science	MSC, SCI
<hr/>					
General Education Development	GED	Literature – see Languages & Literature	LIT	Senior Adult Education	FAM, SEN
Geography	GEOG	Logistics	LOG	Service Learning	SLN
Geology	GEOL	<hr/>			
German – see Languages & Literature	GERM	Marine Technology	MGO, MTS	Social & Human Services	CDS, SHS
Graphic Design	DES	Material Science – see Science and Engineering	MSC	Social Sciences	SSC, SWF
<hr/>					
Health	HEA	Mathematics	MATH	Sociology	SOC
Heating, A/C & Refrigeration Design	HVC	Mechanical Engineering	MSC, MET, ENGR	Spanish – see Languages & Literature	SPAN
High School Completion – see Adult Basic Education	HSC	Technology – see Engineering		Specialty Desserts & Breads – see Culinary Arts	BAK
History	HIST	Medical Administrative Specialist (SVI)	MAS	Study Abroad	ABD
Hospitality – see Culinary Arts	HOS	Medical Assistant (SVI)	AHL	Supervision & Management	SMG
Hospitality Management B.A.S.	HMG	Medical Assisting	AHM, AMA	Surgical Technology	SURG
Human Development	HDC	Meteorology	MEY	Sustainability	SUST
Humanities	HUM	Multiple Trades Apprenticeship	MTA (SVI)	Sustainable Building Science Technology B.A.S.	SBST
<hr/>					
Industrial First Aid	IFS	Music	MUSC	Sustainable & Conventional Power & Control Technology	EEL
Industrial Manufacturing Technology	INT	<hr/>			
Industrial Power & Control Technology – see Sustainable & Conventional Energy & Control Technology	EEL	Nanotechnology	NANO	Undergraduate Research	UGR
Information – see Library Information Research	INFO	Network Technologies	NET	<hr/>	
Information Technology	IT, ITC, MIC, NET, WEB	New Media	NME	Vietnamese – see Languages & Literature	VIET
International Business B.A.S.	IBN	Nursing	NUR	<hr/>	
International Studies	ISC, ISD, ISP	Nutrition	NTR	Watch Technology	HIN
International Trade	IBN	<hr/>			
Italian – see Languages & Literature	ITAL	Oceanography	OCEA	Web Design & Development – see IT	WEB
<hr/>					
Japanese – see Languages & Literature	JAPN	Opticianry	OPH	Welding Fabrication Technology	WFT
Journalism	JRN	<hr/>			
		Parent/Senior Adult Education	FAM	Wine Industry Training	WIN
		Pastry – see Culinary Arts	PST, BAK	Women Studies	WMN
		Pharmacy Technician	AHI, PHA	Wood Technology	WCO
		Philosophy	PHIL		
		Phlebotomy	AHE		
		Photography, Commercial	PHO		
		Physical Education	PEC		
		Physics	PHYS		
		Political Science	POLS		
		Pre-Apprentice Trades (SVI)	MTA		
		Professional Technical Teacher Education	PTE		
		Psychology	PSG (SVI), PSYC		

## Abroad/Study Abroad

### Study Abroad

Students studying abroad through approved Seattle College District programs register for ABD 150, similar to the Learning/Coordinated Studies Programs. Once the student's enrollment schedule is confirmed, the course credits are broken out into discrete courses. All courses are marked "STDY ABD" in the course description. Study Abroad courses not offered in the Seattle College District are designated with "900" series of numbers. These courses may be used to satisfy distribution requirements in the Associate Degree.

## Accounting

*NOTE: While ACCT& 201, 202, and 203 generally transfer to four-year institutions, some institutions may also accept other accounting courses. Business administration students should check in advance with the four-year institutions of their choice to determine the transferability of any Accounting course. Non-native or ESL students at North Seattle should see their advisor for prerequisites.*

### ACCT 110 (5) N Intro to Accounting/Bookkeeping I

This introductory class covers the development of the accounting cycle for a sole proprietorship, from business transactions through closing entries and financial statements. Includes service and merchandising types of businesses, special journals, banking services, and payroll.

### ACCT 115 (4) N Teach Personal Finance

Understand and learn to teach the fundamentals of managing personal finances, including goal setting, budgeting, banking and basic financial transactions; building, maintaining, and repairing credit; planning for education and retirement; and basic investments.

### ACCT 120 (5) N Intro to Accounting /Bookkeeping II

Explores specialized accounting procedures for merchandising businesses and partnerships. Intro to accounting for corporations. Prereq: ACCT 110 with 2.0 or higher.

### ACCT 130 (5) N,S Intro to Accounting /Bookkeeping III

Hands-on use of the check-writing and record-keeping system. Use of Quicken for business accounting and financial management tasks.

### ACCT 131 (5) N QuickBooks

Hands-on use of QuickBooks to record business transactions, prepare customer invoices, pay vendors, and record payroll. QuickBooks organizes and summarizes all financial data and produces a myriad of reports. Prereq: ACCT 110 or ACCT 201 or permission.

### ACCT 197 (1-5) N Work Experience: Accounting

Earn work experience credit in the accounting field. Prereq: Permission.

### ACCT 200 (5) N Accounting for Non Accountants

Overview of accounting practices, procedures, terminology, and concepts needed to understand financial statements and accounting in every day financial transactions. For non-financial individuals and those involved in oversight of financial affairs.

### ACCT& 201 (5) C,N,S Principles of Accounting I

Defines basic accounting concepts, principles, and procedures for recording business transactions and developing financial accounting reports. Recommended: ACCT 110 or sophomore standing (S).

### ACCT& 202 (5) C,N,S Principles of Accounting II

Examines application of basic accounting concepts, principles, and procedures to more complex business situations in a corporate setting. Prereq: ACCT& 201 with a minimum GPA of 2.0 or permission.

### ACCT& 203 (5) C,N,S Principles of Accounting III

Analysis of accounting data as part of the managerial process of planning, decision-making and control. Concentrates on economic decision-making in enterprises. Prereq: ACCT 120, ACCT& 202, or permission (C,N,S).

### ACCT 215 (3) N Accounting for Small Business

Gain skills in accounting and financing practices necessary to successfully operate your own small business. Learn cash flows; financing; cost-volume-profit analysis; controlling tax liabilities; insurance; federal, state, and local reporting requirements; risk management; investing in long-lived assets; and using ratios to evaluate operations.

### ACCT 241 (5) N Personal Financial Planning

Covers financial planning for individuals and families: investing, diversification, insurance, personal loans, and retirement plans. Learn how much to save in retirement plans; what selections to choose in 401(k)s; how much and what type of life, disability, or long term care insurance is suitable; and the resulting tax impacts and tax forms for individual financial planning.

### ACCT 250 (5) N Accounting Capstone Course

Final accounting course in 2-year degree program. Integrate and synthesize knowledge, skills, and experiences from prior accounting classes. Covers ethics, internal control, systems configuration, financial research, budgeting, and development of a personal portfolio. Prereq: ACCT& 202 or permission.

### ACCT 251 (5) N Intermediate Accounting I

Study of financial accounting theory and financial accounting reporting. Includes an in-depth study of generally accepted accounting principles and concepts. Prereq: ACCT& 202 or instructor permission.

### ACCT 252 (5) N Intermediate Accounting II

Further study of financial accounting theory and financial accounting reporting. Includes an in-depth study of generally accepted accounting principles and concepts. Prereq: ACCT 202 or ACCT 251 or instructor permission.

### ACCT 253 (5) N Intermediate Accounting III

The course provides a comprehensive study of financial accounting theory and financial accounting reporting and concentrates on the foundations of financial accounting and an in-depth study of generally accepted accounting principles and concepts. Emphasis will be on a deeper understanding of leases, income taxes, employee compensation, earnings per share, derivatives, statement of cash flows, and analysis of financial statements. Includes accounting, research, written communication, and ethics elements. Prereq: ACCT& 202 or instructor permission.

### ACCT 254 (5) N Advanced Accounting

A comprehensive study of advanced accounting topics, including business combinations and consolidations, multinational accounting, and partnership accounting. Prereq: ACCT 252 or permission.

**ACCT 255 (5) N****Individual Income Tax**

Intro to individual tax laws (as opposed to business tax laws). Includes preparation of individual income tax forms using text and/or web-based sites or income tax software.

**ACCT 256 (5) N****Taxation of Corporations and Partnerships**

A comprehensive study of the taxation of corporations and partnerships, including basic tax research and the theory of taxation. Prereq: ACCT& 202 and ACCT 255 or instructor permission.

**ACCT 257 (5) N,S****Business Tax Accounting**

Basic principles, practices, and governmental regulations (federal, Washington state, and local) involved in business tax accounting. Includes filing returns, record-keeping, tax planning, registrations, and business licenses. Prereq: ACCT 120 or ACCT& 202 (N) or permission.

**ACCT 258 (5) N****Practical Income Tax Preparation**

Builds on ACCT 225. Covers current tax year update information, training in tax preparation software, client information gathering, and return preparation processes. Gain real experience working with clients preparing basic level tax returns in a structured environment. Prereq: ACCT 225 or permission.

**ACCT 259 (5) N****Practical Income Tax II**

Further develop individual income tax skills by reviewing the subtitles in the basic law practiced in ACCT 258. Learn new and more complex aspects of individual income tax. Study ethics in the profession and methods/resources to conduct basic independent research. Prereq: ACCT 255 & 258 or instructor permission.

**ACCT 261 (5) N****Accounting Info Systems**

Information systems as part of enterprise resource planning systems. Focuses on the activities performed in the major business cycles and the flow of accounting data and information in those systems, whether manual or computerized. Topics include systems analysis, design, and implementation. Examines accounting internal controls, fundamental database concepts, and flowcharting. Prereq: ACCT 110 or ACCT& 201.

**ACCT 264 (5) N****Tax Research Gifts Estate**

Learn federal tax research and IRS tax dispute resolution procedures and skills. Covers ethics related to professional tax preparation and representation. Includes a comprehensive study of tax law as it applies to gifts, estates, and trusts. Prereq: ACCT 255.

**ACCT 265 (5) N****Accounting Not-for-Profit and Government**

Overview of basic accounting principles and procedures relating to not-for-profit and government entities. Includes financial statement preparation and analysis. Prereq: ACCT& 201 or permission.

**ACCT 266 (5) N****Enrolled Agent Exam Prep**

Preparation for the annual IRS Enrolled Agent Exam to achieve EA certification. Prereq: ACCT 256 & 259 or instructor permission.

**ACCT 267 (5) N****Not for Profit Financial Management**

Covers fundamentals of financial management for public, health, and not-for-profit fields. Includes vocabulary, concepts, methods, and basic tools of financial management and analysis within the public sector.

**ACCT 268 (5) N****Advanced QuickBooks**

Hands-on use of QuickBooks to record business transactions in the full accounting cycle, including those related to banking, payroll, inventory management, estimates, and progress billing. Advanced topics are covered, such as class tracking, sales tax, bank feeds, reimbursable expenses, employee time billing, and tracking fixed assets. Students will learn complex company file setup procedures, QuickBooks customization, and custom reports. Prereq: ACCT131 or instructor permission.

**ACCT 269 (5) N****Not-for-Profit Practice**

Provides an overview of the rules and regulations covering not-for-profit organizations. Topics addressed are preparation of Form 990 Return and Form 1023 Application for Exemption, charitable giving, and fund raising issues, officer and board of director interaction and ethics, internal control, and operational effectiveness.

**ACCT 270 (5) N****Cost Accounting**

Covers theory of cost accounting, cost systems, sources of cost data and their accumulation, allocation, and analysis and managerial control through cost data. Prereq: ACCT& 203 or permission.

**ACCT 271 (5) N****Ethics in Accounting**

Learn and cultivate the ethical commitment needed to ensure work in the business world meets the highest standards of integrity, independence, and objectivity. Understand obligations and professional responsibilities of accountants and auditors. Uses case studies and SEC case files to study real world issues. Prereq: ACCT 202.

**ACCT 272 (5) N****Fraud Examination**

Introduction to the field of fraud examination, including general methodology and fraud theory. Learn how and why fraud is committed, how fraudulent conduct can be deterred, and how allegations of fraud should be investigated and resolved. Includes a special interest project, such as health care fraud. Prereq: ACCT&201 or permission.

**ACCT 273 (5) N****Introduction to Financial Crime**

Intro to major categories of financial crime and the legal procedures which are frequently relevant to fraud accounting work, including both criminal and civil procedures. Prereq: ACCT&201 or permission.

**ACCT 274 (5) N****Forensic Accounting**

Integrate accounting, auditing, and fraud investigative skills. Using case studies, analyze documents, evaluate internal controls, and trace funds to resolve accounting irregularities, with an emphasis on fraudulent financial reporting. Includes indirect methods of reconstructing, income, litigation support, computing commercial and economic damages, and business valuation. Prereq: ACCT& 202 and ACCT& 203 or permission.

**ACCT 275 (5) N****Auditing**

Intro to auditing, covering generally accepted auditing standards (GAAS), the auditor's opinion, professional ethics, audit evidence, internal control, and audit procedures. Prereq: ACCT 252 or permission.

**ACCT 290 (5) N****Independent Study in Accounting**

Collaboration between student and instructor to perform research in the field of accounting. Prereq: Permission.

**ACCT 298 (1-5) C,N****Special Topic: Accounting**

Seminar on selected topics or activities in accounting. Prereq: Permission.

**ACCT 299 (1-5) C,N****Independent Study: Accounting**

Independent study of selected accounting topics. Prereq: Permission.

**Adult Basic Education****ABE 010 (15) C,S****ABE Level 1**

Basic course in reading, writing, and arithmetic designed for the non-reader. Covers phonics, structure, word recognition, and reading and writing of simple sentences. Math includes addition, subtraction, multiplication, and division of whole numbers. First and second grade reading level. Entrance by appropriate placement tests.

**ABE 012 (15) C,N,S****ABE Level 1 – Communication Skills**

Learn to recognize and comprehend basic sight words and write short, simple sentences using those words. Learn to write the alphabet from memory; write name, address, and phone number; and complete simple forms.

**ABE 014 (15) C,N,S****ABE Level 1 – Computers**

Computer lab class to provide students in the ABE program with an opportunity to practice basic skills learned in class or learn new skills independently. Students have access to popular word processing and spreadsheet programs as well as specialized basic skills software. Keyboarding and computer literacy skills are emphasized for those new to personal computers.

**ABE 019 (1-6) C,S****Intro to Job Skills**

Supports basic skills and English as a Second Language (ESL) students engaged in unpaid internships in the workplace. Topics include time management relationships with supervisors and coworkers and work styles.

**ABE 020 (1-15) C,N,S,V****ABE Level 2**

Covers reading and writing. Review and apply language skills, correct usage, and spelling.

**ABE 021 (1-15) C****ABE Level 2 – Math**

Meets the needs of beginner level math students who want to improve their ability to solve math problems, including addition, subtraction, multiplication, and division of whole numbers and measurements. Prereq: Appropriate score on division placement test or instructor's permission.

**ABE 022 (1-15) C****ABE Level 2 – Communication Skills**

Designed to meet the needs of beginning level communication students who want to improve their ability in reading and writing. Emphasizes basic grammar, sentence structure, group work, and understanding and recounting events and details in academic and professional texts and forms. Prereq: Appropriate score on division placement test or instructor's permission.

**ABE 024 (1-15) C,N****ABE Level 2 – Computers**

Computer lab class provides an opportunity to practice basic skills learned in class or learn new skills independently. Use popular computer programs as well as specialized basic skills software. Emphasizes keyboarding and computer literacy skills for those new to personal computers.

**ABE 030 (1-15) C,N,S,V****ABE Level 3**

Concentrates on reading comprehension, making inferences, recognizing fact and opinion, vocabulary development, and writing simple paragraphs. Prereq: ABE 020 (N,C) or division placement test.

**ABE 031 (1-15) C****ABE Level 3 – Math**

Designed to meet the needs of low-intermediate level math students who want to improve their ability to solve math problems, including whole numbers, fractions, decimals, measurements, and data sets. Prereq: Successful completion of ABE 021 (ABE Math Level 2), appropriate score on division's placement test, or instructor's permission.

**ABE 032 (1-15) C****ABE Level 3 – Communication Skills**

Designed to meet the needs of low-intermediate level communication students who want to improve their ability in reading and writing by developing their reading comprehension and single paragraph writing. The course emphasizes basic grammar, punctuation, spelling, vocabulary development, understanding main ideas, and making inferences. Prereq: Successful completion of ABE 022 (ABE Comm Level 2), appropriate score on division placement test, or instructor's permission.

**ABE 034 (1-5) C,S****Computer Assisted ABE Level 3**

More advanced computer-assisted practice in reading, writing, and math. Learn from textbooks, fiction, policies and procedures manuals, and purchase agreements. Write résumés, reports and, formal letters. Compute percentages, ratios, proportions, simple formulas, and interpret graphs and charts.

**ABE 040 (1-15) C,N,S,V****ABE Level 4**

Emphasis on reading comprehension, making inferences, recognizing fact and opinion, vocabulary development, basic sentence patterns, paragraphs, punctuation, capitalization, and correct word usage. Covers multi-paragraph essays. Prereq: ABE 030 or division placement test (N,C).

**ABE 041 (1-15) C,N,S,V****ABE Level 4 – Math**

Adult Secondary Education Math Level 4 is designed to meet the needs of intermediate level math students who want to improve their ability to solve higher-level math problems, including fractions, ratios and proportions, and percents, and measurements.

**ABE 042 (1-15) C,N,S,V****ABE Level 4 – Communication Skills**

Designed to meet the needs of intermediate level communication students who want to improve their ability to read and write at the college level and professional level. Emphasizes vocabulary, grammar, organization, structure, and purpose in both writing multi-paragraph essays and reading texts. Prereq: Successful completion of ABE 032 (ABE Comm Level 3), appropriate score on division placement test, or instructor's permission.

**ABE 044 (1-15) C,N,S****ABE Level 4 – Computers**

More advanced computer-assisted practice in reading, writing, math, and test-taking skills. Instructional activities will improve general reading, writing, math, and test-taking skills. Take practice tests and work with instructor until ready to take the college division placement test (C,S). Covers the basics of Microsoft Office applications. Self-paced with a high level of student/teacher interaction (N).

**ABE 047 (3-5) N****Intermediate Digital Literacy**

Intermediate digital literacy/computer skills course for students in Adult Basic Education, with an emphasis on online tools and apps, beginning MS Word, Canvas, and MS Excel, job searches and applications, and online safety and privacy.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN . . . . . Watch Technology**

**NAME TO PREFIX**

**Watch Technology . . . . . HIN**

Common Course Numbering explanation is on page 224.

**ABE 049 (1-15) C,N,S,V**  
**Basic Skills Support Prof/T**

Provides specific support to assist students in completing Professional-Technical programs and building job-related language skills. Coreq: Enrollment in a Professional-Technical program.

**ABE 050 (3-10) N**  
**Language Arts II**

Emphasis on preparing for college-level English courses, with a focus on academic reading, writing, and critical thinking strategies and skills, including identifying main ideas, making inferences, recognizing fact and opinion, developing more nuanced vocabulary, analyzing sentence patterns, employing advanced mechanics and word usage, writing paragraphs, transitioning between paragraphs, and drafting multi-paragraph essays.

**ABE 051 (1-15) N**  
**Geometry I**

An introductory geometry course that covers the study of angles, triangles, quadrilaterals, polygons, circles, Pythagoras' Theorem, and measurement, including perimeter, area, and volume. Students will study practical applications of how geometry is used in the real world.

**ABE 054 (1-15) C,N**  
**Computer Assisted ABE 5**

Use computers to improve basic skills of reading, writing, and math. Prepare to take the College Placement Test and receive scores high enough to enter developmental education courses in English and math. Take practice tests and work with instructor until ready for the actual test.

**ABE 057 (3-5) N**  
**Advanced Digital Literacy for ABE**

Advanced digital literacy/computer skills course for Adult Basic Education students in advanced word processing (Word), spreadsheet (Excel), database (Access), and presentation (PowerPoint) applications. Students will create a variety of common business documents and learn to edit and format. Students will also learn file management skills, including how to create and name directories; rename files; and delete, copy, and move files. Prereq: completion of ABE 047 or instructor permission.

**ABE 060 (1-15) C,N,S**  
**ASE – Asset/Compass Prep**

Preparation to pass the college placement exam needed to enter a college program. Emphasizes effective essay writing, reading college text, solving higher-level multi-step math problems, and adapting to the college culture.

**ABE 061 (1-15) C,N,S**  
**ASE – Math Level 6**

Preparation to pass the math portion of the COMPASS exams.

**ABE 062 (1-15) C,N,S**  
**ASE – Communication Level 6**

Preparation to pass the Communications portion of the COMPASS exam needed to enter a college program. Emphasizes effective essay writing, reading college text, and adapting to the college culture.

**ABE 064 (1-15) C,S**  
**ASE – Computer Assisted Level 6**

Advanced computer-assisted skill-building in reading, writing, math and test-taking. Prepare for the COMPASS Test. Take practice tests and work with instructor until ready to take the actual test.

**ABE 070 (1-3) C,N,S**  
**ED Interview for ABE/GED**

Helps ABE/GED students at all competency levels identify their current abilities, characteristics, styles, and readiness to learn. Intro to campus resources.

**ABE 071 (1-3) C**  
**Educational Planning**

Provides information needed for college and career readiness during enrollment in ABE/GED Math or ABE/GED Communications courses. Prereq: Enrollment in ABE, pre-GED or GED class, placement test score, or instructor permission.

**ABE 079 (5) C,N,S**  
**College Transitional English**

The focus of this class is on the four basic communication skills: reading, writing, listening, and speaking. The aim is to prepare students for the 090 level developmental English or ESL classes. The class meets daily, Monday through Friday. Students who enroll as College Transfer will earn 5 credits. Prereq: Students may be referred by intake testing (ASSET or ESL assessment), by counselor or instructor assessment, or by self-selection.

**ABE 080 (1-5) N**  
**English Skills Shop**

Support class for students enrolled in developmental English programs and students seeking to strengthen their academic writing skills. Individual and small group tutoring to improve listening; speaking; study skills; reading comprehension and rate; vocabulary; phonics and word skills; spelling; grammar; and writing sentences, paragraphs, and essays. Strongly recommended for students enrolled in developmental English courses.

**ABE 081 (1-15) N**  
**Basic Math Skills**

This course covers whole and signed numbers, fractions, decimals, percent, ratio and proportion, units of measurement, and geometry. Prereq: ABE 021 or placement.

**ABE 084 (1-15) N**  
**Algebra I**

This course covers basic operations with algebraic expressions, solving and graphing linear equations and inequalities, word problems, and systems of equations. Prereq: ABE 041, ABE 081, MATH 081, or placement.

**ABE 085 (1-15) N**  
**Algebra II**

This class will focus on factoring polynomial, rules of exponents, solving quadratic equations, equations and graphs, roots and radicals, solving rational equations, and problem solving. Prereq: ABE 084 with 2.0 or above or successful completion of MATH 084.

**ABE 098 (1-15) N**  
**Intermediate Algebra**

This course covers real number systems, polynomial and rational expressions, exponents and radicals, first and second degree equations, linear systems of equations, and graph. It also serves as an introduction to functions and logarithms. Prereq: ABE 085 with 2.0 or above, or successful completion of MATH 085 or MATH 097, or math placement, or instructor permission.

**BTS 040 (1-15) C****Basic & Transitional Studies: ABE Offsite**

Emphasizes reading comprehension, making inferences, recognizing fact and opinion, vocabulary development, basic sentence patterns, paragraphs, punctuation, capitalization, and correct word usage. Covers multi-paragraph essays. Prereq: BTS division placement test with appropriate score or instructor's permission.

## Adult Basic Education High School Completion

**HSC 041 (1-5) N,C,S,V****Fine Arts Portfolio**

Creation of a portfolio that demonstrates mastery of the learning outcomes required by the Washington state Board of Education for fine arts credit toward a high school diploma.

**HSC 042 (1-5) C,S,V****Health Portfolio**

Creation of a portfolio that demonstrates mastery of the learning outcomes required by the Washington state Board of Education for health credit toward a high school diploma.

**HSC 043 (1-5) C,S,V**

Language Arts Portfolio Creation of a portfolio that demonstrates the mastery of the learning outcomes required by the Washington state Board of Education for language arts credit toward a high school diploma.

**HSC 044 (1-5) C,S,V****Lab Science Portfolio**

Creation of a portfolio that demonstrates mastery of the learning outcomes required by the Washington state Board of Education for lab science credit toward a high school diploma.

**HSC 045 (1-5) C,N,S,V****Physical Education Portfolio**

Creation of a portfolio that demonstrates mastery of the learning outcomes required by the Washington state Board of Education for physical education credit toward a high school diploma.

**HSC 046 (1-5) C,S,V****Math Portfolio**

Creation of a portfolio that demonstrates mastery of the learning outcomes required by the Washington state Board of Education for math credit toward a high school diploma.

**HSC 047 (1-5) C,N,S,V****Washington History Portfolio**

Creation of a portfolio that demonstrates mastery of learning outcomes required by the Washington state Board of Education for Washington state History and Government. Course completion will fulfill the Washington state graduation requirement of 0.5 high school credit in WA State History and Government.

**HSC 048 (1-5) N,V****Occupational Education Portfolio**

Creation of a portfolio that demonstrates mastery of the learning outcomes required by the Washington state Board of Education for Occupational Education credit toward a high school diploma. Course completion will fulfill the Washington state graduation requirement of 1 high school credit in Occupational Education.

**HSC 050 (3-5) C****United States History Portfolio**

Fosters the creation of a portfolio that demonstrates mastery of learning outcomes required by the Washington state Board of Education for US History. Course completion will fulfill the Washington state graduation requirement of 1 high school credit in US History. Prereq: ABE department placement or instructor's permission.

**HSC 052 (5) N****U.S. History I**

An introductory United States history and government course which addresses the Washington state Essential Academic Learning Requirements for high school social studies. Students will explore the development of US politics, society, culture, and economy through an analysis of the issues and events surrounding European colonization through Reconstruction.

**HSC 053 (3-5) N****Life Science**

An introductory life science course. Includes an introduction to diversity of life, processes within cells, maintenance and stability of populations, and mechanisms of evolution.

**HSC 054 (3-5) N****Physical Science**

An algebra-based introductory physical science course. Includes an introduction to scientific inquiry, motion, forces, energy, momentum, gravity, and machines.

**HSC 091 (1-5) C****EDP Skills Enhancement I**

Assessment portion of the National External Diploma Program (EDP). Measures reading, writing, and math skills. Work individually with an instructor to identify skills needed for successful completion of the diploma program. [www.nedp.org](http://www.nedp.org)

**HSC 092 (1-5) C****EDP Skills Enhancement II**

Project portion of the National External Diploma Program (EDP). Working with an instructor, complete five projects that demonstrate skills in 65 generalized competencies, including communication and computation. Demonstrate occupational preparedness by completing a sixth individualized project based on employment or other specific experiences. Must complete these projects with 100% accuracy.

## Aerospace Composite Materials

*Also see Aviation Maintenance Technology, page 239.*

**ACM 101 (3) S****Intro to Aviation Industrial Hygiene**

This course covers the fundamentals of environment, health, and safety topics required to become a successful composites technician. In-depth and specific environment, health, and safety issues, policies, procedures, and regulations are discussed and practiced throughout the composites program. Topics include hazardous communication, ergonomics, regulations, SOPs, LEAN, personal protective equipment, lockout/tagout, hand and power tool safety, and industrial housekeeping.

**ACM 102 (3) S****Measurement and Drawings – Aviation**

This course covers the fundamental skills common in industry related to measurement and drawings. In drawings, skills include types and interpretation, prints, views, a working knowledge of the alphabet of lines, tolerances, dimensioning, and drawing 3-D views. In measurement, the skills include the care and handling of semi-precision and precision instruments, the difference between semi-precision and precision measurement, and the introduction and practice of several measurement instruments.

**ACM 103 (5) S****Materials: Properties, Choice, and Application**

In this course, students will learn about the physical and chemical properties of structures. Includes uses, strengths, limitations, and other characteristics of metals, alloys, non-metals, and composite materials. Topics include the terminology and fundamental knowledge of composites, knowledge and skills to work with metal and nonmetallic materials and various forms of hardware, and basic applied physics and chemistry concepts as related to aviation structures.

**ACM 104 (6) S****Composites Lab A – General Aviation**

Running parallel with the other General Aviation Certification courses, Technical Laboratory A projects are designed to introduce, reinforce, and practice aspects of many, if not all, of the courses in the General Aviation Certificate. The student will create increasingly complex projects to gain mastery in the materials and processes of aviation and other industries requiring the fabrication, assembly, and repair of composite materials.

**ACM 111 (4) S****Composite Fabrication & Tooling**

This course is offered in the second quarter of the Aerospace Composite Technician program. It assumes students have had an introduction to material properties and processes and an introduction to composite fabrication, assembly, and repair. This lecture course is taught in tandem with Composites Technician Laboratory B. Topics include safety, matrices, fiber reinforcements, basic design, molding methods, core materials, tooling, and bonding and fastening.

**ACM 112 (2) S****Composite Inspection & Repair**

This course presumes that the student has had an introductory overview course that broadly describes composites fabrication, assembly, and repair. This course hones the knowledge and skills necessary to inspect, test, and repair composite structures. Emphasis is on structural and nonstructural evaluation, material handling, surface preparation, and repair procedures.

**ACM 114 (9) S****Composite Lab B – Advanced Composites**

This course presumes the student has completed the Composite General Aviation Certificate, which includes an introduction to composites fabrication, assembly, and repair. Students create ever more complex projects to gain mastery in the proper use of tools, tooling, materials and processes, prints, and drawings in order to fabricate, assemble, and repair advanced composite materials.

**ACM 120 (4) S****Composite Fabrication**

Develop skills in print reading, project planning, layout, distortion control, fixturing, and other fabrication techniques. Apply knowledge to assigned or personal projects. Prereq: Permission.

**ACM 125 (4) S****Composite Assembly**

Identify and use appropriate materials and processes to assemble structures made of composite materials. Lab covers safety of handling resins, reinforcements, and related materials. Prereq: Permission.

**ACM 130 (4) S****Composite Repair**

Learn to inspect, test, and repair composite structures. Emphasizes structural and nonstructural evaluation, material handling, surface preparation, and repair procedures. Prereq: Permission.

**ACM 145 (3) S****Special Projects**

Develop further skills in print reading, project planning, layout, distortion control, fixturing, and other fabrication techniques through assigned and/or personal projects. Prereq: Permission.

**ACM 198 (1) S****Capstone A – Aerospace Comp Tech**

Capstone A provides the tools, knowledge, and skills to successfully navigate a career in the field of composites. Skills covered are necessary behaviors, habits, and documentation necessary to gain employment, navigate an organization, and advance in this career path. It is taught as a capstone throughout the certification pathway. Topics include industry relevant resumes, transferable job skills, interview skills, and more. Capstone A is part one of two capstone courses.

**ACM 199 (2) S****Capstone B – Aerospace Comp Tech**

Capstone B provides the tools, knowledge, and skills to successfully navigate a career in the field of composites. Skills covered are the behaviors, habits, and documentation necessary to gain employment, navigate an organization, and advance in this career path. Topics include resumes, cover and thank you letters, transferable job skills, interview skills, project documentation, and more

**Allied Health**

*Includes courses relevant to undergraduate level Emergency Medical Technician (EMT), Medical Assisting, Medical Office Assisting, Medical Transcription, Phlebotomy, and Surgical Technician, and to Bachelor of Applied Science (B.A.S.) degrees in Allied Health. For additional B.A.S. course listings, look under track titles:*

*Community Health Education, page 228.*

*Dental Hygiene, page 261.*

*Healthcare Services Management, page 228.*

*Respiratory Care, page 367.*

**AHD 100 (1) V****Strategies for Success Dental**

Develop study skills for life-long learning, using strategies effective in all classes. Explore lifelong applications of learning that can enhance personal and professional life.

**AHD 150 (1) V****Intro to Dental Assisting**

Intro to the field of dentistry and the dental assistant program, with emphasis on attendance policy, academic progression, and professional appearance. Covers history of dentistry, dental terminology, and the dental healthcare team.

**AHD 151 (4) V****Clinical Science I**

Learn general anatomy and physiology, structures, and functions of the human body, head, and neck. Overview of disease processes impacting skeletal, muscular, nervous, cardiovascular, respiratory, digestive, endocrine, urinary, integumentary, and reproductive systems. Covers oral embryology/histology related to prenatal, embryonic, facial and oral cavity development and dentition, tooth life cycle, and anatomy.

**AHD 152 (4) V****Clinical Science II**

Gather diagnostic information from history, clinical, and radiographic sources; learn patient assessment for medical and dental emergencies. Covers inflammation, microorganisms, disease transmission and immune system, principles and techniques of disinfection, instrument sterilization, documentation of prescribed medications, controlled and uncontrolled substances. Learn about CDC, OSHA, FDA, and EPA.

**AHD 153 (1) V**  
**Dental Equipment/Instrument**

Learn dental equipment and tray set-ups for basic operative procedures of four/six-hand dentistry. Study pain control and topical anesthetic placement sites for local anesthesia. Chart entries of patient treatment through case studies.

**AHD 154 (2) V**  
**Dental Materials**

Intro to properties, uses, and limitations of dental materials in clinical practice: gypsum, impression pastes, hydrocolloid materials, acrylics, metals; bases, liners, and varnishes; amalgams, composite resins, inlays; abrasives, polishing agents, and dentifrices; synthetic resins; and thermal conductivity and expansion.

**AHD 155 (1.5) V**  
**Clinical Lab I**

Intro to a clinical and laboratory setting. Use of rubber dam, matrix/wedge placement and removal on anterior and posterior teeth, mixing temporary cements, liners, bases, varnish, and preliminary impressions.

**AHD 156 (2) V**  
**Practice Management**

Learn dental office procedures, including appointment scheduling, accounts receivable, accounts payable, telephone techniques, and inventory control.

**AHD 157 (2) V**  
**Preventive Dentistry**

Intro to patient education, fluoridation, sealants, coronal polishing, and nutritional analysis. Covers the dental caries process, early childhood caries, modes of transmission, the periodontium, types of periodontal diseases, stains, plaque, and calculus. Collect nutritional information for dietary analysis.

**AHD 160 (10) V**  
**Clinical Procedures I**

Intro to clinical dental assistant skills. Interact with dentist, hygienist, peer, and patient. Learn professionalism and effective communication. Covers infection control, instrumentation, 4- and 6-handed dentistry, moisture control, asepsis, vital signs, topical placement, documentation, and computer software.

**AHD 161 (4) V**  
**Radiology Science**

Covers principles of dental radiology science and theory, safety, and application of oral radiographic techniques.

**AHD 162 (4) V**  
**Radiology Laboratory**

Develop radiology proficiency for best possible diagnostic quality. Focuses on intraoral and extraoral radiographs, digital imagery, film duplication, mounting, and dark room management. Includes infection control and patient management.

**AHD 170 (10) V**  
**Clinical Procedures II**

Increase proficiency and time management skills in clinical procedures: composites, amalgams, sealants, cavitron, radiology, and patient exams. Demonstrate 90% or higher proficiency in all competency exams.

**AHD 171 (4) V**  
**Dental Specialties**

Practice and demonstrate competency in both general and specialized areas of dentistry, including fixed and removable prosthodontics, endodontics, periodontics, pediatrics, orthodontics, dental implants, oral and maxillofacial surgery.

**AHD 172 (4) V**  
**Clinical Laboratory II**

Increase skills in general dentistry procedures involving instrumentation, laboratory materials, study models, vacuum-formed thermoplastic resin, and dental waxes.

**AHD 173 (2) V**  
**Law and Ethics**

Covers ethics and law in dentistry: principles and guidelines, confidentiality, and the American Dental Assistant Association professional code of ethics. Examines the legal ramifications of licensing, auxiliary supervision, abandonment, negligence, and malpractice suits. Includes treatment modifications for special needs patients.

**AHD 190 (1.5) V**  
**Job Seeking Skills I**

Learn basic skills involving employment applications, résumé, cover and thank you letters, and job interviews. Prepare for externship work assignment.

**AHD 192 (9) V**  
**Dental Assistant Mandatory Clinical**

Clinical practice in dental assisting functions, performed under direct supervision of the Board Certified Dentist in private practice, specialty office, and/or community dental clinic. Students demonstrate knowledge and competency in clinical dental health care in accordance with minimum entry-level industry standards for dental assisting. Prereq: Permission.

**AHE 101 (8) S**  
**Front Office Medical Assisting**

Provides skills needed for employment in a call center environment. Emphasizes practical skill development and application of policies and procedures within company guidelines.

**AHE 103 (3) N**  
**Math for Health Careers**

For those entering health care medical programs. Review basic arithmetic and algebra and apply concepts to health care of children and adults. Covers decimal and fractional numbers, ratios, percents, and basic algebra techniques to solve equations involving unknowns and proportions. Prereq: MATH 081 or placement into MATH 084 and permission. Recommended: ENGL& 101.

**AHE 104 (9) S**  
**Medical Office Procedures and Documents**

Learn administrative skills and procedures using MS Office Suite and keyboarding, including creating patient medical documents. Includes appointment processing, written and oral communications, medical records management, filing systems, office environment, and patient education. Prereq: Typing 35 wpm, CASAS Reading score of 220, and basic skills in Microsoft Office Suite.

**AHE 105 (10) S**  
**Medical Term Ins Bill Coding**

Includes medical terms, therapeutic interventions, pharmacology, and surgical terms. Intro to medical insurance processing, coding, claims, and the use of Medisoft for invoicing and scheduling for ambulatory care settings, dental offices, and hospitals. Prereq: Typing 35 wpm, CASAS Reading score of 220, and basic skills in Microsoft Office Suite.

**AHE 106 (3) S**  
**Math for Healthcare**

Students will learn basic computations with fractions and decimals, ratio and proportion, percentage, measurement systems, diluting of solutions, graphs, dosage and concentration problems, and basic algebra and statistics.

**AHE 110 (4) C,N,S****Medical Orientation**

Standards of conduct and responsibilities in medical legal, ethical, and bioethical issues.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN . . . . . Watch Technology  
**NAME TO PREFIX**  
Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**AHE 111 (12) C**  
**Nursing Assistant Certified**

Covers instruction and hands-on experience in basic nursing care skills and supervised clinical training in a long-term care facility. Preparation for WA State Nursing Assistant Certified examination. Current Healthcare CPR, First Aid, and HIV/AIDS are required prior to clinical and are scheduled as separate courses.

**AHE 113 (15) C,S**  
**Nursing Assistant**

This course provides instruction and hands on experience in basic nursing care skills, including First Aid, CPR, and HIV/AIDS, and supervised clinical training in a long-term care facility. Instruction will also be provided in student success and career transition skills. After successful completion of the Nursing Assistant Program, students are eligible to sit for the State of Washington NAC exam for certification as a Nurse Assistant.

**AHE 117 (1) C**  
**Medical Terminology I**

Intro to medical terminology. Emphasizes vocabulary and knowledge to communicate with health care team. Prereq: Enrollment in Surgical Technology.

**AHE 118 (5) N**  
**Intro to Phlebotomy I**

Provides theory of basic blood collection techniques and supervised blood collection practice. Provides support for ESL and Adult Basic Education students.

**AHE 119 (7) N**  
**Intro to Phlebotomy II**

Provides theory of basic blood collection techniques, supervised blood collection practice, and a clinical externship of 120 hours. Provides support for ESL and Adult Basic Education students.

**AHE 120 (4) C,N,S**  
**Computers in Medical Office**

Introduction to computer applications within a medical office. Concepts of PC/DOS, basic word processing, and data entry procedures will be taught. There will be opportunity to practice concepts learned through planned exercises.

**AHE 124 (4) S**  
**Software Apps for Health**

Learn Patient Accounting Software. Features include standard HCFA health insurance claims forms, diagnoses codes, patient ledgers, statements, patient appointment book, and specialized reporting. Coreq: AHE 130.

**AHE 126 (2) C**  
**Essential Skills Health**

Learn core skills applicable to all health disciplines. Each healthcare program chooses which modules are required.

**AHE 127 (1) C**  
**Medical Terminology II**

Continuation of AHE 117. Terminology of the circulatory/lymphatic, urinary, reproductive, and musculoskeletal systems and their pathophysiology. Prereq: Enrollment in Surgical Technology.

**AHE 128 (4) C**  
**Intro to Healthcare**

Covers elements of professionalism, ethical principles, and basic assessment techniques for allied health practitioners in Washington State. Includes role of the healthcare practitioner, health history taking, vital signs assessment, patient management, and infection control.

**AHE 129 (1) C**  
**Intro Healthcare Applied Practice**

Covers professionalism, ethical principles, and basic assessment techniques, including patient health history, vital signs assessment, patient management, infection control, and the role of the healthcare auxiliary.

**AHE 130 (5) S**  
**Medical Insurance I**

Covers basic diagnosis and procedural coding, ICD-9 and 10 (International Classification of Diseases), and the CPT (Current Procedural Terminology) coding systems recognized by the insurance industry. Course includes medical office insurance processing for billing and reimbursement, documentation, information flow, insurance forms, and medical office policies. Course is part one of two insurance courses. AHE 131 follows this course. Prereq: BUS 169 or instructor permission. Coreq: AHE 124.

**AHE 131 (3) S**  
**Medical Insurance II**

Course is a topic continuation of AHE 130. Students will use ICD-9 and 10 (International Classification of Diseases) and the CPT (Current Procedural Terminology) coding systems to code insurance claims for the insurance industry, the physician, and medical office as the standard for billing and reimbursement. Insurance processing topics covered will include documentation, information flow, insurance forms, and medical office policies. Prereq: AHE 130.

**AHE 135 (15) S**  
**Home Care Aide**

This is a one quarter, short term training course. The course runs as a cohort and covers 85 hours of learning and skills objectives mandated by WA State for Home Care Aides. Includes context-related basic skills, such as reading and study strategies, math, and oral communication. The course prepares students for success in passing the State of Washington Department of Health Home Care Aide examination and is a step in continuing to Nursing Assistant Certified and health-related courses. Prereq: Permission.

**AHE 137 (1) C**  
**Medical Terminology III**

Continuation of AHE 127. Terminology of the respiratory, integumentary, endocrine, nervous systems, and their pathophysiology. Prereq: Enrollment in Surgical Technology.

**AHE 140 (10) C**  
**Central Supply/Instrument Technician**

For students interested in being a certified Central Supply/Instrument Technician. Addresses infection control, supplying and processing and distribution of supplies. Gain knowledge in safety, inventories, interpersonal skills, communication, interdisciplinary teams, professionalism, and ethics.

**AHE 141 (2) S**  
**Pharmacology I**

Intro to pharmacology. Includes medication laws, classifications, safety, medication effects and responses, pharmaceutical abbreviations, systems of measurement, and safe dosage calculations.

**AHE 143 (4) S****Medical Terminology & A/P I**

This course provides the medical terminology and an analytical look at the human body's structure and functions as it relates to diseases, disease process, and specifically coding for diseases and procedures. This course is developed specifically for coding professionals and is not meant for those entering nursing or the sciences. This course does not include a clinical science lab.

**AHE 144 (4) S****Medical Terminology & A/P II**

This course is a continuation of AHE 143 but can be taken out of sequence. It covers the medical terminology and an analytical look at the human body's structure and functions as it relates to diseases, disease process, and specifically coding for diseases and procedures. The systems covered are distinct from those covered in AHE 143. This course is specifically for coding professionals and is not meant for those entering nursing or the sciences. It does not include a clinical science lab.

**AHE 145 (4) S****Medical Document Processing**

Provides skills needed for employment in a call center environment. Emphasizes practical skill development and application of policies and procedures within company guidelines.

**AHE 146 (5) S****ICD Coding**

Covers ICD-9-CM and ICD-10 diagnostic coding. Apply the numeric classification of codes to diseases and injuries, symptoms, disorders, and for therapeutic interactions, using various source documents. Coding is used for billing, electronic health records, and HIPAA privacy. Prereq: AHE 130 or permission.

**AHE 147 (5) S****CPT Coding**

Learn appropriate service codes and methods for service and surgery: consultations, office visits, anesthesia, and specific surgeries. Apply CPT and HCPCS codes to medical data and records. Prereq: AHE 130 or permission.

**AHE 148 (3) S****Human Diseases I**

Students will learn basic disease concepts, including mechanisms of disease, neoplasms, inflammation, and infection. Students will acquire knowledge of common diseases, disorders, symptoms, and injuries by each body system as it relates to coding for diagnoses and procedures in healthcare.

**AHE 150 (0.5) C****HIV/AIDS Education**

Meets requirements for health care professionals under RCW 18.130. Covers etiology and epidemiology of HIV, transmission and infection control, testing and counseling, clinical manifestations and treatment, and psychosocial issues. Approved by the Washington state Department of Licensing.

**AHE 151 (1) C****Standard Precautions/FA**

Covers blood-borne pathogens and infections that students may be exposed to in the health care setting, methods of prevention, and regulations surrounding workplace safety. Learn about equipment and supplies, and practice using them.

**AHE 152 (1) C****Health Care Provider CPR  
American Heart Association Certificate**

Health Care Provider CPR is for those in or entering health care with patient contact. Covers skills competency for infant, child, and adult CPR that might be needed in the professional health care setting. Certificate awarded on completion. Prereq: Permission.

**AHE 155 (1-6) N****Special Topic Medical Assistant**

Designed to meet the special needs of individuals or groups studying in the medical assisting field.

**AHE 165 (3) C****Medical Terminology I**

Fundamentals of medical terminology, with emphasis on basic rules, vocabulary building, abbreviations, and knowledge of medical terms relating to body systems and medical specialties.

**AHE 166 (3) C****Medical Terminology II**

Continuation of AHE 165. Prereq: AHE 165.

**AHE 167 (3) C****Medical Terminology III**

A continuation of AHE 166. Prereq: AHE 166

**AHE 168 (5) S****Medical Terminology**

Intro to the concept of word building with Greek and Latin word roots, prefixes, and suffixes, resulting in the acquisition of a large medical vocabulary. Also available as correspondence course.

**AHE 170 (1) S****HIV/Blood Borne Pathogen**

Covers the principles of disease transmission in compliance with OSHA Standard 2001 and the Washington state AIDS Omnibus Law for Health Care Providers Requiring Seven Hours of HIV/AIDS Education. Includes occurrence and spread of infection, exposure control plan, and use of personal protective equipment. Examines employer and employee responsibilities, guidelines for environmental infection control for health care facilities, exposure incidents, and needle stick safety and prevention.

**AHE 171 (4) S****Medical Excel**

This course in Microsoft Excel for Health Care Occupations is a spreadsheet program you can use to manipulate numbers; track and chart medical sales, expenses, medical budgets; help make informed medical business decisions. Students will learn to use calculations and pre-defined formulas to organize data, crunch statistical information, and more.

**AHE 172 (4) S****Word for Healthcare**

Covers comprehensive word processing using Microsoft Word Software for a Medical environment. Includes basic skills, such as tables, envelopes, templates, and mail merge. Includes advanced formatting skills and transcribing medical documents, such as operative reports, radiology reports, discharge summaries, H&P reports, and other medical documents and forms.

**AHE 173 (3) S****Medical Records Management**

The study of the basic alphabetic, numeric, subject, and geographic filing principles necessary to manage database filing systems utilizing ARMA rules. Course includes hands-on practice in creating and using database systems to create files, tables, forms, and queries; enter and manipulate data; and generate reports for a medical environment.

**AHE 190 (12) N****Emergency Medical Technician**

Provides training in pre-hospital emergency care. Follows State of Washington law and King County EMS. Coreq: AHE 192.

**AHE 191 (1-5) N****Emergency Response**

Provides continuing education for EMTs to meet annual requirements for recertification.

**AHE 192 (1) N****BLS for Healthcare Providers**

The American Heart Association BLS curriculum is the standard training for healthcare agencies/personnel. It meets the requirements for CPR certification and includes CPR for Adults, Children, and Infants; AED (Automatic Defibrillation); and use of the Bag Valve Mask. For those in EMT program, this is a corequisite with AHE 190.

**AHE 194 (4) N****EMT Refresher**

Continued training in emergency care for those who have previously passed the initial training but have not been State or National Registry Certified or for those whose certification has expired by less than three years.

**AHE 197 (1-5) C,N,S****Work Experience: Allied Health**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply allied health knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission.

**AHE 198 (1-5) C,N,S****Work Experience: Allied Health**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply allied health knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission.

**AHE 199 (1-5) C,N,S****Work Experience: Allied Health**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply allied health knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission.

**AHE 202 (1) C****RC Orient Intro to the Respiratory Care Program**

Covers curriculum, policy, clinical procedures, professional outlook, and study and library skills.

**AHE 209 (2) C****Intro Respiratory Care**

Explores the respiratory care profession. Focuses on historical development and the role of the respiratory care practitioner. Emphasis on professionalism, ethical thought, death and dying, and working in a multicultural environment.

**AHE 213 (2) C****RC Clinical Assessment**

This course is a study of the concepts and principles by which disease alters the normal function of the cardiopulmonary system. The main emphasis will be on cardiopulmonary assessment. Students will learn to analyze clinical data and synthesize patient case data into a formal assessment. Further emphasis will be placed on development of logic and reasoning for an advanced Respiratory Care Practitioner (RCP). Prereq: Permission.

**AHE 215 (2) C****Pharm Basic Respiratory Care Pharmacology**

Introduces the learner to foundational principles of the study of pharmacology. Learners will also begin their study of pharmacologic agents with medications used universally in Respiratory Care to treat primary respiratory disorders. This course is directed at adding to the learner's knowledge of respiratory care and the performance of the skills needed to safely deliver medications as adjuncts to the delivery of Respiratory Care. Prereq: Permission.

**AHE 217 (5) C****CP&P**

This course is designed to provide an in-depth investigation into the structure and function of the respiratory and cardiovascular systems of the human body. The interdependence of the two systems will be emphasized, and the physiology of respiration will be examined in detail. Also covers multiple body systems and their interplay with the respiratory system under normal and abnormal conditions. Prereq: Permission.

**AHE 218 (4) C****BASTHAP**

This course is an introduction to the procedures used to assess and treat common respiratory diseases. Emphasis is on knowledge and skills necessary to safely and effectively apply patient assessment techniques, body mechanics, medical gas therapy, oxygen therapy devices, aerosol and humidity therapy, hyperinflation therapy, chest physiotherapy, and airway clearance techniques. Prereq: Permission.

**AHE 219 (1) C****BTAE&T**

An introduction to the application of Respiratory Care therapeutics learned in RCP 218. In this class, learners will apply theory acquired in RCP 218 using models, simulation, and laboratory partners for practice. Focuses on assessment, documentation, communication, medical gas and aerosol therapy, airway clearance, and hyperinflation therapies. Prereq: Permission.

**AHE 232 (5) N****Intro Clinical Software**

Review of health Information systems, including clinical information systems and administrative information systems, enterprise health information systems, reports queries, databases, interfaces, integrated systems, and modules.

**AHE 233 (5) N****Intro Health Informatics**

Intro to health informatics, including definitions, theory, technologies, workflow and expectations in the informatics field, tools, and professional organizations.

**AHE 234 (5) N****HIPAA Network Security**

Review HIPAA Regulations and Guidelines, basic IT network security, the Electronic Medical Record, and intro to health informatics.

**AHE 242 (2) N****Basic Blood Collection**

Theory and laboratory practice in supervised blood collection to meet requirements for job entry as a phlebotomist (blood drawer). Prereq: Take or placement into ENGL& 101.

**AHE 243 (4) S****Healthcare Law**

This course provides an overview of law and ethics in the healthcare system. Students will gain advanced knowledge of patient, healthcare laws, and ethics related to EDI.

**AHE 244 (4) S****Advanced Electronic Health Records**

This course provides intermediate and advanced functionality and features of Electronic Health Records (EHR) with an overview of health information systems used to identify, file, and store patient health information, clinic administration, the patient chart, office visit, and clinical tools, such as customizing templates, tests, procedures and diagnosis codes, productivity and utilities.

**AHE 246 (7) S**  
**Clinical Coding**

This course is intended to develop the advanced medical coding for the purposes of medical record coding, hospital coding, and applying advanced coding principles to medical situations and clinical reports.

**AHE 299 (1-3) C,N,S**  
**Allied Health Seminar**

Seminar format to address current trends and issues in allied health occupations.

**AHE 301 (5) C**  
**Principles of Healthcare Delivery**

Introduction to U.S. healthcare delivery topics, such as purpose, history, components, organization, strengths and weaknesses, and proposed and implemented reforms. Covers current and future challenges of healthcare delivery and the development of healthcare policies to address these challenges. Prereq: Instructor's permission.

**AHE 330 (5) C**  
**Information Literacy for Health Sciences**

Introduction to the organization, retrieval, and evaluation of electronic and print information. Overview of college library systems, traditional scholarly resources, and the concepts underlying the research process. Emphasis on information literacy skills specific to the allied health sciences through examination and application of specialized resources. Prereq: Enrollment in a B.A.S. in Allied Health track, ENGL& 102, MATH& 146, each with a 2.0 or higher.

**AHE 401 (5) C**  
**Principles of Research**

General principles of research design and methodology, with emphasis on applications for allied health practice. Prereq: Instructor's permission.

**AHE 426 (5) C**  
**Leadership and Team Building/Organizational**

Covers leadership, working in, and developing teams. Develops personnel management skills.

**AHL 100 (1) V**  
**Strategies for Success**

Students learn health care and educational success strategies for lifelong learning. Assessment and skill development activities focus on goal setting, self management, positive image building, and leadership qualities.

**AHL 101 (0.5) V**  
**Health Care CPR/First Aid**

Designed to provide health care professionals with the ability to recognize life threatening emergencies; administer Cardiopulmonary Resuscitation (CPR) for infants, children, and adults; utilize an automated external defibrillator (AED); and alleviate choking. Upon successful completion, students receive certificates in Healthcare Provider Basic Life Support (BLS) and Heartsaver First Aid issued by the American Heart Association. Prereq: Instructor or dean permission.

**AHL 102 (0.5) V**  
**CPR/First Aid**

This course is designed to teach Cardiopulmonary Resuscitation (CPR), First Aid (FA), relief of Foreign Body Airway Obstruction (FBAO), and how to operate the Automated External Defibrillator (AED) to all lay rescuers, particularly those expected to respond to emergencies in the workplace. Successful completion will qualify the participant for an American Heart Association Heartsaver First Aid/CPR/AED course completion card.

**AHL 105 (0.5) V**  
**HIV/AIDS Training**

The HIV/AIDS course is designed to meet the seven hour requirement for healthcare workers in Washington State. The course includes a focus on epidemiology, blood borne pathogens, clinical manifestations, at risk populations, psychological impact, transmission of disease, risks to healthcare workers, patient education, health promotion, and disease prevention. Prereq: Instructor or dean permission.

**AHL 111 (6) V**  
**Anatomy & Physiology I/Microbiology**

Focuses on the structure/function of the human body and systems: tissues and membranes, skeletal, muscular, and nervous. Emphasis includes microbiology, disease processes relative to major conditions, infectious diseases, neoplastic conditions, and congenital diseases. Prereq: Instructor or dean permission.

**AHL 112 (6) V**  
**Anatomy & Physiology II/Pathophysiology**

Focuses on the following structures/functions of the human body and systems: respiratory, digestive, cardiovascular, lymphatic, reproductive, and urinary. Emphasis includes disease processes relative to major conditions, infectious diseases, neoplastic conditions, and congenital diseases. Prereq: AHL 111 with a 2.0 or higher, instructor's permission, or dean's permission. Coreq: AHL 114 or instructor's permission.

**AHL 113 (3) V**  
**Medical Terminology I**

Explores the language of medicine. Focuses on basic word parts (prefixes, roots, suffixes), definitions, pronunciation, spelling, abbreviations, acronyms, symbols, eponyms, and terminology for diagnostic testing and medical procedures corresponding to the structures/functions of the human body and systems studied in Anatomy & Physiology AHL 111: tissues and membranes, skeletal, muscular, and nervous. Prereq: Instructor or dean permission. Coreq: AHL 111 or instructor's permission.

**AHL 114 (3) V**  
**Medical Terminology II**

Continuation of AHL 113. Focuses on basic medical words: prefixes, roots, suffixes, definitions, pronunciation, spelling, abbreviations, acronyms, and terminology for diagnostic testing/medical procedures corresponding to the structures/functions of the human body/systems studied in AHL-112, A&P II: skeletal, muscular, digestive, reproductive, urinary, nervous. Prereq: AHL 113 with a 2.0 or higher, or instructor or dean's permission. Coreq: AHL 112 or instructor's permission.

**AHL 123 (3) V**  
**Insurance & Coding**

Explores areas of health insurance and numeric/alphanumeric codes utilized in health care for the purpose of maintaining accurate medical records and ensuring efficient claims processes. Emphasis is placed upon various types of health insurance and the individuals they serve, diagnostic and procedural code identification/utilization, and the Health Information Privacy and Accountability Act (HIPAA). Prereq: Instructor's permission.

**AHL 124 (2) V**  
**Medical Office Finance**

Covers financial accounting aspects of medical practices and relative duties in this area of responsibility. Emphasis is placed upon vocabulary and abbreviations relative to bookkeeping and accounting, accounts receivable, collection procedures, and basic concepts in Microsoft Excel. Prereq: Instructor's permission.

**AHL 125 (2) V**  
**Medical Office Simulation**

Covers front office procedures and provides students with opportunities to apply their administrative knowledge within a simulated medical office setting. Students demonstrate their competency through prescribed scenarios focusing on customer service, reception, scheduling, referrals, billing procedures, insurance processes, critical thinking, and working toward positive outcomes. Prereq: Permission.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN . . . . . Watch Technology**

**NAME TO PREFIX**

**Watch Technology . . . . . HIN**

Common Course Numbering explanation is on page 224.

**AHL 126 (2) V**  
**Reception & Scheduling/Medical Records**

Covers medical front office reception, admission, and discharge procedures and provides students with opportunities to acquire administrative knowledge of the medical front office. Students demonstrate their competency through prescribed scenarios focusing on customer service, reception, scheduling, medical record management, critical thinking, and working toward positive outcomes. Prereq: Permission.

**AHL 127 (2) V**  
**Electronic Health Records**

Focuses on the skills and techniques required for the clinical and administrative functions of a medical assistant in an ambulatory care setting relative to electronic health records. Emphasis is placed on patient confidentiality and HIPAA requirements. Includes criteria established by the Office of the National Coordinator for Health Information Technology under the provisions of the American Recovery and Reinvestment Act of 2009. Prereq: AHL113 with a 2.0 or higher.

**AHL 128 (3) V**  
**Law & Ethics**

The Law and Ethics course addresses legal and ethical matters relative to the allied health profession/professional and includes HIPAA regulations and how they are applied in a clinical setting. Patient advocacy; patient rights; the impact of the American Medical Association Council; cultural, social, ethnic diversity in ethical performance; tort law; scope of practice; informed consent; as well as various laws and agencies relative to health care are included in this course. Prereq: Permission.

**AHL 142 (2) V**  
**Medical Insurance Billing**

Covers insurance and the electronic billing process and provides students with opportunities to apply their knowledge within a simulated medical office setting. Students demonstrate their competency through prescribed scenarios focusing on guidelines for specific insurance types and their billing requirements/processes, customer service, insurance processes, critical thinking, and working toward positive outcomes. Prereq: Permission.

**AHL 143 (3) V**  
**Medical Computer Application**

Become familiar with computerized account and information management for the medical office. Develop skills necessary to successfully use computerized software in a medical office setting. Patient records, patient billing, insurance coding, and other medical office information is managed through the use of computer software. Reports are generated to summarize and facilitate medical office decisions.

**AHL 155 (2) V**  
**Electrocardiogram (EKG) Technician**

The Electrocardiogram Technician interacts directly with patients and performs diagnostic testing that monitors and records the activity of the heart. EKG Technicians work under the direction of a provider and/or clinical supervisor in a variety of clinical settings. The contents of this course includes anatomy and physiology, medical terminology, obtaining a 12 lead electrocardiogram, responding to and assisting providers with electrocardiogram requests in emergent and non emergent situations.

**AHL 161 (3) V**  
**Pharmacology**

Examines the language of pharmacology, abbreviations, Controlled Substances Act, drug dependency, and prescriptions. Explores medication supply, patient care applications, drug classifications and interactions, safety, and routes of administration. Covers learning of skills needed to administer oral medication, calculate dosages, and prepare injections. Prereq: Instructor's permission. Coreq: AHL 183.

**AHL 178 (6) V**  
**Clinical I**

Focuses on the skills, techniques, and professionalism required in the educational process of Medical Assistants preparing to work collaboratively with medical professionals while caring for patients and interacting with family representatives of diverse communities. Prereq: Permission.

**AHL 180 (8) V**  
**Clinical II**

Upholds a professional environment within a simulated clinic setting while focusing on non-invasive procedures. Includes wound care, ear lavage/irrigation, respiratory treatments, identification and use of surgical instruments, sterilization processes, set up/break down for minor procedures, patient positioning, assisting the provider, documentation, diagnostic imaging, nutrition, gender specific procedures, and pediatric procedures/interaction. Prereq: Permission.

**AHL 183 (8) V**  
**Clinical III**

Upholds a professional environment within a simulated clinic setting while focusing on invasive procedures. Medication administration through variable routes, including injection, intravenous therapy, medication calculation, phlebotomy, waived laboratory tests, specimen integrity, handling and transport, safe clinical practices, and effective patient documentation are included. Prereq: Permission. Coreq: AHL 161.

**AHL 189 (1) V**  
**Emergency Preparedness**

This competency-based course focuses on the skills, techniques, and professionalism required for Medical Assistants relative to emergency preparedness and assisting with emergencies in an ambulatory care setting while working collaboratively with medical professionals and caring for patients.

**AHL 190 (6) V**  
**Clinical IV**

Focuses on all back office procedures and continues to provide students with opportunities to apply and further develop their acquired competencies within a simulated professional clinic setting. Students demonstrate their competency through prescribed scenarios focusing on anticipation of patient and/or provider needs, critical thinking, directives by healthcare providers, and working toward positive outcomes relative to the daily demands and expectations of a medical assistant.

**AHL 191 (2) V**  
**Medical Assistant National Exam Prep**

This course provides an opportunity for Medical Assistants in the process of program completion or who have completed a Medical Assistant program and have not pursued certification to prepare to sit for a national certification examination through the administering agency of their choice. Students will utilize knowledge they have acquired throughout a Medical Assistant program and/or work experience.

**AHL 192 (5) V**  
**Medical Assistant Practicum**

This course satisfies the requirement for an unpaid practicum/externship in clinical practice under direct supervision in an ambulatory care/clinic setting. Practicum opportunities are decided through a competitive interview process. The acceptance to a clinic is a part of the educational process of the Medical Assistant program and does not imply or guarantee employment at the practicum site. Prereq: Permission.

**Allied Health  
Community Health  
Education (B.A.S.)****CHED 301 (5) C**  
**Principles of Community Health**

Introduces students to terms, concepts, theories, methods, and resources which are related to community and public health issues and designed to improve the health of populations in the United States. Focuses on the role of healthcare workers in various community health settings and organized activities. Emphasis on principles that meet the national standard of practice for all health education specialists.

**CHED 304 (5) C**  
**Principles of Higher Ed in Allied Health**

This course reviews adult learning theory, emphasizing practical skills for successful post-secondary teachers and trainers in allied health disciplines. Topics include development of course outlines and syllabi, learning objectives, teaching methods, experiential and non-experiential learning, clinical skills development strategies, professional presentation skills, and assessment.

**CHED 322 (5) C**  
**Program Planning and Evaluation**

Provides a foundation in Community Public Health. Covers the establishment of measurable outcomes, the creation of monitoring of programs, and the final evaluation at completion of programs. Studies the theories of program planning and methods of community participation. Examines the importance of community engagement, stakeholder buy-in, and sensitivity to the needs and voices of diverse groups in the community, particularly of those marginalized and vulnerable.

**CHED 341 (5) C**  
**Community Health Needs Assessment & Improvement**

Focuses on public and community health needs by identifying the strategic planning process used to manage and improve the health of the population in a targeted area. Covers the planning and evaluation of improvement methods while considering social determinants of health, as well as health inequities, social justice, and global health initiatives. Prereqs: Completion of all required BAS core classes with a 2.0 or higher in each or concurrent enrollment in any remaining BAS core class.

**Allied Health  
Community Service,  
Cooperative Ed (B.A.S.)****CMS 197 (1-3) C**  
**Community Service/Volunteer**

Provides students with an opportunity to serve their community by engaging in meaningful volunteer service with diverse agencies and populations while enhancing career and personal goals. This course includes reflection and supervision/evaluation by the site supervisor. Prereq: Instructor's permission. Coreq: Must be volunteering in a non-profit or not-for-profit organization; public/private school, college, or university; hospital; or government agency.

**CMS 198 (3) C**  
**Community Service/Volunteer**

Provides students with an intermediate-level learning opportunity to serve their community by engaging in meaningful volunteer service with diverse agencies and populations while enhancing career and personal goals. This course includes reflection and supervision/evaluation by the site supervisor. Prereq: Instructor's permission. Coreq: Must be volunteering in a non-profit or not-for-profit organization; public/private school, college, university; hospital; or government agency.

**CMS 199 (1-3) C**  
**Community Service/Volunteer**

Provides students with an advanced learning opportunity to serve their community by engaging in meaningful volunteer service with diverse agencies and populations while enhancing career and personal goals. This course includes reflection and supervision/evaluation by the site supervisor. Prereq: Instructor's permission. Coreq: Must be volunteering in a non-profit or not-for-profit organization; public/private school, college, or university; hospital; or government agency.

**Allied Health  
Healthcare Services  
Management****HSM 301 (5) C**  
**Principles of Healthcare Services Management**

Covers basic managerial functions of healthcare services, such as planning, organizing, leading, and controlling resources to accomplish organizational goals. Prereq: Permission.

**HSM 311 (5) C**  
**Principles of Healthcare Management**

Covers basic managerial functions of healthcare services, such as planning, organizing, leading, and controlling resources to accomplish organizational goals. Prereq: Permission.

**HSM 322 (5) C**  
**Human Resources**

Introduction to the functions of human resource management in health organizations, with an emphasis on the relationship between human resources and organizational strategy.

**HSM 325 (5) C**  
**Financial Management in Healthcare**

Basics of healthcare financial management. Development of knowledge and skills to manage a departmental budget, capital budgets, and productivity and staffing resources.

**HSM 451 (5) C**  
**Healthcare Outcomes and Quality Management**

Overview of continuous quality improvement methods in healthcare systems. Covers the CQI process, data measurement and management, outcomes development, and outcomes assessment. Focuses on using quality data in the effective management of departmental processes and as a tool for the origination of departmental and hospital safety initiatives. Prereq: ENGL&102, MATH&146 (or equivalent), and HSM 301, each with a 2.0 or higher.

**American Ethnic Studies****AME 150 (5) C,N,S**  
**America's Ethnic History**

Intro to U.S. history as a multicultural phenomenon. Emphasizes the interaction of American Indian, African, European, Latino, and Asian immigrants in the development of the U.S. Focuses on conflict and cooperation in the areas of economics, politics, and culture.

**AME 151 (5) C,N,S**  
**Societies & Cultures: U.S.**

Intro to contemporary issues in American ethnic and race relations. Emphasizes racism, prejudice, stereotypes, and equity issues through an examination of Asian, African, and Indigenous Americans. Focuses on diversity of interests and identities within each community.

**AME 160 (1-5) C**  
**Special Topics in Multicultural Studies**

Intro to the continuum of social justice issues that emphasize the role of multicultural collaboration in the establishment and securing of democracy and democratic practice. Considers the forces shaping social change past and present, the role of the individual (change agent), and the personal characteristics and skills required of change agents.

**AME 200 (5) N**  
**Leadership & Social Change**

Examines issues raised by civil rights struggles in the United States. Covers the forces shaping social change, the role of the individual or "change agent," and the personal skills required of change agents. Incorporates community service as a central teaching technique.

**AME 201 (5) C,S**  
**Diversity & Social Justice**

Combines theoretical frameworks, practical issues, and experiential activities to help students develop skills and identify plans of action in eradicating the multiple forms of social oppression. Use critical analysis as an investigative tool to examine racism, sexism, heterosexism, ableism, classism, religious oppression, and aspects of internalized oppression.

**American Sign Language**

*See Languages & Literature, page 315.*

**Anthropology****ANTH& 100 (5) C,N,S**  
**Survey of Anthropology**

Introduces the field of anthropology. Covers biological and cultural anthropology, linguistics, and archaeology. Survey of humans over time and space. Includes evolution, ethics, political structure, social structure, economics, and communication. Prereq: ENGL&101 eligibility.

**ANTH& 106 (5) C,N**  
**American Mosaic**

Examines American culture, implications, and consequences through the anthropological lens. Includes race, ethnicity, class, religion, sex, gender, and ability. Explores individual experiences and structural patterns. Provides an insightful look at ourselves from anthropological and sociological perspectives. Field trips. May be taken as SOC 102.

**ANTH 113 (5) C,N**  
**Africa**

A survey of cultures, languages, and social diversities of Africa south of the Sahara. Examines Africa's role in the contemporary world.

**ANTH& 125 (5) C,N**  
**Human Variation**

Covers past and present evolutionary forces contributing to variations in human populations. Investigates the biological and social concepts of race.

**ANTH 130 (1-5) C,N**  
**World Cultures**

Exploration of global cultural variation and traditions in the modern context of international capitalism. Using ethnographic approaches informed by the ideas of cultural relativism and transculturation, considers both Western and non-western cultures as well as indigenous and industrialized cultures. Prereq: ENGL& 101 with a minimum grade of 2.0.

**ANTH 135 (3-5) C**  
**Intro Environmental Anthropology**

Intro to the relationship between cultures and environments. Explore how humans interact with, adapt to, extract resources from, and modify the environment. Looks at the dynamic between "traditional" and "modern" societies.

**ANTH 201 (5) C**  
**Contemporary Issues in Anthropology**

Analysis of current research on a particular topic in cultural or physical anthropology. Topic varies by quarter; check with instructor for specific course content.

**ANTH& 204 (5) C,N**  
**Archaeology**

Introduction to the history, methods, and theories of archaeology. Trace and explain the principal lines of cultural evolution in the Old and New Worlds. Discuss the importance of cultural resource management and public understanding and involvement. Prereq: ENGL& 101 with a minimum grade of 2.0 (C).

**ANTH& 205 (5) C,N**  
**Biological Anthropology**

Intro to biological and cultural evolution of humans, with evidence from fossil and contemporary populations. Examines physical and biological variations of humans past and present. Emphasis on developing a working vocabulary of anthropological terms.

**ANTH& 206 (5) C,N,S**  
**Cultural Anthropology**

Intro to human culture, including social organization, economics, political systems, religion, technology, values, art, and language. Cultural perspective focuses on contemporary literate and pre-literate societies and includes both Western and non-Western ways of life.

**ANTH& 210 (5) C,N**  
**Indians of North America**

Ethnographic survey of North American native cultures. Examination of historical and contemporary problems regarding legislation, treaties, reservations, fishing rights and education.

**ANTH 212 (3) N**  
**East African Archeological Research**

Intro to paleo-anthropological research in East Africa in "digging up" hominid evolutionary past. Analyze archeological remains. Observe terrain and type of environment occupied by early hominid. Discuss patterns of tool manufacture and use. Lectures and field participation at actual archeological sites in Kenya, East Africa (Koobi, Fora, Lake Turkana).

**ANTH 213 (3) N**  
**East African Hominid Evolution**

Surveys origin and relations of the extinct forms of humankind that have been discovered in East Africa. Review of some of the earliest hominids of the late Cenozoic Era through the present. Focuses on the biocultural stages of evolution to modern hominid. Includes lectures and field sessions on site in Kenya, East Africa.

**ANTH& 216 (5) C,N**  
**Northwest Coast Indians**

Ethnographic survey of the Indians of Alaska, British Columbia, Washington, Oregon, and Western Idaho. Examines prehistoric and contemporary cultures and controversial legislation regarding fishing, water rights, and treaties.

**ANTH& 227 (5) S**  
**Pacific Island Cultures**

Intro to cultures and peoples of the Pacific region known as Oceania, including origins of indigenous Pacific Islanders, the trajectory of cultural changes caused by Euro-American contact, the mass migration and formation of Pacific Islander communities and networks throughout the diaspora. Emphasizes contemporary Pacific Islander cultures and communities. Prereq: ENGL&101 with a minimum grade of 2.0 (C).

**ANTH& 228 (5) C,N**  
**Cultures of Middle East**

Multidisciplinary intro to Middle Eastern cultures, including social, economic, political, and religious factors contributing to the region's diversity. Exploration of historical and contemporary forces and changing interpretations by both Westerners and Middle Easterners. Prereq: English 101 with a minimum grade of 2.0.

**ANTH 250 (5) C**  
**Applied Social Change**

Explores social and cultural change historically and comparatively through an anthropological lens. Moves quickly from theory to practice to empower students to create effective and inspiring change-making actions. Change on an individual and structural level are addressed. Intrapersonal and interpersonal awareness are achieved through the practice of various life skills and humanization skills. Prereq: English 101 with a minimum grade of 2.0.

**ANTH 275 (5) C,N**  
**Medical Anthropology**

Explores culture, society, medicine, and health from a global perspective. Examines biomedical and cross-cultural perspectives of the human body, life, death, well-being, and healing.

**ANTH 298 (1-5) C,N,S**  
**Special Topics/Anthropology**

Independent study or fieldwork in anthropology. Periodic meetings with instructor. Prereq: Permission.

**ANTH 299 (1-5) C,N**  
**Special Problems/Anthropology**

Small group setting to cover selected topics in anthropology. Prereq: Permission.

**Apparel Design & Development**

*Courses above 100 require completion of all entry requirements to the School of Apparel Design & Development.*

**APPRL 096 (2) C**  
**AD&D Skill Development 1**

For students preparing to enroll in the School of Apparel Design & Development who have little or no sewing or patternmaking experience. Introduction to sewing terms, commercial and production pattern development, layout and cutting, industrial sewing machine operation, and professional construction techniques for basic garments and samples. Prereq: Eligibility ENGL& 101.

**APPRL 098 (2) C**  
**AD&D Skill Development 2**

For students preparing to enroll in the School of Apparel Design & Development. Intermediate beginners update their sewing machine handling and patternmaking skills. More complex sewing techniques and sample garments are constructed using industrial sewing and pressing equipment. Includes pattern drafting and labeling for production. Prereq: APPRL 096 or permission through successful completion of a skills test and eligibility for ENGL& 101.

**APPRL 100 (2) C**  
**AD&D Skill Development 3**

Required for enrollment in AD&D. For students with previous sewing and patternmaking experience. Enhance industrial equipment handling skills for sewing and pressing to complete more difficult sewing techniques and sample garments. Covers pattern development of a bodice sloper and proofing methods. This course is a required prerequisite for enrollment into AD&D. Prereq: APPRL 098 or permission through successful completion of a skill test and ENGL& 101 eligibility.

**APPRL 101 (4) C**  
**Construction 1 – Professional Techniques**

Covers professional techniques and methods to construct samples and garments to professional industry standards. Emphasis on accuracy, use of industrial sewing and pressing equipment, and developing technical specification packages. Prereq: APPRL 100 and program entrance requirements.

**APPRL 102 (4) C**  
**Construction 2**

Prof Techniques Build on skills from APPRL 101 by producing samples and garments using intermediate construction techniques and meeting industry quality standards. Emphasis on industrial equipment use and proficiency and enhanced specification package development. Prereq: APPRL 101.

**APPRL 103 (4) C**  
**Construction 3**

Prof Techniques Presents techniques and methods using factory processes to construct garments for manufacturing. Blends skills in pattern design for target markets and construction for mass production. Continuation of technical specification development and industrial equipment use. Prereq: APPRL 102.

**APPRL 111 (4) C**  
**Patternmaking 1**

Flat Patterndrafting Development of basic production patterns using flat pattern and drafting methods. Focus on fundamental patternmaking practices, including cutting, labeling, and approaches for pattern manipulations. Prereq: APPRL 100 and program entrance requirements.

**APPRL 112 (4) C**  
**Patternmaking 2**

Draping Pattern development using draping techniques to generate basic slopers. Combines draping with basic flat pattern manipulations to create patterns for garment designs. Prereq: APPRL 111.

**APPRL 113 (4) C**  
**Patternmaking 3**

Continues development of flat pattern and draping techniques from APPRL 111 and 112. Combines fitting methods, and use of production pattern blocks and pattern modifications to create more complicated garment designs. Prereq: APPRL 112.

**APPRL 114 (2) C**  
**Patternmaking 4 – Pattern Alteration for Fit**

Focuses on evaluating and achieving good fit through fit analysis and pattern adjustment and alteration techniques for common body variations. Prereq: APPRL 102 and APPRL 112.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN . . . . . Watch Technology

**NAME TO PREFIX**  
Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**APPRL 130 (2) C**  
**Apparel Manufacturing**

Survey of the apparel manufacturing business cycle. Includes materials acquisition, production, scheduling, product costing, machine processes, and industry standards. Prereq: APPRL 100 and program entrance requirements.

**APPRL 131 (3) C**  
**Business Practices Fashion**

Examines aspects of conducting business in the fashion profession, including industry practices, job categories, professional development, and business communications. Prereqs: APPRL 101, 111, 130, and 151.

**APPRL 141 (2) C**  
**Design 1 – Principles of Design**

Covers the basic design principles of repetition, rhythm, emphasis, harmony, balance, scale, and proportion as they relate to garment design. Prereq: APPRL 100 and program entrance requirements.

**APPRL 142 (2) C**  
**Design 2 – Fabric Science Technology**

Analyze how fibers, yarns, fabric structure, and finish affect fabric characteristics. Studies include textile history, independent research, and visual presentation. Prereqs: APPRL 130 and APPRL 151.

**APPRL 143 (2) C**  
**Design 3 – Color And Palette**

Investigates color design trends and application in the apparel market. Explores hues, values and saturation, and basic color theory. Prereqs: APPRL 142 and APPRL 152.

**APPRL 151 (3) C**  
**Computer Applications Apparel Design 1**

Develop Excel, Illustrator, and Photoshop skills for use in the apparel design field. Includes specification development, technical drawing, and image editing. Prereq: APPRL 100 and program entrance requirements.

**APPRL 152 (3) C**  
**Computer Applications Apparel Design 2**

Continues building computer skills, terminology, and procedure. Gain proficiency in graphics programs commonly used in industry to produce technical drawings and visual presentations. Prereq: APPRL 151.

**APPRL 197 (1-5) C**  
**Work Experience in Apparel Design**

Earn relevant work experience and practical hands-on skills through the completion of an internship in the apparel design and development field. Prereq: Permission.

**APPRL 201 (4) C**  
**Ready-to-Wear Construction**

Construction methods with focus on ready-to-wear and tailored garments. Coordinates with APPRL 211 to execute pattern designs for specific target markets. Prereq: APPRL 103. Coreq: APPRL 211.

**APPRL 202 (4) C**  
**Active Sportswear Construction**

An advanced course focused on industry methods and standards for constructing active technical sportswear, outerwear, and accessories. Projects are constructed from patterns designed in APPRL 212. Prereqs: APPRL 201 and 211. Coreq: APPRL 212.

**APPRL 211 (4) C**  
**Pattern Design Ready-to-Wear**

Presents advanced pattern design for ready-to-wear and tailored garments. Employs a variety of methods to produce patterns from blocks, measurements, fashion source material, and line drawings. Coordinates with APPRL 201 to construct pattern designs. Prereqs: APPRL 103 and 113.

**APPRL 212 (4) C**  
**Pattern Design – Active Sportswear**

Patternmaking for active sportswear and outerwear. Develop patterns from samples and sketches to industry standards and for functionality. Pattern designs are constructed in APPRL 202. Prereq: APPRL 211.

**APPRL 221 (4) C**  
**Pattern Grading**

Covers basic principles of grading garment designs for manufacturing. Produces scaled-up and scaled-down versions of patterns using the shift and grid methods of grading. Prereq: APPRL 103 and 113.

**APPRL 222 (4) C**  
**Computer Pattern Grading**

Explore apparel industry standards and guidelines for pattern sizing for more complex patterns. Intro to using computer-aided technology to size patterns. Prereq: APPRL 221.

**APPRL 230 (4) C**  
**Portfolio & Resume Development**

Survey course of job search and interviewing strategies, including production of a professional portfolio and resume targeted for the apparel design and development industry. Prereqs: APPRL 197, 202, 212, 222, 242.

**APPRL 241 (4) C**  
**Design 4 – Print & Pattern**

Development of surface designs for fabrics and garment silhouettes. Focus on design methodology, textile pattern and print technology, Photoshop techniques, and apparel industry practices. Prereqs: APPRL 143 and APPRL 152.

**APPRL 242 (4) C**  
**Design 5 – Line Design**

Explore elements of designing a line of clothing to industry standards. Focus on development of boards for line presentations and design of a clothing line for production in APPRL 270. Prereq: APPRL 241.

**APPRL 260 (3) C**  
**Fashion History**

Survey of key clothing items from major historical periods. Gain tools for communicating clothing concepts and understand current fashion trends. Explore social influences and cultural ideals that impact fashion. Prereqs: APPRL 143, 151, and 152.

**APPRL 270 (8) C**  
**Final Line Design & Development**

Capstone course to produce the line of clothing designed in APPRL 242. Includes pattern development, materials sourcing, garment construction, and production of technical specifications. Collaboratively produce the annual fashion portfolio show where final collections and portfolios are on display to industry professionals and the public. Prereqs: APPRL 197, 202, 212, 222, and 242.

**APPRL 298 (1-5) C**  
**Apparel Design Special Topics**

Seminar on selected topics in apparel design and development in an area related to but not offered as part of the regular School of Apparel Design & Development curriculum. Prereq: Permission.

## Application Development Bachelor of Applied Science

*Students must be accepted into the program in order to take these courses.*

**AD 300 (5) N**

### Component Software

Covers object-oriented programming using Java, with an emphasis on the creation and use of software components. Includes reusability, the model-view-controller (MVC) design pattern, linked lists, binary trees, recursion, and algorithmic analysis using Big-O notation.

**AD 310 (5) N**

### Software Lifecycle

Overview of tools, processes, and practical approaches that support software product lifecycle. Topics include project life-cycle management: team roles, tasks, timelines; responding to customer needs and requirement changes, development paradigms: waterfall, spiral, agile, RAD (Rapid Application Development); documentation requirements; tools: source code management, unit testing, debugging. Prereq: Acceptance into the Application Development B.A.S.

**AD 315 (5) N**

### Discrete Math, Computer Programming

This course provides hands-on application of the (abstract) discrete structures that constitute the backbone of computer science. Topics shall include numerical representation and limitations for numerical methods, discretization, discrete probability, finite-state machines. Other topics may be included at instructor discretion. Topics shall be explored within the context of student-written application programs. Prereq: AD 300 or CSC 143, MATH& 151 with a 2.5 or better, or permission.

**AD 320 (5) N**

### Web Application Development

Develop a database-driven web application incorporating MVC patterns. Covers state maintenance, CRUD, and REST integration on both server and client sides. Learn to parse, cache and integrate API data achieved by third party providers into the application. Technologies can include Query, CURL, AJAX, and parsing JSON and XML. Explore legal and ethical Issues of web applications, including security, privacy, benefits, and unintended consequences.

**AD 325 (5) N**

### Data Structure/Algorithms

Covers fundamental data structure and their algorithms and applications in problem solving by programming. Includes linked lists, stacks, queues, priority queues, binary and multi-way trees, directed graphs, hashing, internal and external sorting. Prereq: AD 300.

**AD 330 (5) N**

### Professional Communication in IT

This course presents strategies for effective communication in the technology environment. Emphasizes ethics in professional communications in the context of diverse teams and technical teams and discusses ethical guidelines for communication of technical information and outcomes. Also explores the intersection of professional communication and legal issues, such as copyright, fair use, and intellectual property. Prereq: Acceptance into the Application Development B.A.S.

**AD 340 (5) N**

### Mobile Application Development

Development Intermediate course in the fundamentals of mobile application development. Includes program language and mobile platform design, building apps that respond to users in a useful/intuitive way, integration of data sources, location awareness, image/file management, and legal and ethical issues specific to the mobile environment. Prereqs: AD 320 and acceptance into the AD-B.A.S. program or permission.

**AD 350 (5) N**

### Database Technology

Covers intermediate programming in an SQL relational database. Provides an introduction to non-relational databases as used in Cloud Computing and Big Data. The RDMS topics include views, models, stored procedures, triggers, indexing, JOINS and abstraction techniques, query construct efficiency. Introduction to noSQL databases: uses, terminology, indexing, storage, compute consumption, compression, and reliability. Prereq: Acceptance into the Application Development B.A.S.

**AD 400 (5) N**

### Project Management in Software Development

Comprehensive overview of current processes, practices, and tools used to manage software development projects. Apply best practices for planning, organizing, scheduling, controlling, and adapting strategies to specific project needs and constraints. Includes requirement identification and analysis, documentation, legal and licensing requirements. Emphasizes contractual agreements, licensing, resource acquisition and management, testing and deliverables, and customer support and management.

**AD 410 (5) N**

### Web Application Practicum

Work in teams to create a MVC based web application. Store and share code via software versioning system and use small team agile strategies. Write requirements documents, build the app in stages, and integrate components into a larger project. Covers legal and ethical issues of app development and lifecycle and working in a diverse and collaborative environment. Prereqs: AD 310 and 320.

**AD 420 (5) N**

### Cloud Computing – Software as Service

Covers fundamentals and strategies for moving and developing apps and data storage in the cloud. Students will analyze cloud based offerings and compare them for suitability to specific app and infrastructure needs. They will learn to deploy apps to the cloud, utilize cloud based services, develop cloud specific apps, and explore legal and ethical issues specific to the cloud computing environment. Prereqs: AD 320, 325, and 350.

**AD 430 (5) N**

### Mobile Application Practicum

Students work in teams to build a mobile app for an external client. Students will interview users, prototype their apps, write app specs, and consult for product viability and legal issues. Teams will use a recognized development strategy, performing design reviews and quality assurance checks at intervals. Upon completion, teams will deploy their mobile apps. Prereq: AD 310, 320, and 340.

**AD 440 (5) N**  
**Cloud Computing Practicum**

Students will work in small teams to develop and deploy cloud-based services and apps for an external client: determining suitability, cost benefit analysis, ongoing maintenance needs in deploying an existing app to a cloud-based service, develop/implement a deployment plan to migrate an app to a cloud-based service, and extend the app's capabilities to utilize cloud-specific offerings, such as big data or cloud-based development platforms. Prereq: AD 310, 320, and 420.

**AD 490 (5) N**  
**Internship/Capstone**

In this course for the Application Development, Bachelor of Applied Science, students shall complete a capstone project or arrange and complete an internship, applying the skills learned in the classroom to the workplace. Students write a culminating paper reflecting on their experience and integrating it with classroom learning. Prereq: Permission.

**Applied Behavioral Science  
Bachelor of Applied Science**

*Students must be accepted into the program in order to take these courses.*

**ABS 206 (5) C**  
**Tech Writing Applied Tec**

Learn to efficiently compose memos, emails, letters of advocacy for clients, reports for court and other authorities, cover letters, case notes, grant proposals, and more. Emphasis on using computer applications to produce these and other documentation while meeting HIPAA (Health Insurance Portability and Accountability Act) and ethical standards. Not required for B.A.S. degree. Prereqs: ENGL& 101, 102, and MIC 101.

**ABS 310 (5) C**  
**Professionalism and Ethical Practice**

Examines ethical principles in the field of human services, including client interactions, peer-to-peer interactions, working with various communities, and the impact of ethics/ethical decisions. Prereq: Permission.

**ABS 320 (5) C**  
**Applied Social Psychology**

Examines the application of social psychological concepts and systems theory in human service settings, including prevention, policy analysis, groups, professional and client relationships, and multi-cultural competence. Prereq: PSYC& 100.

**ABS 330 (5) C**  
**Info Literacy and Program Assessment**

Intro to organization, retrieval, and evaluation of electronic and print information: college library systems, networked information systems, traditional scholarly resources, and concepts of research. Examine specialized resources of various Social and Human Services disciplines.

**ABS 335 (5) C**  
**Human Services Practice**

Learn to apply knowledge, professional values, sociocultural dynamics, and ethics to theory-based models of practice. Covers assessment, information literacy, planning, practice evaluation, and termination.

**ABS 340 (5) C**  
**Applied Environmental Science**

Investigates the relationship between environment and the human condition. Explores human needs and experiences based on the health of their environment, specific challenges posed by degraded environments, and unequal access to healthy environments. Focus on developing environmental literacy and familiarity with tools for promoting environmental justice. Local field trips may be required. Prereq: Enrollment in Applied Beh. Sciences BAS program or instructor's permission.

**ABS 350 (5) C**  
**Quantitative Principles**

Learn the quantitative organization of data central to scientific research and assessment design in applied behavioral sciences. Prereqs: PSYC& 100, PSYC 217, and MATH 098, all with 2.0 or higher.

**ABS 360 (5) C**  
**Public Policy Analysis**

Learn the art and science of providing problem-solving advice to government decision-makers, managers, and citizens in order to influence government processes. Understand theoretical frameworks, problem definition, development of alternative solutions, predicting impact of choices, policy evaluation, and modification of policies through policy case studies. Prereq: SHS 103 or POLS 202 or permission.

**ABS 399 (1-5) C**  
**Independent Study and Research**

Pursue academic and professional areas of interest and possible employment related to applied behavioral science.

**ABS 410 (5) C**  
**Economic & Political Systems**

Explore the nature and scope of political economy by examining its historical evolution. Conduct a comparative analysis of contemporary political and economic systems and learn how public service relates to political economy through taxation and finance. Prereqs: Microeconomics suggested.

**ABS 415 (5) C**  
**Cross-Cultural Competency**

Develop understanding of theory, research, and applications pertaining to the process of cross-cultural competency. Examine cultural assumptions, values, perceptual and cognitive orientations, cultural stereotypes, prejudice, ethnocentrism, non-verbal behaviors, language, and meaning systems in cross-cultural interactions between people from diverse cultural and ethnic groups.

**ABS 420 (5) C**  
**Multicultural Artistic**

Examine jazz as both a developing art form and as a social and cultural institution with clearly identifiable roots and traditions. Understand how practitioners have responded to pressing contemporary social circumstances and how jazz provides a model of democracy in action.

**ABS 430 (5) C**  
**Sociology of Families**

Examine the trends, issues, and debates regarding the social construction of families and how changes in families relate to social, economic, global, and political changes in the larger social structure. Develop critical thinking and analytic skills by drawing on empirical research, personal histories, current events, and public policy issues. Prereqs: SOC& 101.

**ABS 495 (5) C**  
**Senior Capstone Project**

Demonstrate mastery of learning in the field of Applied Behavioral Science and area of concentration. Evaluate overall educational experience and individual professional direction by integrating experiential learning, coursework, knowledge, and skills, and demonstrating critical thinking, oral presentation, creativity, problem-solving, and writing commensurate with senior level work.

**ABS 497 (5) C**  
**Advanced Field placement I**

First of two quarters of applied professional work in a community setting consistent with the student's area of interest. Meets requirements for supervised field practice required for licensure and professional accreditation in many professional specialties.

**ABS 498 (5) C**  
**Advanced Field placement II**

Second quarter of applied professional work in a community setting consistent with the student's area of interest. Meets requirements for supervised field practice required for licensure and professional accreditation in many professional specialties.

**ABS 499 (1-5) C**  
**Independent Study and Research**

Pursue academic and professional areas of interest and possible employment related to applied behavioral science.

**Art****ART& 100 (5) C,N,S**  
**Art Appreciation**

Historical backgrounds and design fundamentals that have affected art, using slide lectures, reading, and practical studio applications.

**ART 101 (5) C,N,S**  
**Design**

Studio series in the fundamentals of two-dimensional art, with problems based on line, space, texture, shape, and color theories. Includes practical applications of theories to design. Required for art majors.

**ART 102 (5) C,N,S**  
**Design**

Continuation of ART 101. Intro to three-dimensional space organization using the elements of design. Construction in sculptural formats. Required for art majors. Prereq: ART 101.

**ART 103 (5) C,S**  
**Design**

Tutorial in individual problems in design. Prereq: Permission.

**ART 104 (3) C,N**  
**Modern American Art**

Course will focus on the 19th and 20th Century American art in the context of the European art tradition, as well as that of non-Western cultures. Course will provide a chronological survey of artworks, movements, and artists; however, greater emphasis will be placed on the nature and significance of American art. Prereq: None.

**ART 105 (5) C**  
**Survey of Modern Art**

Study of major art movements of the late nineteenth century to the present, with a focus on the major artistic forms, artists, and styles emerging out of Europe and the United States. Consideration also is given to the impact and exchange of artistic traditions and practices outside of Europe and the United States. May be taken out of sequence. Prereq: Recommended ENGL& 101 (C).

**ART 111 (5) C,N,S**  
**Drawing**

Freshman level drawing. Study of line, value, space, perspective, and composition through the use of a variety of drawing media.

**ART 112 (5) C,N,S**  
**Drawing**

Continuation of ART 111. Exploration in subject and media, including drawing from the human figure. Focus on composition, expression, and creative conceptualization. Prereq: ART 111 or permission.

**ART 113 (5) C,N,S**  
**Drawing**

Continuation of ART 112. Further development of fine art drawing with an emphasis on expression and composition, including development of portfolio building or other project. Prereq: ART 112 or permission.

**ART 114 (5) C,N**  
**Digital Photography I**

Intro to digital camera use, photography basics, photographic visualization, composition, lighting, and minimal editing. Students must provide their own digital camera with five or more mega-pixels, Auto, Auto-P, Aperture Priority, Shutter Priority, and full manual Exposure Modes. Prereq: Eligibility ENGL 096 or equivalent.

**ART 115 (5) C,N**  
**Digital Photography II**

Continue with photography basics involving digital imaging, lighting, models, and presentation. Students need a current DSLR camera with full manual modes, tripod, lens tissue, thumb drive, card reader, compact flash or other memory card. Photo lights optional. Prereq: ART 114 or permission.

**ART 121 (5) C,N**  
**Intro to Printmaking**

Study and application of basic relief print media. Covers linocuts, woodcuts, multicolor prints, and experimental monoprints. Intro to relief and intaglio techniques, with emphasis on small editions. Recommended: Some drawing background.

**ART 122 (5) C,N**  
**Intro to Printmaking – Intermediate**

Covers various aspects of printmaking, with an emphasis on intaglio printmaking processes. Intro to drypoint, engraving, and etching with hard and soft grounds. Learn water and acid etching and the use of photosensitive emulsions on metal plates. Recommended: Some drawing background.

**ART 123 (5) C**  
**Cont. Print: Monotype**

Develop technical and conceptual skills to create the painterly print. Emphasis on sequential imagery, layered impressions, color use and inks, use of the press, plates and papers, and evolution of personal imagery. Covers variation, using a matrix, and altered monotypes. Recommended: Some drawing background.

**ART 124 (5) N**  
**Printmaking – Screenprint**

Study and application of screenprinting media. Covers multiple techniques to create screens for Fine Art prints on paper. Introduces use of transparency in image. Instruction and focus on color mixing and interaction. Investigates multiple color print techniques and registration, with emphasis on monoprints and small editions.

**ART 125 (4) C,N**  
**Basic Silk Screen Process**

Preparation of silk screen frame, silk screen printing techniques, photo screen composition and processing, and photo screen printing.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**ART 166 (5) N**  
**Video Art I**

Introduction to video art through use of digital video filming and editing. Explore digital video editing, sound integration, formatting, output, and distribution strategies and options. Covers visualization, composition, effects, and transitions of digital video within a fine art context. Create, present, and critique finished digital video works. Recommended: ART 114 and ART 210.

**ART 170 (1-5) C,S**  
**Photography as an Art**

Traces the history and distinctive properties of photography. Includes camera, exposure, lighting, composition, black and white dark-room work, and digital imaging.

**ART 201 (5) C,N,S**  
**Painting**

Beginning painting in oil or synthetic media, using still life. Emphasis on basics: composition, value studies, color mixing, canvas preparation, styles, and techniques. Recommended: Drawing background.

**ART 202 (5) C,N,S**  
**Painting**

Further development of color and composition in oils or synthetic painting media. Individual instruction. Prereq: ART 201 or permission.

**ART 203 (5) C,N,S**  
**Painting**

Further studies in color, composition, and subject matter, including portfolio building or other project. Individual instruction. Prereq: Art 202 or permission.

**ART 204 (5) N**  
**Mural Art**

Explore the stages of mural art, from brainstorming and budgeting to community input and creation, with particular emphasis on the craft of mural execution. Hands-on experience requires ability to work outdoors 3+ hours at a time. Prereq: ART 201 or permission.

**ART 205 (5) C,S**  
**Water Color Painting**

Intro to water color painting. Covers basic wash techniques, color mixture, value contrast, composition, and wet into wet. Recommended: Some drawing background.

**ART 206 (5) C,S**  
**Water Color Painting**

Continuation of ART 205, based on a series of water color problems, utilizing skills learned in the previous quarter. Further work with composition. Prereq: ART 205 or permission.

**ART 207 (5) C,S**  
**Watercolor**

Individual water color projects in series. Prereq: ART 206 or permission.

**ART 210 (5) N,S**  
**Digital And Graphic Art**

First of two courses. Image design, creation, and manipulation using vector-based and pixel-based programs. Combines fine art and technical aspects of digital composition for production of media formats, including print and web-based. Previous drawing/design and basic computer skills strongly recommended.

**ART 211 (5) N,S**  
**Sculpture**

Fundamentals of composition in the round, in clay and plaster, using basic techniques of carving, casting, and building. Prereq: One quarter of drawing, design, or permission.

**ART 212 (5) N,S**  
**Sculpture**

Fundamentals of relief composition in clay, plaster, and wood, using basic techniques of carving, casting, and building. Prereq: ART 211 or permission.

**ART 213 (5) N,S**  
**Sculpture**

Fundamentals of three-dimensional composition, with emphasis on life studies. Basic materials used are clay, plaster, or wood. Prereq: ART 212 or permission.

**ART 214 (5) C,N,S**  
**Digital Art – Intermediate**

Continuation of ART 210. Further explore fine art and technical aspects of digital composition using vector graphics (such as Adobe Illustrator) and pixel-based (such as Adobe Photoshop) programs. Students will be encouraged to further develop their own visual language. Includes lectures, software demos, digital image making exercises, projects, and readings. Prereq: ART 210.

**ART 215 (5) C,S,N**  
**Digital Art – Advanced**

Continuation of ART 214. Further explore fine art and technical aspects of digital composition using pixel and vector based software (such as Adobe Creative Suite). Students will be encouraged to further develop their own visual language. Includes lectures, software demos, digital image making exercises, projects, and readings. Prereq: ART 214. Software is available on campus. Online students are responsible for obtaining their own software.

**ART 221 (5) C,N,S**  
**Ceramic Art**

Beginning basic pottery design and construction. Emphasizes hand building coils and slabs, basic glazing, and beginning pot throwing on the potter's wheel.

**ART 222 (5) N,S**  
**Pottery/Ceramics**

Develop throwing skills. Understand basic glaze composition and kiln operation. Continue studies in techniques of surface decoration. Prereq: ART 221 or permission.

**ART 223 (5) N,S**  
**Pottery/Ceramics**

Continuation of ART 222. Advanced work on the wheel. Emphasis on combining methods of construction. Learn basic glaze skills. Prereq: ART 222 or permission.

**ART 240 (5) N**  
**Book Arts**

Studio course in the art of book-making. Students will create narratives through visual story telling; learn tool handling and techniques in book construction; discuss historical and social contexts for the artist book; develop a personal expression through the medium of artist books. Methods of image-making will include, but are not limited to, painting, drawing, printmaking, digital art, and collage.

**ART 251 (5) C,N**  
**Art History**

Study of the major forms of visual expression, including Paleolithic, Egyptian, Mesopotamian, Greek, Roman, and Early Christian periods. Emphasis on European and Middle Eastern art (C).

**ART 252 (5) C,N**  
**Western Art Survey II**

Continuation of ART 251 but can be taken out of sequence. Emphasis on the Medieval period through the Renaissance, focusing on European and Islamic art. Prereq: Recommended ENGL& 101 (C).

**ART 253 (5) C,N**  
**Western Art Survey III**

Continuation of ART 252 but may be taken out of sequence. Emphasis on the Italian Renaissance through the present day. Prereq: Recommended ENGL& 101 (C).

**ART 254 (1-5) C**  
**Survey of Northwest Coast Art**

Surveys the visual culture of the Pacific Northwest Coast, beginning with indigenous arts in historical context through the present, with a focus on contemporary expressions and issues. Consideration will also be given to the exchange of artistic traditions and practices beyond the Northwest and the impact of colonialism, technological developments, and societal shifts. Prereq: Recommended ENGL& 101 (C).

**ART 255 (5) C,N**  
**Survey of Asian Art**

Survey of the visual arts of India, China, and Japan, with a focus on major religions, artistic forms, techniques, and cultural traditions. Consideration will also be given to the impact of outside invaders on the arts and cultural exchange across space and time. Prereq: Recommended ENGL& 101.

**ART 256 (5) C**  
**Art History: History of Photography**

Examines the role photography has played reflecting and shaping culture from its emergence in the 19th century to the digital revolution currently underway. Emphasizes photography's role in the larger development of art history and what it means to photograph, to be photographed, and to view photographers as part of an audience. Students make a few photographs of their own along the way. Prereq: ENGL 101.

**ART 257 (5) N**  
**Non Western Art History**

Survey major forms of art from Africa, Australia, and South Pacific Islands. Art will be examined through the lens of pre-colonization, colonization, and art of indigenous peoples post-colonization to present day. Includes the study of sculpture, architecture, painting, and personal adornment. May be taken out of sequence. Transfer class.

**ART 281 (5) N**  
**Jewelry Design I**

Basic jewelry design and construction with precious and/or semi-precious metals. Simple stone setting, tool usage, soldering, metal testing, properties and characteristics of metals and stone. Recommended: One quarter each of design and drawing.

**ART 282 (5) N**  
**Jewelry Design II**

A continued exploration of metal fabrication and jewelry design, covering surface enrichment, advanced forming techniques, faceted stone setting, and intro to enameling. Prereq: ART 281.

**ART 283 (5) N**  
**Intro to Alloying Jewelry**

Explore the alloying and casting processes of Jewelry Design. Learn lost wax casting and rubber molding processes. Prereq: ART 282 or permission.

**ART 284 (5) N**  
**Bench Techniques and Practice**

Covers advanced bench skills and production techniques which encourage creation of innovative pieces with personal statements. Emphasis on creating a body of work that is ready for exhibition. Prereq: ART 283.

**ART 285 (5) N**  
**Metal Tech Small Scale**

Metalsmithing techniques for functional and sculptural objects. Learn the physical properties of metal and create objects that express personal images and creative thoughts in metal sculpture, hollowware, and model making. Includes field trips to metal fabrication studios.

**ART 290 (5) N**  
**The Art Business**

Fundamentals of the business aspects of art, including designing and packaging the portfolio for A.F.A./C.F.A. degrees, photographing artwork, building a résumé, marketing, copyrights, contracts, and other essential business practices. Recommended: At least two college-level art courses.

**ART 291 (2) C,N**  
**Art Seminar**

Readings and discussion in the philosophy and ideas of artists and art movements with criticism and analysis of works of art.

**ART 298 (3) C**  
**Directed Reading in Art**

Advanced film production involves scripting, budgeting, and scheduling. Emphasis on information film production, interior and studio lighting for color, sync-sound recording, and editing techniques.

**ART 299 (1-5) C,N,S**  
**Special Problems in Art**

Individual or seminar instruction. May be repeated to earn a maximum of 9 credits. Prereq: Second year art major, level of ability, and permission.

## Astronomy

**ASTR& 100 (5) C,N,S**  
**Survey of Astronomy**

Emphasis on astronomic concepts fundamental to an understanding of the solar system, stars, galaxies, and origin and history of the universe.

**ASTR 102 (5) N**  
**Space and Space Travel**

Intro to space exploration, both robotic and human, and the engineering of space-faring vehicles to withstand space hazards. Prereq: Completion of MATH 098 (with a grade of 2.0 or higher) and placement into ENGL& 101.

**ASTR 104 (5) C**  
**Observational Astronomy**

Covers the celestial sphere and coordinates; Earth's orbital motion; time; moon, planets, stars, constellations and deep sky objects. Includes technology, processes, and math used by astronomers: optics, telescopes, digital detectors, data reduction, observing techniques, and data analysis. Minimum two nights observing required. Prereq: Recommended ASTR& 100 and MATH 102.

**ASTR& 110 (5) N,S**  
**The Solar System**

Survey of planets of the solar system with emphasis on recent space exploration and the comparative evolution of the Earth and the other planets. Includes light optics, telescopes, and the history and development of astronomy. Night observing sessions required. Prereq: MATH 098 or higher with 2.0 or placement above MATH 098 or permission. Recommended: Test into ENGL& 101 or higher.

**ASTR& 115 (5) N**  
**Stars, Galaxies & Cosmology**

Methods and goals of scientific inquiry developed within the study of outer space, including the life and death of stars, galaxies and clusters of galaxies, and cosmology, including the Big Bang. Includes historical perspective, theories, laboratory exercises, and direct observations. Prereq: Completion of MATH 098 (with a grade of 2.0 or higher) (N).

**ASTR 201 (5) N,S**  
**The Universe & the Origin of Life**

Modern views of atomic and molecular evolution, from the big bang theory through the formation of the solar system and emergence of life on earth. Discuss extraterrestrial intelligent life and the ultimate fate of the cosmos. Recommended: AST 100 or some science background.

**ASTR 299 (1-5) C**  
**Independent Study**

Independent study of approved topics in astronomy. Prereq: Permission.

**Auto Body Collision Repair**

*NOTE: Courses ABR 111 through ABR 164 include instruction in safety, environmental awareness, human relations, and work ethics.*

**ABR 111 (4) S**  
**Intro to Auto Collision**

Covers the skills needed to become a good body shop employee, typical movement of a vehicle through a body shop, and basic procedures for repairing a collision damaged vehicle. Identify and use general purpose hand tools and power tools used in a body shop.

**ABR 112 (3) S**  
**Safety/Environment**

Practices Covers various environmental and other regulations in an automotive refinishing department. Locate hazardous warning information for products used in refinishing, select the proper personal protection equipment, inspect it, and demonstrate proper use.

**ABR 113 (8) S**  
**Welding and Cutting**

Covers the differences between various metal joining processes, selection of the correct heat joining for various jobs, the advantages of using MIG welding, personal and shop safety, along with vehicle protection measures. Learn about welding wires, shielding gases, tuning the welder. Be able to visually inspect and destructively test the weld.

**ABR 121 (4) S**  
**Panel Replace/Alignment**

Covers selection, understanding, and use of panel replacement and alignment tools. Prereq: ABR 111, 112, and 113, or permission.

**ABR 122 (3) S**  
**Working with Trim/Hardware**

Covers the proper use and selection of tools and removing and installing of interior door trim panels, door locks and handles, deck lid lock cylinders, and exterior trim. Install pinstripes and decals. Prereq: ABR 111, 112, and 113, or permission.

**ABR 123 (4) S**  
**Metal Straightening**

Covers the basic fundamentals of metal straightening and proper selection of metal straightening tools. Prereq: ABR 111, 112, and 113, or permission.

**ABR 124 (4) S**  
**Body Fillers**

Covers the correct mixing and application of body fillers to increase the quality of the repair. Prereq: ABR 111, 112, and 113, or permission.

**ABR 131 (2) S**  
**Understand Auto Finishes**

Identify the differences between a variety of automotive finish systems, including dry time, chemical make-up and plant and body shop application. Prereq: ABR 111, 112, and 113, or permission.

**ABR 132 (6) S**  
**Prep Surface**

For Refinish Determine the condition of a vehicle's finish and plan the steps used in refinishing the vehicle. Prereq: ABR 111, 112, and 113, or permission.

**ABR 133 (5) S**  
**Prep Equip/Paint/Material**

Setup and use the final preparation, spray environment, and drying areas for refinishing. Understand paint mixing formulas using reference manuals; mix paint according to published formulas; and describe the various types of air supply equipment and setup. Use various types of spray guns, make all preliminary adjustments to the air system and spray gun, test the spray gun, and make final adjustments in preparation for refinishing. Prereq: ABR 111, 112, and 113, or permission.

**ABR 134 (1) S**  
**Detailing**

Covers proper cleaning of the exterior and interior of the vehicle, removal of overspray, decals and pinstripes. Prereq: ABR 111, 112, and 113, or permission.

**ABR 151 (2) S**  
**Metal Straightening**

Learn the basic fundamentals of metal straightening and proper selection of metal straightening tools.

**ABR 152 (2) S**  
**Body Fillers**

Learn the correct mixing and application of body fillers that will increase the quality of the repair.

**ABR 153 (2) S**  
**Understand Auto Finish**

Learn to identify a variety of automotive finish systems, including dry time, chemical make-up and plant and body shop application.

**ABR 161 (5) S**  
**Damage Analysis**

Covers how a vehicle absorbs the forces of a collision through "crush zones," how damage travels from the point of impact through the body, and the identification of two types of damage conditions. Prereq: ABR 111, 112, and 113, or permission.

**ABR 162 (3) S**  
**Door Skin Repair Replace**

Covers proper alignment of door frames, the principles and techniques for removing and replacing a welded door skin, door intrusion beam removal, surface preparation, and installation techniques. Prereq: ABR 111, 112, and 113, or permission.

**ABR 163 (5) S**  
**Quarter Panel Replacement**

Analyze quarter panel damage; determine whether sectioning or full panel replacement is required; learn the principles and techniques of removing a damaged quarter panel, surface preparation, alignment, and installation. Prereq: ABR 111, 112, and 113, or permission.

**ABR 164 (2) S**  
**Moveable Glass/Hardware**

Remove and install moveable door glass, identify cause, and correct air and water leak problems. Prereq: ABR 111, 112, and 113, or permission.

**ABR 171 (7) S****Straightening Structural Parts**

Learn proper mounting and anchoring of the vehicle and various types of pulling equipment. Study H.S.S.; cold and hot stress relief; pulling and straightening of front, rear end, side impact, and roof damage. Prereq: ABR 111, 112, and 113, or permission.

**ABR 172 (7) S****Full/Partial Panel Replacement**

Understand full or partial panel replacement; uses of various types of joints used in sectioning; repair or replacement of a complete rail section, rocker panel, A and B pillar, floor pan, truck floor, and full body section. Prereq: ABR 111, 112, and 113, or permission.

**ABR 173 (2) S****Restore Corrosion Protection**

Covers safely working with chemicals, corrosion, and its effect on vehicles and restoring corrosion protection to collision damaged areas. Plan effective and correct corrosion protection treatment to welded areas and exposed seams, interior seams, exposed surfaces, trim and accessories during repairs.

**ABR 181 (6) S****Steering & Suspension**

Covers identifying and diagnosing tire and wheel steering, rack and pinion steering, power steering suspension, strut type, and problems in steering and suspension systems.

**ABR 182 (7) S****Electrical/Electronic Systems**

Learn to diagnose and repair electrical and mechanical systems problems.

**ABR 183 (3) S****Mechanical Systems**

Focuses on repairing a vehicle involved in a collision, often removing mechanical parts, including suspension, steering, drive train, and engine parts, and servicing of mechanical parts. Some areas require collision repair technicians to be certified to perform mechanical repairs.

**ABR 191 (4) S****Applying the Finish**

Prepare a surface for topcoat; apply primer-scaler; and apply single stage paint, base, clear-coat, and tri-coat finishes. Prereq: ABR 131.

**ABR 192 (3) S****Blending Color**

Prepare a vehicle for a blend; blend single-stage; blend base coat, clear coat, or tri-coat finishing. Prereq: ABR 131.

**ABR 193 (3) S****Solving Paint Application Problems**

Identify paint application problems caused by contamination, paint defects caused by spraying techniques, and solve paint problems related to drying, curing of paint, and those caused by improper preparation. Prereq: ABR 131.

**ABR 194 (3) S****Finish Defects**

Covers identifying paint film defects, causes and corrective methods, surface defects and corrective methods of repair. Prereq: ABR 131.

**ABR 197 (1-5) S****Industry Internship (ITEC Based)**

Provides instructional link between classroom and on the job experience, reinforces and documents on-the-job learning experiences, and provides opportunities for faculty and student interaction.

**ABR 199 (1-12) S****Auto Body/Rebuild/Refinish**

Principles of correcting auto body and sheet metal damage. Includes a study of characteristics of metal, frame repair, welding, and refinishing.

**ABR 299 (1-12) S****Special Topics**

A special topics course for an individual or group in Automotive Collision Repair.

**Automotive Technology**

*NOTE: Courses include instruction in safety, environmental awareness, human relations, and work ethics.*

**AUT 100 (6) S****Intro to Electricity**

This introductory course covers skills required by the Automotive Service Excellence Education Foundation (ASEEF), including electrical theory; testing series and parallel circuits using a multimeter; diagnosing electrical system problems using schematics and component locators; Testing battery, starting, and charging systems on vehicles, including safety procedures. MATH 110 is embedded in this course.

**AUT 102 (4) S****Advanced Electrical Systems**

Covers understanding and using schematics. Includes battery, starting, and charging system operation and testing.

**AUT 104 (3) S****Automotive Electronics**

Contents include safety, automotive lighting, gauges and warning devices, horns, windshield wipers and washers, defoggers, power accessories diagnosis, and repair or replacement of the components. In addition, the function and construction of each component.

**AUT 106 (3) S****Basic Power Accessories**

Covers basic computer operation and applications on the vehicle, using scan tools to diagnose electronically controlled components and accessories. Prereq: MVM 100, MVM 102, AUT 100, Math 110. Coreqs: AUT 102, AUT 104.

**AUT 112 (3) S****Manual Transaxles Clutch**

Power flow and principles involving manual transaxles; troubleshooting and diagnosing manual transaxles noises, clutch issues, and shifting problems, and removal and reinstallation of manual transaxle in vehicle. In addition, the function and construction of each component, as well as their diagnosis and service procedures, will be covered.

**AUT 114 (3) S****Manual Transmissions, Transfer Cases & Drive Axles**

Covers basic principles involving manual transmissions, transfer cases, and drive axles, including function and construction of each component, diagnosis, and service procedures. Prereq: MVM 100, AUT 110, basic math skills, at least 9th grade reading level, or permission.

**AUT 116 (6) S****Air Conditioning & Heating**

Basic principles involving air conditioning and heating systems; troubleshooting and diagnosing of air conditioning and heating systems; removal and reinstalling of air conditioning and heating components in vehicles. In addition, the function and construction of each component, as well as their diagnosis and service procedures, will be covered. Instruction in safety, environmental awareness.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN ..... Watch Technology

**NAME TO PREFIX**  
Watch Technology ..... HIN

Common Course Numbering explanation is on page 224.

**AUT 118 (4) S**  
**Automotive Transmission, Diagnosis & Service**

Power flow and principles involving automatic transmissions. Diagnosing, servicing, and adjusting automatic transmissions. Understanding electronic control systems. Locate repair external transmission leaks. Performing a proper road test for transmission problems. In addition, the function and construction of each component, as well as their diagnosis and service procedures, will be covered.

**AUT 120 (6) S**  
**Advanced Automatic Transmission Service**

This course covers bench tear down inspection and reassembly of the transmission. In addition, it covers the function and construction of each component. We will also remove and reinstall automatic transmissions in vehicles.

**AUT 122 (4) S**  
**Steering & Suspension**

Steering and suspension theory, diagnosis and repair or replace, including but not limited to chassis design, wheel bearings, steering and suspension components function and construction.

**AUT 124 (4) S**  
**Tires & Wheel Alignment**

Tire and wheel construction, materials, application, remove and install, balance, diagnosis, and repair. Performing a 4 wheel alignment, understanding all the components on the vehicle and road conditions that can affect alignment. Repair or replacement of those components on the vehicle as well as how aftermarket components can affect ride and safety of the vehicle.

**AUT 126 (3) S**  
**Basic Brake Systems**

This course covers all of the components of disc brake, drum brake, and mixed systems. We cover how each component works, both in theory and in reality in the shop. We teach how to service, diagnose, and to repair or replace each of the components.

**AUT 127 (4) S**  
**Advanced Brake Systems**

Covers operation, diagnosis, and service of disc brakes, power brakes, and Antilock braking System (ABS) brake components.

**AUT 128 (4) S**  
**Automotive Engine Diagnose/Remove & Replace**

This course covers automotive gasoline engines operation, lubrication, and cooling systems. It also covers removal and installation.

**AUT 130 (8) S**  
**Automotive Engine Rebuilding**

Covers engine disassembly, cleaning of engine parts, inspection and measuring of engine components, cylinder head rebuilding, overhauling engine blocks, and reassembly of an automotive engine.

**AUT 134 (3) S**  
**Introduction to Engine Performance**

Automotive engine performance theory, operation and diagnosis of engine performance components, as well as removal, repair, or replacement of components from vehicles. Prereq: MVM 100, MVM 102, AUT 100. Coreqs: AUT 128, AUT 132.

**AUT 138 (6) S**  
**Advanced Drivability Fuel Systems**

This course will cover gasoline ignition and fuel systems. Included are distributor waste spark and coil on plug ignition systems, also fuel pumps both electric and mechanical, fuel injection throttle body, port fuel sequential, and gasoline direct injection systems.

**AUT 140 (4) S**  
**Engine Computers**

Covers automotive engine computer, its multiple power and ground supplies, and how these affect the running of the vehicle. Includes inputs and outputs of the vehicle, how each contributes to the running of the engine, and how to diagnose each one. Prereq: MVM 100, AUT 100, 102, 104, 106, 136, and 138 or equivalent, or permission.

**AUT 142 (6) S**  
**Emission Control and Diagnostics Test Equipment**

Covers all emission-related items on the vehicle and the federally mandated OBD II system. Includes use and operation of super charges and turbo charges on cars.

**AUT 299 (1-18) S**  
**Spec Topics: Automotive**

Special topics for individual or group study. Prereq: Permission.

**MVM 100 (3) S**  
**Introduction to Automotive Technology I**

This course focuses on skills required by the National Automotive Technicians Education Foundation (NATEF), including safety, nomenclature of components and parts, performing preventive maintenance procedures, tools and equipment, repair manuals, parts and time estimating guides, fasteners and equipment, and how they relate to the automotive industry. Prereqs: placement into ENGL 105 and MATH 110. Coreqs: AUT 100, MVM 102, MATH 110.

**MVM 102 (6) S**  
**Introduction to Automotive Technology II**

This course builds on MVM 100 to meet Automotive Service Excellence Education Foundation (ASEEF) standards by covering vehicle inspection; lube, oil, and filter; cooling system; belts and hoses; heating and air conditioning system; driveshaft; manual and automatic transmission service; and using a scan tool to retrieve diagnostic trouble codes (DTC).

**Aviation Maintenance Technology**

*Also see Aerospace Composite Materials, page 220.*

**AMT 104 (5) S**  
**Basic Math Physics W B**

Covers the mathematical computations required in the AMT curriculum. Learn the scientific principles of the operation of aircraft, engines, and maintenance equipment. Learn to calculate weight and balance for aircraft safety, for equipment changes, extreme loading check, and addition of ballast. Prereq: Permission.

**AMT 111 (17) S****Basic Science for Aviation**

This course introduces students to aircraft terminology and nomenclature, basic physics, aircraft drawings, maintenance forms and records, Federal Aviation Regulations (FARs), materials and processes, the exercise of mechanics privileges, and shop safety practices as they pertain to every day shop problems.

**AMT 112 (17) S****Basic Electricity for Aviation**

This course introduces students to the basic concepts of electricity and magnetism. Methods of generating alternating and direct current are studied. Students will learn the proper methods of overhaul, inspection, installation, and repair of aircraft electrical components. Safety precautions are also emphasized.

**AMT 113 (17) S****Airframe Structure & Repair**

This course introduces students to the use of wood, fabric, composites, fiberglass, plastic, and metal as materials for aircraft structures. Upon completion of the projects in the course, students learn methods of inspection and repair of aircraft structures. Safety precautions are emphasized when using the various materials found in aircraft structures.

**AMT 119 (5) S****Materials and Processes**

Identify and select non-destructive testing methods including dye-penetrant, eddy current, ultrasound, and magnetic particle inspections. Covers basic heat-treating process, aircraft hardware, and materials. Includes inspection and checking of welds and performance of precision measurements. Prereq: Permission.

**AMT 133 (17) S****Powerplant Theory & Maintenance**

This course introduces students to powerplant theory and maintenance practices of the reciprocating engine and the gas turbine engine. Course topics include overhaul of each powerplant type, inspection technique, induction systems, cooling systems, exhaust, and turbocharging systems.

**AMT 137 (4) S****Aircraft Nonmetallic Structures**

Covers inspection and repair of all types of sheet metal and composite structures, including transparent plastic enclosures and interiors. Prereq: Permission.

**AMT 199 (1-10) S****Special Projects**

Topics could include inspection and repair of all types of sheet metal and composite structures. Prereq: Permission.

**AMT 214 (17) S****Airframe Systems**

This course Introduces students to the five basic airframe systems: hydraulic-pneumatic power, landing gear, ice and rain control, cabin environment, fuel systems and management. Students work on assigned projects in each of the areas.

**AMT 215 (17) S****Advanced Airframe**

This course Introduces students to aircraft inspection and record keeping procedures, including doors and interior furnishings, fire detection and extinguishing systems, aircraft instruments, aircraft electrical systems, and communication and navigation systems.

**AMT 234 (17) S****Powerplant Systems & Components**

Covers six systems: engine fuel system and fuel metering system, carburetion, and fuel injection; ignition system for reciprocating engines and turbine engines; turbine engine electrical starting systems; powerplant lubrication systems; electrical and mechanical indicating systems; and powerplant ice and rain control systems. Prereq: AMT 133.

**AMT 235 (17) S****Advanced Powerplant**

This course Introduces students to aircraft propeller systems, fire detection and extinguishing systems, reciprocating and turbine engines, powerplant inspections troubleshooting. This is the final phase of powerplant technology, and reviews are given for the final FAA exam, with emphasis is placed on FAA regulations, airworthiness concepts, safety, personal and technical ethics.

**AMT 295 (16) S****A&P Master Class**

This intensive master class is for those with an approved 8610-2 FAA rating application. It provides a review of General, Airframe, and Powerplant sections of the written, oral, and practical FAA-licensing exams, with special focus on those areas of civilian aviation not typically encountered during military service.

**AMT 296 (2) S****AMT Professional Portfolio**

The student will complete an industry research project, develop a job search strategy, create an industry-relevant resume, complete an online job application, and participate in required workshops, and attend a job interview event. They will describe and provide documentation of successfully scheduling and attaining FAA AMT certification according to procedures described in relevant FAA CFRs. Instructor permission.

**AMT 298 (12) S****Special Topics: Aviation Maintenance**

Overview of various parts of the aircraft and their operation, including methods of corrosion detection, removal, treatment, and correct painting techniques. Prereq: Permission.

**AMT 299 (5) S****Special Topics: Maintenance**

Basic aircraft maintenance on a variety of aircraft systems and components by arrangement.

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**Baking**

*See Culinary Arts, page 257.*

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**Biology****BIOL& 100 (5) C,N,S****Survey of Biology**

Intro to biological principles and concepts, cell biology, application of biological knowledge to problems of society, and development of an awareness of science. Lab included. For non-science majors. Prereq: Eligibility for MATH 084, 87, or 91. Completion of ENGL& 101 with a 2.0 or better (C).

**BIOL 102 (5) N****General Biology**

Emphasis on common plant and animal activities, energy pathways via respiration and photosynthesis, and metabolic activities. Stresses other physiological differences between animals and plants. Lab included. Prereq: BIOL& 100 and 160.

**BIOL 103 (3) C****Nutrition, Food Service**

Identification of known nutrients for human health, demonstration of dietary quality guidelines, utilization of dietary guidelines in meal planning, including modification of existing recipes to meet nutritional recommendations.

**BIOL 107 (5) C,N**  
**Intro to Comparative Animal Behavior**

Overview of current thinking and research in the science of animal behavior, including a brief history of the development of animal behavior as a science. Focuses on evolutionary principles and how they influence the behavior of animals. Discover how animals learn and how learning and instinct shape behavior. Explore how strategies employed by different species affect survival. Gain insight into human behavior from a new perspective and understand why and when sociality and apparent altruism can be advantageous to animals. Prereq: Eligibility for MATH 084, 87, or 91. Completion of ENGL& 101 with a 2.0 or better. (C).

**BIOL 109 (2) C**  
**Bio Sexual Transmitted Diseases**

Study the basic biology of the most common sexually transmitted diseases (STDs) in the U.S.: HIV/AIDS, chlamydia, genital herpes, syphilis, gonorrhea, and others. Learn how STDs are transmitted, how microbe-host interactions cause disease, and leading treatments. Includes basic concepts in cellular biology, human biology, and chemistry.

**BIOL 120 (5) C,N**  
**Marine Biology**

Emphasis on natural history, ecology, distribution, habitat, adaptation, interrelationships of local species. Field trips and lab included.

**BIOL 125 (5) N**  
**Biology of the Pacific Northwest**

Discover fundamental principles of biology and ecology through readings, experiments, and field trips. This online course fulfills the lab science requirement.

**BIOL 128 (5) C,N,S**  
**Survey of Human Anatomy & Physiology**

Basic organization of the body, functions and interactions of body parts, response of the body to the environment. Lab included. Prereq: Eligibility for MATH 084, 87, or 91. Completion of ENGL& 101 with a 2.0 or better. (C).

**BIOL 130 (5) N**  
**Northwest Ornithology**

Intro to biology and ecology of Northwest bird species through readings, experiments, and local field study to sites throughout the Pacific Northwest.

**BIOL 150 (5) N,S**  
**The Biology & Evolution of Infectious Diseases**

Covers biology, epidemiology, and evolution of infectious human diseases, such as cholera, Ebola, HIV/AIDS, tuberculosis, malaria, influenza (including H1N1), smallpox, and others. Emphasizes local and global environments of past and newly emerging diseases that impact human societies, including economic, social, cultural, historical, political, and ethical aspects. Prereq: ENGL 096 or permission.

**BIOL& 160 (5) C,N,S**  
**General Biology with Lab**

Basic biological concepts, with an emphasis on biological molecules, cell structures and processes, genetics, and a survey of biodiversity. Prereq: Eligibility for MATH 088, 092, or 098, and completion of ENGL& 101 with a 2.0 or better (C).

**BIOL 161 (5) C,N**  
**Human Genetics**

Intro to genetics, with an emphasis on the impact of genetics on Individuals, families, and society. Topics include cell division, stem cells, meiosis and reproduction, Mendelian inheritance, multifactorial traits and diseases, DNA structure, gene expression and analytics, epigenetics, human genetic variation, mutations, chromosomal abnormalities, cancer, genetic and identity testing, human ancestry, PCR, recombinant DNA, gene therapy, and genomics. Prereq: Eligible for MATH 084, 087, or 091, and completion of ENGL& 101 with a 2.0 or better.

**BIOL 166 (5) N**  
**American Foodways**

Explore the evolution of the North American diet and eating rituals through an historical perspective. Includes influences in supermarkets from the Native American population and immigrants from Europe, Asia, Africa, South America, and the Pacific Islands. Covers the physiological and metabolic aspects of each culture's nutrition. Prereq: Eligibility for MATH 084 and ENGL& 101 (C).

**BIOL 195 (1) N**  
**Biotechnology Seminar**

Overview of history, scope, and career opportunities in biotechnology. Prereq: Concurrent enrollment in Biotechnology program.

**BIOL 196 (1) N**  
**Biotechnology Seminar II**

For students in the last quarter of the Biotechnology program. Examination of FDA regulations, patenting, trademarks, and copyright law. Review and examination of FDA regulations, patenting, trademarks and copyright law. Prereq: Concurrent enrollment in Biotechnology program. Permission of instructor.

**BIOL 197 (1-5) N**  
**Work Experience: Biology**

For biotechnology majors. Internship in laboratory work at a biotechnology company or research lab. Prereq: BIOL& 260 or BIO 280, CHEM& 123 or CHE 103, or permission.

**BIOL 198 (5) C,N**  
**Biology Workshop**

Problem-solving workshop approach to biology topics considered appropriate by the instructor and/or biology faculty. Additional topics may include study skills, note-taking systems, test-taking strategies, and group problem-solving approaches. Prereq: Permission.

**BIOL& 211 (5) C,N,S**  
**Majors Cellular**

A three-quarter intro to biology sequence in preparation for advanced study in areas such as medicine, dentistry, cell biology, microbiology, or veterinary medicine. BIOL& 211 focuses on cellular biology, BIOL& 212 on the biological diversity in animals, and BIOL& 213 on evolution, ecology, and biological principles of prokaryotes, fungi, protists, and plants. Lab included.

**BIOL& 212 (5) C,N,S**  
**Majors Animal**

A three-quarter intro to biology sequence in preparation for advanced study in areas such as medicine, dentistry, cell biology, microbiology, or veterinary medicine. BIOL& 211 focuses on cellular biology, BIOL& 212 on the biological diversity in animals, and BIOL& 213 on evolution, ecology, and biological principles of prokaryotes, fungi, protists, and plants. Emphasis on the biological diversity of animals, general principles of animal physiology, growth, and development. Lab included. Prereq: BIOL& 211 with a 2.0 or better or permission (C).

**BIOL& 213 (5) C,N,S**  
**Majors Plant**

A three-quarter intro to biology sequence in preparation for advanced study in areas such as medicine, dentistry, cell biology, microbiology, or veterinary medicine. BIOL& 211 focuses on cellular biology, BIOL& 212 on the biological diversity in animals, and BIOL& 213 on evolution, ecology, and biological principles of prokaryotes, fungi, protists, and plants. Continuation of series, with an emphasis on prokaryotes, fungi, algae, and plants, including their diversity, anatomy, and physiology. Includes evolutionary and ecological principles relevant to biological studies. Lab included. Prereq: BIOL& 211 with 2.0 or better (N,C), BIOL& 212 with 2.0 or better (S).

**BIOL 228 (4) C**  
**Molecular Cellular I**

For science major transfer students. Covers theory and laboratory techniques, emphasizing recombinant DNA technology, with emphasis on experiential learning. Addresses lab safety, solution preparation, and the process of ethical science.

**BIOL 229 (4) C**  
**Molecular Cellular II**

For science major transfer students. Covers theory and laboratory techniques, emphasizing protein purification and characterization technology, with emphasis on experiential learning. Addresses lab safety, solution preparation, and the process of ethical science.

**BIOL& 241 (5) C,N,S**  
**Human Anatomy & Physiology I**

Covers fundamental principles and establishes a basis for advanced study of anatomy and physiology and clinically-related subjects in the paramedical fields. Lab included. Prereq: BIOL& 160 with a 2.0 or better.

**BIOL& 242 (5) C,N,S**  
**Human Anatomy & Physiology 2**

Covers fundamental principles and establishes a basis for advanced study of anatomy and physiology and clinically-related subjects in the paramedical fields. Continuation of BIOL& 241 with Lab.

**BIOL& 260 (5) C,N,S**  
**Microbiology**

Fundamentals of microbiology, with emphasis on bacteria and bacterial disease. Topics include bacterial cell biology, microbial growth, growth control methods, bacterial metabolism, genetics, classification, identification, viruses, human innate and adaptive immune systems, microbe-host interactions, bacterial pathogenesis, infectious disease epidemiology, and antibacterial drugs. Lab included. Prereq: Two college-level BIOL and/or CHEM courses with 2.0 or higher; eligibility for MATH& 088, 098, or 136, or instructor permission. (C).

**BIOL 290 (5) C,N**  
**General Genetics**

Intro to genetics for science majors. Mendelian inheritance, linkage and recombination, extensions of Mendel, sex determination, multifactorial traits, gene structure and function, mutations and chromosome abnormalities, population genetics, the human genome, genetic technologies, current applications (including cloning, genetic testing, genetically-modified plants and animals, gene therapy, and forensics), and related ethical issues. Prereq: 10 credits of college-level biology or permission.

**BIOL 295 (5) C**  
**Immunology**

For biotechnology and biology majors. Natural and specific immunity. Aspects of humoral and cellular immunity, including antibody structure and function, immunogenetics, development of hematopoietic cells, B and T cell function, antigen presentation, autoimmunity, cytokines, and immunity to different types of disease. Non-lab course. Prereq: BIOL& 260.

**BIOL 297 (5) C,N**  
**ANP Laboratory**

Anatomy and/or Physiology seminar or activity.

**BIOL 298 (1-5) C,N,S**  
**Special Topics – Biology**

Seminar on selected topics or activities in the biological sciences. Prereq: Variable, dependent on topic.

**BIOL 299 (1-5) C,N,S**  
**Independent Study**

Independent study of approved topics in the biological sciences. Prereq: Permission.

**Botany****BOT 110 (5) N**  
**Plants & People**

Practical application relevant to everyday lives. Covers economic plants (grains, legumes, fruits), food values, plant parts, poisonous plants of urban areas, textiles, and wood. Lab included. Prereq: Eligibility for MATH 084, 087, or 091, and completion of ENGL & 101 with a 2.0 or better.

**BOT 112 (5) C,N**  
**The Plant Kingdom**

Intro to the anatomy, physiology, and diversity of plants. Includes reproduction, evolution, and ecology of these organisms. Lab. Prereq: Eligible for MATH 084 and ENGL& 101. Prereq: Eligibility for MATH 084, 087, or 091, and completion of ENGL & 101 with a 2.0 or better (C).

**BOT 113 (5) C,N**  
**Plant Classification**

Intro to classification and diversity of seed plants. Focuses on the characteristics, collection, and identification of regional plants. Lab. Prereq: Eligibility for MATH 084 and ENGL& 101. Prereq: Eligibility for MATH 084, 087, or 091, and completion of ENGL& 101 with a 2.0 or better. (C).

**BOT 299 (5) C,N**  
**Independent Study**

Independent Study – Botany

**Building Trades**  
**Pre-apprenticeship**

See MTA, page 340.

**Business****BUS 090 (2-5) S**  
**Foundation Business Prep**

Offered as a two-quarter course listed as BUS 090a and 090b. Lecture/lab to develop competencies in office administration and computation. Includes keyboarding, intro to computers (Windows, Word), and intro to business communications. Prereq: ASSET test scores indicating basic English, reading/writing, and math skills, or permission.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**BUS& 101 (5) C,N,S**  
**Introduction to Business**

Survey of American business in a global context: business and economic terminology, forms of business ownership, management, accounting, finance, international marketing, and foreign exchange rates. Also covers small businesses, business start-ups and franchising.

**BUS 102 (3) N,S**  
**Business Organization & Management**

Development of modern management: organization and operation, division of responsibility, line and staff organizations, executive leadership and management, business control and procedures, and basic management problems.

**BUS 104 (3) S**  
**Keyboarding**

Intro to keyboarding for those with little or no experience. Includes alpha/numeric keyboarding and basic word processing for creation of business documents. May be taken for S/NC grade.

**BUS 105 (4) N**  
**Keyboarding**

Beginning keyboarding, taught on the computer. For students with no keyboarding experience. Emphasizes touch keyboarding with speed and accuracy on alphabetic and number keys. Intro to basic word processing concepts, letter and memo formatting. May be taken for S/NC.

**BUS 106 (3) C,N,S**  
**Keyboarding/Skillbuilding**

Development of speed and accuracy of letter, symbol, and number keys through extensive drills and timings. May be taken for S/NC or decimal grade and may be repeated for credit. Prereq: Keyboarding of 25 net wpm.

**BUS 110 (5) S**  
**Business Mathematics**

Mathematical processes and techniques currently used in business and finance: percentages, simple/compound interest, discounts, arithmetic of payroll, taxes, bank statements, reconciliation, trade and cash discounts, retail pricing, consumer credit, annuities, business and consumer loans. Prereq: Passing scores on ASSET (W&R=43, NS=40), SLEP (combined=61, NS=10), or permission.

**BUS 112 (5) N**  
**Multi-Cultural Issues/Workplace**

Intro to legal, racial, and cultural aspects of the American workplace. Examines diversity, self-exploration as a basis for understanding others, historical overviews of ethnic influences on American business, workforce demographics, and cross-cultural communication.

**BUS 113 (3) S**  
**Diversity Issues in Business**

Intro to legal, gender, racial, and cultural aspects of business. Examines diversity, self-exploration as a basis for understanding others, historical overviews of ethnic influences on American business, workforce demographics, and cross-cultural communication.

**BUS 114 (5) N**  
**Intro to Marketing**

Intro to marketing concepts: respond to the wants and needs of the consumer with the right product, price, promotion, and distribution. Demonstrate value, quality, and service, exceeding customer demands while maintain channel relationships and meet company goals and objectives. Learn various marketing methods. Prereq: Eligible for ENGL& 101 or completion of ENGL 097/098.

**BUS 115 (2) N,S**  
**Computational Skillbuilding**

Intro to basic operation of touch addition, subtraction, multiplication, and division on the electronic printing calculator. Use of memory register and applications to solve business math problems. Enrollment may be for S/NC audit or decimal grade.

**BUS 116 (5) N,S**  
**Business Math/Spreadsheet**

Use business math applications to work with percentages, invoices, trade and cash discounts, markups and markdowns, payroll, depreciation, and other business applications. Use Excel software to create spreadsheets. 2.0 or higher required for BIT Certificates and degrees (C). Prereq: Math 081 or MATH 084 placement (N); placement at MATH 081 level (C).

**BUS 117 (2) N**  
**Records Management**

Gain an understanding of the components of correct document and information management. Learn the rules as established by the Association of Records Managers (ARMA) for correctly applying filing guidelines to alphabetic, numeric, geographic, and subject filing systems.

**BUS 118 (5) N**  
**Project Management Introduction Overview**

Overview of project management from a business perspective, including project estimation, feasibility, planning, risk management, contingency planning, scheduling, and control. Apply project management principles to student project. Prereqs: BUS 169 and 236.

**BUS 119 (3) N**  
**Leadership Management Skills**

Learn to integrate people, projects, and sponsors to complete tasks and deliverables on time. Covers effective leadership, leading vs. managing, and styles of each. Includes responsibilities, team development and dynamics, personality types, influence without authority, conflict management, organizational and cultural influence on a project. Prereqs: BUS 169 and 236.

**BUS 123 (5) N**  
**Word for Business**

Create and edit business documents, such as letters, memos, reports, basic tables and charts, electronic forms, outlines, mail merges, and column text. Learn to share work for comments, revisions, and merging, and integrate other Office applications. Recommended: Familiarity with computer usage or successful completion of BUS 169, ability to key 25 words per minute, or successful completion of BUS 105.

**BUS 124 (5) N**  
**Excel for Business**

Learn Excel. Create worksheets; enter, calculate, manipulate, and analyze data; create charts and graphs. Learn to manage and organize data, to search and select data that meets particular criteria. Recommended: Familiarity with computer usage or BUS 169.

**BUS 125 (5) N**  
**Access for Business**

Use Microsoft Access to design, create, and edit tables, queries, forms, and specialized reports. Manipulate data using specific criteria, queries, and filters. Learn to import/export data among various applications software. Recommended: Familiarity with computer usage or BUS 169.

**BUS 126 (2) N****PowerPoint for Business**

Learn Microsoft PowerPoint to create visuals to accompany business and personal presentations. Create, change, customize, and save PowerPoint files. Add and manipulate graphics, and apply appropriate design elements to presentations.

**BUS 127 (1-3) N****Outlook for Business**

A two credit course to give students a basic knowledge of Outlook and the effective use of electronic communication. Prereq: Placement into ENG 097/098 or successful completion of ENG 095/096 or higher or instructor permission.

**BUS 131 (5) N,S****Integrated Communications I**

Review and refine basic English grammar, spelling, punctuation, and word usage skills by composing effective basic business letters and memos. Intro to oral communication skills essential to successful giving/receiving of information and cultural aspects of the communication process. Prereq: Satisfactory English placement test score (N,C), ASSET: W&R=46, SLEP: combined=65.

**BUS 132 (5) N****Integrated Communications II**

Further develop communication skills, integrating business English grammar, punctuation, and word usage skills with composition of effective, complex business documents. Develop research, business report writing, and documenting skills. Practice oral presentation techniques, handling of questions, problem-solving and conflict-resolution techniques. Complete meeting preparation tasks. Prereq: BUS 131 with 2.0 or higher.

**BUS 140 (5) N,S****Customer Relations**

Develops skills to identify and resolve customer complaints, handle difficult customers, and utilize effective verbal and nonverbal communication methods. Learn appropriate professional use of various electronic media, and contribute positively to the service culture of an organization. Examines future trends and changes in work environments.

**BUS 147 (5) N****Introduction to Legal Systems**

Learn the legal systems and basic legal forms. Become familiar with courts, their operational structure, and the roles of bailiffs, clerks, and other support offices. Learn how small claims, trial, and appellate courts conduct proceedings and use forms (pleadings).

**BUS 151 (3) N****Intro to Entrepreneurship**

Overview of the entrepreneurial process, examination of the market-place, and discussion of successful business entry strategies. Will also cover need/market trend identification, product/service selection, initial concept validation, as well as developing and accessing sources of information and assistance.

**BUS 152 (5) N****Entrepreneurship**

Intro to product selection, channels of distribution, pricing, marketing, and selling strategies. Write the product, pricing, and marketing sections of a business plan. Prereq: BUS 151 and BUS 154.

**BUS 153 (5) N****Entrepreneurship II**

Intro to financial planning, financing and operations processes. Review forecasting assumptions, prepare financial needs projections, study new business financing, and prepare plans for growth and contingencies. Complete the business plan. Prereq: BUS 152 or instructor's permission.

**BUS 154 (5) N****Exploring Entrepreneurship**

Overview of the entrepreneurial process. Develop a business plan using the student's own business idea. Learn skills and characteristics of successful entrepreneurs, techniques for evaluating business opportunities, planning tools, selling and marketing basics, financial analysis, record keeping, regulations of Washington State, and step by step procedures for starting a small business.

**BUS 156 (5) N****Intro to E-Bus/Commerce**

Overview of the principles of electronic commerce: the origin and growth of e-commerce; comparison with traditional commerce; the relationship of e-commerce to the Internet; electronic money; electronic contracts, legal issues, stock trading; catalogs, accounting, auditing and taxation, international aspects, and e-marketing. Prereq: ENGL& 101 eligibility or completion of ENGL 097/098.

**BUS 159 (5) S****Intro to Comp for Tech**

This course focuses on introducing students to keyboarding, word processing, spreadsheet applications, email, graphic presentations, and performing Internet research. Students will also practice effective communication skills and become familiar with industry specific software. Prereqs: Compass scores. Coreqs: MVM 101, MAT 110, HDM 171.

**BUS 164 (1-2) S****Career Development I**

Learn the steps to research and identify job leads, to approach companies for job-shadow opportunities, and to practice effective informational and position interviews. Required capstone course for Office Assistant Certificate.

**BUS 165 (2) S****Career Development II**

Identify appropriate local non-profit agencies, develop networking opportunities, secure a volunteer job, and apply business skills in a short-term volunteer position. Required capstone course for Office Support Certificate.

**BUS 166 (2) S****Career Development III**

Plan and create a project proposal. Research an area business or non-profit organization, investigate its needs, create a project solution, present the proposal, and implement the result for the organization. Required capstone course for Office Professional Certificate.

**BUS 169 (5) N,S****Using Computers in Business**

Learn basic word processing (Word), spreadsheet (Excel), database (Access), presentation graphics (PowerPoint), and email applications. Intro to Windows and file management. Prereq: BUS 104 or CTN 100 (S) and keyboarding skills.

**BUS 170 (1-5) N,S****Information Tech I**

Intro to Word, Excel, and Outlook. Create letters, business correspondence, reports, and spreadsheets commonly used in a business setting. Prereq: Touch type 25 correct wpm.

**BUS 171 (1-5) N****Information Tech II**

Covers intermediate document creation and formatting features in Word. Create charts, tables, and spreadsheets, and incorporate them into business correspondence. Intro to PowerPoint and the use of Outlook contact lists. Prereq: BUS 170 or permission and touch type 35 correct wpm.

**BUS 172 (1-5) N****Information Tech III**

Use the MS Office Suite to integrate text, data, and charts in business-related projects. Learn database concepts through Access. Prereq: BUS 171 or permission and touch type 45 correct wpm.

**BUS 175 (5) S****Applied Business Statistics**

Intro to concepts and techniques used extensively in public and private sector decision-making, including statistical techniques in accounting, finance, marketing, production, and personnel management. Focuses on real data applications, active learning, quantitative privacy and statistical thinking, and using computer software. Prereq: BUS 110 or MATH 098.

**BUS 177 (5) S****Spreadsheets**

Learn and use Microsoft Excel to manipulate numbers, track sales and expenses, and create budgets and charts to help make informed business decisions. Use calculations and pre-defined formulas to organize data, process statistical information, and more. Prereq: BUS 169 or equivalent.

**BUS 179 (5) S****Word Processing**

Covers comprehensive word processing, using Microsoft Word. Includes basic skills and more advanced techniques, such as tables, envelopes, templates, and mail merge. Prereq: BUS 169 or 170 or equivalent.

**BUS 181 (5) N****Intro Desktop Publishing**

Learn to combine text and graphics to create publications using a popular software package. Course addresses both tool and craft issues. In addition to gaining skill with the computer and software, students learn basic skills and layout skills. Prereq: Prior computer experience.

**BUS 182 (5) S****Info & Database Management**

Study the basic alphabetic, numeric, subject, and geographic filing principles necessary to manage filing systems, as established by the Association of Records, Managers and Administrators (ARMA International). Includes computer practice using a database software simulation. Intro to Microsoft Access database features.

**BUS 186 (5) N****Sustainable Business**

Examines the relationships between business, social and economic development, and the environment. Explores how emerging technologies are reshaping energy utilization and management for businesses and their communities. Prereq: BUS& 101 or permission.

**BUS 197 (1-15) C,S****Business Information Technology Internship**

Provides practical work experience and employment contacts by integrating academic studies with actual on-the-job training. Orientation to Internships required prior to registration. Prereq: Permission.

**BUS 200 (5) N,S****Law and Society**

Fundamental concepts, structure, and function of the American legal system. Emphasis on the role of law in society rather than on the rules of law. Includes sources of law, court systems, dispute resolution, constitutional law, torts, criminal law, contracts, and legal reasoning.

**BUS& 201 (5) C,N,S****Business Law**

Covers nature, development, and operation of principles of business law relating to contracts, commercial paper, corporations, agency, partnerships, and sales.

**BUS 205 (5) N****Human Resource Management**

Analyzes basic functions of supervisory-level management, with emphasis on skills needed to be an effective leader/manager of a diverse work force. Covers management functions of planning, organizing, directing, evaluating, and skill development in effective communication, motivation, problem-solving, managing conflict, and selecting employees.

**BUS 207 (5) N****Intro to Legal Resources**

Study the concepts of law and evidence, the different types of laws (constitutional, statutory, regulatory, and case/common), how laws are made, how they impact one another, and which laws prevail in conflicts. Learn to access and use codes, reports, digests, and find needed non-legal information. Covers operation of law firms and legal agencies. Prereq: BUS 147.

**BUS 210 (5) C,N,S****Business & Economic Statistics**

Studies statistical methods and their application to business and economic data. Prereq: MATH 098 or 116.

**BUS 214 (5) N****Retail Management**

Students will learn the specifics of managing retail establishments of many types. Topics covered will include basic supervision skills, types of retail establishments, retail organizational structures, customer databases, integrated systems and technology in retail, and typical retail manager functions, such as scheduling, merchandising, ordering, customer service, training, and hiring of employees.

**BUS 215 (5) N****Intro to International Trade Business**

Studies business operations, private enterprise, and governmental relationships in a world environment, including investments, marketing, transportation, trade agreements, management, production decisions, and financial analysis. Recommended: Prior business experience.

**BUS 216 (5) C,N,S****Professional Development**

Learn to develop positive mental attitudes and examine useful techniques for personal and professional success. Emphasizes various aspects of career development.

**BUS 220 (5) N****Business Finance**

Businesses must choose what assets to purchase and how to pay for them. Learn how businesses optimally raise funds while making net contributions to value. Includes financial risk and return; capital markets, structure, and cost; and international finance issues. Prereq: BUS 116, either ACCT 110, 201, or 215, or permission.

**BUS 226 (5) N****Advertising & Sales Promotion**

This course presents elements of advertising and sales promotion. Students will gain an understanding of strategy, branding, lead generation, messaging, creative choices, selection of appropriate media – traditional and digital, developing an integrated marketing communications plan, and tracking and analyzing campaigns. The class will also study the social, ethical, and economic aspects of advertising and promotion. Required: ENGL&101 or ENGL&235. Strongly recommended: BUS 114.

**BUS 227 (5) N****Digital Marketing**

Students learn the fundamentals of digital marketing, including search engine optimization (SEO), search engine marketing (SEM), display advertising, content creation, e-mail marketing, social media strategy, mobile marketing, and analytics/measurement. Students have opportunities to experiment with these methods and also learn the importance of building an integrated marketing strategy. Prerequisite: ENGL&101 or ENGL&235. Recommended: BUS 114 Intro to Marketing or marketing experience.

**BUS 229 (5) N****Project Management**

Define and sequence project tasks using MS Project software. Complete a project using Project Management elements, project plan, and budget. Work with resource allocations, critical path, dependencies, estimating, risk management, contingency planning, implementation, and evaluation. Prereq: BUS 118, 169, and 236.

**BUS 230 (5) N,S****Business Communications**

Develop effective business writing skills through preparation of letters, reports, memoranda, and employment documents. Emphasizes intercultural aspects of communication. Prereq: BUS 131. Recommended: BUS 104 (S) or BUS 105 (N).

**BUS 235 (5) S****Oral Communications – Business**

Covers listening, speaking, nonverbal communication, effective business meetings, parliamentary procedures, telephone and interview techniques. Prereq: BUS 131 or ENGL& 101 with 2.0 or higher.

**BUS 236 (5) N****Interpersonal Communication Workplace**

Learn interpersonal communication styles and effective ways to adapt communication to meet business needs. Improve understanding of cultural diversity, nonverbal communication, and individual influences on communication. Includes techniques for making informal and formal business presentations and preparations for employment interviews.

**BUS 237 (5) N****Team Skills in Workplace**

Explore aspects of successful teams and examine the importance of assessing and recognizing individual team member skills. Prereq: BUS 236.

**BUS 240 (5) C,N****Internet Law**

Explores legal issues and topics directly related to the internet: copyright, trademark, and service mark rights; privacy; contractual issues surrounding work-products; web site development and licensing agreements; employment issues, including discrimination and monitoring of employee e-mail; censorship; domain name registration; and defamation or CyberSlander. Provides an overview of the basics of constitutional law, contracts, torts, regulations, criminal law, and personal law as needed.

**BUS 245 (5) N****International Trade Global Market**

Examine the many facets of global marketing and its impact on the global consumer in an era of unmatched consumer awareness and heightened cultural identity.

**BUS 255 (5) N****Business Ethics**

Addresses the fundamental questions of ethical and moral behavior in corporate boardrooms and company meeting rooms in organizations large and small. Examines corporate culture, corporate governance, stakeholder responsibility, social responsibility, and the importance of business ethics in a global economy.

**BUS 280 (5) N****Business Data Analytics**

Using business software and statistical methods, business analytics focuses on developing awareness and understanding of business results and performance. Businesses need to make meaning of the incredible volume of data that they now manage. In this course, learn how to convert data into useful information for decision-making using Microsoft Excel. Also, explore the interaction of business data with business culture, including the unintended consequences of misinformed decisions.

**BUS 298 (1-5) C,N,S****Special Topics: Business**

Prereq: Permission.

**BUS 299 (1-5) C,N,S****Special Topics: Business**

Individual or group study projects on topics in the field of business. Prereq: Permission.

**Business Skills****SSW 090 (0) S****UPS Package Handling**

A 10 week pre-employment course designed to provide students with the knowledge and skill base to enter the parcel workplace, specifically the UPS environment. Critical to success is the ability to follow both verbal and written directions with accuracy and speed, to pass the physical requirements, and to comply precisely with the safety and hazardous materials procedures. Emphasis is placed on UPS concepts, expectations, work culture, and the UPS terminology.

**SSW 094 (1-8) S****Taking the First Step**

An introduction to the workplace, including the basic standards, tools, and expectations. Students will identify and reduce barriers to success and will learn basic critical thinking and problem solving skills. This course is competency based. Each student will be assessed in written and oral communication, math proficiency, and computer literacy. The student will develop skills in each area through individual and group work.

**SSW 095 (1-8) S****You & the Workplace**

Students examine own personal values, traits, and skills as they relate to the workplace. This course focuses on self-esteem, its effects on one's career, maintenance, and success in one's chosen work. This course is competency based. Each student will be assessed in written and oral communication, math proficiency, and computer literacy. The student will develop skills in each area through individual and group work.

**SSW 096 (1-8) S****Contemporary Issues in Business**

An introduction to business basics, contemporary issues, and tools needed to be successful in the career of choice. This course will help each student identify career choice and the skills needed. Also, decision making, personal life organization, team work, and planning for the future will be discussed. This course is competency based. Each student will be assessed in written and oral communication, math proficiency, and computer literacy. The student will develop skills in each area through individual and group work.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**  
**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**SSW 097 (8) S**  
**Teamwork Fundamentals**

Exploration of teamwork within the workplace; its place as it relates to coworkers, supervisors, and customers; and leadership development. This course is competency based. Each student will be assessed in written and oral communication, math proficiency, and computer literacy. The student will develop skills in each area through individual and group work.

**SSW 098 (8) S**  
**Develop Workplace Skills**

Exploration of the practical aspects of getting and keeping a job as well as working within the working culture successfully. Students investigate roles and responsibilities, unions, various forms of discrimination, sexual harassment and employment guidelines. This course is competency based. Each student will be assessed in written and oral communication, math proficiency, and computer literacy. The student will develop skills in each area through individual and group work.

**SSW 099 (8) S**  
**Employment Search Basics**

A culmination course designed to prepare students for immediate employment. Each student will prepare a portfolio which will consist of documentation of work experience, employment options, samples of business communications, projects, and resumes. Students will develop basic interviewing skills. This course is competency based. Each student will be assessed in written and oral communication, math proficiency, and computer literacy. The student will develop skills in each area through individual and group work.

**SSW 101 (6) S**  
**Work Ethic: Business Communications/ Mathematics/Technology**

Exploration of the basic standards commonly expected by businesses in an office environment. In light of employment and career goals, students assess their own personalities, traits, attitudes, and behavior styles, and explore methods of managing stress. In addition, they explore organization and management styles. The business communications, mathematics, and computer skills components support and reinforce the basic principles. The Business Communications, Mathematics, and Technology portions are highly individualized. Each student is pre-assessed, and individualized learning plans are developed in consultation with the student.

**SSW 102 (6) S**  
**Business Structure: Business Communications/ Mathematics/Technology**

An overview of the basics of business, how it is organized, what are the major types, and how it is structured. Students explore business essentials as it relates to employment. The Business Communications, Mathematics, and Technology portions are highly individualized. Each student is pre-assessed, and individualized learning plans are developed in consultation with the student.

**SSW 103 (6) S**  
**You/Business Partnership**

The course focuses on matching employment to student goals and objectives. Exploration of corporate culture, employer expectations, and basic networking strategies. Each student will develop or expand employment strategy. The business communications, mathematics, and computer skills components support and reinforce the basic principles. The Business Communications, Mathematics, and Technology portions are highly individualized. Each student is pre-assessed, and individualized learning plans are developed in consultation with the student.

**SSW 104 (6) S**  
**Focus #1: Business Communications/ Mathematics/Technology**

Exploration of the many aspects of customer service in business, with special emphasis on presenting a positive and helpful image of the company to the outside. Will develop skill in telephone techniques and handling routine and special customers. The Business Communications, Mathematics, and Technology portions are highly individualized. Each student is pre-assessed, and individualized learning plans are developed in consultation with the student.

**SSW 105 (6) S**  
**Exploring Your Options**

This course explores the fundamentals of locating a job or career. Students use self-assessment tools to match their selected careers and construct a specific strategy and plan of action.

**SSW 106 (6) S**  
**Bringing It Together**

The application of knowledge and skills to succeed in the office environment. Will polish learned skills, including interviewing, goal setting, effective communication, record and bookkeeping, and computer skills.

**SSW 120 (16) S**  
**Hospitality Careers Training**

A short-term program designed to provide skills needed for employment in hospitality careers. This program emphasizes practical skill development and application of policies and procedures within the company guidelines.

**SSW 130 (18) S**  
**Intro to Manufacturing**

A program designed to introduce the student to the world of manufacturing and provide both an overview and sufficient specific skills to enter the manufacturing field. This includes review of basic math skills, terms, and equipment commonly used in manufacturing, safety procedures and practices, print interpretation, workplace practices and standards, problem solving, and hands-on application.

**Business Technology Management**

**BTM 098 (3) C**  
**Computing Essentials**

Presents common concepts and principles for effective use of current technologies. Covers basic technology vocabulary, general uses and functions of computers, mobile devices, software applications, and the Internet. Designed for students with little or no experience using computers and/or the Internet for academic and professional purposes. Prereq: Placement into ENGL 092/ESL 093 or equivalent and basic keyboarding skills (United States keyboard).

**BTM 100 (2) C**  
**Orientation and Career Exploration**

Provides the skills and knowledge necessary to develop and pursue a career plan. Includes identification of personal strengths, values, and interests, and evaluation of careers compatible with personal preferences. Provides key career resources, practice in career search skills, and career and education strategies to reach goals.

**BTM 101 (2) C**  
**Word**

Introduces key concepts and software to develop and create business documents. Topics include document design, creation, formatting, layout, output, graphics, tables, citations, and sharing documents. Prereq: None. BTM 098 or BTM 111 recommended.

**BTM 102 (2) C**  
**Excel**

Introduces key concepts to develop and analyze business spreadsheets. Topics include formulas, formatting, functions, charts, and working with multiple workbooks. Prereq: Recommended BTM 111.

**BTM 103 (2) C**  
**MS PowerPoint**

Create, collaborate, and effectively present your ideas with the leading presentation software. Create, edit, and add dynamic multimedia effects to engage business and related audiences.

**BTM 104 (2) C**  
**Photoshop**

Introduces Photoshop using the array of tools for editing digital photos, scanned photographs, and creating photo-realistic images. Prereq: Recommended BTM 111.

**BTM 105 (2) C**  
**Adobe InDesign****BTM 106 (3) C**  
**Keyboarding**

Keyboarding using Word for students with little or no typing experience. Includes alpha/numeric keyboard and word processing of correspondence documents. May be taken for S/NC grade.

**BTM 107 (3) C**  
**Speed Building**

Development of keyboarding speed and accuracy through hands-on and timed exercises. May be taken for S/NC or decimal grade. Prereq: Recommended keyboarding speed of 25 net wpm.

**BTM 108 (3) C**  
**Applied Business Math I**

Discusses whole numbers, fractions, decimals, percentages, and applied case studies using these operations to solve everyday business math problems. Prereq: Eligibility Math 081.

**BTM 109 (5) C**  
**Business Communications I**

Review and refine basic English grammar, spelling, punctuation, and word usage skills to effectively compose basic business documents. Prereq: Eligibility ENGL 097 or equivalent.

**BTM 111 (5) C**  
**Business Applications I**

Introduction to word processing, spreadsheets, and personal information management, database, and presentation software. Includes creating letters, business correspondence, spreadsheets, tables and queries, and presentations commonly used in business settings. Prereq: Recommended BTM 098.

**BTM 112 (5) C**  
**Business Applications II – Data Analysis w/ Excel**

Explores the use of Excel data analysis tools to transform data from many sources into effective business intelligence reporting solutions for any organization. Emphasis on introducing advanced query editing, pivot table creation, and interactive summary visualizations. Prereq: BTM 111 with 2.0 or higher or instructor's permission based on equivalent experience.

**BTM 113 (5) C**  
**Business Applications III**

Introduces students to advanced MS Office applications skills, along with cloud-based, client-side computing. Students learn content management sites to manage their work and participate in team projects. Prereq: BTM 111 and BTM 112, each with a 2.0 or higher.

**BTM 118 (5) C**  
**Applied Business Math II**

Covers applied business statistics, invoices, trade and cash discounts, markups and markdowns, payroll, depreciation, compound interest, and solving equations. Includes use of spreadsheet software to analyze business data. Prereq: BTM 108 with a minimum grade of 2.0.

**BTM 119 (5) C**  
**Business Communications II**

Further develops business English grammar, punctuation, and word usage skills to compose effective, complex business documents. Develops research, business report writing, and documenting skills. Includes practice of techniques and strategies for effective oral presentations. Covers planning, facilitating, and documenting business meetings. Prereq: BTM 109 with a minimum course grade of 2.0.

**BTM 120 (5) C**  
**Customer Relations Management**

Develops skills to identify and resolve customer complaints, handle difficult customers, utilize effective verbal and nonverbal communication methods, and use customer relationship management systems. Covers appropriate professional use of various electronic media. Provides skills to contribute positively to the service culture of an organization. Examines future trends and changes in global work environments. Prereq: Eligibility ENGL 097 or equivalent.

**BTM 122 (5) C**  
**Professional Development**

Course designed to enhance positive attitude, professional and personal comportment, collaborative techniques, and comprehensive presentation skills to achieve personal and professional success in global interactions.

**BTM 197 (1-5) C**  
**Work Experience – Business Technology Management**

Integrates educational studies with supervised internship work experience. Provides individualized opportunities to apply Business Technology Management knowledge and skills in the workplace. Includes setting of work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Instructor's permission. Coreq: Must be employed, interning, or volunteering in a position approved by program faculty or the Cooperative Education office.

**BTM 217 (5) C**  
**Web Development and Development**

Introduces website design and development using Hypertext Markup Language (HTML) along with Cascading Style Sheet (CSS). Focuses on designing and developing webpages with hand-coded HTML elements in conjunction with managing website file structure and project. Includes common webpage design formats and functions, with a focus on User Experience and User Interface (UX/UI) design. Prereq: BTM 111 recommended.

**BTM 218 (4) C**  
**Web Design with Dreamweaver**

The course introduces Dreamweaver, software for Web page development.

**BTM 225 (5) C**  
**Marketing Fundamentals**

Introduces Adobe Dreamweaver, a software program for webpage and website development. Includes creation of simple webpages as well as dynamic and comprehensive websites. Covers a range of Web design concepts and webpage elements, such as HTML, CSS, and JavaScript. Almost no hand-coding is involved. Prereq: BTM 111 recommended.

**BTM 226 (3) C**  
**Small Business Startup**

Introduces steps to starting a small business. Learn to select the most appropriate form of business ownership, register a business name, and access and complete required local, state, and federal legal documents. Study trademarks, copyrights, and patents. Examine ways to finance a business. Present start-up proposals to community business professionals for review. Prereq: Instructor's permission.

**BTM 227 (3) C**  
**Entrepreneurship Toolkit**

Introduces entrepreneurial and small business principles and skills. Explores entrepreneur opportunities and interests. Includes development of a small business entrepreneur venture plan.

**BTM 228 (5) C**  
**Small Business Management**

Covers the skills necessary to successfully start, improve, and manage a small business, including business plan creation, marketing, copyrights/patents, prototyping, and cash flow.

**BTM 231 (5) C**  
**Applied Accounting I**

Students will learn the "language of business Accounting." This includes the terminology, definitions, principles, and rules of accounting. Students will learn the entire accounting cycle by setting up both a manual and computerized accounting system and how to analyze, classify, and enter transactions into the system. Students will know how to create and interpret financial statements in accordance with GAAP rules. Prereq: BTM 108.

**BTM 232 (5) C**  
**Applied Accounting II**

Covers complex business situations in a small business and corporate setting, focusing on plant and equipment, depreciation, short- and long-term liabilities, formation of partnerships and corporations, cash flows, financial statements, and ratios in accordance with Generally Accepted Accounting Principles (GAAP). Completion of the three-course series provides preparation for the certified bookkeeper exam. Prereq: BTM 231 with minimum grade of 2.0.

**BTM 233 (5) C**  
**Applied Accounting III**

Covers payroll, including computing wages, salaries, and withholdings, and fulfilling filing requirements of state and federal forms. Includes basic business taxation, tax planning, and record keeping, as well as comparisons of for-profit and non-profit businesses. Also covers internal audits and master budgets. Completion of the three-course series provides preparation for the certified bookkeeper exam. Prereq: BTM 232 with a minimum grade of 2.0.

**BTM 236 (5) C**  
**Supervision Leadership**

Introduction to first-line supervision management, covering total responsibilities of a supervisor. Includes the function of management, human relations and motivation, effective communications, systems concepts, and problem-solving.

**BTM 237 (5) C**  
**Human Resource Management**

Introduction to organizational structure of the modern business office, recruitment and training, management of human resources, employee rights and ethical issues, legal responsibilities, and team-oriented collaboration for human relation dynamics.

**BTM 240 (5) C**  
**Applied Database Design**

Introduces the concepts and application of designing and building relational database models in solving business database problems. This will include using basic Structured Query Language (SQL) and database software to build database applications. Prereq: BTM 111 minimum grade of 2.0 recommended or instructor permission.

**BTM 245 (5) C**  
**Business Process Management**

Examines the creation, improvement, automation, and mapping of a set of procedures (e.g., a business process) to improve an organization's internal and external activities or workflows so that it may more efficiently deliver the wants of its clients.

**BTM 250 (5) C**  
**Records Information Management**

Examination of manual and digital record management systems currently used in industry. Introduction and application of the following filing/management systems: Alphabetic (as established by ARMA International), geographic, numeric, and subject. Access 2016 will be used to design, create, maintain, update, and integrate an electronic filing system. Prereq: BTM 211 is recommended.

**BTM 260 (5) C**  
**Project Management**

Overview of project management from a business and IT perspective, including project estimation, feasibility, planning, risk management, contingency planning, scheduling, control, and Agile project methodology. Examine and evaluate project planning techniques, budget estimation, resource allocations, critical path dependencies, risk management, contingency planning, implementation, and evaluation, and complete a project. Prereq: BTM 111 with a 2.0 or higher or instructor's permission.

**BTM 275 (5) C**  
**Computer User Support**

Introduces students to the fundamentals of help desk operations. Emphasizes the basic components of a successful help desk, provides students with working knowledge of software to process and track calls, and presents hands-on experience with problem analysis. Prereq: BTM 111 with a 2.0 or higher or instructor's permission.

**BTM 278 (5) C**  
**Organizational Behavior**

Focuses on a variety of factors that influence organizational behavior, including the structure, policies and procedures, management effectiveness, and interactions of individual groups and workplace environments. The impact human behavior has on job performance, communication, motivation, and leadership will be used to study how they affect organizational identity, design, innovation, change, and many other roles that shape organizations. Prereq: Eligibility for ENGL 096.

**BTM 298 (5) C****Special Topics**

Designed to allow for special course offerings and new course development on topics relevant to new and emerging computer and technology applications and industry needs. Prereq: Permission.

**BTM 299 (1-5) C****Independent Study**

An independent study course for Business Technology Management students who need to fulfill degree requirements under the approval and supervision of faculty. Prereq: Permission.

**Chemical Dependency**

See *Service Learning*, page 372.

**Chemistry****CHEM 106 (5) N,S****Intro to Food Science**

Studies the biological and chemical consequences of food preparation. Explores questions such as why cut potatoes turn brown, why starch thickens sauces, and why bread rises. Lab.

**CHEM& 110 (5) C,N,S****Chemical Concepts with Lab**

Stresses a humanistic approach to chemistry and de-emphasizes mathematical problem-solving. Reveals chemical principles, facts, and theories through practical applications, computer graphic illustrations, and experiments. Includes lab. Prereq: Eligibility for MATH 084, 87, or 91. Completion of ENGL & 101 with a 2.0 or better (C).

**CHEM& 121 (5) C,N,S****Intro to Chemistry**

Fundamental inorganic chemistry, including bonding, stoichiometry, gas laws, and acid/base topics. Of particular interest to Health Science and Biotechnology students. Lab included. Prereq: One year of high school algebra or MATH 085. Prereq: Eligibility for MATH 084, 87, or 91. Completion of ENGL & 101 with a 2.0 or better (C).

**CHEM& 122 (5) C,N****Intro to Organic Chemistry**

Continuation of organic chemistry and intro to biochemistry. Lab included. Prereq: CHEM& 121.

**CHEM& 123 (5) C,N****Intro to Biochemistry**

Explores the role of biochemistry in modern society. Covers functional groups, carbohydrates, amino acids, lipids, nucleic acids, steroids, genetics, and pharmaceuticals. Lab included. Prereq: CHEM& 122.

**CHEM& 131 (5) C,N,S****Intro to Organic/Biochemistry**

Covers the structure, properties, and reactions of various organic compounds, including hydrocarbons, alcohols, aldehydes, ketones, carboxylic acids, and amines. Examines complex compounds found in living systems: carbohydrates, lipids, proteins, and nucleic acids. Lab focuses on analysis and separation techniques. Prereq: CHEM& 121 with 2.0 or higher.

**CHEM& 139 (5) C,N,S****General Chemistry Prep Lecture I**

Includes chemical mathematics, basic atomic structure, chemical bonding, chemical equation balancing, mole concept, and chemical stoichiometry. Prereq: MATH 098 with a 2.5 or higher (C).

**CHEM& 161 (6) C,N,S****General Chemistry w/Lab I**

For science majors. A three-quarter sequence introducing basic concepts of chemistry: structure and bonding, chemical reactivity, physical measurement, stoichiometry, structure of matter, gas laws, intermolecular forces, solutions, chemical kinetics, equilibrium, acid/base, thermodynamics, redox, and electrochemistry. Fulfills the QSR requirement for A.A. degree. Satisfies the general chemistry requirement for science majors and various pre-professional programs. Several pre-engineering and other programs require only CHEM& 161 and 162. Prereq: CHEM& 139 (or passing grade on placement exam) and MATH& 141 with 2.0 or higher.

**CHEM& 162 (6) C,N,S****General Chemistry w/Lab II**

For science majors. Covers chemistry principles, structure of matter, atomic and molecular theory, the elements, quantitative relationships, nuclear chemistry, aqueous solutions, kinetics, chemical thermodynamics, oxidation and reduction, electrochemistry, periodicity, equilibrium systems, qualitative analysis, and organic chemistry. Fulfills the QSR requirement for A.A. degree. Prereq: CHEM& 161.

**CHEM& 163 (6) C,N,S****General Chemistry w/Lab III**

For science majors. Covers chemistry principles, structure of matter, atomic and molecular theory, the elements, quantitative relationships, nuclear chemistry, aqueous solutions, kinetics, chemical thermodynamics, oxidation and reduction, electrochemistry, periodicity, equilibrium systems, qualitative analysis, and organic chemistry. Fulfills the QSR requirement for A.A. degree. Prereq: CHEM& 162.

**CHEM 191 (9) C,N****General Chemistry**

CHEM 191 and 192 are equivalent to CHEM& 161, 162, and 163. Explores the principles of chemistry, structure of matter, atomic and molecular theory, the elements, periodicity, quantitative relationships, nuclear chemistry, aqueous solutions, oxidation, and reductions. Both courses fulfill QSR requirement for A.A. degree. CHEM 191 prereq: CHEM& 139 or passing score on chemistry placement exam and MATH 102 or MATH& 141; CHEM 192 prereq: CHEM& 162.

**CHEM 192 (9) C,N****General Chemistry**

CHEM 191 and 192 are equivalent to CHEM& 161, 162, and 163. Explores the principles of chemistry, structure of matter, atomic and molecular theory, the elements, periodicity, quantitative relationships, nuclear chemistry, aqueous solutions, oxidation, and reductions. Both courses fulfill QSR requirement for A.A. degree. CHEM 191 prereq: CHEM& 139 or passing score on chemistry placement exam and MATH 102 or MATH& 141; CHEM 192 prereq: CHEM& 162.

**CHEM 211 (5) C,N****Quantitative Analysis for Biotech**

Theories, principles, and methods of gravimetric, volumetric, and instrumental analysis. Lab included. Prereq: CHEM& 123 or CHE 103.

**CHEM& 241 (4) C,N****Organic Chemistry I**

Structure, nomenclature, reactions, and synthesis of the main types of organic compounds. Prereq: CHEM& 163.

**CHEM& 242 (4) C,N****Organic Chemistry II**

Further discussion of physical properties and transformations of organic molecules, especially aromatic and carbonyl compounds. Prereq: CHEM& 241.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**CHEM& 243 (4) C,N**  
**Organic Chemistry III**

Polyfunctional compounds and natural products, lipids, carbohydrates, amino acids, proteins, and nucleic acids. Prereq: CHEM& 242.

**CHEM& 251 (4) C,N**  
**Organic Chemistry Lab I**

Preparation of representative compounds. Prereq: CHEM& 241 or concurrent enrollment.

**CHEM& 252 (4) C,N**  
**Organic Chemistry Lab II**

Preparations and qualitative organic analysis. Prereq: CHEM& 242 or concurrent enrollment and CHEM& 251.

**CHEM 255 (3) N**  
**Biochemistry I**

First of two courses. Survey of basic principles of biochemistry and molecular biology, emphasizing chemical events in living systems in terms of metabolism and structure-function relationships of biologically important molecules. For chemistry, biochemistry, medicine, dentistry, pharmacy, or medical technology majors.

**CHEM 256 (3) N**  
**Biochemistry II**

Second of two courses. Survey of basic principles of biochemistry and molecular biology. Covers chemical events in living systems in terms of metabolism and structure-function relationships of biologically important molecules. For chemistry, biochemistry, medicine, dentistry, pharmacy, or medical technology majors. Prereq: CHEM 255 with 2.0 or better.

**CHEM& 261 (6) S**  
**Organic Chemistry w/Lab I**

The first course in a three-quarter sequence includes molecular structure and bonding, acid-base chemistry, nomenclature, reactions and synthesis of hydrocarbons, stereochemistry, and an introduction to reaction mechanisms. This sequence satisfies the organic chemistry requirements for science and engineering majors and for various programs, such as pre-medical, pre-dental, pre-pharmacy, and other pre-technical disciplines. Format includes laboratory work. Prereq: CHEM& 163 with a 2.0 or higher.

**CHEM& 262 (6) S**  
**Organic Chemistry w/Lab II**

The second of a three-course series in organic chemistry includes structures, reactions, mechanisms, and preparation of molecules containing specific functional groups, as well as spectroscopic analysis. This sequence satisfies the organic chemistry requirements for science and engineering majors and for various programs, such as pre-medical, pre-dental, pre-pharmacy, and other pre-technical disciplines. Format includes laboratory work. Prereq: CHEM& 261 with a 2.0 or higher.

**CHEM& 263 (6) S**  
**Organic Chemistry w/Lab III**

The third of a three-course series in organic chemistry includes further study in the synthesis, reactivity, and properties of a variety of functional groups, including carbonyls, as well as biologically relevant molecules. This sequence satisfies organic chemistry requirements for science and engineering majors and for programs such as pre-medical, pre-dental, pre-pharmacy, and other pre-technical disciplines. Format includes laboratory work. Prereq: CHEM& 262 with a 2.0 or higher.

**CHEM 298 (1-5) C,N**  
**Special Topics**

Seminar of selected topics and/or activity in the chemical sciences. Prereq: Variable, dependent on topic.

**CHEM 299 (1-5) C,N**  
**Special Topics**

Chemistry Independent study of approved topics in the chemical sciences. Prereq: CHEM& 163 and permission.

**Chinese**

*See Languages & Literature, page 318.*

**Communication**

**CMST& 101 (5) C,N,S**  
**Introduction to Communication**

Intro to communication as a transactional process, with attention to personal, cultural, group, and public communication. Covers verbal and nonverbal messages, listening, self-concept, and perception. Prereq: Placement into ENGL& 101.

**CMST& 102 (5) C**  
**Introduction to Mass Media**

History and impact of the mass media, from hieroglyphics through print, advertising, radio, TV, movies, and the Internet. Critically read media "texts" and analyze the effects on individuals and cultures. Prereq: ENGL& 101 placement.

**CMST 115 (5) C,N**  
**Overcoming Communication Anxiety**

For individuals who have apprehension or nervousness about giving presentations and working with others. Apply emerging social and scientific research on self-esteem, assertiveness, and cross-cultural awareness to their own communication perceptions, expectations, and proficiencies. Recommended for domestic as well as immigrant and international students. Prereq: Placement into ENGL 095/096 or higher or permission.

**CMST 145 (5) C,N**  
**Gender and Family Communications**

Theoretical and practical perspectives on the complex, lifelong relationships among and between females and males. Similarities and differences in gender and culturally based communication and behavior in a variety of contexts and situations, particularly within the family. Prereq: Placement into ENGL& 101.

**CMST 155 (5) C,N**  
**Argumentation and Public**

Concepts and strategies of rhetorical persuasion, integrated with procedures and practice in generating, presenting, and arguing ideas and issues within a public forum. Emphasizes audience research, thorough preparation, and the development of appropriate agendas, information, and policies for eventual group and/or public dialogue and decision-making. Prereq: Placement into ENGL& 101.

**CMST 175 (5) C,N**  
**Oral Interpretation**

Interpretation as an artistic process of studying literature and other texts through individual and group performance with an audience. Analyze and perform various texts in their aesthetic, intellectual, and emotional entirety. Prereq: Placement into ENGL& 101.

**CMST 185 (1-5) C,N**  
**Organizational Communications**

Identification, practice, and evaluation of communication styles and skills to achieve individual and organizational goals within corporate and non-profit cultures and settings. Practical professional orientation. Prereq: Placement into ENGL& 101.

**CMST 195 (5) N**  
**Media Management Operations**

Explores accepted theories, alternative perspectives, and actual practices of organizational communication, administration, and decision-making within media institutions. Covers internal and external participants, problems, solutions, and choice opportunities shaping corporate and non-profit behavior, performance, and change. Prereq: Placement into ENGL& 101.

**CMST 205 (5) C,N,S**  
**Multicultural Communications**

Study concepts of culture and the opportunities and challenges of multicultural communication in domestic settings. Focuses on the importance of culture in all human interaction; the variables which affect intercultural communication, including ethnicity, gender, and multicultural identities; and the influences of American culture around the world. Prereq: ENGL& 101.

**CMST& 210 (5) C,N,S**  
**Interpersonal Communication**

Covers principles and processes of human communication, including observations and applications, personal and cultural contexts, nonverbal and verbal interactions, multiple intelligence, perception, models, and definitions.

**CMST 215 (1-5) N**  
**International Communications**

Psychological and social dynamics of human interaction at the international level. Includes a variety of local and global issues, with attention to interpersonal ethics, political philosophies, economic policies, and communication systems. Prereq: ENGL& 101.

**CMST& 220 (5) C,N,S**  
**Public Speaking**

Covers the process of getting started with confidence; topic selection and research; and preparation and delivery of informative, persuasive, special occasion, and other forms of presentations. Prereq: Placement into ENGL& 101.

**CMST& 230 (1-5) C,N,S**  
**Small Group Communications**

Experience in and analysis of communication within groups, emphasizing the value of interdependent thoughts and efforts, active listening and empathizing, cooperative roles and tasks, power and conflict management, and collaborative decision-making and problem-solving. Prereq: Placement into ENGL& 101.

**CMST 235 (1-5) N**  
**Media Research, Marketing, and Sales**

Overview of the needs, opportunities, and methods for measuring phenomena in human and media communication, specifically applied to integrated marketing and sales promotion. Includes objectives, designs, and processes of inquiry; variables and measures in communication; measuring instruments and problems in sampling; and statistical analyses of data. Prereq: MATH& 146 or BUS 210 and ENGL& 101.

**CMST 240 (5) C**  
**Intro to Health Communications**

Introduction to Health Communication examines the psychological and persuasive appeals aimed at promoting behavioral change with the design and implementation of a health education campaign. Students develop a health education campaign integrating theories of behavioral change, persuasion, cultural competence, health literacy, social marketing, and mediated messages. Prereq: ENGL& 101 with a minimum GPA of 2.0.

**CMST 245 (5) C,N,S**  
**Media Communications and Criticism**

Contemporary perspectives on the transformation of human interaction through media-based communication. Evaluates the content of modern criticism within the context of the cultural and economic marketplace of ideas and values. Prereq: ENGL& 101.

**CMST 255 (5) C,N**  
**Writing for Organizations & Media**

Basics of writing effectively for organizations, print, and electronic media. Communication strategies, formats, and media used by individuals within organizations to convey messages to internal and external audiences. Create individual writing portfolios. Prereq: ENGL& 101.

**CMST 265 (5) C,N**  
**Media Relations/Ethics**

Covers current trends in and ethical issues about the generation, maintenance, and dissemination of effective communications which define and promote corporate and non-profit media organizations. Study their relationships with internal cultures and external communities, including investors, shareholders, clients, analysts, government organizations, other media, and consumers. Prereq: ENGL& 101, ENGL& 102 or BUS 131, CMN 195.

**CMST 275 (1-5) C,N,S**  
**Online Communications**

Survey of communication issues and applications emerging from the ongoing development and use of digitized media. Focus on functioning effectively within the frontier environment of cyberspace. Write and prepare material for digital formats. Prereq: ENGL& 101 and 102; or permission; access to the Internet; and basic email and word processing skills.

**CMST 285 (5) C,N**  
**Current Topics in Communications**

Timely, multidisciplinary approaches to interpersonal, group, organizational, intercultural, and media communication. Prereq: ENGL& 101 and 102 or permission.

**CMST 290 (5) C,N**  
**Media Project Practicum**

Learn guidelines for managing client accounts and techniques for coordinating media productions. Emphasizes critical thinking, problem-solving, managerial and creative skills in professional situations and media formats. Prereq: Placement into ENGL& 101.

**CMST 291 (5) C,N**  
**Internet/Print Practicum**

Integrate scholarly and professional analyses of Internet and print media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating online and print media productions. Increase critical thinking, problem-solving, managerial and creative skills with online and print material. Prereq: BUS 229 or CMN 130, ENGL& 101.

**CMST 292 (5) C,N**  
**Radio/Audio Practicum**

Integrate scholarly and professional analyses of radio and other audio media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating aural media productions. Increase critical thinking, problem-solving, managerial and creative skills with aural material.

**CMST 293 (5) C,N**  
**Television/Video Practice**

Integrate scholarly and professional analyses of television and other video media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating visual media productions. Increase critical thinking, problem-solving, managerial and creative skills with visual material.

**CMST 294 (5) C,N**  
**News/Public Info Practice**

Integrate scholarly and professional analyses of news and public information media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating informational media productions. Increase critical thinking, problem-solving, managerial and creative skills for developing and presenting informational material.

**CMST 295 (1-5) C,N**  
**Studies and Works in Communications**

Analytical study or creative work in Communication. Prereq: ENGL& 101 and 102, an approved learning contract/proposal, and permission.

**CMST 299 (1-5) C,N**  
**Special Projects in Speech**

Special projects in Communication.

**Community Policing****CPP 101 (5) C,S**  
**Intro to Community Policing**

Overview of the Seattle Police Department's function and operational procedures. Focuses on policing philosophy, theory, and procedure. Understand the different dynamics of the police profession and the progression of the policing philosophy.

**Computer Information Systems**

*Also see Computer Science, Computer Technology, Information Technology.*

**CIS 197 (1-5) C**  
**Work Experience: CIS**

Acquire computer-related work experience through jobs or internships.

**Computer Science**

*Also see Computer Information Systems, Computer Technology, Information Technology.*

**CSC 100 (5) S**  
**Beginning Computers**

Covers basic computer terminology; characteristics of hardware and software; capabilities, limitations, and problems associated with computers; intro to email and the Internet.

**CSC 102 (2) C**  
**Computers in Mathematics**

Introduction to software (such as Mathematic) used extensively in advanced math courses. Completion of self-paced tutorials to prepare for final exam. CSC 102B must be taken with MATH 116. CSC 102Q is strongly recommended for students in MATH& 151. First class is mandatory because it provides an introduction to the software. Prereq for CSC 102B: MATH 098, concurrent enrollment in MATH 116, or permission. Prereq for CSC 102Q: MATH& 142 or permission.

**CSC 110 (5) C,N,S**  
**Intro to Computer Programming**

An overview of computer program design and problem solving, with a focus on problem analysis, program development, testing, and debugging. Students will use decision and loop structures to develop a variety of programs to solve scientific and technical problems. Programming language used will be Python. Prereq: MATH 095 or MATH 098 with a 2.0 or higher. Computer fee.

**CSC 111 (5) C,N,S**  
**Computers for Math & Science**

Learn to create and manage your own website with images, links, and multimedia. Use spreadsheet software for scientific calculations and to create graphs. Create a complete presentation using presentation software. Design and build a simple database using database software. Enhance your website with simple programs. Includes introduction to computer hardware, networks, and privacy. Prereq: MATH 098 with a 2.0 or better. Lab fee. Transfers to UW as CSE/INFO 100.

**CSC 142 (5) C,N,S**  
**Computer Programming I**

General principles of modern programming, including how to design, implement, document, test, and debug computer programs, using the Java programming language. Topics include objects, messages, expressions, statements, methods, classes, conditionals, iteration, arrays, and collections. Prereq: MATH& 142 with a 2.0 or higher and CSC 110 with a 2.0 or higher. Computer fee. Transfer class.

**CSC 143 (5) C,N,S**  
**Computer Programming II**

Advanced concepts of modern programming that continue the ideas introduced in CSC 142. Topics include classes and interfaces, inheritance, graphics, exceptions, stream I/O, recursion, analysis of algorithms, and some dynamic structures (lists, stacks, trees). Uses the Java programming language. Prereq: CSC 142.

**CSC 198 (5) C,N,S**  
**Computer Workshop**

Covers computer topics as considered appropriate by the instructor and/or division. Topics may be chosen so as to supplement content in another course. Class format may vary from lecture to group problem solving to lecture. Prereq: Permission of instructor.

**CSC 273 (5) N,S**  
**Data Structures Algorithms**

Covers fundamental data structure and their algorithms and applications in problem solving by programming. Includes linked lists, stacks, queues, priority queues, binary and multi-way trees, directed graphs, hashing, internal and external sorting. Prereq: CSC 143 with 3.0 or better or permission.

**CSC 298 (10) C,N,S**  
**Special Topics**

A seminar of selected topics or activities in computer science. Prereq: Variable, dependent on topic.

**CSC 299 (1-5) C,N,S**  
**Independent Study**

Independent study of approved topics in computer science. Prereq: Permission.

**Computer Technology**

*Also see Computer Information Systems, Computer Science, Information Technology.*

**CTN 101 (5) S**  
**Intro to Computing Technology**

Learn the common hardware components of computing systems, including the technical knowledge to make decisions about hardware selection, configuration, and upgrading for software optimization. Covers basic network topologies and management schema. Prereq: CSC 100 or concurrent enrollment.

**CTN 120 (5) S**  
**Databases I**

Study of database concepts and applications using recent version of Microsoft Access. Includes practical experience setting up related database systems and developing tables, queries, forms, and reports. Prereq: CSC 100.

**CTN 121 (5) S**  
**Database II**

Advanced topics in MS Access: Create macros, switchboard, action queries, front-end Access/back-end SQL. Intro to SQL: create databases, SQL queries, and tables from script; use views, more join types. Includes SQL server: back-up techniques, security, user rights, and permissions. Prereq: CTN 120 with 2.0 or higher.

**CTN 131 (5) S**  
**Intro to Computer Programming**

Intro to computer programming using Microsoft Studio and/or other languages to explore elementary programming techniques. Use various control structures and modular program design and structural concepts. Prereq: CSC 100 (2.0 or higher) or permission.

**CTN 142 (5) S**  
**Operating Systems II**

Study the implementation and administration of the most recent Microsoft Windows operating system to help prepare for the Microsoft certification exams. Focus on general operating systems' architectural concepts, including file, memory, I/O, and process management methods. Learn UNIX and Windows operating systems' intrinsic structure and functionality. Prereq: CTN 101 (2.0 or higher) or permission.

**CTN 143 (5) S**  
**Operating Systems III**

Intro to the Linux operating system, including features and distributions, the X Window System, user commands, installation, administration, basic networking, and shells. Helps prepare the student for the CompTIA Linux+ certification exam. Prereq: CTN 142 with 2.0 or higher.

**CTN 160 (5) S**  
**Web Production I**

Intro to Internet media development using HTML 5, tables, forms, and CSS3. Learn how to deploy and test sites on a web browser. A final project is to build a website. Prereq: CSC 100 or permission.

**CTN 161 (5) S**  
**Web Production II**

Web development using streamlined development tools and responsive web design. Integrate graphics and complex code to produce professional quality websites. Tools used meet current industry standards. Prereq: CTN 160 (2.0 or higher) or permission.

**CTN 165 (5) S**  
**Usability Design**

Focuses on combining information architecture, design, usability testing, and technology. Learn to include usability testing at the start of the technology project and carry usability through the development cycle. Learn to analyze results and change the interface to reflect testing results. Prereq: CTN 160 with 2.0 or higher; ART 210 recommended.

**CTN 170 (5) S**  
**PC Hardware I**

Covers computer hardware repair and service training toward A+ certification prep. Focus on peripherals, software, and hardware designs. Covers work habits, customer interaction, reference materials, and basic linear troubleshooting. Includes choices, installation, configuration, and economic guidelines for repair or replacement decisions. Prereq: CSC 100, CTN 101 with 2.0 or higher or equivalent.

**CTN 171 (5) S**  
**PC Hardware II**

Preparation for the CompTIA A+ certification for hardware and software technologies. Develops knowledge and hands-on competencies in core hardware and operating system technologies, including installation, configuration, diagnosing, and preventive maintenance. Emphasizes customer interaction techniques and systematic approaches to troubleshooting. Prereq: CTN 170 with 2.0 or higher.

**CTN 173 (5) S**  
**Content Management Systems (CMS) – WordPress**

Using Word Press or similar software, students can accomplish basic and advanced tasks of inserting, updating, and deleting available information and content via the dashboard of the Content Management System (CMS). Includes installing, configuring, managing, and using CMS plug-ins and widgets. Theme creation and modification are taught. Prereq: CTN 160 (2.0 or higher).

**CTN 197 (1-15) S**  
**Computer Technology Internship**

Provides practical work experience and employment contacts by integrating academic studies with actual on-the-job training. Orientation to Internships required prior to registration. Prereq: Permission.

**CTN 202 (5) S**  
**Web Scripting**

Advanced HTML. Incorporate industry standard scripting languages in web pages. Include variables, functions, objects, and events; data types and operators and debugging code. May examine JavaScript, PHP, AJAX, and other languages. Prereq: CTN 160 and (CTN 131 or CTN 161) (2.0 or higher) or permission.

**CTN 224 (5) S**  
**Web Server Configuration & Management**

Focuses on building, maintaining, and optimizing web servers. Topics include security, user management, and authentication and access tracking. Prereq: CTN 101 and 160; CTN 270.

**CTN 270 (1-5) S**  
**Local Area Networks I**

Intro to networking concepts, terminology, and technologies, including history, OSI reference model, standards, common protocols, data translation techniques, data transmission processes, and network structures. Includes error handling, communication hardware, and popular network operation systems. Prereq: CSC 100. Recommended: CTN 101.

**CTN 274 (5) S**  
**Local Area Networks III**

Covers advanced topics in computer networking, including remotely installing operating systems; implementing network security; setting up directory services, such as Active Directory; designing and implementing policies; setting up and implementing print services; and configuring distributed file systems. Prereq: CTN 270 with 2.0 or higher.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**CTN 276 (5) S**  
**Virtualization & Cloud 1**

Learn how Cloud computing and virtualization technologies work. Covers differences between Cloud computing and virtualization; the technologies, TCO, and continuing costs; and decision guidelines. Discuss and use Xen, Hyper-V, VMware, and application level virtualization technologies. Prereq: CTN 142, 274 & 282 with 2.0 or higher.

**CTN 277 (5) S**  
**Network Security 1**

Intro to the concepts and practices used to guard organizational data and computer systems. Select and deploy practical and effective solutions used to identify, assess, and prevent external network threats. Covers Microsoft and Linux operating systems for server security, firewall security, and remote access solutions. Prereq: CTN 270.

**CTN 278 (3) S**  
**Wireless Communication I**

Intro to wireless communication and WLAN use, design, installation, security, and troubleshooting. Studies the 802.11 standards, including WLANs, Bluetooth, and cellular technology concepts. Learn how and why wireless communication works and how to select and setup the correct wireless devices for the best network solution. Prereq: CTN 270 or equivalent.

**CTN 281 (5) S**  
**Security+ Certification**

Prepares students for the latest CompTIA Security+ Certification Exam. Focus is on security risks, vulnerabilities, and solution concepts, including Infrastructure; access control; cryptography; physical, network, and operating system security strategies; assessments; and auditing. Uses the most recent distributed operating systems. Prereq: CTN 277 with 2.0 or higher.

**CTN 282 (5) S**  
**CISCO I**

Intro to networking official CCNA 5.0 – CCNA Routing and Switching. First of four-course Cisco training program which prepares the student for the Certified Cisco Network Associate certification exam. Includes building simple LANs, performing basic configurations for routers and switches, and implementing IP addressing schemes. Prereq: CTN 270 with 2.0 or higher.

**CTN 283 (5) S**  
**CISCO II**

CCNA 5.0 – CCNA Routing and Switching: Routing Protocols. Second of four-course Cisco training program which prepares the student for the Certified Cisco Network Associate certification exam. Includes Routing Concepts, Static and Dynamic routing, EIGRP, OSPF. Uses IPv4 and IP v6. Prereq: CTN 282 and pass the CCNA 1 final.

**CTN 284 (5) S**  
**CISCO III**

CCNA 5.0 – CCNA Routing and Switching: Switched Networks. Third of four-course Cisco training program. Covers the architecture, components, and operations of a converged switched network; Layer 2 switching protocols; and concepts, with the primary focus on VLANs concepts, configuration, security, and communication. Intro to WLANs, hierarchical design model, and switch configuration. Troubleshoot with Virtual LANs, VTP, and inter-VLAN routing in a converged network. Prereq: CTN 283 and pass Cisco (2) final.

**CTN 285 (5) S**  
**CISCO IV**

CCNA 5.0 – Connectivity Networks. Fourth of four-course Cisco training program. Study of WAN technologies and network services required by converged applications in a complex network. Includes selection criteria of network devices and WAN technologies, configuration and troubleshooting, resolving common issues with data link protocols, and implementation skills for IPSec and virtual private network operations in a complex network. Prereq: CTN 284 and pass the Cisco 3 final.

**CTN 286 (5) S**  
**Virtualization & Cloud 2**

Learn advanced management methods for virtualization technologies, such as VMware ESXi, XenServer. Install, configure, manage, and troubleshoot virtualization server products and guest operating systems. Gain practical experience with High Availability, VM migration, virtualized networking, SAN configuration, and data security concepts. Prereq: CTN 276 with 2.0 or higher or work experience equivalent or instructor permission.

**CTN 287 (5) S**  
**Cloud Computing**

Build a cloud server using Microsoft products (Hyper-V, SharePoint, and Azure) to understand the interactions of each and the advantages, the complexities, security issues, disadvantages, and seamless appearance from the users' view of the Cloud. Prereq: CTN 276 with 2.0 or higher or work experience equivalent.

**CTN 295 (5) S**  
**Research & Customer Service**

Learn effective customer service. Includes support desk techniques, infrastructure, and research methods to solve technical problems efficiently. Emphasizes customer interaction and soft skills. Accomplish, document, evaluate, and present research to the customer. Study help desk techniques and infrastructure. Prereq: CSC 100 or equivalent. Recommended: At least one hardware, operating system, programming, or networking class with 2.0 or higher.

**CTN 298 (1-10) S**  
**Special Topics: Computing Technology**

Special topics in individual or group study in the Computing Technology field. Prereq: Permission.

**CTN 299 (1-10) S**  
**Special Topics: Computer Tech**

Accommodates individuals who wish to learn new skills or to update specific skills by creating an agreement or contract with the college. Prereq: Permission.

**Cooperative Work Experience**

**CWE 100 (1-15) C,N**  
**Cooperative Work Experience**

On-the-job training in field of study. Prereq: Permission of Cooperative Education office.

**CWE 101 (1-2) N****Portfolio Job Search Internship**

Learn to develop the internship or job you want. Develop the tools and resources necessary for the internship, job search, and/or transferring to a four-year school. Prereq: ENGL 095/096 or higher or placement into ENGL 097/098 strongly recommended.

**CWE 102 (2) N****Job Shadow**

Provides an opportunity to observe the practical side of the student's chosen field of study. Learn expected behavior, culture, and dynamics of the workplace. Shadow professionals in the field, conduct information interviews, and assess career choices. Prereq: CWE 101 strongly recommended.

**CWE 110 (2-3) N****Internship**

Apply classroom theory and skills to the workplace. Develop and document learning objectives, complete a work performance evaluation with their supervisor, and write a capstone paper. Campus sessions and online discussions enrich individual internship experiences. Prereq: CWE 101 strongly recommended.

**CWE 120 (5) N****Internship Work Experience**

An opportunity for students to apply their skills and knowledge while gaining valuable work experience and insight in their chosen field of study. Prereq: Permission.

**CWE 197 (1-15) C,N****Work Experience – Cooperative Education**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission

**CWE 198 (1-5) C****Work Experience-Cooperative Education**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission

**CWE 199 (1-5) C****Work Experience – Cooperative Education**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission.

**CWE 494 (1) N****International Business Internship Preparation**

The International Business B.A.S. curriculum includes a major internship component. This course is designed to assist the distance learning IB students in preparing to find and secure appropriate internship positions. Students will develop tools which include knowledge of resources, searching for opportunities, writing targeted resumes, creating professional online profiles, and practicing interviewing skills. Prereq: Enrollment in International Business B.A.S. program.

**CWE 495 (3-9) N****Baccalaureate Internship**

In this online variable credit course for the Bachelor of Applied Science (BAS), students arrange and complete an internship, applying theory and skills learned in the classroom to the workplace. Students write a culminating paper, reflecting on their experience and integrating it with classroom learning. Students may take internship course up to 2 times after completing the first two quarters of the program to fulfill the 8/9 credit requirement. Prereq: CWE 494 or instructor permission.

**Coordinated Studies Programs/Learning Communities**

*Learning Communities, also called Integrated Studies, study a major theme from a variety of academic disciplines. A team of faculty and students use critical thinking to study important issues and concerns for the entire quarter. Students enroll for the entire program. Each program is taught by a team of diverse faculty members who conduct lectures and lead student seminars, field trips, and group projects.*

*In Learning Communities, students and faculty work together on local and global issues, requiring creative and active participation from all those in the classroom.*

*Though separate courses are listed on a student's transcript, the program is conducted as one coordinated course and each program becomes a unique sum, greater than the total of the parts.*

*This innovative approach to teaching and learning has won national recognition for the Seattle College District. The sense of community and excitement generated by Learning Communities creates an atmosphere that is especially memorable and profound.*

*For further information, students should contact the Advising Center at their campus and check the quarterly class schedule.*

**Core Employment Readiness****COR 095 (1-15) C,S****Community Corrections Program**

Short term program designed to provide skills needed for employment as a Community Corrections Facilitator in community based corrections. As a CCF, this person will be responsible for residential supervision of clients under court jurisdiction. This program emphasizes practical skill development and application of policies and procedures within the company guidelines.

**COR 100 (1) V****Strategies for Success**

Covers business professional and educational success strategies for lifelong learning. Assess and develop skills in goal setting, self-management, positive image building, and leadership qualities.

**COR 110 (5) C,S****Health and First Aid**

Health and safety of the Correction Officer, the inmate, and the environment are vital within the correction field. Consists of four cohesive, instructional components with an expert instructor in each field: first aid, communicable disease prevention (emphasis on AIDS-HIV awareness), alcohol and alcoholism, drugs and substance abuse. State certification will be given to those who perform satisfactorily in both written exams and in demonstrations. Attendance for a minimum number of classroom hours is mandatory.

**COR 120 (3) V****Communication & Professionalism**

Focuses on the methods and practices of developing and maintaining helpful and effective professional relationships with patients, clients, and coworkers. Prereq: PSG 110 with a 2.0 or higher or instructor, director, or dean's permission.

**COR 131 (3) V**  
**Employment Skills**

Offers instruction in developing oral and written communication skills needed for success in the employment and career search process. Focuses on developing resumes, writing cover letters, creating career portfolios, conducting employment searches, preparing for interviews, making public presentations, and developing business communication and etiquette skills. Prereq: Permission.

**COR 197 (15) C,S**  
**Internship Field Experience**

Following an orientation, spend time in the field under guidance of an instructor and/or mentor to learn about operations, policies, procedures, and clientele serviced in a given correction or public service organization or institution. Students meet as a group during the internship, which can be during ongoing program coursework or upon completing the coursework or both. Prereq: Permission.

**COR 225 (2) C,S**  
**Crime in America I**

Introduction to American crime trends and how American society and politics dealt with the problems based upon historical American opinion and politics.

**COR 230 (3) C,S**  
**Crime in America II**

Covers contemporary social and political policy factors affecting crime and crime trends in America. Special emphasis on American policy regarding trends in offender housing and behavior modification with today's policy on direct supervision. Focus on how crime impacts social and political trends, with emphasis on offender and victim profiles. Prereq: COR 225.

**COR 240 (3) S**  
**Case Management**

For those seeking employment in community, government, or private corrections or security work. Learn to assist clients with long-term education, training, employment, and family reintegration needs. Study the fundamentals of critical education, economic and social service systems needed by adults in transition from prison. Prereqs: Complete SSC Community Corrections & Protective Services Training Certificate and/or work in the field and a high school diploma.

**Culinary Arts****CUL 103 (4) C**  
**Food Theory III**

Covers professional restaurant cooking and international cuisines. Explores European, Asian, and U.S. cooking, culture, and eating traditions. Includes menu writing, recipe development, flavor building, plate presentation, and the study of a variety of specific techniques: soufflé, consommé, pasta, fish butchery, gumbo, Chinese dumplings, and antipasto. Prereq: Successful completion of second-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**CUL 104 (6) C**  
**Food Theory IV**

Emphasizes international fine-dining cooking theory. Focus on classical and contemporary Northwest, Middle Eastern, Mexican, Spanish, French, and Pan Asian cuisines. Includes menu writing, vegetarian cuisine, advanced sauces, ingredient identification, advanced cooking methods, advanced plate presentation, fine dining kitchen organization, whole animal fabrication, and charcuterie. Prereq: Successful completion of third-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**CUL 106 (1.5) C**  
**Introduction to Culinary Arts: Theory**

Introduction to the theory of culinary arts, covering the various methods of moist and dry heat cooking as well as product knowledge and identification, knife skills, and foundational cooking techniques. Prereq: Permission.

**CUL 111 (4) C**  
**Intro Professional Cooking: Practicum**

A hands-on introduction to the fundamentals of professional cooking. Includes kitchen safety operations, knife skills, basic food cooking and stock preparation, teamwork, leadership, general housekeeping, sanitation, cleanup, and inventory. Prereq: Permission.

**CUL 112 (8) C**  
**Quantity Cooking: Practicum**

Preparation of international quantity cooking meals. Includes mise en place, item marketing, equipment operation, and preparation of meals from the Italian, Asian, Middle Eastern, Mexican, Creole, Indian, French, and American traditions. Prereq: Successful completion of first-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**CUL 113 (8) C**  
**Restaurant Cooking: Practicum**

Prepare meals for on-campus casual American restaurant. Work all kitchen stations. Use traditional and contemporary culinary techniques to produce a culturally diverse selection of soups, salads, and casual entrees. Practice fabrication of various meats, seafood, and vegetables, and various wet and dry cooking methods. Includes concepts of mise en place, collaboration, and seasonality. Develop skills in organization, speed, plate presentation, and evaluation of finished product.

**CUL 114 (8) C**  
**International Cooking: Practicum**

Provides hands-on training in cooking and preparing meals for fine dining. Gain experience in classical and contemporary Northwest and international cuisines. Skill focus will be placed on plate presentation, accuracy, good working habits, palate development, care for ingredients, safety, professionalism, and organization. Students work collaboratively to present dishes in a full-service restaurant. Menus utilize seasonal, sustainable, and non-GMO ingredients.

**CUL 120 (1) C**  
**Introduction to Wine**

Covers the fundamentals of grape growing and winemaking, including table, sparkling, and fortified wines. Includes sensory evaluation of classic grape varieties and their growing regions, with emphasis on Washington state wines. Learn strategies for food and wine pairing. BAK 103 or CUL 104 with a minimum GPA of 2.0.

**CUL 151 (1) C**  
**Sustainable Food Systems I**

Introductory course exploring the current ecological, economical, and political issues relating to the food system. Raises awareness of issues of the food system from producer to consumer, exploring agriculture, fisheries, dairy, meat and poultry production, water, and waste. Includes trade, health, and social justice issues within the food system. Prereq: Admission into Culinary Arts Program.

**CUL 152 (1) C****Sustainable Food Systems II**

Continuation of CUL 151. Introductory course exploring the current ecological, economical, and political issues relating to the food system. Raises awareness of issues of the food system from producer to consumer, exploring agriculture, fisheries, dairy, meat and poultry production, water, and waste. Includes trade, health, and social justice issues within the global food economy. Successful completion of second-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**CUL 153 (1) C****Sustainable Food Systems III**

Explore the issues relating to a sustainable food system: globalization, food politics, food security, and social justice. Examine climate change as it relates to the food system, water and waste issues, heritage foods, and practical application of ideas in the kitchen. Learn how to navigate and purchase from the local producer market. Prereq: Permission.

**CUL 205 (1) C****Advanced Culinary Theory**

Students refine the practical skills for managing and running kitchens, dining rooms, and other areas of the food service industry. The technical background of designing menus and menu items for specific target populations with an emphasis on high end and specialty dining will be explored through cooking demonstrations, product sampling, and lectures. Prereq: Successful completion of fourth-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**CUL 215 (4.5) C****Advanced Culinary Practices**

Culmination and refinement of culinary techniques. Create and serve a "Chef of the Day" menu in the One World dining room. Create meals with a nutritious focus, execute banquet and tasting menus, practice advanced culinary techniques, and refine culinary competition skills. Practice professionalism and the commitment to producing high-quality food. Prereq: Successful completion of fourth-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**CUL 251 (4) C****Buffet & Garden: Theory**

Basic cooking methods covering garde mange applications, such as charcuterie, forcemeats, curing and smoking, and hors d'oeuvres. Learn to design a show platter and relate to buffet catering and garde manger principles, and understand the relationship of theory to the menus and recipes in the practicum show platter. Learn about produce farming, sustainability, and seed to plate food production while visiting Skagit Valley Farm.

**CUL 255 (8) C****Buffet/Garden/Ice: Practicum**

Prepare foods for a buffet setting, including salads, sandwiches, street food, hot entrees, cold kitchen preparation, and desserts. Produce a variety of charcuterie items. Implement recipes and cooking methods presented in class. Work on a show platter for buffet presentation. When applicable, utilize weekly harvests from the Skagit Valley Farm to execute seed-to-plate philosophy in menus and recipes. Prereq: CUL 112 or permission.

**CUL 291 (5) C****Seattle Culinary Academy Travel 1 – Spain**

Intensive international culinary immersion program. Travel and learn history, language, culture, traditional and modern cuisine of a specific country through Seattle Culinary Academy's international partners. Enhance cultural knowledge and language skills via research and travel to historic sites, cultural events, food producers, and exhibits. Practice skills learned in a professional kitchen abroad. Prereq: Permission.

**CUL 292 (5) C****Seattle Culinary Academy Travel 2 – Spain**

Intensive culinary immersion programs in international culture and cooking with international partners. Travel and learn history, language, culture, traditional and modern desserts, breads, and pastry techniques of the country in classroom and kitchens. Enhance language skills and cultural knowledge via research and travel to historic sites, cultural events, food producers, and exhibits. Prereq: Permission.

**CUL 299 (5) C****Independent Project/Culinary**

Independent study course for individual projects in the Culinary Arts field. Prereq: Permission.

**FSD 100 (3) S****Health and Sanitation**

Intro survey for food service students. Covers sanitation guidelines as suggested by the National Restaurant Association's "servSafe" program and Fundamentals of Hazard Analysis of Critical Control Point (HACCP) management. Online fees apply.

**FSD 101 (1) S****Orientation Culinary Arts**

Two-week module introducing the culinary kitchen lab areas. Includes equipment operation, safety, and sanitation. Practice beginning knife skills.

**FSD 160 (5) S****Culinary Fundamentals**

Introduction to culinary fundamentals. Covers theories and techniques of classical cooking, stocks, and sauces. Explores pantry techniques, including sandwiches, salads, and dressings. Prereq: Enrollment in Culinary Arts or permission. Coreq: Concurrent enrollment in FSD 100 and FSD 165.

**FSD 165 (15) S****Fundamentals of Classical Techniques**

Focuses on classic methods of stocks, banquet style salads, sandwiches, and volume food production. Covers storeroom receiving, storage, issuing, inventory, and organizational tasks. Emphasis on developing knife skills, including knife selection, sharpening, and classical vegetable cuts. Includes operation of dish washing equipment and proper sanitation procedures. Prereq: Enrollment in Culinary Arts or permission. Coreq: Concurrent enrollment in FSD 100 and FSD 160.

**FSD 170 (5) S****Theory 2 – Advanced Culinary Fundamentals**

Covers intermediate culinary fundamentals, including stocks and sauces, soups, meat and poultry cookery, and meat, poultry, and game identification. Prereq: FSD 160 with 2.0 or higher or permission.

**FSD 175 (15) S****Advanced Classical Techniques**

Covers the fundamentals of classical cooking techniques. Includes classic methods and volume production of starches, vegetables, proteins, soups, and sauces. Introduces the various equipment used every day in the industry. Concentrates on knife skills and classical cuts as well as safe operation and cleaning of machines. Front of House and customer service standards. Prereq: FSD 100 and FSD 165 with 2.0 or higher or instructor permission. Coreq: Concurrent enrollment in HOS 170.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN ..... Watch Technology

**NAME TO PREFIX**  
Watch Technology ..... HIN

Common Course Numbering explanation is on page 224.

**FSD 180 (5) S**  
**Garde Manger and Menu Development**

Examines organization, equipment, and techniques of the “cold kitchen,” including hors d’ oeuvres and charcuterie items. Prepares future leaders by examining the role menu planning plays within operations. Examines contemporary plating styles. Prereq: FSD 170 with 2.0 or higher or permission. Coreq: Concurrent enrollment in FSD 185.

**FSD 185 (15) S**  
**Restaurant Production 1**

Plan, prep, and prepare a la minute menu items, with emphasis on technique, speed, and plate presentation. Covers canape and amuse bouche production. Includes production of classical sauces, soups, and simple pastries and plated desserts. Covers basic protein fabrication. Prereq: FSD 175 with 2.0 or higher or instructor permission. Coreq: Concurrent enrollment in FSD 180.

**FSD 190 (5) S**  
**Cost Control**

Examines the manager’s role in cost control and the relationship between operational standards and controlling costs. Prereq: FSD180 with 2.0 or higher or permission. Coreq: Concurrent enrollment in FSD 195.

**FSD 195 (15) S**  
**Restaurant Production 2**

Continuation of Restaurant Production 1. Plan, prep, and prepare a la minute menu items, with emphasis on modern American and International cuisines. Includes production of advanced classical sauces and quick- and yeast-dough breads. Covers basic charcuterie items and fresh cheeses production. Provides training in fine-dining service and the relationship between back and front of house. Prereq: FSD 185 with 2.0 or higher or instructor permission. Coreq: Concurrent enrollment in FSD 190.

**FSD 197 (1-5) S**  
**Internship Culinary Arts**

Individual internship in the culinary, restaurant, banquet, and other food-related industries. Prereq: Permission.

**FSD 200 (5) S**  
**Theory 5 – Management Techniques**

Covers human resource management concepts and techniques related to the supervisor, sous chef, and restaurant manager, including diversity, communication, and standard operating procedures. Also examines menu and restaurant design. Prereq: FSD 190 with 2.0 or higher or permission.

**FSD 205 (15) S**  
**Leadership Practicum**

Practicum in functioning as kitchen supervisor, practicing teamwork and leadership and skills while overseeing all kitchen production. Emphasizes daily assignments, production sheets, menu planning, and product utilization. Includes capstone projects for a la carte and banquet style service. Prereq: FSD 195 with 2.0 or higher or instructor permission. Coreq: Concurrent enrollment in FSD 200.

**FSD 210 (5) S**  
**Intro Sustainable Food Systems**

Examines the issues and challenges in the global food system. Covers historical events impacting the current food production model and the effects food systems have on the environment, health, and communities. Explores conventional agriculture and food safety concerns. Emphasizes the movement towards sustainable food systems. Prereq: Enrollment in the Culinary Arts program or permission.

**FSD 215 (15) S**  
**Banquets and Catering**

Final course in Banquet and Catering Track includes advanced garden manger, baking concepts, and Sous Chef position training, supervising, and coordination for the Pantry and Prep stations. Capstone practicum involves the planning and execution of a formal banquet or buffet. Prereq: FSD 195 with 2.0 or higher or permission.

**FSD 220 (10) S**  
**Summer Practicum Special Topics**

Students may choose from a variety of special topics for their summer practicum, such as charcuterie, cheese production, specialty baking, and buffet or restaurant production. Topics to be arranged based on student request, instructors, and enrollment. Prereq: Enrollment in the Culinary Arts program or permission. Coreq: Concurrent enrollment in FSD 210.

**FSD 299 (1-15) S**  
**Special Topics Culinary Arts**

Independent study on an individual basis in the Culinary industry. Prereq: Permission.

**Culinary Arts**  
**Pastry & Baking Arts**

**PST 101 (5) S**  
**Pastry Baking Orientation**

Learn trade terminology, scaling and measuring procedures, mixing methods, identification and proper use of hand tools and mechanized baking equipment, plus safety procedures and sanitation. Covers portion control, baking math, and ingredient functions in baking. Prereq: Enrollment in program or permission.

**PST 102 (5) S**  
**Intro to Baking Management**

Learn bakery and pastry production management, including procedures and organizational tools for day to day operations of a bakery or pastry shop. Study standardized formulas, cost control, AP and EP menu mix, purchasing, receiving, storeroom organization, formula cost analysis, safety and sanitation, trade terminology, professional and ethical behavior, and attitude. Prereq: PST 101 or permission.

**PST 103 (4) S**  
**Decoration Theory 1**

Covers theory and practical applications of decorative confectionary mediums. Learn techniques, ingredients, and tools used in centerpiece, show piece, and confectionary display production, including performance test and showpiece requirements. Includes rye dough, Royal icing flow, marzipan, macaronade, rose paste, and chocolate tempering. Prereq: PST 102 or permission.

**PST 104 (4) S**  
**Decoration Theory 2**

Covers theory and practical applications of decorative confectionary mediums. Learn techniques, ingredients, and tools used in centerpiece, show piece, and confectionary display production, including performance test and showpiece requirements. Covers pastillage, gum paste, rolled fondant, modeling chocolate, rock sugar, and poured sugar. Prereq: PST 102 or permission.

**PST 105 (4) S**  
**Decoration Theory 3**

Covers theory and practical applications of decorative confectionary mediums. Learn techniques, ingredients, and tools used in centerpiece, show piece, and confectionary display production, including performance test and showpiece requirements. Covers pulled sugar, flower piping, rice paper flowers, salt dough, and nougatine. Prereq: PST 102 or permission.

**PST 111 (15) S**  
**Baking 1**

Covers production of cookies, cakes, and quick breads. Learn terms, ingredients and their functions, and techniques of basic baking. Prepare assorted doughs and batters using classic and modern mixing methods. Includes assessment of doughs and batters, product finishes, safety, and sanitation procedures. Prereq: PST 101 or permission.

**PST 112 (15) S**  
**Pastry 1**

Covers French pastry and beginning decorating and finishing. Make primary doughs and bases using classical techniques: Pate Feuilleté, pâte à choux, pâte sucrée, and assorted pie doughs. Includes elementary assembling and finishing for cakes and tarts, pastry ingredients and their functions, baking methods, assessment of doughs and batters, sponges, safety and sanitation. Prereq: PST 111, FSD 100, and HOS 203 with 2.0 or better or permission.

**PST 113 (15) S**  
**Baking 2**

Covers beginning and intermediate bread baking, terms and techniques of bread production, including proper mixing, fermentation, shaping, proofing, baking, and finishing. Prepare laminated and rich yeasted doughs (Viennoiserie). Deepen learning about bread ingredients and their functions, baking methods, lamination procedures, assessment, safety, and sanitation. Prereq: PST 112 or permission.

**PST 197 (1-5) S**  
**Internship Pastry Baking**

Individual internship in Pastry and/or Baking Arts industries. Prereq: Permission.

**PST 211 (15) S**  
**Pastry 2**

French pastry and plated desserts. Make more complex pastry doughs and bases using classical techniques. Includes dessert ingredients and their functions, advanced product finishes and decorations, plated dessert design, and production. Study dessert sauces and garnishes, flavor profiles and combinations, banquet desserts, safety, and sanitation. Prereq: PST 113 or permission.

**PST 212 (15) S**  
**Pastry 3**

Covers terms and techniques of chocolate work, seasonal baking, and show pieces, including tempering, candy cooking, enrobing, piping, and product finishes. Also covers use of local, sustainable, natural, and organic dairy and seasonal produce in baked and dessert products. Learn storage and care, stock rotation, safety, and sanitation. Produce a decorative display piece. Prereq: PST 211 or permission.

**PST 213 (15) S**  
**Pastry 4**

Covers terms and techniques of advanced pastry decoration by making complicated desserts and highly decorated cakes, including advanced mousses, Bavarians, and meringues. Learn practical management skills through student lead experiences: delegation, leadership, time management, conflict resolution, customer relations, inventory control, product receiving and rotation, safety, and sanitation. Prereqs: PST 102 and 212 or permission.

**PST 299 (1-15) S**  
**Special Topics: Pastry Basics**

Special topics on an individual or group basis related to Pastry and Baking Arts industries.

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**Culinary Arts  
Specialty Desserts****BAK 101 (4) C**  
**Intro Desserts & Bread**

Intro to baking/cooking methods and to the scientific principles used in this field. Covers ingredient responses to temperature, friction and storage, mise en place, ingredient functions and characteristics, tools/equipment, and trade terminology. Includes discussion of yeast doughs, quick breads, syrups, icings, sauces and creams, pastries, pies and tarts, cake mixing, and baking. Prereq: Admission to program.

**BAK 102 (3) C**  
**Bread Food Preservation**

Presents theory and ingredients, including why specific baking techniques work. Emphasizes the formation and exercise of judgment in baking practice, relationships between procedures and products, and evaluation of product quality. Includes discussion of bread history, buttercreams, soufflés and meringues, frozen desserts, chocolate sugar/work, bread and bread sculpture, centerpieces, and wedding cakes. Prereq: BAK 101.

**BAK 103 (4) C**  
**Science and Practice of Baking with Chocolate**

Presents advanced theory and ingredients in the chocolate making process, fair trade practices, cacao bean growing, and chocolate making. Learn the scientific principles of sugar process, sugar alcohol, sugar cooking stages, fat functions and characteristics. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**BAK 105 (1.5) C**  
**Restaurant Baking: Theory**

For culinary arts students. Expands on science and principles of baking, including yeast doughs and formulas, icing techniques, basic cake types, and characteristics of desserts. Prereq: Successful completion of second-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**BAK 111 (6) C**  
**Intro Desserts & Bread**

Application of baking theory to production. Includes mise en place and preparation of a variety of doughs, breads/rolls, breakfast breads/pastries, cookies, tarts, sponge and tea cakes, and decorated cakes. Prereq: Admission to program.

**BAK 112 (8) C**  
**Beg Dessert/Bread: Practicum**

Further application of baking theory to production, including exercising judgment and product success/failure analysis. Includes preparation of pastry creams, egg foams, butter creams, meringues, mousses, soufflés, custards, frozen desserts, holiday desserts, compotes, chocolate candies, sauces, and fillings. Prereq: Successful completion of first-quarter Specialty Desserts and Breads Program courses with a minimum GPA of 2.0 in each course.

**BAK 113 (8) C****Intermediate Dessert/Bread: Practicum**

Development of professional bakery skills, including organization, accuracy, and communication. Practice assessment of product texture, taste, and appearance. Includes preparation using advanced techniques of intricate chocolate work, European cakes, and plated desserts, with increased emphasis on presentation and artistic skills. Prereq: Successful completion of second-quarter Specialty Desserts and Breads Program courses with a minimum GPA of 2.0 in each course.

**BAK 115 (1) C****Restaurant Baking: Practicum**

For culinary arts students. Production of baked goods, including ganache, custards, creams, puddings, mousses, and purees. Prereq: Successful completion of second-quarter Culinary Arts courses with a 2.0 or better.

**BAK 116 (1) C****Fine Dining Baking: Practicum**

For culinary arts students. Applies baking theory to production of yeast doughs (bread, puff pastry, and choux), focaccia, cakes, icings, decorations, mousses, tortes, puff pastries, and fine plated desserts. Prereq: Successful completion of third-quarter Culinary Arts courses with a minimum GPA of 2.0 in each course.

**BAK 117 (1) C****Intro to Cheese Making**

For culinary academy students. Learn cheese making and fermentation techniques in the culinary field, including cheese diversity, milk composition, and the eight basic steps. Prereq: Successful completion of previous quarter's Specialty Desserts and Breads or Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**BAK 123 (2) C****Advanced Dessert/Bread: Theory**

Learn, analyze, and develop an understanding for the components of successful wedding cakes and petit fours. You will explore current industry standards in regard to flavor profiles, design components, and structure. This course includes a review and discussion on a variety of preservation methods and techniques for preserving summer produce. Prereq: Successful completion of third-quarter Specialty Desserts and Breads Program courses with a minimum GPA of 2.0 in each course.

**BAK 124 (8) C****Advanced Buffet Desserts/Wedding Cakes/Preservation**

Design and develop a line of wedding cakes and petits fours using the latest industry techniques. Produce jam and preserves using organic fruits and vegetables. Includes practicing the seed-to-plate cooking model and designing and marketing a bakery display case. Prereq: Successful completion of third-quarter Specialty Desserts & Breads courses with a minimum GPA of 2.0 in each course.

**BAK 125 (8) C****Advanced Desserts/Breads – Prac**

Design and develop a line of bakery goods. Purchase and inventory goods and calculate cost analysis as an extension of the class project. Prereq: BAK 113 or permission.

**BAK 126 (3) C****Advanced Whole Grain Baking Theory**

Explore the unique properties associated with a wide variety of fresh milled whole grains as applied to baking as well as alternative sugars in pastry work. Learn scientific principles applied to yeast products, fermented foods, and food preservation, including flour facts and alcohol fermentation. Prereq: Successful completion of previous quarter's Specialty Desserts and Breads Program courses with a minimum GPA of 2.0 in each course.

**BAK 299 (1-5) C****Special Projects/Commercial Baking**

Independent study course for individual projects in the Commercial Baking/Pastry field. Prereq: Instructor permission.

**Dental Hygiene****Bachelor of Applied Science in Allied Health – Dental Hygiene Track**

*Students must be accepted into the program in order to take these courses.*

**DHY 100 (4) C****Fundamentals of Dental Hygiene I**

Examines the theory and scientific principles underlying the assessment, planning, and implementation of clinical procedures in dental hygiene. Focuses on the scope of practice in Washington State, legal and ethical principles that govern the profession, and professionalism. Learn effective communication, infection control, instrumentation, vital signs assessment, screening examinations, documentation, and use of computers.

**DHY 101 (3) C****Clinical Dental Hygiene I**

First in a series of supervised clinical and pre-clinical experiences involving the assessment, planning, and implementation of patient care and clinical dental hygiene.

**DHY 102 (2) C****Health Promotion**

Explores the process of health-related behavioral change through planned interventions in patient education and health promotion. Emphasizes theories of change, the effect of cultural norms and values in client-provider interaction, and communication skills to assess the patient's perceptions, needs, and motivation to change.

**DHY 103 (4) C****Dental Radiology I**

Study of radiation hygiene and the fundamentals of radiology relevant to dentistry. Includes demos and practice in exposing, processing and interpreting intra-oral radiographs. Covers principles and rules for patient and operator safety.

**DHY 104 (2) C****Preventive Dentistry**

Study of dental deposits, dental diseases, causes, and prevention, including the relationship between plaque and oral disease processes, dental caries, and gingivitis. Includes use and methods of researching professional literature and using oral health prevention measures, such as patient education, self-care, fluoride, and physiotherapies.

**DHY 105 (2) C****Oral Biology**

Study of oral histology, including developmental origins and microscopic organization of selected oral and facial structures. Includes embryonic development of the face and palate and common craniofacial malformations. Examines the formation, eruption, and histological organization of the teeth and their supporting tissues as well as the oral mucosa and salivary glands.

**DHY 107 (3) C****Pharmacology**

Learn the general pharmacological and therapeutic actions of drugs, with emphasis on those used in dentistry. Includes dosage, routes of administration, drug interactions, drug effects on the oral cavity, indications, contra-indications and factors in patient treatment planning.

**DHY 108 (2) C**  
**Periodontology I**

Learn the periodontal structures of the mouth and periodontal instrumentation, including types of instruments, names, setups, and their proper application to periodontal therapy and treatment. Covers techniques for providing periodontal therapy, using adjunctive periodontal therapeutic agents, patient selection, treatment, and post-treatment evaluation.

**DHY 109 (3) C**  
**Human Pathophysiology**

Study of human pathology, including the etiology, predisposing factors, mechanisms of disease, and characteristics of the disease process in each body system. Emphasizes specific disease entities that are most commonly seen in the clinical dental hygiene setting or that may influence an individual's dental care.

**DHY 110 (2) C**  
**Head and Neck Anatomy**

Study the anatomy and function of the head and neck. Learn the location, characteristics, and function of the hard and soft tissues of the head, neck, and oral cavity, including all anatomic features, the circulatory system, muscular system, cranial nerves, and teeth.

**DHY 112 (3) C**  
**Dental Anatomy and Morph**

Study the anatomy and function of the head and neck. Learn the location, characteristics, and function of the hard and soft tissues of the head, neck, and oral cavity, including all anatomic features, the circulatory system, muscular system, cranial nerves, and teeth.

**DHY 113 (3) C**  
**Dental Radiology II**

Continue study of radiation hygiene and radiology relevant to dentistry. Includes laboratory demos and practice in exposing, processing, and interpreting intra-oral radiographs and extra-oral techniques.

**DHY 114 (3) C**  
**Restorative Materials I**

First of six-course sequence in clinical restorative dentistry. Focuses on the chemical, physical, and mechanical properties of dental materials commonly used by hygienists and on their manipulation. Learn to place restorations into prepared cavities.

**DHY 117 (1) C**  
**Emergency Management**

Intro to the role of the dental team in the treatment of medical emergencies, prevention of medical emergencies, patient assessment, stress minimization, emergency drugs, and equipment. Participate in class simulations of emergency treatment.

**DHY 118 (4) C**  
**Pain Control Anesthesia**

Covers theory and practice of pain control in dental hygiene and restorative dentistry, including nitrous oxide administration, topical anesthesia, and nerve block, field, and infiltration as local anesthesia applications.

**DHY 119 (3) C**  
**Restorative Materials II**

Second of six-course sequence in clinical restorative dentistry. Deepen learning of chemical, physical, and mechanical properties of dental materials, their manipulation, and placing restorations into prepared cavities.

**DHY 120 (2) C**  
**Fundamentals of Dental Hygiene II**

Examines the theory and scientific principles underlying the assessment, planning, and implementation of clinical procedures in dental hygiene. Focuses on the initial assessment of the patient, charting, indices, disease assessment, treatment planning, and assessing special cases involving abuse and neglect, and use of computers.

**DHY 121 (4) C**  
**Clinical Dental Hygiene 2**

Second in a series of seven courses. Continue learning assessment and evaluation of the patient, planning and implementing dental hygiene care, and instrument techniques.

**DHY 122 (2) C**  
**Oral Pathology**

Study lesions, pathologies, and abnormal conditions of the head, neck, and oral cavity.

**DHY 130 (2) C**  
**Fundamentals of Dental Hygiene III**

Examines the scientific principles underlying the assessment, planning, and implementation of clinical procedures. Focuses on the selection of detection and scaling instruments, selection and use of ultrasonic instruments, use and application of desensitization agents, custom trays, margination, area-specific curets, periodontal files, Nabors probe, and tooth whitening. Covers risk assessment, presentation, and written case documentation in development of individualized treatment plans for clinic patients.

**DHY 131 (4) C**  
**Clinical Dental Hygiene 3**

Third in a series of supervised clinical experiences, with patient care involving assessment, planning, and implementation of clinical procedures.

**DHY 150 (1-9) C**  
**Supp Learning In Dental Hygiene**

The Individualized study in dental hygiene theory and/or practice personalized to meet the needs of dental assistants who have graduated from an accredited program and are making the transition into dental hygiene.

**DHY 200 (2) C**  
**Fundamentals of Dental Hygiene IV**

Fourth in a series focusing on the scientific principles underlying the assessment, planning, and implementation of clinical procedures. Emphasizes biochemistry of food, nutritional counseling in dental hygiene practice, and personal, professional, and community issues related to HIV/AIDS.

**DHY 201 (8) C**  
**Clinical Dental Hygiene 4**

Fourth in a series of supervised clinical experiences, with patient care involving the assessment, planning, and implementation of clinical procedures.

**DHY 203 (2) C**  
**Ethics and Jurisprudence**

Focuses on the ethical, legal, and regulatory issues facing a dental hygienist in a private dental office, community agency, or independent practice. Through simulated cases, consider professional traits, theories of moral development, ethical dilemmas and principles, the Washington State Dental Practice Act, the hygienist-patient relationship, and risk management in dental hygiene practice.

**DHY 208 (2) C**  
**Periodontology II**

Deepen study of periodontal diseases, including prevention, cause, prevalence, recognition, patient education, advanced treatment planning, and appropriate treatment. Apply prevention and treatment techniques to patients with moderate to severe disease.

**DHY 215 (2) C**  
**Selective Populations**

Study the specific care modifications required to effectively deliver oral health services to patients with special mental, emotional, and physical challenges or medical problems, such as salivary dysfunctions, neurological impairments, immune system dysfunctions, cancer treatments, and surgery.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

HIN . . . . . Watch Technology

**NAME TO PREFIX**

Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**DHY 220 (3) C**  
**Fundamentals of Dental Hygiene V**

Fifth in a series focusing on the scientific principles underlying the assessment, planning, and implementation of clinical procedures. Emphasizes higher level concepts needed for successful board certification and national examinations.

**DHY 221 (8) C**  
**Clinical Dental Hygiene 5**

Fifth in a series of supervised clinical experiences, with patient care involving the assessment, planning, and implementation of clinical procedures. Provide care to a broader range of clients in clinic. Emphasizes refining and integrating previously learned concepts and skills into an effective pattern of comprehensive case management. Demonstrate clinical judgment and decision-making based on scientific evidence and treatment outcomes.

**DHY 222 (1) C**  
**Community Dental Health I**

First of three courses in public and community health approaches to the prevention and management of dental and oral health needs. Emphasizes identification of community dental health programs with experience in schools, nursing homes, community centers, and hospitals.

**DHY 223 (2) C**  
**Community Dental Health II**

Study community dental health program planning and development, focusing on prevention of dental disease and practice through learning projects. Develop a community outreach program and execute it.

**DHY 224 (2) C**  
**Community Dental Health III**

Covers community dental health program planning and development, focusing on prevention of disease. Integrates concepts and techniques regarding the selection and delivery of oral health services and education to underserved populations. Emphasizes program implementation and evaluation.

**DHY 230 (3) C**  
**Fundamentals of Dental Hygiene VI**

Explores the scientific principles underlying the clinical practice of dental hygiene. Develop high-level skills to enhance patient assessment, management, and treatment.

**DHY 231 (8) C**  
**Clinical Dental Hygiene 6**

Sixth in a series of supervised clinical experiences, with patient care involving the assessment, planning, and implementation of clinical procedures.

**DHY 233 (2) C**  
**Restorative Materials 3**

Third laboratory course in restorative dental practice and materials, focusing on correct placement of dental restorations on mannequins in the laboratory and patients in the clinic. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington law.

**DHY 234 (2) C**  
**Restorative Materials 4**

Fourth laboratory course in restorative dental practice and materials, focusing on correct placement of dental restorations on mannequins and patients. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington state law.

**DHY 235 (2) C**  
**Restorative Materials 5**

Fifth laboratory course in restorative dental practice and materials, focusing on correct placement of dental restorations on mannequins and patients. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington state law.

**DHY 236 (2) C**  
**Restorative Materials 6**

Final laboratory course in restorative dental practice and materials, focusing on correct placement of dental restorations on mannequins and patients. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington state law.

**DHY 238 (1) C**  
**Professional Issues**

Covers the practice of dental hygiene including résumé development, interviewing techniques, patient scheduling systems, employment contracts, dental staff relations, understanding the business aspects of a dental practice, and development of a personal philosophy of practice.

**DHY 240 (2) C**  
**Fundamentals of Dental Hygiene VII**

Focuses on the scientific principles underlying clinical practice dental hygiene. Focuses on inter-professional relations, team-building, sharing new knowledge, and the responsibilities of a practicing dental hygienist for professional development and lifelong learning.

**DHY 241 (8) C**  
**Clinical Dental Hygiene 7**

Seventh in a series of supervised clinical experiences, with patient care involving the assessment, planning, and implementation of clinical procedures in dental hygiene.

**DHY 245 (1-5) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 246 (1-5) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 247 (1-5) C**  
**Applied Practicum in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 248 (1-5) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 249 (5) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 250 (2) C****Oral Biology**

Study of oral histology, including developmental origins and microscopic organization of selected oral and facial structures. Includes embryonic development of the face and palate and common craniofacial malformations. Examines the formation, eruption, and histological organization of the teeth and their supporting tissues as well as the oral mucosa and salivary glands.

**DHY 251 (3) C****Human Pathology**

Study of human pathophysiology includes the etiology, predisposing factors, mechanisms of disease, and characteristics of the disease process in each body system. Emphasizes specific disease entities most commonly seen in the clinical dental hygiene setting or that may influence an individual's dental care.

**DHY 252 (3) C****Fundamentals Dental Hygiene I**

Examines the theory and scientific principles underlying the clinical practice of dental hygiene. Emphasis on oral screening, infection control, and professionalism.

**DHY 253 (3) C****Clinical Dental Hygiene I**

Apply the theory and scientific principles underlying dental hygiene practice. Covers professionalism, clinical preparation of the examining area, safety, patient privacy, documentation, and screening techniques.

**DHY 254 (2) C****Health Promotion**

Intro to dental health education, patient education, health promotion, and the process of health-related behavioral change. Emphasizes assessment of educational needs, client-provider interaction, communication skills, cultural competence in healthcare delivery, and motivation to change.

**DHY 255 (2) C****Radiology I**

Principles of oral radiology imaging, stressing the physics of x-ray production and biologic effects of ionizing radiation. Includes radiation safety and protection, dental radiographic examination, and radiographic interpretation of anatomical structures of the head and oral cavity.

**DHY 256 (2) C****Dental Radiology I Practicum**

Intro to dental x-ray equipment, processes, and techniques. Emphasizes patient and operator safety, evaluation of technique and imaging quality, darkroom and digital operations, beginning level proficiency in exposing and analyzing intra-oral dental radiographs.

**DHY 257 (2) C****Head & Neck Anatomy**

Didactic sessions teaching anatomy and function of the head and neck. Course draws on concepts taught in general anatomy and physiology classes. Students are introduced to the location, characteristics, and function of all anatomical structures, including all hard and soft tissues and all components of the circulatory system and cranial nerves. Prereq: Permission.

**DHY 258 (2) C****Dental Anatomy & Morphology**

Intro to nomenclature, anatomy, morphology, and functions of the primary and permanent dentition. Focuses on healthy, normal end of the health/disease continuum and provides foundation for further dental science, clinical and restorative dental hygiene practice.

**DHY 259 (1) C****Dental Anatomy & Morphology (Lab)**

Apply the theory and scientific principles of specific anatomical characteristics to lab drawings and wax carving. Intro to fine hand-skills and basic instrumentation used for hygiene and restorative procedures.

**DHY 260 (1) C****Emergency Management**

Introduced to the role of the dental team in the identification and treatment of medical emergencies, including prevention, patient assessment, stress reduction protocol, safe use of emergency drugs and equipment. Participate in class simulations of emergency treatment for common medical emergencies in the dental office.

**DHY 261 (2) C****Preventive Dentistry**

Intro to primary prevention methods within the scope of dental hygiene practice. Emphasizes the relationship between oral disease processes and oral health preventive measures, home-care education of the patient, and methods of preventive care implemented by dental hygienists.

**DHY 282 (1-8) C****Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 298 (5) C****Special Projects in Dental Hygiene**

Individualized study in dental hygiene-related subject matter, arranged to meet the needs of students with specific levels of skills and background.

**DHY 300 (4) C****Clinical Dental Hygiene II**

Apply the theory and scientific principles underlying dental hygiene practice. Intro to assessment of gingival and oral soft tissues, selected instrumentation, and periodontal and dental charting.

**DHY 301 (4) C****Clinical Dental Hygiene III**

Apply the theory and scientific principles underlying dental hygiene practice. Intro to patient management, treatment planning, and dental hygiene treatment techniques.

**DHY 302 (8) C****Clinical Dental Hygiene IV**

Apply the scientific principles underlying the assessment, planning, and implementation of clinical procedures. Emphasizes biochemistry of food; nutritional counseling in dental hygiene practice; and personal, professional, and community issues related to HIV/AIDS.

**DHY 303 (3) C****Fundamentals of Dental Hygiene II**

Examines the theory and scientific principles underlying the clinical practice of dental hygiene, with emphasis on integration of screening information to formulate goals for planning dental hygiene treatment needs.

**DHY 304 (2) C****Fundamentals of Dental Hygiene III**

Examines the theory and scientific principles underlying the clinical practice of dental hygiene, with emphasis on principles of instrumentation, dental hygiene diagnosis, and professional development activities.

**DHY 305 (2) C****Fundamentals of Dental Hygiene IV**

Focuses on the fundamental scientific principles underlying the assessment, planning, and implementation of nutrition in dental hygiene. Emphasizes biochemistry of nutrients; nutritional counseling in dental hygiene practice; and personal, professional, and community issues. Prereq: Permission.

**DHY 306 (2) C****Dental Materials I**

This is the first of two didactic courses focusing on the physical, chemical, mechanical, and biological properties of dental materials used in both direct and indirect restorative procedures. Prereq: Successful completion of previous quarter's B.A.S. in Allied Health Dental Hygiene courses with a minimum grade of 2.5 in each course or permission.

**DHY 307 (1) C****Restorative Practice I (Lab)**

Covers clinical restorative dentistry, focusing on the chemical, physical, mechanical properties of commonly used dental materials and their uses, manipulation, and application. Learn to handle and manipulate different types of restorative filling materials into prepared cavities.

**DHY 308 (2) C****Restorative Dentistry II**

This is the second and final didactic course focusing on the physical, mechanical, chemical, and biological properties of dental materials commonly used in direct and indirect restorative procedures, and basic knowledge in materials used in preventive, periodontics, restorative, and other specialty fields in dentistry. Prereq: Permission.

**DHY 309 (1) C****Restorative Practice II**

This is the second lab course, focusing on the physical, mechanical, chemical, and biological properties of dental materials commonly used in direct and indirect restorative procedures, and basic knowledge in materials used in preventive, periodontics, restorative, and other specialty fields in dentistry. Prereq: Permission.

**DHY 310 (2) C****Advanced Restorative Practice I**

Covers restorative dental practice and materials, focusing on correct placement of dental restorations on mannequins and in the clinic on patients. Practice and develop manipulative and carving skills in the placement of amalgam and composite restorations as allowed by Washington state law.

**DHY 311 (2) C****Pain Control Anesthesia**

Curriculum under development at time of printing.

**DHY 312 (2) C****Pain Control Anesthesia Practice**

Curriculum under development at time of printing.

**DHY 313 (3) C****Periodontics I**

Examines periodontal structures of the mouth, from health to disease, including clinical and histological aspects of periodontal disease. Includes various classifications of periodontal diseases and disease progression as it relates to microbiology, etiology, and host response. Learn techniques of periodontal therapy using adjunctive chemotherapeutic agents and oral hygiene aides. Prereq: Instructor's permission.

**DHY 314 (2) C****Dental Radiology II**

Study of dental radiology, including the principles and application of a full range of intra-oral, extra-oral, digital and film radiographic examinations, advanced interpretation for diagnosis of dental anatomy, trauma, lesions, caries, and pathology.

**DHY 315 (1) C****Dental Radiology II Practice**

Learn application of basic radiographic examination techniques for dental patients, stressing adaptation of techniques, consideration of presenting problems, variations of normal supplemental radiographic procedures, analysis of outcomes, and advanced interpretation of diagnostic information.

**DHY 318 (2) C****Oral Pathology**

Study lesions, pathologies, and abnormal conditions of the head, neck, and oral cavity of significance in the clinical practice of dental hygiene

**DHY 323 (3) C****Pharmacology**

Study the general pharmacological and therapeutic actions of drugs, with emphasis on those used in dentistry. Includes nomenclature, dosage, routes of administration, drug interactions, drug effects on the oral cavity, indications, contraindications, factors in patient treatment planning, and legal factors involved in dispensing.

**DHY 382, 383, 384 (1-8) C****Applied Practice In Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 391 (1) C****Community Dental Health I**

Introduction to public dental health. Presents strategies to improve oral health outcomes through evidence-based research techniques, planning, and implementation of public health program models. Provides a foundation for a group community oral health project. Emphasis on community needs assessment and choosing a target population. Prereq: Completion of B.A.S. in Dental Hygiene previous quarter's courses with a minimum grade of 2.5 in each course or permission.

**DHY 400, 401 (8) C****Advanced Practice Dental Hygiene I**

Supervised clinical experiences, with patient care involving the assessment, planning, implementation, and evaluation of clinical procedures in dental hygiene. Prereq and coreq: Enrollment into the Dental Hygiene program.

**DHY 404, 405, 406 (3) C****Principles Dental Hygiene Practice I**

This course focuses on the scientific principles underlying the assessment, planning, and implementation of clinical procedures in dental hygiene. This course emphasizes higher-level concepts needed for successful board certification and national examinations. Course prereq and coreq: Enrollment into the Dental Hygiene program.

**DHY 407 (1) C****Strategies Capstone Project**

This course is an introduction to a culminating educational experience whereby students have the opportunity to demonstrate mastery of learning in the field of dental hygiene. The course integrates experiential learning, coursework knowledge, clinical application, self-analysis, along with strategies for completion and presentation of a Capstone project. Prereq and coreq: Enrollment into the Dental Hygiene program.

**DHY 408 (1) C****Capstone**

This course concludes the culminating educational experience whereby students have the opportunity to demonstrate mastery of learning in the field of dental hygiene. The course integrates experiential learning, program coursework knowledge, clinical application, self-analysis, allowing the student to integrate and evaluate their overall educational experience. Prereq and coreq: Enrollment into the Dental Hygiene program.

**DHY 409 (2) C**  
**Ethics & Jurisprudence**

Focuses on the ethical, legal, and regulatory issues facing the dental hygienist practicing in a private dental office, in a community agency, or in independent practice. Examines professional traits, theories of moral development, ethical principles, the state dental practice act, the relationship with patients and employers, and risk management.

**DHY 410 (2) C**  
**Advanced Restorative Practice II**

Focuses on correct placement of dental restorations on mannequins and in the clinic on patients. Students practice and develop manipulative and carving skills in the placement of amalgam and composite restorations as allowed by Washington state law.

**DHY 411 (2) C**  
**Advanced Restorative Practice III**

Focuses on correct placement of dental restorations on mannequins and in the clinic on patients. Students practice and develop manipulative and carving skills in the placement of amalgam and composite restorations as allowed by Washington state law.

**DHY 412 (2) C**  
**Advanced Restorative Practice IV**

Focuses on correct placement of dental restorations on mannequins and in the clinic on patients. Students practice and develop manipulative and carving skills in the placement of amalgam and composite restorations as allowed by Washington state law.

**DHY 413 (2) C**  
**Periodontics II**

Study of advanced periodontal diseases, including cause, recognition, prevention, and treatment planning. In addition, this course covers periodontal surgery and implant care. Reviews periodontal concepts through case studies. Prereq: Enrollment in the Dental Hygiene program.

**DHY 414 (1) C**  
**Selective Populations**

Introduction to etiologies, signs and symptoms, prognoses, medications, and oral healthcare strategies to optimize oral health outcomes for patients with selective medical conditions. Prereq: Successful completion of previous quarter's B.A.S. in Allied Health Dental Hygiene courses with a minimum grade of 2.5 in each course or permission.

**DHY 415 (1) C**  
**Selected Populations Practice**

This course consists of various laboratory externships through existing community organization affiliate agreements which provide supervised student experiences. Students will adapt the Dental Hygiene Process of Care for medically compromised high-risk patients to optimize oral health outcomes and provide caregiver oral health education as appropriate. Enrollment into the dental hygiene program: Course prereq and coreq.

**DHY 416 (1) C**  
**Professional Issues**

This course will explore issues encountered in a variety of dental hygiene employment settings, including resume preparation, interview success techniques, malpractice insurance, employment contract negotiation, conduct and professional licensure, fundamentals of dental practice business concepts, employment team concepts, personal practice philosophy development, and the creation of a personal professional development plan. Prereq: Enrollment into the Dental Hygiene program.

**DHY 419 (2) C**  
**Community Dental Health II**

This course is the study of public and community health methodologies in oral disease prevention and program development. Students will establish contact with populations to develop presentations targeted to a specific demographic as a community health program or project. Students will learn the basics of research, including data collection, dental indices application, biostatistics utilization, and program evaluation. Prereq and coreq: Enrollment into the Dental Hygiene program.

**DHY 420 (1) C**  
**Community Dental Health III**

This course is the advanced study of public and community health methodologies in oral disease prevention and program development. Students will present an oral health program to target populations addressing a specific need and demonstrate research methodologies, including data collection, dental indices application, biostatistics utilization, and program evaluation. Prereq and coreq: Enrollment into the Dental Hygiene program.

**DHY 482 (1-8) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 483 (1-8) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 484 (1-8) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**DHY 485 (1-8) C**  
**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

**Diesel and Heavy Equipment**

*NOTE: These courses include instruction in safety, environmental awareness, human relations, and leadership.*

**HDM 100 (8) S**  
**Preventative Maintenance and Inspection**

This course focuses on skills required by the National Automotive Technicians Education Foundation (NATEF), including safety procedures compliant with OSHA regulations, hand tools, power tools, measuring tools, and equipment used in the repair of both trucks and equipment in the heavy duty diesel mechanic industry. Inspection and maintenance are also a major part of this course. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110. Coreq: HDM 105.

**HDM 110 (8) S**  
**Intro to Electrical**

This course introduces students to skills necessary for the National Automotive Technicians Education Foundation (NATEF) certification, including electrical theory; diagnosing electrical system problems; removal, repair, and installation of electrical components from vehicles. The function and construction of each component, diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 115.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
**HIN . . . . . Watch Technology**

**NAME TO PREFIX**  
**Watch Technology . . . . . HIN**

Common Course Numbering explanation is on page 224.

**HDM 115 (8) S**  
**Advanced Electrical**

Building on the introductory course, students will focus independently on electrical theory, data scan tools, and diagnosing electrical and electronic system problems, including truck accessories necessary for NATEF certification. The function and construction of each component and diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 110.

**HDM 120 (8) S**  
**Tires And Suspension**

This course will cover diagnostic theory, systems problems and evaluations, removal, repair and installation of tires, alignment, steering, and suspension components of heavy duty diesel vehicles to meet NATEF certification. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 125.

**HDM 125 (8) S**  
**Hydraulic and Air Brakes**

Contents of this course include diagnostic theory; systems problems and evaluation; removal, repair, and installation of hydraulic, air brake, and ABS components from vehicles to meet NATEF certification. The function and construction of each component and their diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 120.

**HDM 130 (8) S**  
**Hydraulics & Pneumatics**

This course will focus on theory; systems problems and evaluation; reading and reviewing diagrams, and removal, repair, and installation of hydraulic and pneumatic components of heavy duty diesel vehicles to meet NATEF certification. The function and construction of each component and their diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 135.

**HDM 135 (8) S**  
**Drive Train**

Contents include theory; diagnosing system problems and evaluation; and removal, repair, and installation of heavy duty diesel drive train components from vehicles to meet NATEF certification. The function and construction of each component and their diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 130.

**HDM 140 (8) S**  
**Heating, Ventilation, and Air Conditioning**

This course focuses on theory; diagnosing system problems and evaluation; and removal, repair, and installation of heating, ventilation, and air conditioning (HVAC) components from vehicles to meet NATEF certification. The function and construction of each component and their diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 145.

**HDM 145 (8) S**  
**Gasoline Engines**

This course focuses on theory; diagnosing system problems and evaluation; and removal, repair, and installation of gasoline engine components from vehicles to meet ASE standards. The function and construction of each component and diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 140.

**HDM 150 (8) S**  
**Diesel Engine Diagnosis/Remove, Replace**

Contents of this course include diesel engine theory, diagnosing system problems and evaluation, and removal and installation of a diesel engine from a vehicles to meet NATEF certification. The function and construction of each component and their diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 155.

**HDM 155 (8) S**  
**Diesel Engine Rebuild**

This course covers advanced theory, diagnosing systems problems and evaluation, and the rebuilding of a diesel engine to meet NATEF certification. The advanced function and construction of each component and their diagnosis and service procedures will be covered. Prereqs: MVM 101, BUS 159, HDM 171, MAT 110 with a 2.0 or higher or by instructor permission. Coreq: HDM 150.

**HDM 171 (2) S**  
**Lift Truck Operator**

Learn current regulations and practical fork lift operation in order to obtain a lift truck operator's safety certification card. Prereq: HDM 101 or permission.

**HDM 197 (1-7) S**  
**Internship Heavy Duty Diesel**

Gain experience and practice with mechanical repair procedures and skills performed regularly on the job site. Tasks, skills content, format, and projects vary depending on the job site. Prereq: Permission.

**HDM 198 (1-10) S**  
**Special Topics Heavy Duty Repair**

Study selected procedures and skill tasks for truck and heavy equipment technicians. Course content, format, and projects vary. Prereq: Permission.

**HDM 298 (1-10) S**  
**Advanced Special Topics – Heavy Duty Mechanics Repair**

Advanced study of selected procedures and skill tasks for truck and heavy equipment technicians. Course content, format, and projects vary. Prereq: Prior work site experience and permission.

**Drafting Design****DSN 151 (11) N****Intro to Engineering Graphics**

Addresses engineering drafting and design practices for the mechanical design and manufacturing industries. Emphasis on lettering, line work, reading scales, and applied geometry using freehand sketching and manual mechanical drawing techniques. Fundamentals of orthographic projection include blueprint reading, dimensioning techniques, section views, and auxiliary views. Develop visualization skills through isometric drawing and descriptive geometry. Includes ANSI/ASME and ISO drafting standards where appropriate. Take concurrently with DSN 163. Prereq: Computer skills helpful.

**DSN 152 (11) N****Engineering Graphics for Mechanical Design**

Continuation of DSN 151. Emphasis on advanced mechanical assembly drawing practices and concepts. Produce detailed, sub-assembly and assembly drawings of mechanical designs. Working drawing sets incorporate threaded fastener specifications, dimensioning and tolerancing practices, including ANSI and ISO standard fits and allowances, bills of material, and drawing revision practices. Introduces flat pattern and bend calculations, dimensioning for CNC manufacturing processes, methods of forming and fabrication, and captive fasteners through pattern drafting, with an emphasis on documentation requirements for sheet metal fabrication. Take concurrently with DSN 261. Prereq: DSN 151 and 163.

**DSN 153 (11) N****Statics & Strengths**

Third of 3 courses which address engineering drafting and design practices for the mechanical design and manufacturing industries. Intro to engineering physics through the study of statics and strengths of materials. Study how forces affect mechanical structures at rest or during unaccelerated motion. Examine concurrent-coplanar, non-concurrent-coplanar, and parallel force systems, and calculate their resultants, equilibrants, or moments. Study frictional forces and strengths of materials commonly used in mechanical design and manufacturing for their ability to withstand mechanical and thermal strength of fasteners, bolted or riveted connections, and welded joints. Take concurrently with MAT 098. Prereq: DSN 152, DSN 261.

**DSN 163 (4) N****Intro to Autocad – Mechanical Design**

Learn the AutoCAD drafting and design software. Focuses on the development of 2-dimensional drawing and editing skills using AutoCAD software to produce engineering drawings. Includes dimensioning, adding text and notes, library symbol (block) and attribute definition, Modelspace and Paperspace drawing setup, and hardcopy output (plotting). Uses the most current version of AutoCAD. For degree and certificate students, take concurrently with DSN 151. Computer skills helpful.

**DSN 164 (4) N****Intro to Pro/Engineer**

Encompasses the fundamentals of Pro/Engineer parametric modeling CAD software. Includes system fundamentals, base and construction feature creation, sketching techniques, datum construction, application to design task, drawing creation, and construction of assemblies from created parts.

**DSN 165 (4) N****Intro to Solidworks**

First of 2 courses in the SolidWorks mechanical design and modeling software. Intro to creating 3D CAD models using a feature-based, parametric solid-modeling design. Includes base, boss and cut feature creation using extruded, revolved, simple swept or simple lofted shapes; sketching techniques for capturing design intent using automatic or user-defined geometric and dimensional constraints; building assemblies from created parts; and detail and assembly drawing creation and bill of material insertion.

**DSN 250 (4) N****Schematic CAD Drafting**

Focuses on drafting of schematic diagrams for electronic circuits and the design of printed circuit boards (PCB) using a major CAD software package for schematic creation and PCB design. Design PC boards utilizing standard through-hole technology and surface mount technology. Includes manufacturing methods for PCBs, specifications and standards for electronic schematics, and design of PCBs. Prereq: DSN 152 or EET 107 or EET 161.

**DSN 255 (7) N****Lab Schematic CAD Drafting**

Develop skills in drafting of schematic diagrams for electronic circuits and the design of printed circuit boards (PCB) using CAD software dedicated for schematic creation and PCB design. Prereq: DSN 250 (may be taken concurrently).

**DSN 261 (4) N****Advanced Autocad for Mechanical Design**

Second of 2-course sequence to learn AutoCAD drafting and design software. Presents advanced concepts, including three dimensional (3D) wireframe, surface, and solid modeling for the mechanical design process. Covers creation of 2D documentation using 3D models and Paperspace drawing setup techniques. Presents data translation, using DXF, IGES, and SAT file formats to share data between other CAD software programs. Incorporates an overview to highlight changes in commands and functionality for students upgrading from previous releases of AutoCAD. Prereq: DSN 163.

**DSN 264 (4) N****Advanced Pro/Engineer**

The second quarter of Pro/Engineer includes advanced modeling for sheet metal, plastics molding, casting, and other processes; drawings and assemblies; tolerance stack-ups and interferences; and advanced engineering topics, such as import/export, SLA files, and mass properties. Prereq: DSN 164 or instructor permission.

**DSN 266 (4) N****Advanced Solidworks & Parameters**

Second of a 2-course sequence to learn the SolidWorks mechanical design and modeling software. Includes troubleshooting problems with parametric features, advanced data translation, sheet metal design, advanced swept and lofted shapes, generation of parametric surfaces, design table creation of part families, part and assembly configuration management, top-down assembly modeling, and advanced detail drawing generation. Prereq: DSN 165 or instructor permission.

**DSN 271 (4) N****Draft & Design for Polymers**

Designs and process considerations for plastic, ferrous, and non-ferrous metals. Materials definition through chemical and physical properties. Lab, lecture, and field trip experiences. Prereq: DSN 153, MAT 098, or instructor permission.

**DSN 272 (11) N****Mechanical Design Application**

Intro to practical engineering mechanics and strength of materials. Design applications include casting, design, and drafting; spring design using the computer as a design tool; gear terminology; complex mechanism design. Prereq: DSN 164 or 165, 271, 272, and 274.

**DSN 273 (7) N****Mechanical Production Design Applications**

Advanced applications include design study, layout, and documentation principles for mechanical packaging designs for electronic products; drawing trees; tolerance studies; and interference studies. Integrates DSN 271 and DSN 272. Prereq: DSN 164 or 165, 271, 272, and 274.

**DSN 274 (4) N****Geometric Dimensions & Tolerance**

For those involved in mechanical drafting, design, engineering, manufacturing, and quality control. Involves the principles of dimensioning and tolerancing as defined by ASME Y14.5M-1994, with additional references to the internal standard ISO-1101. Includes detailed comparisons with standard dimensioning practices, symbology application methods, measuring techniques, and the benefits from the use of Geometric Tolerancing. Prereq: DSN 152 or equivalent industry experience.

**DSN 275 (7) N****Drafting & Design Polymers**

Design and process considerations for plastic, ferrous, and non-ferrous metals. Materials definition through chemical and physical properties. Prereq: DSN 271 (may be taken concurrently), 274, and 264, or 165, or instructor permission.

**DSN 281 (4) N****Autocad for Mechanical Applications**

Panel layouts, auto-dimensioning, formatting, and drawing for NC and CNC process operations, library-building, user-defined menu for symbology and primitives, file manipulation, storage retrieval, paper space applications, grouping, revisioning, and plotting. Intro to 3-D wire frame and AME. Prereq: DSN 163 or equivalent work experience.

**DSN 298 (5) N****Special Topics in Engineering Design Technology**

A study of selected topics in Engineering Design Technology (electro mechanical drafting) as considered appropriate by the instructor and/or electromechanical drafting faculty. Course content, format, and projects vary depending on topics. Prereq: Permission of instructor and applicable experience. Lab fee varies.

**Drama****DRMA& 101 (5) C,S****Intro to Theatre**

Intro to theatrical experience through play analysis, acting, directing, critique, stage and costume design, with emphasis on theatre as a performance art.

**DRMA 103 (5) N****Fundamentals of Theatrical Design**

Foundation for all areas of theatrical and entertainment design: costume, scenery, lighting, and art direction. Explores the creative process, elements of design, and the relationship between text and visual expression. Intro to various mediums and methods of artistic presentation while learning the elements needed to visually communicate responses to literary and musical sources.

**DRMA 105 (5) N****Intro to World Theater**

Intro to theatrical practices from different cultures. Analyze scripts, videotapes, and live performances through theoretical, cultural, and historical readings. Examine how the performance or script reflects on the culture that produced it. Relate current theatrical practices to the larger global society. Prereq: ENGL& 101 eligibility.

**DRMA 108 (1-5) N****Rehearsal & Performance**

Participation in rehearsal and performance process, culminating in performance. Audition or instructor permission.

**DRMA 109 (1-5) N****Rehearsal & Performance**

Participation in rehearsal and performance process culminating in performance. Audition or instructor permission.

**DRMA 110 (1-5) N****Rehearsal & Performance**

Participation in rehearsal and performance process, culminating in performance. Audition or instructor permission.

**DRMA 112 (5) C****American Sign Language Theatre**

Intro to artistic sign language expression and the principles of stage acting. Focuses on guided developmental processes, improvisation, scene study, technique, and a working knowledge of character creation for the stage. Covers translating English to ASL. Prereq: ASL& 222 or permission.

**DRMA 114 (5) C****Mime and Physical Comedy**

Learn physical techniques for acting with the whole body and apply specific mime, movement, and acting skills. Explore mime as playwright, creating original mime performances and presenting them to an invited public audience.

**DRMA 116 (5) N****Fundamental Acting for Camera**

Covers the elements of "electronic drama," essential technological and dramatic vocabulary, and camera acting fundamentals. Create a filmed sequence for presentation. Recommended: DRMA 121 and placement in ENGL& 101.

**DRMA 120 (5) C,S****Introduction to Acting**

Builds a foundation of theory and application, with the broad use of improvisational techniques and movement for the actor.

**DRMA 121 (5) C,S****Acting**

Theory and practice of acting fundamentals. Exercises in voice, movement, observation, imagination, and script analysis. Culminates in scene study, production, and performance process. Recommended: DRMA& 101 or DRMA 120.

**DRMA 122 (5) C,N****Acting**

Continuation of DRMA 121, with emphasis on characterization and further scene study. May culminate in public performances. Prereq: DRMA 121.

**DRMA 123 (5) C,N****Acting**

Continuation of DRMA 122, with further emphasis on scene study, critical analysis, and scoring scripts. May culminate in public performances. Prereq: DRMA 122.

**DRMA 131 (5) C,N****Intro to Tech Theater**

Intro to the technical aspects of theatre: lights, sets, props, and sound. Learn how these areas are created and managed and how each impacts a production. Work on the technical aspects of mainstage productions.

**DRMA 170 (2) C,N****Theater Appreciation – Musicals**

This course will introduce students to theater practices in order to make them more informed audience members. Through the lens of costume and makeup design, students will analyze the creation, collaboration, and communication of musical theater. Using Aristotle's theater taxonomy, students will use their knowledge of costume and makeup design to assess theatrical communication in live musical theater performances. Prereq: Placement into ENGL 097/098 or higher.

**DRMA 171 (2) C,N****Theater Appreciation – Classics**

This course will introduce students to theater practices in order to make them more informed audience members. Through the lens of dramatic structure students will analyze the creation, collaboration, and communication of classical theater. Using Aristotle's theater taxonomy, students will use their knowledge of dramatic structure to assess theatrical communication in live classical theater performances. Prereq: Placement into ENGL 097/098 or higher.

**DRMA 172 (2) C,N****Theater Appreciation – Realism**

This course will introduce students to theater practices in order to make them more informed audience members. Through the lenses of directing and acting, students will analyze the creation, collaboration, and communication of realistic theater. Using Aristotle's theater taxonomy, students will use their knowledge of directing and acting to assess theatrical communication in live realistic theater performances. Prereq: Placement into ENGL 097/098 or higher.

**DRMA 173 (2) C,N****Theater Appreciation – Comedy**

This course will introduce students to theater practices in order to make them more informed audience members. Through the lens of set and prop design, students will analyze the creation, collaboration, and communication of comic theater. Using Aristotle's theater taxonomy, students will use their knowledge of set and prop design to assess theatrical communication in live comic theater performances. Prereq: Placement into ENGL 097/098 or higher.

**DRMA 174 (2) C,N****Theater Appreciation – Contemporary**

This course will introduce students to theater practices in order to make them more informed audience members. Through the lens of light and video design, students will analyze the creation, collaboration, and communication of contemporary theater and performance art. Using Aristotle's theater taxonomy, students will use their knowledge of light and video design to assess theatrical communication in contemporary theater and performance art. Prereq: Placement into ENGL 097/098 or higher.

**DRMA 180 (5) N****Music Theatre Production**

Covers the techniques of musical theater through participation in the production of a musical. Participation in any one of several areas: acting, dance, stage management, technical theater, and business management. Specific work is contracted between student and instructor. Dramatic roles determined by audition. Recommended: DRMA& 101 or 121.

**DRMA 182 (5) N****Intro to Musical Theatre**

Basic instruction in dramatic and vocal discipline of musical theater. Learn basic techniques of analysis, rehearsal, and performance of musical theater through the study of scenes and in-class performance of designated scenes. Recommended: MUSC 119, 130 and/or DRMA& 101 or 121.

**DRMA 200 (1-5) C,N****Special Projects: Drama**

Individual student-initiated and developed performances/projects under faculty supervision. Prereq: Permission.

**DRMA 201 (1-5) C,N****Special Studies: Drama**

Special project course. Content, credit, and expectations are achieved through discussion with students, including tailoring the projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

**DRMA 202 (1-5) C,N****Special Studies**

Special project course. Content, credit, and expectations are achieved through discussion with students, including tailoring the projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

**DRMA 204 (5) C****Intro Dance – Jazz I**

Intro to the world of concert Jazz dance. Includes basic concepts and principles of Jazz technique, muscle strengthening and flexibility exercises, building vocabulary of connective movements, and skills for basic auditioning and memorizing choreography.

**DRMA 205 (5) C****Intro Dance – Jazz II**

Continuation of DRMA 204.

**DRMA 206 (5) C****Intro Dance – Jazz III**

Continuation of DRMA 205.

**DRMA 211 (1-5) C,N****Theater Management**

Special project course in theater management. Content, credit, and expectations achieved by discussion with students, including tailoring projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

**DRMA 221 (5) C,N****Advanced Acting**

Examination of acting styles and techniques, with emphasis on scene study and analysis in contemporary and classical drama. Prereq: DRMA 123 or permission.

**DRMA 222 (5) C,N****Advanced Acting**

Continuation of DRMA 221. Prereq: DRMA 221 or permission.

**DRMA 223 (5) C,N****Advanced Acting**

Continuation of DRMA 222. Emphasis on longer acting projects and monologue repertoire. Prereq: DRMA 222 or permission. The following courses are variable-credit special projects in different aspects of theater. Content, credit, and expectations are arrived at through discussion with students, a tailoring of the projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

**DRMA 224 (1-5) C,N****Production & Stage Management**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**DRMA 231 (1-5) C,N**  
**Props & Sound**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 241 (1-5) N**  
**Costuming**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 251 (1-5) C,N**  
**Stage Scenery**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 261 (1-5) C,N**  
**Stage Lighting**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 271 (1-5) C,N**  
**Acting**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 272 (1-5) N**  
**Acting**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 273 (1-5) N**  
**Acting**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 281 (1-5) C,N**  
**Directing**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 284 (5) C,N**  
**Playwriting**

Develop writing skills for one-act plays by exploring dramatic structure, character development, and the author's stylistic voice. Learn the roles of director, dramaturge, actor, and other theatrical artists in the writing process. Includes critical analysis of published plays, readings, and critiques of student work. Prereq: ENGL& 101 placement or permission.

**DRMA 285 (5) N**  
**Playwriting 2**

Continue to hone playwriting skills in plot, characterization, author's stylistic voice, play structure, and dialogue. Further understand the roles of director, dramaturge, actor, and others. Prereq: DRMA 284 or permission.

**DRMA 286 (5) N**  
**Playwriting 3**

Continue to hone the skills of plot, characterization, play structure, dialogue, the author's stylistic voice, and theatrical collaboration. Covers the initial development process for a full-length play. May be repeated for credit. Prereq: DRMA 285 or permission.

**DRMA 291 (1-5) C,N**  
**Theatrical Internship**

Individual student-initiated and developed performances/projects under faculty supervision. Prereq: Permission.

**DRMA 292 (5) C,N**  
**Theatrical Internship**

Individual student-initiated and developed performances/projects under faculty supervision. Prereq: Permission.

**DRMA 293 (5) C,N**  
**Theatrical Internship**

Individual student-initiated and developed performances/projects under faculty supervision. Prereq: Permission.

**DRMA 298 (1-5) C,N,S**  
**Independent Projects in Theater**

Individual projects in set design, lighting, costuming, directing, house management, and acting, as determined by advanced drama students and the drama faculty. Prereq: Advanced standing, permission.

**Early Childhood & Family Studies**

**CFS 101 (2) C**  
**M.E.R.I.T Seminar**

A series of workshops and classes designed to support The Managed Education and Registry Information Tool known as MERIT, Washington State's system for professionals in the field of early care and education and school-age professionals. Meets the initial 20-hour State Training & Registry System (STARS) training requirement. (This course was previously numbered CFS 299.)

**CFS 110 (3) C****Developmentally Appropriate Activities**

Intro to working with children and families in designing welcoming, safe, healthy, and supportive learning environments. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 120 (3) C****Physical Intellectual Development**

Examines physical, cognitive, creative, and linguistic developmental needs and stages of children from birth through pre-adolescence. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 130 (3) C****Social/Emotional Development**

Covers the social, emotional, self-esteem, and identity development of children from birth through pre-adolescence. Explores methods and strategies for creating a holistic approach to supporting development. Addresses guidance and behavior management. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 145 (3) C****Development During School Age Years**

Examines physical, social, emotional, cognitive, and moral development of school-age children, including the family, peer group, and community. Covers individual differences, typical issues, and areas of concern. Includes roles of practitioners and history and philosophies of various program models. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 155 (3) C****Development During Adolescents Years**

Examines all stages of adolescent development within social and cultural contexts, including family, peer group, and community. Explores issues youth face, youth culture and values, coming of age, and rites of passage. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 180 (3) C****Guiding School Age Child**

Covers the social, emotional, self-esteem, and the identity development, from childhood to adolescence. Explores methods and strategies for creating a holistic approach to supporting development. Addresses guidance and behavior management. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 208 (3) C****Planning & Space Design**

Theoretical and practical examination of successful, diverse, inclusive environments. Includes design of the learning environment, materials, family involvement, programming, and activities. Applicable to recreation, tutoring, health, education, social services, cultural arts, and other out-of-school-time environments. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 215 (3) C****Math/Science with Young Children**

Explores the many ways young children integrate math and science concepts into their daily lives and how to support their classroom learning. Emphasis on promoting cognitive development, basic concepts of math and science taught during the early years, ways for supporting those groups typically underrepresented in the STEM fields. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 223 (2) C****Physical Development in School Age**

Explores strategies and methods for incorporating cooperative games, sports, dance, creative movement and leadership development into youth programs. Examines and expands movement repertoire, coaching and mentoring skills and culturally diverse approaches. Prereq: Eligible for ENGL& 101 and MATH 085.

**CFS 225 (3) C****Assessment & Programming**

Covers approaches for assessing of the individual child, the family, an agency, and community, and developing programming for utilizing strengths and meeting needs. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 228 (3) C****Child/Adolescent Sexuality**

Explores biological sexual development and culturally specific responses to myths and misinformation common among children, youth, and families. Covers strategies for incorporating accurate, culturally-sensitive information with families, children, and youth. Explores issues of sexual-identity development, including gender roles, sexuality, stereotypes, and the impact of the media. Examines responses to teen-pregnancy and sexual abuse. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 245 (3) C****Partnership with Diverse Family**

Focuses on understanding family structures and developing conceptual frameworks and strategies that support all members of the school and service community. Particular emphasis is on issues and approaches for working with family in urban environments. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 252 (3) C****Violence Prevention**

Examines the nature of violence in our community, including institutionalized violence, media violence, domestic violence, bullying, and gangs. Covers impact of prevention programs, strategies and methods for community-building, and empowerment. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 263 (3) C****Children with Disabilities**

Focuses on the social, emotional, physical, legal, historical, and environmental issues which may affect children and youth with disabilities and their families. Explores strategies for supporting an inclusive learning environment for children, youth, and families. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 270 (1-3) C****Child & Family Health**

Explores the impacts of typical family stresses, including health care, wellness, safety, childcare, nutrition. Focuses on ways for building strong communities. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 280 (3) C****Methods for Cultural Relevance/Anti-bias Child & Family Studies**

Specific strategies for working with all families and creating holistic, inclusive learning communities. Includes awareness and strategies for addressing bias. Prereq: HUM 105 and eligible for ENGL& 101 and MATH 084.

**CFS 284 (3) C****Literacy Development for Child/Family**

Understanding and practical strategies for literacy development, home-to-school connection, and supporting English language learners. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 290 (1-4) C****Budget and Finance**

Covers budget design and monitoring; money, credit, and financial statements; bookkeeping and financial planning; taxes and other legal requirements; computer applications; fees and other revenue sources; grant writing; and fund raising; the budget/quality link. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 296 (1-4) C****Personnel & Supervision**

Designed for program administrators; examines concepts and issues like staff development, evaluations and training, team-building, communication, group dynamics and conflict management, developing personnel systems and procedures, performance contracts, living wages, and benefits. Prereq: Eligible for ENGL& 101 and MATH 084.

**CFS 299 (2) C****M.E.R.I.T.**

A series of workshops and classes designed to support The Managed Education and Registry Information Tool known as MERIT, Washington State's system for documenting professional achievements of early care and education and school-age professionals.

**ECED& 105 (5) C,N****Intro to Early Childhood Education**

Explore the foundations of early childhood education. Examine theories defining the field, issues and trends, best practices, and program models. Observe children, professionals, and programs in action. Students are required to work or volunteer directly with children.

**ECED& 107 (5) C,N****Health, Safety, and Nutrition**

Develop knowledge and skills to ensure good health, nutrition, and safety of children in group care and education programs. Recognize the signs of abuse and neglect, responsibilities for mandated reporting, and available community resources. Work/volunteer directly with children.

**ECED& 120 (2) C,N****Practicum: Nurturing Relationships**

In an early learning setting, apply best practices for engaging in nurturing relationships with children. Focus on keeping children healthy and safe while promoting growth and development. Work/volunteer directly with children.

**ECED 121 (4) C****Practicum II**

This is the second of three field practicum classes. Apply best practices for engaging in nurturing relationships with children in an early learning setting. Focus on keeping children healthy and safe while promoting growth and development. Prereq: ECED& 120.

**ECED 122 (4) C****Practicum: Nurturing Relationships III**

This is the third of three field practicum classes. Apply best practices for engaging in nurturing relationships with children in an early learning setting. Focus on keeping children healthy and safe while promoting growth and development. Prereq: ECED 121.

**ECED& 132 (3) C,N****Infants and Toddlers**

Examine the unique developmental needs of infants and toddlers. Study the role of the caregiver, relationships with families, developmentally appropriate practices, nurturing environments for infants and toddlers, and culturally relevant care. Work/volunteer directly with children.

**ECED& 134 (3) C,N****Family Child Care**

Learn the basics of home/family child care program management. Includes licensing requirements, business management, relationship building, health, safety, and nutrition. Guiding behavior, and promoting growth and development. Work/volunteer directly with children.

**ECED& 139 (3) C,N****Administration**

Develop administrative skills required to create, open, operate, manage, and assess early childhood education and care programs. Explore techniques and resources available for Washington state licensing and National Association for the Education of Young Children (NAEYC) standard compliance. Work/volunteer directly with children.

**ECED& 160 (5) C,N****Curriculum Development**

Investigate the integration of learning theory, program planning, and tools for curriculum development to promote growth in language, fine/gross motor, social-emotional, cognitive, and creative skills in young children (birth-age 8).

**ECED& 170 (3) C,N****Environments – Young Child**

Design, evaluate, and improve indoor and outdoor environments to ensure quality learning, nurturing experiences, and optimize the development of young children.

**ECED& 180 (3) C,N****Language/Literacy Development**

Develop teaching strategies for language acquisition and literacy skill development at each developmental stage (birth-age 8) through the four interrelated areas of speaking, listening, writing, and reading.

**ECED& 190 (3) C,N****Observing & Assessment**

Collect and record observation of and assessment data in order to plan for and support the child, the family, the group, and the community. Practice reflection techniques, summarizing conclusions, and communicating findings.

**ECED 250 (5) N****Infant/Toddler Mental Health**

This course examines the dynamics of infant and toddler mental health development, including attachment, trauma, toxic stress, and lasting impacts of childhood experiences. Students will identify protective and risk factors for mental health in children from prenatal- 3 years of age. We will compare screening, assessment, and collaborative treatment strategies.

**Early Childhood Education**

*See also Education, page 286.*

**CCE 101 (5) N****Human Development**

Intro to the field of child development. Using an ages and stages approach, examines physical, cognitive language, social and emotional development of children from birth through young school age. Study major theorists and the use of research. Learn basic observation skills and apply the information to child development.

**CCE 102 (3) N****Issues & Trends in Child**

Examines the profession of early childhood education and the historical and political perspectives for understanding ECE in a changing society. Addresses current educational problems and trends, underlying values assumptions, and guides for professional action.

**CCE 110 (6) N**  
**Intro Early Childhood**

This course is designed to introduce early childhood students to the variety of work available within the early childhood profession. The course will also explore the student's and professional's role in advocating for themselves as well as children and their families.

**CCE 111 (3) N**  
**Intro to Family Day Care**

Considerations for starting a family day care center, including arranging a home and yard for safety and learning, storage, equipment, day-to-day activities and program planning, guiding children's behavior, communicating with parents, and licensing procedures and requirements.

**CCE 118 (3) N**  
**Child Guidance/Group Management**

Observation and interaction with young children from a variety of backgrounds in laboratory settings.

**CCE 120 (6) N**  
**Laboratory Participation**

Systematic observation of teaching of young children, participation as an assistant teacher in the campus laboratory preschool, and participation in weekly in-depth discussions.

**CCE 121 (6) N**  
**Field Participation**

The second in the sequence of practice teaching experiences, this time in selected, quality early childhood education and special education programs in the community. Seminars focus on good curriculum, requisites for change, risk taking, and the culture of a school. Prereq: CCE 120. Recommended: CCE 125 and CCE 106.

**CCE 122 (6) N**  
**Infant/Toddler Lab**

Observe skills and interests of very young children; develop materials and activities based on each child's skills and interests; provide guidance. Taken concurrently with CCE 135. Prereq: CCE 101, 120.

**CCE 123 (5) N**  
**Child Physical/Cognitive Competence**

This course has been designed as an integrated approach to a variety of topics pertinent to the early childhood professional currently working in the field. The course will provide the students with the opportunity to gain knowledge of child development and skills in observing, recording, and planning a program for young children. The focus areas for the development of these skills and knowledge will be advancing children's physical, cognitive, communication, and creative competence. An ongoing focus on professionalism in the early childhood field and writing and literacy skills will also be included as a part of the course work.

**CCE 125 (5) N**  
**Program Planning**

Overview of the components of creating a child-responsive learning environment for 3- to 5-year old children that maximizes each child's social, motor, cognitive, and expressive development through play. Evaluate the physical environment of two ECE programs using accreditation criteria from the National Academy of Early Childhood Programs.

**CCE 126 (3) N**  
**Curriculum Development/Implementation**

Fundamental teaching procedures for working with young children in a variety of settings, i.e., in-home care, family day care, mini-center, "Head Start," day care, etc. Development of learning materials and teaching techniques related to their setting.

**CCE 130 (3) N**  
**Family & Community Relationships**

Emphasis on importance of family to children and development of strategies to work effectively with families.

**CCE 133 (5) N**  
**Support Childs' Soc/Emotion**

Integrated course which includes CCE 100, CCE 110, CCE 126. Previously Offered Independently. Prereq: None.

**CCE 135 (5) N**  
**Foundations of Early Learning**

Covers special needs of infants, toddlers and 2-year-olds in care-giving settings. Includes brain research, developmental tasks, environmental components for optimal development, caregiver/teacher roles, working with parents, and curriculum planning.

**CCE 136 (2) N**  
**Signing with Young Child**

Intro to American Sign Language (ASL) not only as a second language but as a valuable tool for enhancing communication with children. Sign language provides a tactile method for children to learn, play, and express themselves.

**CCE 145 (1-4) N**  
**Music & Creative Expression**

Stimulates both beginning and experienced early childhood teachers to provide a wide variety of musical activities for children's active participation in movement and music making. Develop ease in supporting and leading musical activities while learning a method for selecting and planning a fun, creative, and skill-developing music education program for preschool children and older toddlers.

**CCE 159 (4) N**  
**Behavior Management**

Explores two approaches to discipline: behaviorism and child-centered guidance. For behaviorism, learn to manage the difficult child, administer effective rewards, construct cognitive behavior modification interventions, and build desired new behavior through chaining and shaping. For guidance, learn to construct a social learning environment that facilitates social problem-solving and personal responsibility.

**CCE 160 (1-8) N**  
**Connecting to Children**

The four modules listed on page 124 provide an opportunity to demonstrate performances essential to the effective influencing of young children.

**CCE 165 (3) N**  
**Understanding Literacy**

Covers philosophies and definitions of literacy. Explores radical, non-traditional thinking of the concept through readings, guest speakers, and research.

**CCE 166 (3) N**  
**Cultivating Conversation**

Learn to facilitate the verbal expression of young children by practicing the techniques of responsive listening and informative talk and applying those skills to everyday conversations with children.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN . . . . . Watch Technology

**NAME TO PREFIX**  
Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**CCE 170 (18) N**  
**Creating the Conditions**

The modules listed on page 124 provide an opportunity to demonstrate performances necessary to create learning environments for children ages 2 to 5. They challenge teachers to investigate and engineer the broad range of quality activities that meet the needs and circumstances of their own school without conflicting with most early childhood models or theoretical approaches.

**CCE 175 (3) N**  
**Mathematics and Design**

Presents methods for developing a sense of competence and enjoyment in exploring cognitive-mathematical activities in children ages 3- to 5. Covers activities for printing, designing, counting, number sequencing, patterning, graphing, problem-solving, and exploring the world of logical-mathematical thinking. Helps children develop effective habits of mind (wondering, figuring it out, predicting, and challenge seeking) and the ability to work cooperatively for extended periods.

**CCE 180 (1-5) N**  
**Professional Development**

Covers topics on the care and development of children for early childhood care personnel, educators, and parents.

**CCE 185 (3) N**  
**Physical Education in Early Childhood**

Explores the outdoor physical environment for children in preschools and childcare settings. Analyze the fundamental motor patterns, the need for risk and personal confidence, the role of natural environments in the development of children, and create the ideal physical development program for young children.

**CCE 190 (5) N**  
**Parenting in the Foster Family**

The concerns and interests of foster parents will be the focus of this course. Defining the role of foster parents, relationships with children, caseworker and natural parents, relationships with community agencies, child development, and guidance techniques are among the topics included.

**CCE 195 (3) N**  
**Art for Young Children**

Provides the experience of art to children 3 to 8 years old. Explores self-expression in painting, drawing, clay, and collage. Conduct a series of art classes for children to practice relating in ways that facilitate the children's self-expression in these fundamental media.

**CCE 199 (5) N**  
**Coop Ed/Work Experience: Childhood**

Cooperative Education is a program which allows students to gain work experience directly related to their majors. This program integrates classroom study with employment. It is based on the principle that one learns not only through academic achievement but also through practical experience. It provides participating students with supervised work experience in an individualized learning environment.

**CCE 200 (3) N**  
**Children and Nature**

Discover the joys of connecting young children with nature. Nature influences social skills, enhances learning, fuels imagination, instills a reverence for the environment, and helps children with sensory integration deficit.

**CCE 201 (3) N**  
**Special Topics: Teacher Training Techniques**

This is a professional development class for practicing trainers and supervisors of early childhood education staff on techniques for in-service training that promotes developmentally appropriate practice. Drawing on discussion of direct experience as well as theories of adult learning and staff development, students will design, implement, and evaluate training strategies and tools. Observation and feedback techniques will be practiced and critiqued, including the use of video.

**CCE 204 (2) N**  
**Autism and Related Disorders**

Covers aspects of autism spectrum disorder, including its definition, causes, characteristics, behaviors, diagnosis, current research and treatments, and hands-on strategies for working effectively with children on the autism spectrum.

**CCE 223 (3) N**  
**Health, Safety, and Nutrition**

Provides information on a child's health status, a safe but challenging learning environment, proper nutrition, and their effects on care, nurturance, and optimal physical and cognitive development.

**CCE 232 (4) N**  
**Parent Involvement in Early Childhood Education**

Examines the ways teachers can open themselves and the school to include parents as a part of the learning community. Includes expectations parents and teachers have for each other, the tasks parents face in growing up with their children, assertive and supportive help, communicating the aims of school in a democracy, and dealing with difficult issues that affect both school and home, such as abuse, death, and divorce.

**CCE 234 (1-4) N**  
**Staff Relationships**

Covers interpersonal communication skills needed to function effectively as a contributing, collaborative, helping staff member in the workplace, including early childhood education settings.

**CCE 240 (3) N**  
**Mc Dialogues in Early Childhood Education**

Examines the concept of multiculturalism and how it relates to the ECE classroom. Through dialogues, readings, and projects, students assess their beliefs, teaching environment, and style in order to identify changes and promote respect for differences that accompany children and families.

**CCE 242 (3) N**  
**Concept & Language**

Develop Children's learning processes viewed from the Piagetian framework. Provides rationale for curriculum development in areas of science, mathematics, language, and literature. Prereq: CCE 101, CCE 108, and CCE 125.

**CCE 245 (5) N**  
**Music for Young Children**

How both experienced and beginning early childhood teachers can provide a wide variety of musical activities for children's active participation in music making and movement. Students help each other develop an ease in supporting and leading musical activities as they learn a method for selecting and planning a fun, creative, and skill developing music education program for preschoolers and older toddlers.

**CCE 250 (5) N****Teaching Young Children**

Practice and refine teaching skills in a field setting such as a child care program, in-home care, special education or elementary classroom. Prereq: CCE 108, CCE 109.

**CCE 253 (7) N****Family Child Care Practicum**

Participation as a member of a teaching team in weekly laboratory preschool, under instructor supervision. Two-quarter course includes seminar on effective teaching practices and their application to family day care settings.

**CCE 261 (1-6) N****Readings in Early Childhood Education**

Individualized program of study relating to specific problem or content area under faculty supervision. Credits based on work accomplished. Prereq: Permission.

**CCE 285 (5) N****The Project Approach**

For teachers who have been teaching several years. Explore how learning objectives assessment and emergent curriculum combine to foster a creative, personally expressive, co-active, celebratory curriculum for a democratic learning community.

**CCE 290 (12) N****Lab Practice Teaching**

The intensive capstone experience of collaboratively teaching and managing a half-day preschool program for 3- to 5-year-old children. Under faculty supervision and videotape analysis, teachers rotate roles to creatively meet the educational needs of the on-campus laboratory preschool children. Prereq: CCE 120 and CCE 121. Recommended: CCE 125, CCE 106, PSY 260, CCE 245, CCE 265, and CCE 234.

**CCE 291 (8) N****Field Practice**

Participation in community child care setting or public school classroom (15 hours/week). Includes planning, supervision, and evaluation of activities. Weekly seminars focus on communication within the teaching team, resume writing, job interview skills, and taking initiative in the classroom. Prereq: Instructor permission.

**CCE 292 (1-12) N****Classroom Research**

Use the work setting as the environment to meet the needs of children through social, motor, cognitive, language, and expressive skills. Under faculty supervision and peer interaction, examine quality education. Students will analyze their current knowledge and actions in their classroom.

**CCE 294 (4) N****Early Childhood Management: Fund Management**

Focuses on the four basic management functions, leadership styles, theories of management, problem-solving techniques, program planning, policies and procedures, NAEYC Accreditation, marketing, time management, management information systems, working with boards of directors, parent involvement and communication, advocacy, and professional development.

**CCE 295 (6) N****Early Childhood Management: Coop Ed**

Coop students will be supervised at their job site by community experts. Specific assignments will be coordinated with CCE 294 to enhance management skills. Prereq: Concurrent enrollment in CCE 294.

**CCE 296 (4) N****Personnel & Supervision**

Staff development, evaluations, staff training, coaching and developing cohesive teams, staff communication, conflict management, group dynamics, staff recruitment, hiring and retention, developing personnel systems and procedures, performance contracts, motivating staff, wages and benefits.

**CCE 297 (6) N****Early Childhood: Personnel Supervision Coop**

Coop students will be supervised at their job site by community experts. Specific assignments will be coordinated with CCE 296 to enhance personnel and supervision skills. Prereq: Concurrent enrollment in CCE 296.

**CCE 298 (4) N****Early Childhood Budget**

Fin Budget design and monitoring, money and credit, financial statements bookkeeping, financial planning, taxes and other legal requirements, computers for financial management, parent fees and other sources of revenue, grantwriting/fundraising, and the budget/quality link.

**ECE 305 (4) N****ECE Approaches & History**

This course examines changes in early care and education over time, including social, political, and societal trends. Current local, state, national, and global trends will be compared and critiqued. Using a historical approach, students will analyze key influences in the field and reflect upon the diversity embedded in this field. Students will observe and differentiate between models of early care and education and develop a personal teaching philosophy.

**ECE 310 (5) N****Cognition/General Knowledge**

This course focuses on using learning theory and key concepts of cognition development in young children to design math/science curriculum. Students will describe how learning occurs for young children and critique learning theory. They will learn to apply learning theory to their instruction and design developmentally appropriate strategies to teach math and science content based on the understanding of cognition.

**ECE 315 (5) N****Language, Literacy and Communication**

Examines methods of communication for children aged 0-8 years. Covers the development of communication skills and foundations of language and literacy. Using developmentally appropriate practice, students design and implement strategies to promote development of language, literacy, and communication skills in an early learning setting. Includes analysis of approaches to instruction, development of curriculum, and assessment of communication abilities.

**ECE 320 (3) N****Creative Expression**

Students will promote creativity in an early learning setting using music, art, movement, and imaginative play to support development across developmental domains (physical, cognitive, social-emotional). Students will examine different approaches to creativity, design curriculum incorporating creativity, and demonstrate developmentally appropriate practices supporting creativity in the classroom.

**ECE 350 (4) N****Practicum: Interactions**

Covers developmentally appropriate instructional interactions with children in early learning settings (ages birth-8 years). Introduces best practices in teacher-child interactions. Observations in a minimum of two programs serving different age groups are required.

**ECE 355 (5) N****Anti-Bias Education**

Explore equity issues in early childhood education and reflect on biases present in ourselves, communities of practice, and the systems in which our children live. Includes study of embedded bias and its impact on identity development and strategies to counter structural bias.

**ECE 430 (3) N**  
**Linguistically Diverse Learners**

Focuses on the language, literacy, and communication skills of children who are dual language learners, ages birth through 8. Assessment and instruction strategies applied to early learning settings. Emphasis is placed on identifying, strengthening, and building upon the family and community connections of young children who are dual language learners.

**ECE 450 (5) N**  
**Child Development and Assessment**

Examines child development holistically and across physical, cognitive, social, and emotional domains. Includes the importance of play in child development. Covers planning and preparing an effective system of ongoing assessment to support child development and the appropriate use of screening and assessment tools.

**ECE 480 (5) N**  
**Leadership and Professional Community**

Examine the professionalization of the early care and education field. We will identify professional organizations and examine how they support children, families, and early care and education professionals. We will look at national, state, and local standard development and implementation. This course addresses the importance of advocacy for vulnerable populations and explores opportunities for professional development in a variety of formats. Students will contribute to the ECE field.

**ECE 490 (5) N**  
**Capstone**

The culminating course in the Early Childhood Education BAS. Students will use an inquiry approach to research a specific area for improvement and design and implement significant change in an educational setting. Students will reflect upon previous coursework, research, and teaching practice to produce a culminating document that will include a revised teaching philosophy.

**Economics****ECON 100 (5) C,N,S****Survey of Economics**

Examines basic principles of economics, determination of national prosperity, income distribution, the role of government, price determination, allocation of resources, economic systems, and market behavior.

**ECON 101 (5) N**  
**Intro to Economics in the World of Work**

Intro to economics. Covers how the process of work, job creation and compensation are affected by changing conditions, markets and institutional constraints.

**ECON 102 (5) N,S**  
**Public Economics & Government**

Examines politics, decision-making, and current events of American government through basic principles of economics. Emphasizes the role of government related to economic efficiency within the context of diverse political interests.

**ECON& 201 (5) C,N,S**  
**Micro Economics**

Covers resource allocation and income distribution, with emphasis on price determination, production costs, and market structures. Application of economic reasoning to public issues and business. Prereq: MATH 098. Recommended: ENGL& 101.

**ECON& 202 (5) C,N,S**  
**Macro Economics**

Intro to the aggregate measures in the economy: GDP, unemployment, and inflation. Examines monetary and fiscal policies and their effects on the interest rate and inflation. Covers investment, economic activity, and the employment of resources. Fulfills Global Studies and/or QSR requirement for AA degree. Prereq: MATH 098 or equivalent.

**ECON 240 (1-5) C,N,S**  
**World of Work**

Surveys how the process of work, job creation, and compensation are affected by changing economic condition and institutional constraints. Explores personal career development, business conditions, and labor markets.

**ECON 298 (1-5) C,N,S**  
**Special Topics/Economics**

Independent study or field work in selected economics topics under the supervision of sponsoring faculty. Prereq: Permission.

**Education**

*Also see Early Childhood Education, page 283.*

**EDUC& 115 (5) C,N**  
**Child Development**

To provide a foundation of information regarding the physical, social, communication, and cognitive development of children via multimedia presentations that reflect cross cultural and global perspectives. Observations of children, research, vocabulary growth and application, and discussions serve as active learning experiences.

**EDUC& 130 (3) C,N**  
**Guiding Behavior**

Examine the principles and theories promoting social competence in young children and creating safe learning environments. Develop skills promoting effective interactions, providing positive individual guidance, and enhancing group experiences. Work/volunteer directly with children.

**EDUC& 136 (3) C,N**  
**School-Age Care**

Develop skills to provide developmentally appropriate and culturally relevant activities and care, such as preparing the environment, implementing curriculum, building relationships, guiding academic/social skill development, and community outreach. Work/volunteer directly with children.

**EDUC& 150 (3) C,N**  
**Child/Family/Community**

The course will develop students understanding about the ways in which child development is influenced by familial and community contexts. Students learn effective communication tools to explore cultures and demographics of families in society and identify community resources and strategies for involving families in the education of their child. This course requires the student to directly work/volunteer with children.

**EDUC 197, 198, 199 (1-5) C,N**  
**Work Experience – Education**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply education knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission.

**EDUC 200 (1-5) C,N,S**  
**Peer Tutoring**

Tutor training and/or experience. Focus on tutoring techniques and problems in any setting. For more information, contact Division offices in Humanities, Math & Science, Allied Health, Business, or Education on your campus.

**EDUC& 202 (5) C**  
**Intro to Education**

Intro to the Elementary Education profession. Overview of the education profession and U.S. educational system, including historical development, social foundations, and diversity of educational institutions. Focus on the K-8 system. Includes current theories, trends, and issues in education and the community, roles, and responsibilities of teachers, learners, and other school personnel. Prereq: ENGL 080 or permission.

**EDUC& 203 (3) C,N**  
**Exceptional Child**

Emphasizes diversity and a value-based approach to human exceptionality and disability using a lifespan view. An historical perspective covers current trends and practices in early intervention, special and general education, and life-long supports for individuals with disabilities and their families.

**EDUC& 205 (5) C**  
**Intro to Education Field**

Intro to K-12 education. Explores the complexity and dynamics of today's K-12 education environment. Includes suggestions for all-inclusive teaching methods geared toward the increasingly diverse multi-ethnic, multi-cultural, and multi-lingual student population. Covers the new federal education bill as well as the state of Washington student learning goals, including the Essential Academic Learning Requirements (EALRS) for student learning.

**EDUC 210 (5) C**  
**Intro to Bilingual Education**

Fundamental principles in the education of second language learners. Examines their unique academic needs and defines effective bilingual education strategies to address these needs, including the effects of culture on language development and content-area instruction.

**EDUC 211 (5) C**  
**Intro to Bilingual Education**

Focuses on historical, legislative, and socio-political background, including arguments for and against bilingual education. Includes a survey of research in bilingual education program design and an overview of the organization and structure of bilingual programs.

**EDUC 220 (3) C**  
**Assessing Bilingual Students**

Study of issues teachers must consider when assessing bilingual students, including eligibility testing, validity and reliability of standardized tests, alternative assessment, pre-assessment procedures, and placement of bilingual students in special education.

**EDUC 222 (5) N**  
**Math and Science Methods in ECE**

Explores the development of math and science concepts in young children. Methods for supporting key foundational skills in math, science, and cognition will be researched and applied to early learning settings. Culturally and developmentally appropriate assessment techniques will be discussed and practiced. Focus on promoting positive math and science identities, particularly for traditionally underrepresented groups in STEM fields.

**EDUC 234 (3) N**  
**Relationship Based Peer Mentoring in ECE**

This course examines the foundations of relationship based peer mentoring in early care and education settings. Students will discuss and apply best practices in relationship based adult learning, communication, cultural responsiveness, reflective practice, ethics, and professionalism.

**EDUC 250 (3) C**  
**Paraprofessionals & Teachers: Partners**

Comprehensive intro to knowledge and skills needed by paraprofessionals assigned to assist students in the instructional process and the teachers with whom they work. Includes roles and responsibilities of the paraprofessional, team-building, and behavior management.

**EDUC 271 (5) C**  
**ESL Reading/Language Art**

Learn methods of assessment, placement, and instruction of ESL students in reading and language arts. Focuses on instructional techniques for the literacy level and age of the ESL student and on integration of reading and language arts.

**EDUC 272 (5) C**  
**Integrating ESL in Class**

Specifically for the teacher with bilingual and monolingual students in the same classroom. Overview of current theories of language acquisition, with a focus on practical instructional strategies. Covers a wide repertoire of strategies drawn from bilingual, ESL, and mainstream methodologies.

**EDUC 291 (5-10) C**  
**Using World as Classroom**

Provides a unique opportunity to earn credit for various travel/study experiences in an international setting.

**EDUC 298 (9) C**  
**ESL Methods for Diverse**

Examines the languages, cultures, and diverse learning styles of limited-English-proficient (LEP) learners and fosters teacher proficiency in English as a Second Language (ESL) methods which respond appropriately to learners' diverse needs and facilitate their English language development. Emphasis on communicative language teaching.

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**Electrical Engineering****EEL 201 (5) N,S**  
**Energy Generation, Conversion & Sustainability**

This Industrial Power and Control Technology course covers the principles of electrical machines (AC and DC rotating equipment, including wind turbine technology) used in electrical generation and conversion to mechanical energy. The course reviews fundamentals of electricity, magnetism, transformers, and single-phase circuits; three-phase circuits are introduced. Prereqs: EET 109 or MATH&141 or equivalent and EET 160 or 162.

**EEL 202 (5) N,S**  
**Industrial Motor Controls and Drives**

This Industrial Power and Control Technology course covers electromagnetic and electronic control and drive devices and circuits used for starting, accelerating, stopping, reversing, and protecting industrial AC and DC motors. Prereqs: EET 109 or MATH&141 or equivalent and EET 161.

**EEL 203 (5) N,S**  
**Programmable Logic Controllers**

This course describes the fundamentals of programmable logic controller (PLC) systems, including how PLCs work and providing practical information and skills about installing, programming, and troubleshooting PLC systems.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

HIN . . . . . Watch Technology

**NAME TO PREFIX**

Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**Electronics Technology**

*Includes courses in Biomedical Equipment Technology, Broadband Technology, Electronics Engineering Technology, Sustainable & Conventional Energy & Control Technology, and Telecommunications Technology.*

**EET 097 (6) N  
Understand Electricity**

Practical survey of electricity and electronics with lab projects. Covers DC/AC, semiconductors, and digital concepts and applications. Includes safety issues, house wiring, and household electronics.

**EET 100 (8) N  
DC Principles of Electronics**

The first course in a series designed for an in-depth study of electronics. Analyze resistive networks, measure circuit values with electronic test instruments, construct DC circuits, and solve for unknown circuit variables. Basic concepts of energy, work, power, current, and voltage are learned as well as laws and theorems. Prereq: MAT 099 or concurrent enrollment.

**EET 102 (3) N  
Intro to Measurement**

Introduces technical students to the fundamentals of measuring systems that will be used throughout the technical program. Performance goals will equip the student with the ability to obtain direct and indirect measurements, correctly choose and utilize various measurement tools, identify types and sources of uncertainty or error in measurements, and use computer technology to prepare reports and presentations to communicate results of efforts. Introduction to advanced utilizations of measurement equipment.

**EET 103 (3) N  
Survey of Technology**

Study specific disciplines within electronic and engineering technologies relative to occupational opportunities. Knowledge of the standards, practices, and skills necessary for a complete understanding of these fields.

**EET 105 (2) N  
Intro to Technology**

Survey of the field of electronics and technology occupations. Learn the standards, practices, and skills necessary for employment in electronic-related occupations.

**EET 106 (1) N  
Intro to Soldering**

Develop competent soldering skills in removing and replacing components without causing damage to either the component or the printed circuit boards. Learn techniques to select the proper solder, soldering aids, tools, and other associated test equipment.

**EET 107 (5) N  
Aviation Electronics**

Intro and overview of avionics instrumentation and wiring.

**EET 108 (5) N  
Intro to Fiber Optics**

Intro to fiber optics theory and maintenance as applied to information technology, aerospace, broadband, and generic use. Use industry standard diagnostic test equipment, safety, routing, installation, cleaning, measurement, and inspection processes in lab. Prepare for Fiber Optic Association Certification (FOA).

**EET 109 (5) N  
Mathematical Applications for Circuit Analysis**

Overview of basic mathematical applications for electronic circuit analysis. Includes fundamental concepts of operations with numbers, the metric system, fundamental algebraic concepts, graphing, exponential and logarithmic functions, right angle triangles, basic trig functions, vectors, and complex numbers. Prereq: MAT 081 or equivalent.

**EET 110 (8) N  
AC Principles of Electronics**

Review of DC principles; inclusion of AC concepts of frequency, resonance, inductance, etc., with emphasis on magnetic circuits and energy. Study of capacitors, inductors, transformers, and other devices. Lab included. Prereq: EET 107, MAT 106, or concurrent enrollment or acceptable score on electronics advanced placement test or equivalent.

**EET 111 (8) N  
Solid State Electronics**

Analysis of semiconductor devices and their application in electronic circuits. Construction and measurement of circuits verify math analysis of bipolar, FET, MOS, and other popular semiconductor families. An introduction to operational amplifiers and other integrated circuits. Prereq: EET 110, or acceptable score on electronics advanced placement test, or equivalent.

**EET 112 (5) N  
Fundamentals of Fluid Power & Alternative Energy**

Introduction to fluid power systems used in industry and to photovoltaic systems. Covers fundamentals of hydraulic and pneumatic systems, including fluid power components and schematics. Includes electrical/electronic control of fluid power systems and demonstrates several electro-hydraulic servo-systems. Prereq: EET 109 or MATH&141 or higher.

**EET 114 (5) N  
Applied Physics**

Physics for students in a vocational technical field. Covers the basic laws of physics as applied to mechanics, matter and heat, wave motion and sound, electricity, magnetism, and light. Includes physics concepts applied to industrial-technical fields. Prereq: EET 109 or MATH&141.

**EET 115 (5) N  
Troubleshooting Fundamentals**

Intermediate electronic support course covering appropriate selection and use of small hand tools, basic electronic test equipment, soldering, and assembly techniques. Also covers the basic steps of troubleshooting and application of those steps on electronic circuits. Prereq: EET 111 or permission.

**EET 117 (4) N  
Electronics Devices**

Analysis of characteristics of semiconductor devices and their application in common electronic circuits. Covers the theory and practical application of diodes, bipolar junction transistors (BJTs), junction field effect transistors (JFETs), metal-oxide-semiconductor FETs (MOSFETs), and thyristors. Prereq: EET 107 or equivalent.

**EET 118 (4) N**  
**Electronics Devices Lab**

Covers construction and measurement of electronic devices and circuit parameters to verify models and math analysis developed in EET 117. Begins with construction of simple power supplies and moves on to more complex amplifier circuits. Covers diodes, bipolar junction transistors (BJTs), junction field effect transistors (JFETs), metal-oxide-semiconductor FETs (MOSFETs), and thyristors. Coreq: EET 117.

**EET 119 (5) N**  
**Intro to Troubleshooting**

Intermediate electronic support course providing students with information about the appropriate selection and proper and safe use of small hand tools and basic electronic test equipment. Also covers the basic steps of troubleshooting and application of those steps on electronic circuits. This course is designed to make the construction and troubleshooting of electronic circuits less frustrating and more personally rewarding.

**EET 127 (4) N**  
**Intro to Digital & Analog Circuits**

Third course in an in-depth study of electronics. Covers the fundamentals of analog and digital circuits. Analog topics include differential and operational amplifiers, and comparators, linear and nonlinear op amp applications. Digital topics include digital signals, number systems, Boolean algebra, logic gates, combinational logic, flip-flops, and sequential logic. Prereq: EET 117. Coreq: EET 128.

**EET 128 (4) N**  
**Intro to Digital & Analog Circuits, Lab**

With EET 127. Includes construction, debugging, and adjustments of analog and digital circuits. Evaluate and compare circuit performance, with predictions based on circuit models and mathematical analysis. Analog circuits include standard op amp designs plus linear and nonlinear application examples. Digital topics include logic gate and flip-flop operation, the construction of combinational and sequential logic circuits, interfacing between logic families, and a project. Prereq: MAT 106 and EET 117. Coreq: EET 127.

**EET 130 (9) N**  
**Computer Basics – A+ Cert**

Intro to basic computer knowledge and skills necessary for a network specialist. Emphasis on computer component integration and problem solving techniques. Intro to troubleshooting from a hardware and software approach. Presents stand-alone and peer-to-peer operating systems (DOS, Win 95/98). Taught to A-Plus certification standards. Student should have systems troubleshooting experience, including interfacing to peripherals.

**EET 131 (5) N**  
**IT Essentials I A+ Cert**

First of two courses that address the knowledge required for the current Comptia A+ Certification test. Emphasizes fundamentals of installing, maintaining, and configuring computer hardware, operating systems, networks, and security. Lab fee.

**EET 132 (5) N**  
**IT Essentials A+ Certification Advanced**

Second of two courses that address the knowledge required for the current Comptia A+ Certification test, including installing, maintaining, and configuring computer hardware, operating systems, networks, and security. Lab fee.

**EET 135 (5) N**  
**Intro to Broadband**

Introduction to broadband cable technologies, theory, and skills required for technicians working in the broadband industry, including HDTV, high speed internet, and telephony. Training is adapted from the Society of Cable and Telecommunications Engineers (SCTE), with input from local cable providers. Prereqs: EET 131, EET 160, or EET 161, or instructor permission.

**EET 136 (5) N**  
**Introduction to Robots**

Intro to foundation concepts in building and programming robots. Students program microcontrollers and configure electronic components to enable robotic activity. Includes programming of LED lighting, digital pushbuttons, motion control, digital displays, light measurement, and frequency and sound.

**EET 137 (5) N**  
**Introduction to Robotics**

Intro to foundational concepts in building and programming robots. Build, program, and configure a robot using various electronic devices to enable a wide variety of robotic activity.

**EET 138 (5) N**  
**Industrial Robotics**

An introduction to industrial robotics, including the application, programming, troubleshooting, and servicing of state-of-the-art industrial robots and associated sensors, end effectors, and systems. Prereq: EET 137 or instructor permission.

**EET 160 (5) N**  
**Intro to Electricity & Electronics**

Survey of electronics and electricity, addressing AC/DC, resistors, capacitors, inductors, semiconductors, amplifiers, operational amplifiers, digital systems, and microprocessors. Provides a quick, one-course overview of this material without the details and rigors of math found in standard course offerings.

**EET 161 (5) N**  
**DC Principles of Electronics**

Covers physics as applied to electricity and magnetism, electrical and electronic terms, and units. Intro to electronic measuring devices, electrical circuits, magnets, magnetism, meter movements, and DC circuit analysis. Prereq: High school algebra.

**EET 162 (5) N**  
**A. C. Electronics**

Second course in a series designed for an in-depth study of electronics. Covers the sinusoidal waveform, its generation and measurement, and basic AC topics, including frequency, inductance, capacitance, reactance, resonance, filters, transformers. Computer models, as well as labs with the oscilloscope, are used throughout. Prereq: EET 161 or equivalent. Coreq: EET 109 or MATH& 142 or instructor permission.

**EET 163 (5) N**  
**Solid State Electronics**

Analysis of characteristics of analog semiconductor devices and their applications in common electronic circuits. Course begins with construction of simple power supplies and moves to more complex amplifier circuits. Construction and measurement of devices and circuit parameters verify math analysis of circuits explored. Prereqs: EET 162 or instructor permission.

**EET 164 (5) N**  
**Solid State Electronics II**

Covers regulated power supplies, power amplifiers, basic AM transmission and receiving, parameters of various solid-state devices as applied to linear circuits. Prereq: EET 163 or equivalent or acceptable score on electronics advanced placement test.

**EET 165 (5) N**

**Analog Circuits/Devices**

Continued analysis of characteristics of analog semiconductor devices and their applications in common electronic circuits. Explanation and analysis of field-effect transistors (FETs), thyristors, and operational amplifiers, their nomenclature and identification, characteristics, parameters, and basic circuit applications. Explanation and analysis of special-purpose diodes (particularly the zener) and their applications.

**EET 166 (5) N**

**Analog Circuits/Device II**

Further study of common analog devices, circuits, and subsystems in the fields of communication and industrial controls. Prereq: EET 165 or equivalent.

**EET 167 (5) N**

**Basic Electrical Systems**

Covers the fundamental applications of digital and analog circuitry to industrial measurement and control problems. Includes data acquisition, thyristor characteristics and application, and control fundamentals. Prereq: EET 166 and EET 171.

**EET 168 (5) N**

**Electrical Systems & Industrial Applications**

Continues the applications of digital and analog circuitry to industrial measurement and control problems. Covers transducers, final control elements, and interfacing. Emphasis on automated test equipment and programmable controllers. Prereq: EET 167.

**EET 170 (5) N**

**Digital Electronics & Programmable Logic Controllers I**

Fundamentals of digital electronics and interface circuits. Course covers number systems, logic gates, Boolean algebra and logic simplification (including DeMorgan's theorems and Karnaugh maps), encoders and decoders, multiplexers and demultiplexers, and an introduction to flip-flops, and an introduction to programmable logic controllers (PLCs). Prereq: EET 161 or instructor permission.

**EET 171 (5) N**

**Digital/Programmable Logic Controllers II**

Fundamentals of digital electronics and interface circuits, continued. Course covers flip-flops, shift registers, counters and state machines, multivibrators (including the 555 timer IC), programmable logic, data storage and memory, analog-to-digital and digital-to-analog conversion and interfacing applications, introduction to microprocessors and programmable logic controllers (PLCs). Prereq: EET 170 or instructor permission.

**EET 197 (10) N**

**Special Topics: Electronics**

Study of selected topics considered appropriate by the instructor and/or faculty. Course content, format, and projects vary. Prereq: Permission.

**EET 198 (2) N**

**Electronics Workshop**

Open lab with instructor. Analog and digital course work enhancement. May include proper use of bench equipment, troubleshooting techniques, study skills, and group problem-solving.

**EET 201 (5) N**

**Energy Generation, Conversion and Sustainability**

This Industrial Power and Control Technology course covers the principles of electrical machines (AC and DC rotating equipment, including wind turbine technology) used in electrical generation and conversion to mechanical energy. The course reviews fundamentals of electricity, magnetism, transformers, and single-phase circuits; three-phase circuits are introduced. Prereqs: EET 109 or MATH&141 or equivalent, and EET 162.

**EET 202 (5) N**

**Industrial Motor Controls and Drives**

This Industrial Power and Control Technology course covers electromagnetic and electronic control and drive devices and circuits used for starting, accelerating, stopping, reversing, and protecting industrial AC and DC motors. Prereqs: EET 109 or MATH&141 or equivalent, and EET 161.

**EET 203 (5) N**

**Programmable Logic Controllers**

This course describes the fundamentals of programmable logic controller (PLC) systems, including how PLCs work and providing practical information and skills about installing, programming, and troubleshooting PLC systems.

**EET 206 (5) N**

**Marine Electronics**

Fundamentals of analog and digital electronics, with applications to the marine industry and shipboard systems. Course support curriculum at the Seattle Maritime Academy. Prereq: MGO 127 or permission.

**EET 207 (4) N**

**Advanced Principles of Electronics**

Reinforcement of DC principles and inclusion of AC concepts of frequency, resonance, inductance, capacitance, and reactance. Emphasis on magnetic circuits and energy. Covers circuit construction and measurement using power supplies, multimeters, oscilloscopes, and other test instruments. Prereq: EET 107 or EET 161, and EET 109 or MAT 102 or higher. Coreq: EET 208.

**EET 208 (4) N**

**Advanced Principles of Electronics Lab**

Lab course to accompany EET 207. Covers circuit construction and measurement, using power supplies, multimeters, oscilloscopes, and other test equipment. Coreq: EET 207.

**EET 210 (8) N**

**Digital Electronics**

An introduction to logic fundamentals, logic IC families and their characteristics, logic controls, and associated circuitry. A sampling of topics include logic numbering systems, Boolean algebra, detectors, combinational logic, minimization techniques, ADA converters, memories, and registers. Prereq: MAT 109, EET 111, CSC 109, or permission.

**EET 211 (8) N**

**Analog Circuits & Device**

Continuation of analog devices, circuits, and subsystems. Emphasis on active and passive filters and associated electrical considerations. Timers, transducers, AD/DA converters, communication circuits, multiplexers, modulators, and techniques. Prereq: EET 115, EET 210, PHY 118, or equivalent, or acceptable score on electronics advanced placement test.

**EET 212 (8) N**

**Industrial Applications**

This course covers the application of digital and analog circuitry to industrial measurement and control problems. Transducers, final control elements, and interfacing are discussed. Instruction on automatic test equipment. Prereq: EET 211 or equivalent.

**EET 215 (5) N****Analog Troubleshooting**

Allows students to apply theoretical premises to actual systems and circuits that are faulty, repair the fault, and test the system. Includes an in-depth study of the proper test equipment to use in each step of troubleshooting. The student will progress in troubleshooting skills, using audio tape, oscilloscope, black and white television sets. Prereq: EET 115, EET 210, MAT 109, and PHY 118, or permission.

**EET 216 (4) N****Digital & System Troubleshooting**

Focus is on complex digital systems: microcomputers and peripherals (i.e., floppy disk drive, hard drive) and switching power supplies. A maintenance and repair strategy will be followed.

**EET 217 (4) N****Digital & Analog Circuits II**

Continues the study of analog and digital circuits. Analog studies include active filters, oscillators, and voltage regulators. Digital studies include number arithmetic operations and circuits, counters, and shift registers. Emphasis on D/A and A/D converters and data acquisition systems. Coreq: EET 218. Prereq: EET 127 and EET 207.

**EET 218 (4) N****Digital & Analog Circuits, Lab**

Covers construction, debugging, and adjustment of analog and digital circuits, and data conversion circuits. Analog research includes active filters, oscillators, and voltage regulators. Digital research includes binary and BCD adders, counters, and shift registers. Coreq: EET 217.

**EET 219 (3) N****Metrology**

This course provides an introduction to the foundational knowledge and skills required for the Certified Calibration Technician Certification administered by the American Society for Quality (ASQ). The ASQ has additional requirements for work experience that candidates must fulfill before they are eligible to take the exam; check with the ASQ for more information. Prereqs: EET 114 and EET 162 or instructor permission.

**EET 220 (5) N****Circuit Analysis**

Design and analysis of passive networks, small signal amplifiers, and integrated circuit operational amplifiers. Emphasis on mathematical and computer modeling techniques, circuit prototyping, and testing methods. Prereq: EET 110, EET 111, EET 211, or equivalent, or instructor permission.

**EET 240 (12.5) N****Communication Electronic**

An overview of communications technology, including specialized equipment: antennas: AM, SSB, and FM modulation and microwave, transmitters and receivers: satellite communications and antenna requirements and specialized test equipment. Also, preparatory information pertaining to the FCC General Class License examination will be reviewed. Prereq: EET 211 and EET 215 or permission.

**EET 241 (5) N****Principles of Telecommunications I**

Intro to basic telephony: apparatus and plant design, network design, network traffic planning, private and switched networks, data systems and testing equipment. Lab.

**EET 242 (5) N****Principles of Telecommunications 2**

Continuation of telephony: apparatus, plant design, network design, traffic planning, private networks, data systems, distribution of switched networks. Lab. Prereq: EET 241.

**EET 243 (5) N****Principles of Telecommunications 3**

Basic switched telephony: telephone apparatus and plant design, switched network designs, and network traffic planning of switched and private switched networks. Lab. Prereq: EET 242.

**EET 251 (5) N****Microprocessor Fundamentals I**

Covers fundamentals of microcontroller and embedded systems. Review of digital fundamentals, microcomputer system organization, assembly programming, I/O devices, and interfacing. Prereq: EET 127 or EET 170 or permission.

**EET 252 (5) N****Microprocessor Fundamentals II**

Covers assembly language, I/O devices, constructing, programming, and troubleshooting microprocessor-based applications. Prereq: EET 251 or permission.

**EET 255 (8) N****Advanced Digital Computer Technology**

Microcomputer applications and systems, software development, computer interfacing, peripheral devices, and system troubleshooting. Emphasis on functional project development using software development systems, logic analyzers, and microprocessor emulators to verify hardware and software performance and troubleshoot malfunctions. Prereq: EET 210, EET 251, and CSC 109, or equivalent. Coreq: EET 291.

**EET 271 (10) N****Advanced Technology Modules/Electronics Technology**

Self directed modules for customization programs specializing in Electronics Technology. Modules cover selected topics in switching regulators, lab view, automated test equipment, and power semiconductors. Coreq: EET 217 and EET 218; some modules may have additional requirements. Prereq: EET 112, EET 207, and EET 208.

**EET 276 (10) N****Advanced Technology Modules/Power & Control**

Self directed modules for customization programs specializing in Power and Industrial Control. Modules cover selected topics in stepper motors, sensors, transducers, motor control, or PLCs. Coreq: EET 217 and EET 218; some modules may have additional reqs. Prereq: EET 112, EET 207, and EET 208.

**EET 285 (3) N****Electronics Technology Project**

Team project course serving as a capstone experience in the electronics technology and related specialty programs. Plan, design, implement, and present an electronics-oriented project of suitable complexity. Prereq: EET 171 and 166.

**EET 286 (5) N****Biomedical Equipment I**

This course covers the devices, circuits, and concepts specific to the healthcare environment, including theory and operation of equipment used for patient care. Emphasis is given to patient-connected equipment, including monitors for cardiovascular, respiratory, and neurological parameters; thermometry; and electrical safety. Lab exercises emphasize maintenance, troubleshooting, repair, and calibration of such equipment. Prereqs: EET 163, AMA 117, CHEM 121, and AMA 119, or BIOL 128.

**EET 287 (5) N****Biomedical Equipment II**

This course continues the study of medical technology begun in EET 286, with a focus on equipment specific to the surgical setting, medical video, medication pumps, medical lasers; an overview of various imaging modalities; and technology used in the clinical laboratory. Lab exercises emphasize maintenance, troubleshooting, repair, and calibration of such equipment. Prereq: EET 286 with a grade of 2.5 or higher.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN . . . . . Watch Technology

**NAME TO PREFIX**  
Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**EET 291 (4) N**  
**Electronics Externship**

On-the-job training for electronics students who have finished their electronics certificate requirements and would like to improve their skills before actively seeking a job. Prereq: Completion of appropriate amount of designated program and permission. 55 hours of job-related work experience = 1 credit.

**EET 297 (4) N**  
**Biomedical Technician**

Placement in a clinical engineering department or equipment manufacturer, 220 hours of mentored work experience to integrate the theory and practice learned in EET 286 and 287. Prereq: EET 287 with 2.5 or higher.

**EET 298 (5) N**  
**Special Topics – Electronics Technology**

Selected topics in electronics technology. Prereq: Permission.

**EET 299 (7) N**  
**Special Projects in Electronics I**

Independent electronics study project assigned and directed by the instructor. Prereq: Permission and enrollment in electronics program.

**Emergency Department Tech**

**EDT 101 (4) N**  
**Emergency Department Technician Fundamentals**

Provides the theoretical background needed for emergency department technicians to provide basic patient care and assist with the various procedures common to the emergency department.

**EDT 102 (5) N**

**ED Tech Clinical Procedures**

This course will provide the students with the skills and techniques used by Emergency Department Technicians (EDT) daily. This covers basic responsibilities, procedures, and diagnostics testing.

**EDT 103 (4) N**

**Emergency Department Technician Lab Skills**

Provides the students with the skills and techniques used by emergency department technicians on a daily basis.

**EDT 104 (4) N**

**ED Technician Skills II**

This course will provide the students with the advanced skills and techniques used by Emergency Department Technicians (EDT) in an Emergency Department (ED) or Urgent Care setting.

**EDT 105 (3) N**

**Emergency Department Technician Practicum**

This course will give the student the opportunity to apply theory and practice skills acquired in the program while providing clinical practice in an Emergency Department (ED) or Urgent Care setting as an Emergency Department Technician. Working in the clinical environment, the student will be supervised by a site preceptor or a member of the ED. The students will also meet weekly to discuss and share the acquired experience with others.

**Emergency Medical Technician (EMT)**

**AHE 190 (12) N**

**Emergency Medical Technician**

Provides training in pre-hospital emergency care. Follows State of Washington law and King County EMS. Coreq: AHE 192.

**AHE 191 (2-5) N**

**EMT – Continuing Education**

Provides continuing education for EMTs to meet annual requirements for recertification.

**AHE 192 (1) N**

**Basic Life Support for Healthcare Providers**

The American Heart Association BLS curriculum is the standard training for healthcare agencies/personnel. It meets the requirements for CPR certification and includes CPR for Adults, Children, and Infants; AED (Automatic Defibrillation); and use of the Bag Valve Mask. For those in EMT program, this is a corequisite with AHE 190.

**AHE 194 (4) N**

**EMT Refresher**

Continued training in emergency care for those who have previously passed the initial training but have not been State or National Registry Certified, or for those whose certification has expired by less than three years.

**Engineering**

**ENGR 110 (2) C,N,S**

**Engineering Orientation**

Covers fields of engineering, career options, and general information.

**ENGR& 111 (4) C,N,S**

**Engineering Graphics I**

Covers principles of orthographic projection, freehand sketching, pictorials, lettering, scales and use of instruments, basic dimensioning, and descriptive geometry. Intro to computer-aided and designed drafting. Prereq: MATH& 141.

**ENGR& 112 (4) C,N,S**

**Engineering Graphics II**

Continuation of ENGR& 111. Includes basic principles of revolution and principles used to solve problems relating to curved and warped surfaces, intersection of surfaces, development of common shapes and surfaces, and procedures for finding the locus of a line. Prereq: ENGR& 111.

**ENGR 116 (4) S**

**Engineering Design & Creativity**

Examine the nature of creativity and its process. Intro to analysis and solution of engineering problems, applications of vectors, and calculus in statics and dynamics.

**ENGR 140 (5) N**

**Intro Engineering Problems**

Covers problem-solving methods; analysis in measurements, probability, and statistics; dimensions and unit systems; vector algebra, intro to scalar statics. Prereq: MATH& 141.

**ENGR 141 (5) S**

**Scientific Programming**

Covers problem analysis, algorithm design, numerical techniques, and the elements of programming, using MATLAB or similar high-level programming language. Emphasis on learning how to write clean, efficient, and well-documented programs for modeling of scientific and engineering problems. Prereq: MATH& 142 or higher.

**ENGR 142 (5) C,S**  
**Computer Programming**

Central: Learn the general principles of modern programming, including how to design, implement, document, test, and debug computer programs. Based on Java. Covers objects, messages, expressions, statements, methods, classes, conditionals, iterations, arrays, and collections. Prereq: CSC 110 and MATH& 116 or 142 (C). ENGR 142 may be taken as CSC 142. South: Intro to computer science for scientists and engineers. Emphasizes design, algorithms (variables, expressions, statements), abstraction (data types, functions), and analysis (correctness, efficiency). Prereq: CSC 110 and MATH& 141 (S). ENGR 142 May be taken as CSC 142.

**ENGR 161 (4) S**  
**Plane Surveying I**

Intro to basic surveying methods and functions, office procedures, and field practices in the use of instruments. Organization of the field party to learn each job function. Includes theory and application of tapes.

**ENGR 170 (4) S**  
**Intro to Materials Science**

Survey of materials used in engineering. Covers physical and chemical principles related to structure, properties, and engineering applications. Studies include metals, alloys, semiconductors, polymers, ceramics, and composites. Prereq: CHEM& 161.

**ENGR 171 (1) S**  
**Materials Science Lab**

Practical application of the terminology of engineering materials and of methods used to solve materials problems. Experiments expand on ENGR 170. Includes a tour of an industrial materials testing lab. Prereq: ENGR 170.

**ENGR& 204 (5) C,N,S**  
**Electrical Circuits**

Covers basic circuit and systems concepts. Includes resistors, sources, capacitors, inductors, and operational amplifiers. Includes solution of first and second order linear differential equations associated with basic circuit forms. Prereq: PHYS& 222 and MATH& 152.

**ENGR& 214 (5) C,N,S**  
**Statics**

Covers force and moment systems, equilibrium principles for particles and rigid bodies, analysis by vector algebra of two- and three-dimensional structures, frames, machines, trusses, and beams. Includes analysis of internal forces, friction, centroids, and moment of inertia. Prereq: MATH& 152 and PHYS& 221.

**ENGR& 215 (5) C,N,S**  
**Dynamics**

Studies motion and the forces which affect the motion, including rectilinear motion, curvilinear motion, plane motion, dynamic force analysis, work and energy, impulse, and momentum. Prereq: ENGR& 214 with a 2.5 or better and MATH& 152.

**ENGR& 224 (5) C,N,S**  
**Thermodynamics**

Intro to thermodynamics from a macroscopic point of view. Development of the laws of thermodynamics and application to energy transformations and state changes. Prereq: MATH& 153, PHYS& 222, and CHEM& 161.

**ENGR& 225 (5) C,N,S**  
**Mechanics of Materials**

Covers basic relationships between axial, torsion, bending, and shear loads acting on solid elements, such as rods, shafts, columns, and beams, and their allowable stress, strains and deformations, Mohr's circle of stress. Prereq: ENGR& 214 and MATH& 152.

**ENGR 240 (5) N**  
**Introduction to Numerical Methods**

Covers numerical solutions to engineering problems using modern scientific computing tools. Includes intro to MATLAB programming, matrix algebra, finding roots, curve-fitting, integration, differential equations.

**ENGR 271 (6) S**  
**Digital Logic Design**

Intro to digital logic, Boolean algebra, combinational and sequential circuits and logic design, programmable logic devices, and the design and operation of digital computers, including ALU and I/O. Weekly labs. Prereq: CSC 142 or permission.

**ENGR 298 (1-5) C,N,S**  
**Special Topics**

A seminar of selected topics and/or activities in engineering. Prereq: Variable, dependent on topic.

**ENGR 299 (1-5) C,N,S**  
**Independent Study**

Independent study of approved engineering topics. Prereq: Permission.

**Engineering Graphics & Design Technology****TDR 100 (5) N**  
**Basic Building Information Management for Design**

Intro to basic Building Information Management/Modeling (BIM), practices using Autodesk's Revit program. Focuses on familiarization with BIM environment, including drawing commands, efficiencies of CAD vs. BIM. Emphasizes production skills.

**TDR 101 (5) N**  
**Intermediate Building Information Management for Design**

Covers drafting techniques for structural design using BIM with Autodesk's Revit Structure. Work with beam, column, structural details, schedules, and analysis of all structural members. Lab. Prereq: TDR 100 or permission.

**TDR 102 (5) N**  
**Advanced Building Information Management for Design**

Focus on whole commercial building creation, including details, construction drawings, building management, and plotting as they relate to construction, design, and sustainable applications. Focuses on Revit Architecture, MEP and Structure. Lab. Prereq: TDR 101 or permission.

**TDR 103 (4) N**  
**Energy Analysis for Building Information Management**

Continuation of TDR 102. Focuses on building Life Cycle Assessment (LCA), Building for Environmental Economic Stability (BEES), building envelope considerations, achievable green performance, and use of green analysis software. Prereq: TDR 100, 101, and 102, or permission.

**TDR 105 (1) S**  
**Technical Employment Preparation**

Intro to the pre-employment components of the CAD/Design program. Covers job search techniques, including resume writing, cover letters, job applications, interviewing techniques, industry visits, and portfolio preparation. Prereq: ENGL 105. Coreq: TDR 123.

**TDR 109 (1) N**  
**Architectural Engineering Lab**

A supervised drafting development lab where students can work on class projects to increase competency and hands-on skills using appropriate software or hand drafting techniques. May be repeated.

**TDR 111 (5) N****Basic CAD Draft/Construction & Design**

Intro to basic Computer Aided Drafting practices using Autodesk's AutoCAD program. Focus on drawing commands, layering, scaling, dimensioning, and text styles as used in construction/design applications. Emphasizes production skills. Open Lab.

**TDR 112 (5) N****Inter CAD Draft/Construction & Design**

Continuation of TDR 111. Focuses on team usage of external sources, creation of blocks, paper space/model space, file management and exchange, and plotting as it relates to construction/design industry. May introduce isometrics and 3-D concepts. Emphasis on production skills. Prereq: TDR 111, TDR 174, or permission.

**TDR 113 (5) N****Basic Drafting**

Learn the basic fundamentals of hand drafting. Focus on drafting equipment and its use, basic linework, hand lettering, orthographic projections, isometrics, and basic sheet layout. Select discipline options, including structures for construction/design or basic mechanical drawings. Open lab.

**TDR 115 (5) N****Civil and Site Drafting**

Study development of site plans, including basic contours, utility features, simple road layout, and storm drainage features. Perform simple calculations.

**TDR 121 (4) N,S****Drafting Technology I**

Covers basic drafting knowledge, skills, and standards required to prepare three-view and pictorial drawings to current industry standards. Prereq: COMPASS or SLEP test.

**TDR 123 (4) N,S****Drafting Technology II**

Covers basic principles and practices involved in the creation of production drawings, including dimensions and tolerancing, sections, and auxiliary views. Emphasizes standard practices and variations permitted when required for clarity. Prereq: TDR 121 or permission.

**TDR 124 (5) N****Materials & Method of Construction**

Intro to basic materials used in construction, with discussion on manufacturing, fabrication, design, and assembly processes for large and small buildings. Focus on steel, concrete, wood, and masonry construction.

**TDR 125 (4) S****Drafting Technology III**

Advanced principles, techniques, and application of engineering graphics, including advanced dimensioning and tolerancing, detail, and assembly drawings. Emphasis on standard practices ANSI, ASME, or ISO, and variation permitted when required for clarity. Prereq: TDR 123.

**TDR 126 (4) N,S****Space Geometry**

Covers basic principles of space geometry and use of direct projection techniques to resolve spatial relationships. Emphasizes projection techniques and application of principles to problem solutions. Prereq: TDR 121 or permission.

**TDR 129 (3) S****Industrial Blueprint Reading**

Primarily for the machinist. Covers the detail drawing page, title block, dimensioning, tolerancing, views of a drawing, drawing notes, drawing changes, and geometric tolerancing.

**TDR 131 (4) N,S****Introduction to CAD 2-D**

Learn the features, limitations, and considerations associated with the operation of a computer-aided design/drafting (CAD) system. Practice using the AutoCAD micro-based CAD software. Prereq: TDR 121 or concurrent enrollment.

**TDR 133 (4) N,S****Intermediate CAD 2-D**

Builds on skills developed in TDR 131, providing students with additional instruction on advanced commands of the AutoCAD micro-based CAD software. Prereq: TDR 131.

**TDR 134 (5) N****Systems in Buildings**

Focuses on the major building systems, including HVAC, water and waste, fire protection, electrical, and structural. Intro to the Uniform Building Code, type of construction, and history. Includes heat loss calculation and lateral loads and their resisting elements, plus earth work and foundations.

**TDR 135 (4) S****Autocad 3-D Modeling**

Intro to computer-based three dimensional modeling. Explores the fundamental concepts and workflows for creating 3-D models using AutoCAD, using industry-specific design scenarios. Prereq: TDR 133 or permission.

**TDR 144 (5) N****Design & Construct Environment**

Intro to basic organizational, business, and legal aspects of the construction/design industry. Includes business forms, contractual obligations, employment issues, registration duties, public safety, and other issues which may affect business.

**TDR 160 (5) N,S****Surveying/CAD Civil**

Covers basics of surveying and mapping; survey planning and operations; measurement of distances, angles, and elevations. Includes taking field notes, calculating, and plotting the survey data. Prereq: MATH 111, 112, TDR 123, 131, or permission.

**TDR 161 (3) N****Architectural Drafting I**

A continuation of TDR 160. Covers basic wood beam design. Includes allowable stress, loading criteria, shear, and deflection. Covers basic truss analysis.

**TDR 169 (4) S****CAD – Electrical**

Covers basic skills in electronic schematic drafting using 3D CAD capabilities. Learn drafting styles used in electrical plans, such as power stations, industrial and house wiring. Use layout symbols for electric power systems and plot plans for residential/commercial electrical plans. Emphasis on real world applications to engineering problems. Prereq: TDR 131 and MATH 112 or permission.

**TDR 170 (5) N****Introduction to Design for 3D Printing**

Introduces the 3D printing pipeline while keeping a focus on design and how to export models from CAD software. Familiarization with 3D slicing software and tools like Simplify3D and design software such as Autodesk Meshmixer. Emphasis on developing real world skills related to advanced design in manufacturing.

**TDR 171 (5) N****Introduction to SolidWorks**

Intro to basic parametric solid modeling practices using SolidWorks or comparable programs to industry standards. Learn engineering graphics in the 3D environment, including drawing commands, efficiencies of PSM vs. the 2D environment. CAD or 3D experience recommended.

**TDR 172 (5) N****Intermediate SolidWorks**

This course builds on the modeling skills taught in TDR171 (Introduction to SolidWorks) and includes expanded coverage of part and assembly modeling and the production of engineering drawings as well as an introduction to parametric solid modeling, the use of analytical tools available within the SolidWorks application, basic surfacing, skills associated with the modeling of sheet metal parts, molds and weldments, and use with various industrial processes, particularly additive manufacturing.

**TDR 173 (5) N****Advanced Design for 3D Printing**

Continued application of 3D printing in the creation of prototypes to show ideas and concepts in a tangible way. Attention on advanced post-processing techniques for 3D prints and building sophisticated print jobs in Simplify3D. Significant practice troubleshooting and problem solving designs and 3D prints. Prereq: TDR 170.

**TDR 174 (4) N****Intro to CAD/Architecture & Engineering**

Intro to the basic concepts of Computer Aided Drafting (CAD). Uses AutoCAD to produce construction drawings and details. Covers the impact of CAD on productivity and contemporary design practice.

**TDR 175 (4) N****Intermediate AutoCAD for Architecture & Engineering**

Covers more advanced AutoCAD commands and features and reinforces basics. Increase productivity and complexity of project assignments. Build the tools necessary to compete for AutoCAD positions in the design community.

**TDR 176 (4) N****Advanced AutoCAD/Architecture & Engineering**

Advanced concepts of AutoCAD. Develop productivity tools, such as macros, templates, and system customizing. Begin to work in 3-D.

**TDR 179 (4) S****CAD – Mechanical**

Covers techniques used to prepare mechanical engineering drawings: basic mechanism geometry, detail, and assembly drawings. Emphasis on appropriate presentation of data. Prereq: TDR 123 and TDR 131.

**TDR 197 (1-5) S****Internship**

Provides practical work experience and employment contacts by integrating academic studies with actual on-the-job training situations. Orientation to internships required prior to registration. Prereq: Permission.

**TDR 200 (5) N****Intro to Solid Works**

Intro to basic parametric solid modeling practices using SolidWorks or comparable programs to industry standards. Learn engineering graphics in the 3D environment, including drawing commands, efficiencies of PSM vs. the 2D environment. CAD or 3D experience recommended.

**TDR 201 (5) N****Intro CATIA**

This course will focus on students wanting to become a technical designer with emphasis in part creation, assemblies, and minor surface commands. These are key elements of CATIA and will be built upon on subsequent classes. Student should have strong skills in CAD applications that pertain to 3D and Solid Modeling.

**TDR 202 (5) N****Intermediate CATIA**

This course will focus on students wanting to become a technical designer building upon what was learned in TDR 201, with emphasis in advanced surfacing. The student should have advanced skills in various CAD applications as it pertains to 3D and solid modeling. Prereq: TDR 201 or instructor permission.

**TDR 228 (4) S****CAD Sheet Metal/HVAC**

Understand CAD operation, including interactive graphics systems start-up, setup of drawing session, menus and commands, geometry, editing, drawing storage, and retrieval using the latest version of AutoCAD. Prereq: TDR 123 and TDR 131 or permission.

**TDR 230 (4) S****CAD 3-D Parametric Solid Design I**

Intro to the capabilities of the 3D CAD software, using a feature-based parametric solid modeling design with many industry applications. Covers true 3-D surfaces and 3-D viewing options; the use of X, Y, Z filters; and the user-defined coordinate system (UCS). Prereq: TDR 123 and 131.

**TDR 231 (4) N,S****CAD 3-D Parametric Solid Design II**

Explores 3-D graphics and construction capabilities of 3D CAD. Includes a review of point coordinate entry; X, Y, and Z filters; and the user coordinate system (UCS). Intro to spherical and cylindrical coordinate entry, along with 3-D viewing options, 3-D geometry construction, surface mesh, region and solid modeling. Prereq: TDR 230 or permission.

**TDR 236 (1) N,S****Design Project Management**

Integration of basic elements of a design project: design process, teamwork, project planning and management, and project presentation. Prereq: TDR 233 or 235, TDR 231, and MET 102.

**TDR 237 (2) N,S****Design Project I**

Practical application course utilizing previously acquired skills. Concentration on the civil aspects of a major design project. Prereq: TDR 236 or permission.

**TDR 238 (2) S****Design Project II**

Practical application course utilizing previously acquired skills. Concentration on the aspects of a major design project.

**TDR 240 (4) S****Intro to CATIA**

Intro to CATIA (Computer Aided Three Dimensional Interactive Application). Gain understanding of the CATIA interface and how to use CATIA to create solid models of parts, assemblies, and drawings. Understand how to manage parts in the context of an assembly. Produce simple parts drawings and assemblies. Prereq: TDR 135 or permission.

**TDR 241 (4) S****Intermediate CATIA**

Expand skills and techniques using advanced features of computer-based 3D modeling. Produce the parts, drawings and assemblies, surfacing, and sheet metal drafting. Prereq: TDR 228 and 240 or permission.

**TDR 258 (5) N****Contract Drawing Prep I**

Preparation of architectural drawings, with emphasis on wood frame structures and light commercial buildings. Includes building codes, specifications, and building department requirements for obtaining building permits. Uses Revit Architecture CAD program.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN . . . . . Watch Technology

**NAME TO PREFIX**  
Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**TDR 259 (5) N**  
**Contract Drawing Prep II**

Similar to TDR 258, with emphasis on structural drawings required for obtaining building permits. Use Revit Structure CAD program. Discusses requirements for mechanical, electrical, civil, and landscaping drawing sets.

**TDR 263 (4) S**  
**Applied Mechanics I**

Graphical methods for determining resultants and equilibrants in coplanar, parallel, and non-parallel force systems, such as beams and trusses. For drafting majors. Prereq: MET 102 or permission.

**TDR 265 (5) N**  
**Structural Detailing**

Prepare shop drawings for both structural and reinforcing steel using guidelines from American Institute of Steel Construction and Concrete Reinforcing Institute. Use local shop detailing procedures. Open lab.

**TDR 268 (4) S**  
**Architectural/Structural**

Design considerations and drawing preparation required to construct a frame and masonry building. Includes floor plans, elevations, structural details, mechanical and electrical requirements. Prereq: Second-year standing or permission.

**TDR 269 (5) N**  
**Construction Estimating**

Intro to quantity take-offs and pricing of materials by working on problems common to the general contractor. Focus on creating an ordered method of determining material and labor costs and other factors.

**TDR 270 (5) N**  
**Advanced Estimating**

A continuation of TDR 269. Covers labor and business costs. Develops a system to prepare estimates for complete jobs from current contract documents.

**TDR 272 (4) N,S**  
**Applied Mechanics II**

Covers structural material strength and basic calculations involved when loading structural members and joints. For drafting majors. Prereq: TDR 263.

**TDR 276 (3) N**  
**Computer Aided Drafting I**

Introduction to use of microcomputer CAD system. Provides familiarization with the system and simple drawing on the computer.

**TDR 277 (3) N**  
**Computer Aided Drafting 2**

Continuation of TDR 276, introducing more advanced features of AutoCAD. Covers plot and print configurations, creation of isometric drawings, 3-D drawing basics, and using wireframe and surface models.

**TDR 278 (3) N**  
**Computer Aided Drafting 3**

A customizing AutoCAD class featuring fine-tuning of AutoCAD software to meet specific industry needs. Students select a project to develop customizing techniques using Auto-LISP programming language. Industry standards applied to performance for a passing grade.

**TDR 280 (4) S**  
**Geometric Dimensions & Tolerances**

Basic interpretation of geometric tolerances on engineering drawings. All studies are based on ANSI Y14.5M-1982. Prereq: TDR 179.

**TDR 297 (1-10) N**  
**Construction Engineering Drafting**

For students with solid AutoCAD skills. Intro to Architectural Desktop, one of Autodesk's specialized versions of the AutoCAD program. Focus on using the special tools and commands to create flexible computer models and drawing sets for construction/design applications. Emphasizes production skills. Prereq: TDR 174 and 175 or TDR 111 and 112 or permission.

**TDR 298 (1-10) N,S**  
**Special Topics Drafting**

Individual or group study in industrial drafting. Prereq: Permission.

**TDR 299 (1-3) N,S**  
**Drafting Design Projects**

An independent laboratory course consisting of specially arranged sessions and substantial independent study to explore areas of special interest or expand specific drafting and/or computer skills.

**English**

*See Languages & Literature, page 318.*

**English as a Second Language**

*See Languages & Literature, page 318.*

**Environmental Science**

**ENVS& 100 (5) N**  
**Survey of Environmental Science**

Covers natural principles governing operation of the environment, including interaction between humans and the environment, emphasizing approaches and actions to maintain a healthy ecosystem.

**ENVS& 101 (5) C,N**  
**Intro to Environmental Science w/Lab**

Covers natural principles governing operation of the environment, including interaction between humans and the environment, emphasizing attitudes and actions to maintain a healthy ecosystem. This course has a lab component focusing on major topics in environmental science. Not open for credit to students who have taken ENVS 150 or ENVS&100. Prereq: ENGL& 101 eligibility and Math 098 (C). Prereq: ENGL& 101 recommended (N).

**ENVS 150 (5) C,N,S**  
**Environmental Issues/Problems**

Covers natural principles governing operation of the environment, including interactions between humans and the environment, emphasizing attitudes and actions to maintain a healthy ecosystem. Prereq: Eligibility for MATH 084, 087, or 091 (C), and ENG& 101.

**ENVS 160 (5) C,S**  
**Principles of Environmental Sustainability**

Explores past and present contributions from major events and leaders to the sustainability movement. Principles of sustainability are used to analyze action on challenges, such as urbanization, climate change, food systems, and pollution. Prereq: Eligibility for ENGL& 101 and MATH 088 (or MATH 091).

**ENVS 170 (5) C,N,S**  
**Energy & Resources – Now & in the Future**

Study of energy and material resources, both personal and worldwide production and consumption. Investigates the impact on the natural environment from production of coal, wind, solar, and hydropower; gasoline, electricity, and hydrogen fuel transportation; and natural gas and biomass heating options. Focus on sustainable alternatives to meet energy and material needs. Prereq: Eligibility for MATH 084, 087, or 091 (C).

**ENVS 197 (1-5) C**  
**Internship in Sustainable Agriculture**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply sustainable agriculture knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission

**ENVS 200 (2) C**  
**Sustainable Food Systems Employment Seminar**

Seminar Presentations and panel discussions involve community members who work in sustainable agriculture, food systems, and other natural resource careers. Identify opportunities to acquire the skills needed in this field. Prereq: Eligibility for ENGL& 101 and MATH 084, 087, or 091 (C), or permission.

**ENVS 201 (5) C,N**  
**General Ecology**

Covers the nature of ecosystems, energy flow, bio-geochemical cycles, population dynamics, organization and dynamics of communities, and identification of environmental problems.

**ENVS 202 (5) C**  
**Principles of Agroecology**

Survey of sustainable agriculture, with particular attention to the Pacific Northwest. Explores crop biodiversity, weed and pest management, organic crop and livestock production. Water use and pollution, natural resource conservation, and energy use presented in the context of sustainable farms. Optional 2-credit service learning. Lab science. Weekend field trip. Part of Sustainable Agriculture Education (SAGE) Program ([seattlecentral.edu/learn/sage](http://seattlecentral.edu/learn/sage)). Eligibility ENGL& 101 and MATH 088 or 091.

**ENVS 203 (5) C,N,S**  
**Environmental Issues/Problems II**

Encompasses the role of technological humans in the global ecosystem. Covers current environmental topics, with a view toward solutions. Includes urban growth, air and water pollution, and siting of nuclear power plants. Prereq: An environmental science, geology, or geography class, or permission.

**ENVS 204 (5) C**  
**Intro Soil Science Restoration**

Understand soils as living systems. Explore physical, chemical, and biological properties; nutrient cycling; fertility analysis and management; decomposition and composting; soil restoration; site diagnosis and classification of soils; and conservation practices. Lab and weekend field trips. Prereq: Eligible for MATH 084, 087, 091 (C), and ENGL& 101; recommend ENV 202.

**ENVS 205 (3) C,N**  
**East African Bio-Culture**

For educators interested in developing classroom materials based on topics and areas covered by the East Africa Study and Travel Program. Field trip.

**ENVS 206 (5) C**  
**Agroforestry Systems**

Agroforests integrate woody plants and forest elements with crops and animals for increased productive, socioeconomic, environmental, and ecological benefits. Examine origin and modern adaptations, working hypotheses, management systems and practices, site diagnosis, and design. Optional 2 credit service learning. Lab and weekend field trips. Prereq: Eligible for MATH 084, 087, or 091 (C), and ENGL&101 or permission; ENV 202 and 204 recommended.

**ENVS 208 (5) C**  
**Eco Science Management Conservation**

Covers natural and human dimensions of forest ecology and land use in the context of Pacific Northwest and global environmental issues. Emphasis on forest ecosystem patterns and processes under various conditions of management and conservation. Optional 2 credit service-learning. Lab and weekend field trips. Prereq: Eligible for MATH 084 and ENGL& 101 or instructor permission; ENV 202 and 204 recommended.

**ENVS 214 (5) C**  
**Urban Food System Analysis**

Investigates the complex ecological, social, and economic interactions of the food system. Emphasis on food security in urban areas, through food banks, urban gardens, food cooperatives, and farmers markets. Optional 2 credit service learning. Weekend field trips. Prereq: MATH 084, 087, or 091 (C), and ENGL& 101 eligibility or permission.

**ENVS 216 (5) C**  
**Sustainable Urban Food**

Covers history, principles, and practices of biointensive urban gardening. Explore methods to increase yields and conserve and maintain healthy ecosystems. Includes garden planning, soil preparation, composting, backyard livestock, seeds, transplanting, perennial food plants, and food preservation. Lab and weekend field trips. Prereq: Eligible for MATH 084 and ENGL&101 or permission; ENV 202 and 204 recommended.

**ENVS 221 (5) C,N,S**  
**Nuclear Choices**

Covers nuclear-generated electricity, nuclear waste, and nuclear weapons, including those existing and those proposed for the near future. Explores possible defenses against nuclear war and ways to avoid it. Writing class.

**ENVS 294 (2) C**  
**Sustainability Seminar S**

Explores sustainable development and invites speakers to demonstrate how they apply sustainable principles to their field of work.

**ENVS 298 (1-5) C,N,S**  
**Special Topics**

Seminar of selected topics and/or activities. Prereq: Variable, dependent on topic.

**ENVS 299 (1-5) C,N,S**  
**Special Problems**

Independent study of approved topics in environmental sciences. Prereq: Permission.

## Expanded Function Dental Auxiliary

### EFDA 100 (1) C Procedures I

Reviews and reinforces the duties and skills of a dental assistant: oral hygiene instructions, radiographs, coronal polishing, and fluoride treatments. Covers final impressions. Perform many of these procedures under "general" rather than "close" supervision of a dentist.

### EFDA 101 (3) C Restorative Lab I

Pre-clinical lab course. Practice skills and techniques on dentoforms and classmates. Clinical skills include radiographs, coronal polishing, fluoride treatments, use of dental materials, actual placement of amalgam and composite restorations on prepared typodont teeth, and taking final impressions on typodonts.

### EFDA 110 (2) C Dental Coronal Anatomy

Covers dental anatomy related to the EFDA's scope of restorative practice: tooth morphology, anatomical features, and function. Emphasizes coronal anatomy, occlusion, Black's classification of cavity preparation, and basics of primary and permanent dentition.

### EFDA 111 (2) C Dental Materials Techniques

Covers the chemical, physical, and mechanical properties of dental materials, selection of the appropriate material, basic techniques, safety measures, and proper handling protocol. Reviews cavity design and preparation of cements, bases and liners, placing, carving, polishing amalgam restorations, and contouring and finishing anterior and posterior composites.

### EFDA 200 (1) C Procedures II

Increase knowledge and skills including oral anatomy, dental anatomy and morphology, radiology, pharmacology, dental materials, patient case management, and restorative dentistry procedures. Perform restorative procedures on typodonts and on patients. Prereq: EFDA 100.

### EFDA 201 (4) C Restorative Clinic II

Demonstrate clinical competence on patients using the full range of basic restorative procedures, from patient management to technical skill of operating field isolation and restoration placement and finishing. Prereq: EFDA 101.

### EFDA 202 (1) C WREB Preparation

Preparation for the Western Regional Examining Board (WREB) restorative examination for licensure. The WREB requires the placement, carving, and finishing of one amalgam and one composite posterior class II restoration within a specific time frame at a minimum passing level. Practice simulation testing to develop sufficient proficiency. Prereqs: EFDA 100, 101, 110, 111.

### EFDA 212 (1) C Ethics and Jurisprudence

Covers the ethical, legal, and regulatory issues for an EFDA in private dental offices and community settings. Includes professional traits, theories of moral development, ethical dilemmas and principles, the state dental practice act, the EFDA-patient relationship, and risk management in the dental practice. Prereq: EFDA 100, 101, 110, 111.

## Foreign Languages

*See Languages & Literature, page 318.*

## French

*See Languages & Literature, page 318.*

## Gender & Women Studies

### WMN 140 (5) N Women in American History

Surveys U.S. women's roles, work, status, accomplishments, issues, and movements from the pre-Colonial period to the present.

### WMN 200 (5) C,N Intro to Gender Studies

Interdisciplinary, multicultural intro to Gender & Women Studies, focusing on the way gender, race, class, sexuality, and culture have shaped women's lives. Examines why women occupy similar and different locations in the United States and international cultures. Reading includes both narrative and analytical approaches.

### WMN 205 (5) C,N Women in the Global Context

Interdisciplinary intro to the study of women in Asia, Africa, Latin America, the Middle East, and/or indigenous women in some Western societies. Explores commonalities and differences among women in various societies and cultures. Focuses on women from specific societies or regions varying by instructor.

### WMN 213 (5) C,N Women and Politics

Intro to concepts of power and policy issues as they relate to women. Covers theoretical, historical, and empirical studies of women's participation in social and political movements nationally and internationally. Includes women's diverse roles in relation to family, economics, labor, government, and law.

### WMN 257 (5) C,N Psychology of Gender

Explores major psychological theories of sex differences. Examines studies of sex-role development and biological and environmental influences that may determine and maintain sex differences in aggression, cognitive abilities, achievement, motivation, affiliation, and sexuality. May be taken as PSYC 257.

### WMN 298 (1-5) C,N Special Topic: Gender & Women Study

Independent research and writing on selected women studies topics under faculty supervision.

## General Educational Development (GED)

### GED 050 (1-18) C,N,S,V Basic GED Preparation 5

Prepare to pass the Language Arts Reading & Writing, Social Studies, Science, and Math GED subject-area tests leading to the General Educational Development Certificate. Follows WA State Learning Standards. Aims for reading and math skills high enough to enter professional technical programs.

### GED 051 (1-15) C,N,S,V Basic GED Prep Math 5

Prepares learners to pass successfully the GED Math test.

### GED 052 (1-15) C,S,V Basic GED Prep Comm 5

Prepares learners to improve their general reading, writing, and test-taking skills, with special emphasis on reading for the GED Social Studies, Science, and Language Arts tests.

**GED 054 (1-15) C,S,V**  
**Basic Computer Assisted GED**

Provides learners the opportunity to improve their general reading, writing, math, and test-taking skills for the GED tests through the use of micro-computers and relevant basic skills software.

**GED 060 (1-15) C,N,S,V**  
**Advanced GED Preparation Level 6**

Interactive course where students learn and apply knowledge of math, reading, and writing skills in academic content areas that will help them pass the GED exams. Reasoning and critical thinking skills are also emphasized.

**GED 061 (1-15) C,N,S,V**  
**Advanced GED Prep Math 6**

Prepares learners to use the math concepts and applications needed to pass the math portion of the official GED test.

**GED 062 (1-15) C,N,S**  
**Advanced GED Prep Comm 6**

Improves general reading, writing, and test-taking skills with special emphasis on reading for the GED Social Studies, Science, and Art and Literature tests.

**GED 064 (1-15) C,S,V**  
**Computer-Assisted GED Prep 6**

Improves general reading, writing, math, and test-taking skills for the GED tests through the use of micro-computers and relevant basic skills software.

**GED 070 (4) V**  
**Intensive GED Prep**

For those who have already passed four of the five GED subject area tests. Prepare to pass the final GED subject-area test leading to the GED Certificate. Follows WA State Learning Standards. Aims for reading and math skills high enough to enter professional technical programs.

**Geography****GEOG& 100 (5) C,N**  
**Intro to Geography**

Introduction to major concepts of geography, climate, landforms, and biogeochemical processes. The course also concentrates on analysis of population demographics, culture, language and religion, food production, patterns of urbanization, paths to economic growth, resource use, and environmental concerns in a globalized world.

**GEOG 155 (5) C**  
**Global Political Geography**

Survey of political geography and scientific theory, offering students an analytical understanding of forces affecting the territorial and functional role of the state in today's world. Examines contemporary cases of territorial and functional change among states.

**GEOG& 200 (5) C,N**  
**Human Geography**

Intro to human patterns on the Earth's surface, distribution, political divisions, and economic activities. Emphasis on the role of geography in understanding the developments and diffusion of value systems and cultural differences in the 20th century.

**GEOG 205 (5) C,N**  
**Physical Geography**

Survey of character and location of different types of land forms, climates, soils, vegetation, minerals, water resources, and significance to human occupancy.

**GEOG 207 (5) C,N**  
**Economic Geography**

Focus on human survival. Examines resource scarcity and uneven distribution and use of technology to extract natural resources. Emphasis on competition for resources and major world conflicts, past and present, stemming from this competition.

**GEOG 230 (5) C,N**  
**Urbanization in Developing Nations**

Focus on cities in their cultural and economic contexts, geographical patterns, internal structure, current problems in rapidly growing cities, and selected policy solutions.

**GEOG 260 (5) N**  
**Geopolitics/Middle East**

Geopolitics is the "game nations play" to extend influence and control over nations. Focuses on the "game" as it relates to the Middle East and Arab, Afghan, Persian, Egyptian, Israeli, and Palestinian people, and current events and the geopolitics of petroleum. Course material is controversial.

**GEOG 298 (1-5) C,N**  
**Special Topics/Geography**

Independent study in selected geography topics under faculty supervision. Prereq: Permission.

**Geology****GEOL& 101 (5) C,N,S**  
**Physical Geology**

Covers the materials of the Earth and the processes that have shaped and placed them, especially plate tectonics. Lab included. Field trips may be required. Placement into ENGL& 101 is strongly recommended (N). Prereq: Eligible for MATH 084, 087, or 091 (C).

**GEOL& 103 (5) N**  
**Historical Geology**

Studies the formation and development through time of the solid Earth, atmosphere, and biosphere. Covers past movements and locations of the continents and interpretation of past environments as recorded in rock and fossil records. Lab included. Field trips may be required. Placement into ENGL& 101 is strongly recommended (N).

**GEOL 105 (5) C**  
**Intro Field Geology**

Survey of physical geology, including the Earth's interior and exterior. Covers the origin and evolution of the Earth, rocks and minerals, surface processes such as glaciation, river erosion, and transport and mass movement. Field exercises involve data collection and analysis. Course may require extended overnight stays. Lab included. Prereq: Eligible for MATH 084, 087, 091 (C).

**GEOL 106 (5) N,S**  
**Dinosaurs**

Studies dinosaurs and the world they lived in. Covers origins, evolution, biology, behavior, and extinction of dinosaurs and their relationship to birds and mammals. Intro to history of the biosphere, Earth's climate, and its changes. Placement into ENGL& 101 is strongly recommended (N).

**GEOL 108 (5) N**  
**Minerals, Gems, Fossils**

Intro to the nature of earth materials, including minerals, with an emphasis on gem minerals and fossils. Covers mineral composition, structure, physical properties, and origins, along with gemology, color mechanisms, history and lore of gems, and uses of gems. Covers fossil identification, preservation, and interpretation. Lab class. Placement into ENGL& 101 is strongly recommended (N).

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN ..... Watch Technology

**NAME TO PREFIX**  
Watch Technology ..... HIN

Common Course Numbering explanation is on page 224.

**GEOL& 110 (5) C,N,S**  
**Environmental Geology: Geology and the Human Env**

Covers the effects of geologic processes and materials on human activity and the effects of human activity on the Earth. Emphasizes awareness of geologic aspects of our everyday environment, including the identification of problems and the formulation and evaluation of solutions. Lab included.

**GEOL 111 (1) C,N**  
**Geology Field Day**

A one-day field trip and five-hour lecture on active and ancient geology in the Pacific Northwest. Topics include faults, glaciers, fossils, landslides, and the Cascade Mountain Range. Lab credit. Also offered as SCI 111.

**GEOL& 115 (5) N**  
**Geology National Parks**

Study of the geology and geologic history of selected national parks and monuments in the context of the geologic history of North America, the Pacific Basin, and the Atlantic Ocean. Labs deal primarily with geologic maps. At least two field trips required. Placement into ENGL& 101 is strongly recommended (N).

**GEOL 118 (1) C,N**  
**Volcano Field Day**

Introduction to the origin and destruction of the Cascade volcanoes, such as Mount St. Helens, Mount Rainier, and Glacier Peak. Includes five hours of lecture and a one-day field trip. Lab credit. Also offered as SCI 118.

**GEOL 207 (5) N,S**  
**The Ice Ages**

Provides a history of the plants, animals, and continental ice sheets of the last three million years. Special attention to fossil and archaeological records of human beings. Lab included.

**GEOL& 208 (5) C,N,S**

**Geology of the Northwest**

Covers the geologic history of the Pacific Northwest, including Washington, Oregon, Idaho, and Alaska. Emphasis on use of geologic principles to interpret present landscapes. Lab included. Prereq: GEOL&101 or instructor permission.

**GEOL 298 (1-5) N**

**Special Topics**

Seminar on selected topics or activities in geology. Prereq: Variable, dependent on topic.

**GEOL 299 (1-5) N**

**Independent Study**

Independent study of selected geology topics. Prereq: GEOL& 101 and permission.

**German**

*See Languages & Literature, page 318.*

**Graphic Design**

**DES 110 (3.5) C**

**History of Graphic Design**

Explores the global history of visual communication and the graphic arts in media, commerce, and the social sphere. The field of graphic design, in particular, has continually evolved to align with and ultimately elevate the ever-changing landscape of technology and culture. Prereq: Successful completion of the program through preceding quarter.

**DES 121 (3.5) C**

**Typography I**

Learn basic principles of micro typography, including the anatomy of letters, adapting letter forms, letter and word spacing, line spacing, and simple hierarchy of text. Create expressive typography.

**DES 122 (3.5) C**

**Typography II**

Focuses on using the grid for page construction. Explores page structure and hierarchy principles and grid systems.

**DES 131 (3.5) C**

**Graphic Design I**

Introduces students to the terminology, process, and social context of graphic design. Students will utilize traditional image making techniques and learn the language of graphic design for building communication and presentation skills. Prereq: Acceptance into the Graphic Design program.

**DES 132 (3.5) C**

**Graphic Design II**

Intro to color and its application to design, including the mechanics of light, the physiology of vision, and the psychology of color. Study ways color is used in culture and methods designers employ in making their work effective.

**DES 133 (3.5) C**

**Graphic Design III**

Covers the design of packaging: three-dimensionality, marketing insights, and innovations in technology. Study consumption and how packaging communicates to consumers. Projects may include soda bottles, folding box packages, and a line of products, with high quality mockups.

**DES 145 (3.5) C**

**Graphic Production I**

Intro to the basic skills, concepts, and techniques of successfully using the vector-based graphics program Adobe Illustrator.

**DES 146 (3.5) C**

**Graphic Production II**

Intro to the basic skills, concepts, and techniques of successfully using the page layout program Adobe InDesign.

**DES 147 (3.5) C**

**Graphic Production III**

Intro to the basic skills, concepts, and techniques of successfully using the pixel-based program Adobe Photoshop. Learn to color correct a photo using curves and levels, create a non-destructive work flow, and select the correct tool for the job.

**DES 151 (3.5) C**

**Interactive I**

This course will address the considerations needed when designing an interface and the differences and similarities between screen-based media and print-based media. This course is intended for the beginning to intermediate graphic design student who has an interest in designing interfaces for websites, mobile devices, kiosks, computer applications, and more.

**DES 152 (3.5) C**

**Interactive II**

Covers the basics of webpage design and development. Addresses the challenges of developing a series of webpages using the structural elements of HTML and the stylistic elements of CSS.

**DES 153 (3.5) C****Interactive III**

Design the user-experience for a website and build the final site using HTML and CSS. Includes the User-Centered Design process, designing a site architecture, conducting usability studies, producing task-flows and wireframes, and creating responsive site layouts.

**DES 197 (1-5) C****Work Experience/Advanced Art**

Earn work experience credit in Graphic Design. Prereq: Permission.

**DES 223 (4) C****Typography III**

Interpret an author's written language into a meaningful visual form using the basic principles of traditional book design and typographic conventions. Create a case-bound book that eloquently expresses the author's words filtered through the student's interpretation.

**DES 231 (4) C****Graphic Design IV**

Explore advertising, art direction, and photo direction, emphasizing expressive, creative, and collaborative problem solving. Develop further research skills. Learn techniques for creating engaging ads for a variety of media and targeting the right market with the right messages.

**DES 232 (4) C****Graphic Design V**

Explores typographic rules, design principles, and grid formats for long documents, as applied to print and screen-based media. Students research, strategize, and design long documents for both print medium and screen-based media. Prereq: Successful completion of the program through preceding quarter.

**DES 233 (4) C****Graphic Design VI**

Covers poster design as a form of visual communication. Emphasizes conceptual visual problem-solving for various audiences and outcomes. Solve various poster design problems with a variety of visual approaches, including typography, graphics, illustration and/or photography.

**DES 234 (4) C****Graphic Design VII**

Design and produce a corporate identity system, including trademark or logo and applied graphics, for a mix of visual applications for a business. Covers research, mind-mapping, creative development, contemporary design approaches, and creating a complete system.

**DES 235 (4) C****Graphic Design VIII**

Design and install the SCCA Portfolio Show. Working in teams, explore creative options to the layout and navigation of the show. Include 2-D and 3-D display installation options, print and web portfolios displays, motion graphics, internal and external signage in the planning.

**DES 236 (4) C****Graphic Design IX**

Acquire work contracts with a client and apply design skills in exchange for a fair wage or equitable trade. Gain practical experience with pricing and negotiating fees, writing proposals and design briefs, organizing efficient timelines, managing workflows, and applying basic accounting and business practices.

**DES 249 (4) C****Graphic Production IV**

Use InDesign and Acrobat for organization, layout, and production of long documents, such as magazine and books. Use guides, styles, master pages, editing tools, and PDF options in simple and complex layouts. Organize files with Adobe Bridge, preflighting, and packaging.

**DES 251 (4) C****Interactive IV**

Learn to design interfaces such as websites, mobile devices, kiosks, computer applications. Study the differences between screen-based media and print-based media.

**DES 252 (4) C****Interactive V**

Study a variety of content management systems, focusing on the popular, free, open-source WordPress blogging platform. Build an entire WordPress website for a community non-profit client.

**DES 253 (4) C****Interactive VI**

Covers User Experience (UX) design, rapid prototyping, usability testing, and Interface design challenges for smaller screens. Create animated mock-ups of mobile applications and build functional websites with HTML5 and CSS3 media queries.

**DES 260 (4) C****Portfolio Prep**

Develop, design, and prepare a portfolio that represents individual creativity and demonstrates skills for seeking employment in the Graphic Design field. Develop a personal business card and stationery.

**DES 270 (4) C****Environmental Graphics I**

Explore graphics designs that are sensitive to human scale in built and natural environments, including way-finding systems, informational signs and symbols, exhibit design and ornamental solutions.

**DES 280 (4) C****Special Projects I**

First of three courses that expand current graphics design knowledge and skills through work on a major self-initiated design project. Emphasizes research and design process to reach a successful design solution.

**DES 281 (4) C****Special Projects II**

Second of three courses that expand current graphics design knowledge and skills through work on a major self-initiated design project. Emphasizes research and design process to reach a successful design solution.

**DES 282 (4) C****Special Projects III**

Third of three courses that expand current graphics design knowledge and skills through work on a major self-initiated design project. Emphasizes research and design process to reach a successful design solution.

**DES 298 (1-5) C****Special Topics**

Designed to provide a flexible format for offering in-depth studies in new and emerging technologies relevant to the Graphic Design Program.

**DES 299 (1-5) C****Independent Study – Graphic Design I**

Independent study on selected graphic design topics.

**VME 110 (3.5) C****Professional Practices I**

Explores the varied career paths found in visual media. Emphasis is placed on creative styles and trends in image making and storytellers of today. Entry-level issues such as working conditions, time management, organizational strategies, and professional ethics will also be examined. Students will begin learning the language of media and how to critique work of their peers.

**VME 111 (3.5) C**  
**Professional Practices II**

Explores professional business communications. Examines methods of written communication for the visual problem solvers. Explore script writing, the creative pitch, presentations, etc. Learn multimedia storytelling, narrative forms and techniques. Develop a better understanding of using images and audio to advocate, communicate, or address a specific subject or issue. Prereq: Successful completion of the program through preceding quarter.

**VME 120 (3.5) C**  
**Lighting Techniques I**

Covers the basic methods of commercial lighting; the laws, principles, and practices of light; the qualities of direct/indirect sunlight and tungsten light sources; lighting for form, texture. Introduces standards for the safe operation of lighting equipment in a studio environment.

**VME 121 (3.5) C**  
**Lighting Techniques II**

Covers studio techniques for lighting people. Addresses safe operation of studio equipment for "portrait lighting" setups. Introduces three-dimensional contrast in a traditional portrait studio setting. Includes subject rapport, subject posing, and development of a theme-based narrative using advanced lighting techniques while demonstrating set construction skills. Prereq: Successful completion of the program's previous quarter.

**VME 131 (3.5) C**  
**Conceptual Solutions I**

Emphasizes research and creative problem solving to achieve a successful solution to a stated visual problem. First of two courses. Students experiment with different presentation techniques and deliverables to solve a series of eleven one week assignments designed to force students to be creative in a short amount of time. Prereq: Successful completion of the program through preceding quarter.

**VME 145 (3.5) C**  
**Digital Imaging I**

Addresses the terminology and ethics of capturing digital images. Covers the functions and operation of HD/SLR cameras. Introduces techniques for determining optimum exposures and basic compositional aesthetics. Includes development of an organized file management system utilizing Adobe Lightroom and parametric editing in Capture One.

**VME 146 (3.5) C**  
**Digital Imaging II**

Covers the creative and technical requirements of digital image optimization using Adobe Photoshop Creative Cloud. Includes interface navigation, tools, layers and filters, creation and manipulation of image selections, adjustments of color and contrast, use of retouching, masking, cropping, and basic image compositing, and the export of images for print and web. Prereq: Successful completion of the first quarter of the Associate of Applied Science program in Visual Media,

**VME 147 (3.5) C**  
**Digital Imaging III**

Introduces advanced image editing techniques and production workflows in Adobe Photoshop. Focuses on precise color correction, refined selections, and multiple image compositing. Includes advanced retouching and image output and evaluation. Requires the creation of a cohesive final project of professional quality utilizing these advanced image editing tools and techniques. Prereq: Successful completion of the previous quarter within the VME program.

**VME 150 (3.5) C**  
**Visual Media I**

This course provides a bridge between still and motion, working with a DSLR camera. Introduction to the Adobe Premiere and technical aspects of video production. Students will design, shoot, and edit several short projects. They will be introduced to a digital, non-linear, post-production environment.

**VME 151 (3.5) C**  
**Visual Media II**

This course examines production methods, pre-production and post-production techniques, basic motion graphics, time-lapse video, slow motion, and audio design. Working with crane/jib/sliders and other various tools. Students must work collaboratively as well as individually throughout the quarter.

**VME 153 (3.5) C**  
**Visual Media III**

Builds on production methods, pre-production, and post-production techniques learned in previous courses. Introduces multi-camera solutions as well as color correction and grading using Adobe SpeedGrade. Emphasis placed on professional audio and sound effects using Pro Tools for mixing and mastering audio. Students learn how to work effectively and develop and simulate a professional workflow for a specific project. Prereq: Successful completion of the program through preceding quarter.

**VME 160 (3.5) C**  
**Studio Techniques I**

Focus on portrait and lifestyle photography techniques: seeing and using available light, using on-camera strobe units, choosing appropriate poses and lighting, story-telling sequencing photos, and adding words and music to increase emotional and saleable impact. Includes retail sales materials, presentations, and pricing strategies. Students encouraged to explore solutions and be creative in their approach to visual problem-solving. Prereq: Successful completion of program through preceding quarter.

**VME 197 (3) C**  
**Work Experience – Visual Media**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply visual media knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring. Prereq: Instructor's permission (Must be employed, interning, or volunteering in a position approved by program faculty or the Cooperative Education Office.)

**VME 232 (4) C**  
**Conceptual Solutions II**

Final of two courses, with an emphasis on research and creative problem-solving to achieve a successful solution to a stated visual problem. Students experiment with different presentation techniques and deliverables to solve a series of eleven one-week assignments designed to compel students to be creative in a short amount of time. Prereq: Successful completion of the previous quarter.

**VME 250 (4) C**  
**Visual Media IV**

Advanced digital video production focusing on the skills needed to complete professional digital video productions pertaining to location and studio environments. Students will produce material, including short documentaries, interviews, studio productions, and music videos. Students will rotate through the roles of a production team while producing projects. Prereq: Successful completion of the program through preceding quarter.

**VME 251 (4) C**  
**Visual Media V**

Begins the final capstone visual media production. Covers the fundamentals of producing and directing techniques of digital video production. In teams, students learn the process of producing a major video production: conceiving, script writing, story development, planning, timelines, props, casting, and budgeting. Explores storytelling using 360 video and virtual reality environments to enhance the experience. Prereq: Successful completion of the program through preceding quarter.

**VME 252 (4) C**  
**Visual Media VI**

Builds on the skills and knowledge acquired in previous Visual Media courses. Introduces advanced editing techniques, including compositing footage, color balancing, chroma-keying, advanced effects, and sound mixing and manipulation. Concludes with a capstone project that is collaboratively produced and demonstrates advanced skills in editing techniques. Prereq: Successful completion of the program through preceding quarter.

**VME 261 (4) C**  
**Studio Techniques II**

Second in a series of 3 classes focused on technique. Explores how to understand the needs of the client, the audience, and the art direction of a campaign, as well as professional requirements of corporate and editorial photography. Continued work on understanding lighting controls while working on location. Students engage in real projects to develop conceptual and creative solutions to produce images that tell a compelling story. Prereq: Successful completion of the program through preceding quarter.

**VME 262 (4) C**  
**Studio Techniques III**

The final course, in a series of three, focused on technique. Explores how to understand the needs of the client, the audience, and the art direction of a campaign. Focuses on food and product photography, identifying some of the challenges and how to resolve them. It offers an in-depth research and practice on how different foods, textures, and products (metal, glass, fabric, plastic, etc.) respond to different types of light. Prereq: Successful completion of the program through preceding quarter.

**VME 270 (4) C**  
**Professional Business Practices: Visual Media**

Provides practical experience with pricing and negotiating fees, writing proposals and design briefs, organizing efficient timelines, managing workflows, and applying basic accounting and business practices. Students acquire work contracts with a client and apply their design skills in exchange for a fair wage or equitable trade. Students are provided with ethical guidelines for conduct and behavior within the visual media profession. Prereq: Successful completion of the previous quarter.

**VME 276 (4) C**  
**Portfolio Show**

Students will collaboratively participate in the planning and organization of the portfolio show. This will include, but is not limited to, Branding, Marketing, Web-Design and Development, Photography, Videography, Exhibit Design, Social Media, and Promotion. Students are required to design and install their own work for the show.

**VME 280 (4) C**  
**Special Projects I**

The first in a series of 3 courses designed to expand current visual media knowledge and skills, offering students the opportunity to work on a major self-initiated visual media project. Emphasizes research and visual experimentation that leads to a successful visual media solution. By engaging in a unique quarter-long project, students have the opportunity to develop strong portfolio pieces, with the goal of employment. Prereq: Successful completion of the program through preceding quarter.

**VME 281 (4) C**  
**Special Projects II**

Second in a series of three courses designed to expand current graphic design knowledge and skills, offering students the opportunity to work on a major self-initiated design project. Emphasizes research and the design process that leads to a successful design solution. By engaging in a unique quarter-long project, students have the opportunity to develop strong portfolio pieces, with the ultimate goal of employment. Prereq: Successful completion of the program through preceding quarter.

**VME 282 (4) C**  
**Special Projects III**

The last in a series of three courses designed to expand current graphic design knowledge and skills, offering students the opportunity to work on a major self-initiated design project. The course emphasizes research and the design process that leads to a successful design solution. By engaging in a unique quarter-long project, students have the opportunity to develop strong portfolio pieces, with the ultimate goal of employment. Prereq: Successful completion of the program through preceding quarter.

**VME 286 (4) C**  
**Portfolio**

Develop, design, and prepare a portfolio of work that represents the student's creative voice and professional direction for presentation to multiple clients, representatives, and agencies. Includes various presentation methods, including electronic portfolios. Create marketing materials: business card, stationery, and self-promotion. Prereq: Successful completion of the program through preceding quarter.

**Health****HEA 025 (5) S**  
**Health Career Link**

Covers physiology for understanding body functioning, including organic and functional disease and disease prevention. Prereq: Appropriate placement on English and Basic Skills tests.

**HEA 125 (5) C,S**  
**Health and Wellness**

Overview of health as an individual and community-based social construct. Analyzes health determinants and health outcomes as a function of genetics, culture, environment, and health behaviors. Emphasizes a holistic model and intellectual inquiry into what constitutes health and well-being. Prereq: MATH 084 and ENGL& 101. Eligibility for MATH 084, 87, or 91. Completion of ENGL& 101 with a 2.0 or better (C).

**HEA 150 (5) N,S**  
**Health & Human Sexuality**

Covers principles of personality development, body functioning, problems, and solutions. Includes human sexuality and family education relating to psycho-sexual development, behavior, problems, and solutions.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

HIN . . . . . Watch Technology

**NAME TO PREFIX**

Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**HEA 160 (5) S**  
**Human Wellness & Fitness**

Comprehensive study of human fitness and wellness, including exercise physiology and training concepts, nutrition, weight management, chronic disease prevention, and health promotion. Assess own fitness level and design an individual program to achieve and/or maintain fitness.

**HEA 225 (5) C**  
**Global Health**

Examines global patterns of health and disease as a function of economic, social, and cultural determinants. Includes measurement of health outcomes, comparative analysis of health care systems, health and disease patterns of epidemiology, transnational disease, health inequalities, and major players in global health. Prereq: MATH 084, ENGL& 101.

**HEA 226 (2) C**  
**Advanced Global Health Seminar**

Self-directed study, including research and presentation, of an area of global health. Prereq: Completion of HEA 225 or completion of MATH 084, 87, or 91, and ENGL& 101 with a 2.0 or better and instructor permission (C).

**HEA 228 (5) C**  
**Water, Gender, and Global Health**

Study global health issues, particularly relating to gender and/or access to adequate and clean water. Includes water-borne and water-related diseases and analysis of various causes of maternal mortality. Involves interdisciplinary problem-solving. Requires 16 hours of service learning in local community. Prereq: HEA 225 or permission.

**HEA 299 (1-5) C,N,S**  
**Independent Study**

Independent study in health education. Prereq: Permission.

**Heating, AC, & Refrigeration Design/HVAC**

**ECT 101 (12) N**

**Heating – Theory, Equipment & Application**

Orientation to program requirements, HVAC industry and opportunities, technician training, and safety procedures. Covers HVAC physical laws, fuels and combustion, and heating equipment, including parts, operation, controls, and system operation.

**ECT 102 (12) N**

**Basic Refrigeration & Air Conditioning**

Covers basic refrigeration system operation, including refrigerants, components, controls, and operating cycle for comfort air conditioning and process refrigeration. Prereq: ECT 103 or permission.

**ECT 103 (12) N**

**Residential Applications**

Calculation of heating and cooling loads to properly size residential heating and air conditioning systems. Includes application of equipment, design of residential distribution systems, balancing air distribution systems, and troubleshooting. Prereq: ECT 102.

**ECT 106 (2) N**

**Electrical Fundamentals**

Covers basic electricity as used in HVAC equipment for power and for control purposes. Covers the electron theory, generation of electricity, Ohms Law, circuitry, and electrical devices. Prereq: Concurrent enrollment in ECT 101.

**ECT 110 (2) N**

**Blueprint Reading/Building Construction**

Includes types of drawings, plan formats, terminology, scale, symbols, and specifications, with emphasis on mechanical parts, and residential and commercial building construction, with emphasis on HVAC systems. Prereq: ECT 106 or permission.

**ECT 111 (2) N**

**Hydronic System Design**

Intro to hydronic system design. Includes equipment piping layouts, sizing, and control systems. Prereq: ECT 110.

**ECT 197 (10) N**

**Special Topics: HVAC**

Study of selected topics in Heating/Air Conditioning and Refrigeration Design as considered appropriate by the instructor and/or HVAC faculty. Course content, format, and projects vary. Prereq: Permission.

**ECT 206 (2) N**

**Computers in Engineering Applications**

Covers the use of Carrier Corporation E20-II software programs to select HVAC equipment, size hydronic system piping, perform heat gain and heat loss calculations, design duct systems, and size refrigeration lines. Prereq: ECT 103 or permission.

**ECT 207 (2) N**

**Energy Management**

This course reviews energy sources, conservation management, evaluation, measuring systems, financial analysis, estimating, and system retrofit.

**ECT 208 (2) N**

**HVAC Marketing & Sales**

Develop knowledge and skill to analyze market needs, identify prospective customers, prepare bids and presentation materials, and make sales presentations. Prereq: ECT 207, current enrollment in HVAC program, or permission.

**ECT 209 (2) N**

**Computerized HVAC System**

Reviews the application of computerized, digital, electronic automation to HVAC systems.

**ECT 213 (12) N**

**System Design & Application III**

Part 4 of 4 in HVAC Design Technology. Covers “wet side” design, including heat generation, heat transfer, hydronic pumping loops, pump performance and selection, hydronic system design and pipe sizing, refrigeration systems and line sizing, and chilled water systems.

**ECT 271 (5) N**

**Refrigeration – System/Components**

The first of two courses that cover refrigeration for commercial applications. This first course includes a description of various systems, controls, and operation of each. Theory and application is included with lecture and lab work for each major section. Prereq: ECT 103 or approval.

**ECT 272 (5) N**

**Refrigeration – Application**

The second of two courses that cover commercial refrigeration. This course covers load calculations, system design and operation. Theory and application is included with lecture and lab for each major section. Prereq: ECT 271 or approval.

**ECT 298 (10) N**  
**Special Topics in HVAC**

Study of selected topics in heating, air-conditioning, and refrigeration design as considered appropriate by the instructor and/or HVAC faculty. Course content, format, and projects vary.

**ECT 299 (5) N**  
**Independent Study in HVAC**

Independent study of selected topics in heating, air-conditioning, and refrigeration design as considered appropriate by the instructor and/or HVAC faculty. Course content, format, and projects vary. Prereq: Permission of instructor.

**HVC 101 (5) N**  
**Essentials of HVAC**

First HVAC course in the HVAC Technician course of study on the fundamental principles of heating, ventilation, and air conditioning (HVAC). Covers safety, basic refrigeration, electricity, combustion and venting, air distribution, and indoor air quality (IAQ). Prereq: BUS 169 or instructor permission.

**HVC 210 (5) N**  
**HVAC Cooling System**

HVC 210 is the second class of a series in Heating, Ventilating and Air-Conditioning installation. The course covers the state, federal, and local codes and requirements on the installation of air conditioners, heat pumps, and hydronic heating systems. Included is the theory of, and hands-on installation of air conditioners, heat pumps, air distribution systems, refrigeration piping, electrical wiring, and basic control systems is covered. Prereq: HVC 101 and EET 160. Coreq: HVC 211.

**HVC 211 (5) N**  
**Cooling Heating System Installation**

Part two of four HVAC Learning Solutions courses. Covers the basic theory and design of heating and cooling systems, including furnace, air handler service and air distribution, AC refrigeration, and heat pumps, electrical control subsystems, temperature control, system wiring, and motors. Prereq: HVC 101.

**HVC 212 (5) N**  
**HVAC System Installation**

Part three of four HVAC Learning Solutions courses. Covers the repair and maintenance of cooling systems, including air handler service and air distribution, AC refrigeration, heat pumps, electrical control subsystems, temperature control, system wiring, and motors. Prereq: HVC 211.

**HVC 220 (3) N**  
**Green HVAC**

Intro to building science and sustainability, with emphasis on HVAC. Includes new code updates, building science concepts, green building strategies, innovative and trending "green" equipment options. Learn to translate new green HVAC into sales and enhanced comfort. Work on the link between building science and business science.

**HVC 221 (5) N**  
**Basic Maritime HVAC**

Learn to work with multi-brand marine refrigeration and HVAC & Refrigeration equipment, including covering chilled water systems, direct expansion and central plant for multiple applications, installation and retrofit of equipment, maintenance, repair, and troubleshooting. Prereq: HVC 101, 210, 211.

**HVC 222 (5) N**  
**Basic Container Refrigeration**

Learn to work with integral refrigerated containers, including shore-side maintenance, installation, retrofitting, and troubleshooting of refrigerated intermodal container units. Prereq: HVC 201, 210, 211.

**HVC 226 (5) N**  
**HVAC Electronics & Control Systems**

Home and Building Automation Systems are centralized, interlinked networks of hardware and software which monitor and control the environment in residential, commercial, industrial, and institutional facilities. Starting with the basics, this course covers analog and digital sensors and controls in residential and light commercial applications. Prereq: HVC 101 and EET 160 or instructor's permission.

**HVC 228 (5) N**  
**Energy Performance**

Learn the basics of energy performance of homes, including analyzing and recording various characteristics of the building envelope: the walls, ceilings, floors, doors, windows, and skylights. Learn how to perform blower door tests, duct blasting and duct air flow tests. Learn the use of infrared thermal imaging cameras to determine high loss/gain areas of the structure's envelope. Prereqs: HVC 212 and HVC 220 or instructor permission.

**HVC 241 (3) N**  
**Solar Electric Design**

Explore the use of sunlight to produce electricity. Practical and economical design of photovoltaic power systems, site analysis, system sizing, equipment specifications and component selection, code requirements, economics of photovoltaic solar systems, and energy efficiency and conservation impacts on system design will be covered. Prereqs: HVC 226 or instructor permission.

**HVC 243 (5) N**  
**Photovoltaic Performance Analysis**

Deals with system performance and commissioning including pre-inspection checkout, startup, troubleshooting, verification, and monitoring. Focus is on a safe and properly installed system, with overview of advanced metering tools. Prereq: HVC 212 and HVC 241 or instructor permission.

**HVC 245 (5) N**  
**Advanced Photovoltaic System Design**

Focus in on photovoltaic systems compliance with NEC codes & regulations. Emphasis on component selection, string sizing, inverter/module matching, conductor sizing, overload protection, grounding, mounting systems, battery backup. Prereqs: HVC 212 and 243 or instructor permission.

## High School Completion

*See Adult Basic Education High School Completion, page 231.*

## History

*NOTE: (History 035 - 091 series fulfills high school completion requirements.) Prereq: Appropriate placement on English and Basic Skills tests.*

**HIST 035 (5) S**  
**United States History 1 C-Link**

Reviews the significant contributions of the Colonial period, emphasizing political and constitutional developments from the American Revolution through Reconstruction. Emphasis on the Constitution and causes and consequences of the Civil War. Includes contributions and achievements of the Native American population.

**HIST 036 (5) S**  
**United States History II**

Covers U.S. development from the Civil War to the present. Includes political, social, and economic forces affecting the United States during the period of westward movement, industrialization, world wars, economic growth, and world dominance. Covers the profound technological developments of the twentieth century in relation to the world of work.

**HIST 037 (5) S**  
**Washington State History C-Link**

Covers the historical development of the Pacific Northwest, with emphasis on the development of Washington state. Looks at contemporary, economic, political, and social problems.

**HIST 105 (5) C**  
**Intro to American Civilization**

Intro to American history, government, and culture for foreign-born students. Includes past and present political, cultural, and socioeconomic aspects. Emphasis on developing cross-cultural understanding and an appreciation of the diversity inherent in American culture.

**HIST 106 (5) N**  
**Survey of American History**

Survey of American history from pre-colonial to the present, with emphasis on political, social, cultural, and economic developments.

**HIST 108 (5) N**  
**World in Evolution – 1500**

Comparative study of the world's major civilizations (African, Chinese, European, Greco-Roman, Indian), with major emphasis on understanding value systems, such as Christianity, Hinduism, and Judaism, and their expression in different political, social, economic, and cultural-religious systems.

**HIST 120 (5) C**  
**Survey of African History**

Surveys the complexity of African societies, including colonialism and its impact, the rise of socialism, the Cold War, as well as trade, kinship, and traditional practices.

**HIST 122 (2) C,N**  
**Local History/Field Trips**

First-hand view of historic Seattle. Includes lectures and field trips to historic sites.

**HIST& 126 (5) C,N,S**  
**World Civilizations I**

Reviews the historic foundations and development of civilizations from 6000 BCE to 1500 CE, with emphasis on social, political, cultural, and economic aspects. Studies the nature of history and its role as an intellectual and academic discipline.

**HIST& 127 (5) C,N,S**  
**World Civilizations II**

Reviews the foundations of modern civilization, with emphasis on the scientific, industrial, and political revolutions that have transformed societies. Emphasis on the period between 1500-1750 and the resulting cross-cultural contact on a global scale.

**HIST& 128 (5) C,N,S**  
**World Civilizations III**

Study of world civilization during the 19th and 20th centuries. Survey of dramatic events and often-conflicting forces and ideologies affecting contemporary life. Analysis of modern peoples' solutions to challenges and problems confronting civilization.

**HIST 130 (3) C**  
**History of Broadcasting**

Examines the development of broadcasting in radio and television. Explores the impact of cultural contributions, show business, news, advertising, and telecommunications technology.

**HIST 131 (5) C,N**  
**Asian-American History**

Covers the experience of Asians in the United States from the 1770s to the present. Emphasizes the impact of exclusionary immigration laws, community responses, and the transformative effects of the Civil Rights era. Surveys the experiences of the Chinese, Japanese, Filipino, Korean, Asian Indian, and Southeast Asian refugees.

**HIST 132 (5) S**  
**Pacific Islands History**

Explores the histories and culture of the Pacific Islands region (Melanesia, Micronesia, and Polynesia), from early navigators and settlers to the colonial and postcolonial eras of the nineteenth and twentieth centuries.

**HIST& 136 (5) C,N**  
**United States History I: to 1877**

Reviews U.S. history from the migration of the first Native populations through Reconstruction. Focuses on encounters, territorial expansion, and development of political, social, cultural, legal, and economic institutions affecting the populations in regions that became the United States.

**HIST& 137 (5) C,N**  
**United States History 2: 1877-Present**

Covers U.S. history from the Civil War to the present. Focuses on industrial and urban development, immigration, race, ethnicity and reform, politics, economics, social change, and Americans at war.

**HIST 138 (5) C,N**  
**Survey of Chicano History**

Surveys Chicano and Latino history, from the Spanish European background and pre-Columbian civilization of Mexico to the social, economic, and political experiences of the Chicano people in the U.S. Emphasis on Mexican history.

**HIST 140 (5) C,N,S**  
**Women in American History**

Surveys U.S. women's roles, work, status, accomplishments, issues, and movements from the pre-Colonial period to the present.

**HIST 145 (5) C**  
**Women, Race, and Class**

Focuses on the United States and its historical stratification by race, sex, and class. Examines the experience of women in their own words, with emphasis on women of color. Examines "her story" to help in understanding the conflict facing the divided women's movement.

**HIST& 146 (5) C,N,S**  
**United States History I: Until 1791**

Study of what is now the USA in its formative period, from its Native, European, and African origins to early nationhood. Emphasis on the American Revolution. Prereq: Eligible for English 101 (C).

**HIST& 147 (5) C,N,S**  
**United States History II: the 1800s**

Examines changes shaping American society in the 1800s: slavery, sectionalism, the Civil War, the westward movement, industrialization, and emergence of the United States as a world power. Emphasizes social change and conflicts, including abolitionism, women's rights, labor, immigration, Manifest Destiny, Reconstruction, and the Gilded Age. Prereq: Eligible for English 101 (C).

**HIST& 148 (5) C,N,S**  
**United States History III: 1900-Present**

Covers an era of conflict, war, uncertain peace, depression, and great social changes. Emphasizes historical, economic, social, racial, and political events that have formed the modern U.S.

**HIST 150 (5) C,N**  
**Multicultural Experiences United States**

Focuses on the history of selected communities of people of color in America. Emphasizes a historical approach to understanding contemporary American issues by examining both the lived experiences of specific people of color and the larger history of race and ethnicity in the United States.

**HIST 191 (5) C**  
**Biography & American History**

Examines the place and role of selected figures in the making of American history, not as a search for the hero or heroine but as an inquiry into the human potential for affecting society in terms of change and development.

**HIST 200 (5) C,N**  
**Critical Issues for 21st Century**

Examines current global issues from global perspectives, using materials from diverse history sources and the research tools of the historian.

**HIST 208 (5) C,N**  
**Tsars & Soviets: Russian Civilization**

Focuses on political, cultural, and social life, stressing continuity and change from pre-revolutionary Tsarist Russia to the 1990s.

**HIST 210 (5) C,N**  
**The Pacific Century**

Study of the transformation of selected Asian Pacific countries and their histories and roles in the modern world. Emphasis on responses to the problems and challenges of economic, political, and social development.

**HIST 211 (5) S**  
**History of the Middle East**

Examines the history of the Middle East (Arab countries, Turkey, Iran, and Israel) from the emergence of Islam to the present. Includes cultural, economic, and political aspects of history, with emphasis on the modern period.

**HIST 212 (5) C,N**  
**Vietnam Era**

Reviews U.S. history from 1945-1975, with special emphasis on the "American War" in Vietnam. Explores the Civil Rights movement, the Cold War, the role of media, the rise of the "counter-culture," and the development of the New Left and the anti-war movement.

**HIST& 214 (5) C,N,S**  
**Pacific Northwest History**

Investigates the history of the Pacific Northwest, from earliest human habitation to the present. Focuses on Washington state and the Puget Sound, contributions by diverse populations, environmental developments, and the region's changing roles within the context of national and global developments.

**HIST 218 (5) C,N**  
**Field Trip: Europe**

Take a field trip to Europe to visit historic monuments, cities, castles, museums, churches, and other areas relative to studies in the classroom. Average length of experience is three weeks.

**HIST& 219 (5) C,N**  
**Native American History**

Examines Native American histories from pre-colonial times to the present. Analyzes pre-interactions with non-Natives, especially conflicting cultural, political, and economic values.

**HIST 221 (5) N**  
**Sports/Social Change 20th Century**

Examines the development of sports and its importance for United States culture and society. Focuses on the struggles of athletes who resisted social restrictions, prejudices, gender and racial segregation, and the role of sports in creating the diverse American society of the 20th century. Also explores the interplay between sports and immigration, technology, and globalization.

**HIST 230 (5) N**  
**U.S. Environmental History**

From pre-Colombian era to present. Focuses on how different groups of Americans have shaped their environments and on how the environment has shaped cultures, societies, and economies in North America, from before the arrival of Europeans to the present. Explores how and why attitudes toward the environment have changed. Provides historical context to facilitate understanding debates over environmental issues. Recommended ENGL& 101 eligible.

**HIST 231 (5) S**  
**Northwest Environmental History**

Examines how different groups of Americans have shaped their environments and how the environment has influenced cultures, societies, and economies in the Pacific Northwest, from before Europeans' arrival to the present. Prereq: Eligibility for ENGL& 101.

**HIST 251 (5) N**  
**History of China**

Surveys the development of Chinese society from ancient times to the present, including fine arts, literature, religion, and thought. Emphasis on the modern period.

**HIST 268 (5) C,N**  
**History of Latin America**

Covers the development of the Latin American republics, from indigenous European and African foundations through independence and the 20th century. Focuses on social, economic, cultural, and political development.

**HIST 269 (5) C**  
**History of the Holocaust**

Interdisciplinary examination of the context and origins of the Holocaust, using history, film/documentaries, and voices from the Holocaust. Emphasizes multiple perspectives, including perpetrators, victims, bystanders, resisters, and rescuers. Analysis of modern institutions (nation-states, bureaucracies) and ideologies (anti-Semitism, scientific racism, nationalism) illuminates the meaning, impact, and legacies of the Holocaust.

**HIST 273 (5) N**  
**Women of American West**

Examines women of diverse communities in the Trans-Mississippi West in all their different roles, from before European contact to the end of the twentieth century. Explores race, ethnicity, class, labor, family, suffrage, politics, social reform, women's groups, arts and entertainment, religion, cultural values, and gender identity.

**HIST 298 (1-5) C,N,S**  
**Special Topics/History**

Independent study in selected history topics under faculty supervision. Prereq: Permission.

**HIST 299 (1-5) C,N**  
**Special Problems/History**

Small class format to study and discuss selected topics in history. Prereq: Permission.

**Hospitality****HOS 101 (1) C**  
**Customer Service Practicum I**

Application of basic customer service theory in a full service restaurant or pastry case. Includes busing, housekeeping, mise en place for both casual and formal restaurant settings, and customer service and sales techniques in bakery counter settings. Prereq: Permission.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**HOS 102 (1) C**  
**Customer Service Practicum II**

Students refine customer service skills by further practice in a pastry case or full-service restaurant. Includes dining room arrangement, buffet set up, customer service, and wait staff duties. In bakery counter settings, students practice product rotation and merchandising. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**HOS 103 (1) C**  
**Customer Service Practicum III**

Students acquire expertise in customer service by performing opening and closing procedures, training bus staff, and using a variety of service techniques, including the French, English, and Russian styles of table service. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**HOS 104 (1) C**  
**Customer Service Practicum IV**

Introduction to leadership positions in the front of the house. Includes maître d' duties, managing reservations, cashiering, tableside food preparation, and service in a fine dining setting. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**HOS 105 (1) C**  
**Customer Service Desserts Breads**

Students assume responsibility for opening/closing, sales, organization and merchandising of product, and training of first-quarter students at a retail pastry case. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**HOS 107 (2) C**  
**Spreadsheet Application for Hospitality**

Introduces key concepts in developing and analyzing business spreadsheets using an application such as Microsoft Excel. Topics include formulas, formatting, functions, tables, charts, and working with multiple workbooks. Focuses on Hospitality business related tools and themes. Prereq: Instructor's permission. Recommended: BTM 111.

**HOS 108 (4) C**  
**Dining Room Kitchen Management**

Students experience supervisory roles in a variety of management situations in both the front and back of the house. This class also includes tableside cooking and service coordination for other students' chef of the day projects.

**HOS 110 (3) C**  
**Principles of Sanitation**

Fundamentals of food service sanitation and its importance to the industry. Includes microorganisms in food spoilage and food-borne illness, ways of limiting microbial contamination and growth, creating a clean and sanitary environment, accident prevention and first aid, Material Safety Data Sheets, sanitation in crisis situations, principles of designing safe and sanitary kitchens, and government regulations. Prereq: Admission into the Culinary Arts Program.

**HOS 111 (1) C**  
**Intro to Customer Service**

Covers the theory and operation of table service in a variety of dining environments. Includes dining room safety, proper service and etiquette, guest interaction, menu knowledge, ticket writing, and use of a variety of dining room equipment. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**HOS 112 (1) C**  
**Spreadsheet for Hospitality**

Introduces key tools and concepts in using business spreadsheet applications, such as Microsoft Excel. Topics include elements of spreadsheet, such as cells, rows, columns, and sheets; applying formatting; working with functions, tables, and charts. Focuses will be on Hospitality industry related tools and solutions. Prereq: Enrollment in Culinary Arts program.

**HOS 120 (1) C**  
**Industry Work Experience**

Students will work in various hospitality operations for 500 hours. Work performance must be documented, and one supervised report will be included. Students will also be required to complete a community service segment as well as a professional service segment. Instructor contact will be one hour per week to discuss work experiences, analyze industry trends, and complete the supervised report.

**HOS 122 (1) C**  
**Purchasing & Inventory: Theory**

Intro to principles of inventory procedures. Encompasses formal and informal purchasing methods, flow of goods, food buying, legal and ethical purchasing considerations, market analysis, stock rotation, bid specifications, yield and cost comparisons, quality tests, and inventory. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**HOS 123 (1) C**  
**Food Costing Principles**

Explores connection between profit and food cost, discusses product waste, and defines costing terms and purchasing units. Use mathematics skills to make conversions, cost bulk and sub-recipes and calculate the selling price of a menu item. Prereq: Successful completion of previous quarter's Seattle Culinary Academy courses with a minimum GPA of 2.0 in each course.

**HOS 124 (2) C**  
**Computerized Menu Planning**

Learn various menu layouts and designs. Learn and use proper menu language while using word processing and spreadsheet programs in the creation of menus. Perform weight to volume conversions while learning how to cost out recipes. Prereq: Successful completion of third-quarter Culinary Arts Program courses with a minimum GPA of 2.0 in each course.

**HOS 150 (2) C**  
**Measurements/Meanings**

Covers the ways measurements, numerical expressions, and calculations are used in the culinary and pastry arts. Learn to perform basic calculations, use percents, measure ingredients, calculate and adjust the yield of recipes, cost recipes, price menu items, and interpret data in chart and graph format. Prereq: Program enrollment.

**HOS 181 (5) C****Intro to Hospitality Management**

Introduces students to management, the business world, and the hospitality industry, focusing on food service, lodging, and tourism. Includes hotel operations, restaurant development, meetings and conferences, gaming/casinos, bed and breakfasts, ADA (Americans with Disabilities Act), discrimination, sexual harassment, beverage management, leadership styles, negotiation strategies, motivation, decision making, problem solving, delegating, human resources techniques, wines and spirits, marketing, labor unions, income statements, balance sheets, and business development. Prereq: Admission to Hospitality Management program.

**HOS 197 (1-15) C****Work Experience: Foods – Hospitality**

Earn credits while working in the hospitality industry.

**HOS 201 (2) C****Functions of Management**

Covers management and communication theories and practices within the culinary arts and baking industries. Includes intro to the hospitality industry and overview of the Americans with Disabilities Act, sexual harassment, as well as other legal and human resource topics. Presents communications skills, functions of management, beverage management, financial statement analysis, and résumé writing. Prereq: Successful completion of previous quarter's courses with minimum GPA of 2.0 in each course.

**HOS 203 (3) S****Commercial Food Nutrition**

Complete overview of the six nutrient categories: carbohydrates, lipids, protein, vitamins, minerals, and water. Practical information on how the body uses nutrients, food sources, and alternatives for each nutrient, and methods of evaluating nutrition information. In evaluating dietary Intake use current USDA food guidelines.

**HOS 299 (3) S****Independent Project Hospitality/Culinary Arts**

To help prepare the student to understand and the theoretical and applied aspects of team hot food competition as outlined by the American Culinary Federation (ACF). The student will be required to participate in weekly team practices and scheduled competitions. The student will work in close supervision with the instructor (coach) through the development of hand skill, menu development, and hot food cooking as specified by the ACF competition guidelines. The student will be handling and preparing food items that will be eaten. Requirements: Concurrent enrollment into the Culinary Arts Program.

**Hospitality Management Bachelor of Applied Science**

*Students must be accepted into the program in order to take these courses.*

**HMG 301 (3) S****Intro to Hospitality**

Survey of the various segments of the hospitality industry, including a brief history and current issues, with an emphasis on service.

**HMG 302 (5) S****Hospitality Management**

Survey of management theories, functions, methods, and concepts applied to hospitality settings.

**HMG 303 (5) S****Hospitality Marketing**

Incorporates theory and practice for an actual business, including elements of local store marketing and sales.

**HMG 310 (3) S****Hospitality Computer Applications**

Explores the technology fundamentals and software applications for business functions and management practices.

**HMG 311 (3) S****Lodging Operations**

Study of each hotel department by function and personnel. Presents concepts of yield management and revenue management in depth.

**HMG 312 (3) S****Legal Issues/Hospitality**

Study of liability, dram shop laws, contracts, and innkeeper laws, with the purpose of reducing the risk environment for operators.

**HMG 313 (3) S****Entrepreneurship**

Concepts and issues related to new business ventures, including small businesses.

**HMG 314 (5) S****Diversity/Culture**

Travel. Learn the cultural principles and practices in domestic and international travel and tourism and the impact on hospitality businesses. Emphasizes diversity.

**HMG 330 (5) S****Intro to Process Improvement in Operations**

This class explores the use of Business Process Improvement methodology for analyzing and improving operational effectiveness in business. The Course requires students to already have earned an AA Degree or higher or instructor permission.

**HMG 401 (5) S****Cost Controls**

Provides the basics of cost control management in the food and beverage industry within the Hospitality Industry.

**HMG 402 (5) S****Hospitality Accounting**

Explores the use of management tools for creating and analyzing operational effectiveness in the hospitality industry. In addition to credits, successful completion earns widely recognized national certification from the American Hotel and Lodging Association (AHLA).

**HMG 411 (3) S****Human Resource Management**

Policy and practice of human resources utilization: selecting, training, motivating, evaluating, and compensating employees; labor relations; EEO legislation.

**HMG 412 (5) S****Service Operations Management**

Design and management of service systems in hospitality operations; control of customer interaction, personnel activities, and inventory.

**HMG 420 (3) S****Ethical Leadership**

Nature and sources of ethical conflicts and dilemmas leaders and organizations confront in the hospitality industry.

**HMG 430 (5) S**  
**Sustainable Business Practices in Foodservice I**

Policy and practice in the use of sustainable business practices in the foodservice industry, including Design of Goods and Services, Sustainability in the Supply Chain, Managing Quality, Statistical Process Control, Process Strategy, Capacity and Constraint Management, Location Strategies, Layout Strategies and Human Resources, Job Design, and Work Measurement.

**HMG 440 (5) S**  
**Sustainable Business Practices in Foodservice II**

Advanced Policy and practice in the use of sustainable business practices in the foodservice industry, including Major Sustainability Data Types and Sources, Creating Knowledge and Insight from Corporate and Industry sustainability Information, Evaluation of Current Reporting Practices, Limitations, and Trends, Making It Happen in Your Organization, Creating Sustainable Value for the Enterprise, Implications for Sustainability Professionals.

**HMG 489 (1) S**  
**Professional Career Development**

Preparation for industry employment, including résumé writing, interview skills, professional dress, and business etiquette.

**HMG 490 (3) S**  
**Internship Lecture**

Tracks student requirement of 1000 hours of industry experiences.

**HMG 491 (5) S**  
**Hospitality Management**

Capstone. Project-based course integrating all components in the curriculum.

## Human Development

**HDC 091 (3) N**  
**Math for Math-Avoiders**

Identify feelings and barriers to learning math. Learn anxiety management, relaxation techniques, test-anxiety, and math study skills.

**HDC 093 (2) N**  
**Study Skills**

Increase academic efficiency by learning about motivation, procrastination, and memory. Includes note-taking and other skills and strategies for success.

**HDC 100 (1-3) C,N,S**  
**Career Plan/Personal Evaluation**

Intro to a systematic approach to help the individual gain a better understanding of self relating to occupational interests and goals. Includes testing and discussions of values, interests, and skills.

**HDC 101 (1-3) C,N,S**  
**Orientation to College Success**

Assists new students in their adjustment to community college. Includes goal-setting, self-motivation skills, identifying college resources, personal development, and general study hints.

**HDC 102 (3) C,S**  
**College Survival Skills**

Assists new and struggling students to identify and develop strategies for success in college and life. Includes learning effective study skills and use of college support services.

**HDC 103 (3) C,S**  
**Critical Thinking**

Covers methods of comparison, inference, and deduction to solve abstract and practical problems. Sequential steps in the evaluation of people, knowledge, and values, in which thinking becomes more complex and less categorical and absolute. Designed to start a reflecting process that helps in understanding how cultural beliefs, attitudes, and values affect the way we think.

**HDC 106 (1-2) C,S**  
**Interview, Resume, Job Hunting**

Focuses on the development of cover letters, résumés, interviewing skills, and job-hunting strategies.

**HDC 111 (1) C**  
**Math Study Strategies**

Introduces students to study skills to improve math success. Covers reading, note-taking, test-taking, math anxiety, and college resources. Most appropriate for students who struggle with math or have not taken a math class for a long time. Prereq: Test placement at or higher than ENGL 097 or equivalent course completion.

**HDC 112 (1) C**  
**Managing Time and College Expectations**

Emphasizes development of effective time management skills and a thorough understanding of classroom and campus expectations, student responsibilities, and campus resources to foster success in college.

**HDC 113 (1) C**  
**Read and Note Taking Strategies**

Become a self-directed learner for reading and thinking academically and personally. Focuses on the development of practical knowledge and strategies to assist students towards that goal.

**HDC 114 (1) C**  
**List and Lecture Note Taking**

Develop ability to take more effective lecture notes through exploration of some well-known note-taking systems. Enhance listening skills and learn to use notes as a study tool.

**HDC 115 (1) C**  
**Test Taking Skills**

Strategies for effective test-taking and test anxiety to enhance testing performance and curriculum retention. Includes assessment of personal learning style, test and question types and strategies, study habits and environment, anxiety reduction strategies, resources, and planning for testing.

**HDC 119 (3) N,S**  
**Stress Management**

Focus on changing stressful situations and personal responses to them. Includes time management, cognitive restructuring, health and wellness, and relaxation training.

**HDC 120 (1-5) C,S**  
**Leadership, Theory, and Practice**

Explores theory behind visionary, servant, and citizen leadership styles. Covers practical leadership skills, such as time management, goal-setting, and effective communication. Emphasizes involvement in various student activities and programs.

**HDC 121 (2) C**  
**Peer Advising**

Focus on communication skills, problem-solving, interviewing techniques, and leadership potential. Upon successful completion of the course, students work in the Advising Center assisting fellow students in understanding degree and transfer requirements and planning their quarterly programs of study.

**HDC 125 (1-3) C,N,S**  
**Learning Strategy Math**

Identifies emotional and cognitive barriers to math learning. Covers research-based skills for strengthening math approach and performance. Includes learning styles, anxiety management, relaxation techniques, cognitive behavioral strategies, memory storage and retrieval, and other skills related to math success.

**HDC 190 (1-2) C,N**  
**Women in Society**

Examines women's changing social roles – locally, nationally, globally – and their effects on women. Explores how these issues relate to college students facing challenges such as achieving goals, balancing responsibilities, overcoming barriers, and establishing inclusiveness. All genders encouraged to enroll.

**HDC 197 (1-3) C**  
**Leadership Practice & Application**

Integrates educational studies with supervised experience with student government, campus clubs/committees, or off-campus leadership activities. Provides individualized opportunities to apply knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission.

**HDC 199 (3) C,S**  
**Independent Study: Student Success**

Increase success in college through the application of techniques for problem-solving, planning, and accomplishing goals. Provides a supportive setting and format for monitoring personal accountability, motivation, and achievement. Students strengthen critical thinking and leadership skills. Prereq: Permission.

**HDC 200 (1-3) C**  
**Orientation to College Success**

Provides international students with the knowledge and skills for success in American community colleges.

**HDC 294 (3) C**  
**Individualized Career**

Designed to help students develop goals by developing awareness of their own patterns of aptitudes, interests, and personality traits. Career counseling session, writing assignments, career research, and assessment help develop self-awareness through self-evaluation. Independent study with a counselor. Prereq: Counselor's signature.

**Humanities****HUM 104 (5) C,N**  
**Visual Thinking**

Intro to thinking in images to release creativity; using the right brain in concert with the left brain; the focusing power of relaxed attention; idea sketching to generate, express, and record ideas; use of new problem-solving strategies for problems defying usual solutions. Prereq: Placement in ENGL 098 or higher.

**HUM 105 (5) C,N**  
**Intercultural Communication**

Interdisciplinary focus on the role of languages and culture in effective intercultural communication, including values, patterns, history, and attitudes that create and sustain cultures. Emphasis on skills and empathy gained from the study of diverse cultures through literature, theory, and guest lecturers.

**HUM 110 (5) C,N,S**  
**Intro to American Film**

Examines Hollywood film-making as an art form, a business, and a shaper of culture. View, discuss, and critically analyze classics, features, and documentaries for increased understanding of artistic elements and film techniques. Covers the impact of American films on personal experience and American culture.

**HUM 112 (5) C,N,S**  
**Responsibilities & Rights of Freedom**

Examines individual rights and responsibilities in a free society in the practical context of an individual's roles as a citizen and resident of various levels of government, family member, and employee or employer. Distinguishes between legally enforceable rights and obligations and the relationship between responsibilities and legal authority. Adds values to the critical thinking process.

**HUM& 116 (5) C,N**  
**Humanities I**

Covers significant movements in Western culture and values through major works of art, drama, literature, philosophy, music, architecture, and language. From historical and political writings, learn of the forces affecting the humanities, from the beginning of civilization to the fall of the Roman Empire.

**HUM& 117 (5) C,N**  
**Humanities II**

Continuation of HUM& 116. Covers the age of Charlemagne to the Enlightenment.

**HUM& 118 (5) C,N**  
**Humanities III**

Continuation of HUM& 117, from the French and American Revolutions to contemporary issues. Recommended: Placement in ENGL& 101 or ENG 101 (N).

**HUM 120 (5) C,N,S**  
**Intro to Asian Cinema**

Survey of cinema of Asian and Asian Pacific Islander countries, including but not limited to Japan, China, Hong Kong, Taiwan, Korea, Vietnam, Cambodia, Philippines, Samoa, India, and Iran. Course satisfies API Emphasis AA requirement at South. Prereq: Placement in ENG& 101.

**HUM 125 (5) C**  
**Hip-Hop Theory & Culture**

Identifies and critically examines the theoretical foundations of hip-hop culture and rap music, the evolution of hip-hop philosophy, and the community from which it originated. Analyzes the influences that the background, music, and style of the hip-hop generation have upon a multicultural nation and world. Prereq: ENGL& 101.

**HUM 130 (5) C,N,S**  
**World Cinema**

This course surveys 20th and 21st C. international films and filmmakers from around the globe. Analyzes how film themes are conveyed through narrative and style. Examines cinema as an art form that represents and influences social, political, and cultural movements worldwide. Prereq: ENGL& 101 placement.

**HUM 135 (5) N**  
**History of Film**

Historical overview of the origins and development of world cinema from 1900 to the present. Examines the various influential directors, major film movements, and national cinemas that have most influenced world cinema. Prereq: ENGL& 101 placement.

**HUM 140 (5) N**  
**Transnational Cinema**

Examines films from at least four non-Western cultures as means of storytelling, as art form, and as commercial product. Covers financial, political, and ideological conditions of the making and reception of these films. Considers how globalization and post colonialism are reflected in these films and how Western viewers and critics understand and value them.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN ..... Watch Technology

**NAME TO PREFIX**  
Watch Technology ..... HIN

Common Course Numbering explanation is on page 224.

**HUM 145 (5) C,N,S**  
**Film Genres**

Study of a particular film genre through a theoretical lens to discover its historical and cultural roots, significance, and context.

**HUM 150 (5) C**  
**Ways of Knowing**

Students study self-assessment or self-evaluation by writing and talking about their own education. Includes a study of learning styles and an exploration of individual learning styles.

**HUM 155 (5) C**  
**Sports and Culture**

Provides a forum for critical analysis, with multiple perspectives of the cultural framework of sports and the sports world. Includes dynamics in sports related to social issues such as race, class, gender, and oppression.

**HUM 160 (5) C,N**  
**Asian Written Traditions**

Intro to written traditions in philosophy, religion, history, and literature of East and South Asia. Emphasis on original texts in translation in relation to social and cultural background. Recommended: ENGL& 101 placement.

**HUM 170 (5) C**  
**Intro to Futures Studies**

Exploration of major future social, cultural, economic, and technological trends and drivers. Emphasis on the role futurists play in a variety of fields, and application of Futures Studies methods. Prereq: ENGL& 101 placement (C).

**HUM 197 (1-15) C**  
**Co-Op Work Humanities**

Earn work experience credit in the humanities field. Prereq: Permission.

**HUM 200 (5) C,N**  
**Reading the Media**

Examines the way cultural identities are constructed by and represented in contemporary media such as film, television, radio, and newspapers. Prereq: Placement into ENGL& 101 (N).

**HUM 210 (5) C,S**  
**Intro to LGBTQ Studies**

Introduces key themes and critical frameworks in Lesbian, Gay, Bisexual, Transgendered, and Queer (LGBTQ) Studies. Topics include histories of sexuality; forms of oppression, including heterosexism, homophobia, and transphobia; resistance to oppression; violence against LGBTQ people; queer activism; diverse experiences of sexuality; and representations in literature, art, and popular media. Prereq: Satisfactory completion of ENGL& 101.

**HUM 261 (5) N**  
**Japanese Civilization**

Covers the development of Japan as a society and nation, including its origins, history, government, literature, economic institutions, material culture, social organizations, and religions.

**HUM 270 (5) C**  
**Comics & Graphic Novels**

Survey the history of comic books, manga, and graphic novels. Study cartoonists' works as channels of human expression and as evidence of changing and differing cultural conditions. Learn the basics of cartooning. Research self-chosen questions pertaining to "sequential art."

**HUM 289 (1-10) C,N**  
**Chinese Language through Experience**

Self-paced experiential education for undergraduates who plan to take advantage of language study opportunities outside the USA, such as living with a family for total language immersion or attending a language school while studying the local cultures. All course requirements must be completed upon return to the USA.

**HUM 290 (1-10) C,N**  
**German Language through Experience**

See course description listed for HUM 289.

**HUM 291 (1-10) C,N**  
**Spanish Language through Experience**

See course description listed for HUM 289.

**HUM 292 (1-10) C,N**  
**French Language through Experience**

See course description listed for HUM 289.

**HUM 293 (1-10) C,N**  
**Italian Language through Experience**

See course description listed for HUM 289.

**HUM 294 (1-5) C,N**  
**Independent Projects**

Independent projects based on humanities research. Prereq: Permission.

**HUM 295 (1-5) C,N**  
**Practicum in the Humanities**

Curriculum practicum for teachers. Prereq: Permission.

**HUM 296 (1-5) C,N,S**  
**Independent Projects**

Continuation of HUM 295 or independent curriculum project on a different topic than that studied in HUM 295. Prereq: Permission.

**HUM 297 (1-10) C,N**  
**Japanese Language through Experience**

A self paced experiential education course designed for the undergraduate who plans on taking advantage of the language enhancement opportunities outside the USA, living with a family for total language immersion, or attending a language school while at the same time studying the culture of the country.

**HUM 298 (1-10) C**  
**Portuguese Language through Experience**

See course description listed for HUM 289.

**HUM 299 (1-5) C,N,S**  
**Special Problems in Humanities**

An independent study/research course in the interdisciplinary field of humanities. Prereq: Permission.

**Industrial First Aid**

**IFS 100 (2) S**  
**Industrial First Aid & Safety**

Offered at Duwamish Training Center. Covers mandate of Washington State's Workman's Compensation Act to recognize, treat, and utilize advanced life support services available to the general public for ill or injured victims. Focuses on safety and prevention of industrial accidents and infectious disease control. Prereq: Covered by Washington state Workman's Compensation Act.

**IFS 102 (1) S**  
**Industrial First Aid**

This course covers basic information required to perform first aid measures on suddenly ill or injured persons. It also covers the application of CPR (Cardio Pulmonary Resuscitation).

## Industrial Power & Control Technology

See *Electronics Technology*, page 287.

## Industrial Technology

**INT 100 (3) S**  
**Manufacturing Processes**

Study how machined parts are fabricated. Includes limited hands-on experience on both lathe and milling machines. For Engineering, Drafting, and Quality Assurance majors.

**INT 101 (3) S**  
**Manufacturing Basics I**

Students gain industry-relevant knowledge and applicable topics relevant for work in a diversified manufacturing environment. Topics include but are not limited to Newton's Law, pressure awareness, energy, force, torque, and gas laws. An introduction to basic electricity and electron flow/charge, circuits, DC & AC, generation, and safety practices.

**INT 108 (3) S**  
**Intro Blueprint Reading**

Learn to identify, read, and interpret construction drawings. Emphasis on practical understanding of the processes involved in construction and interpreting them from drawings.

**INT 109 (1) S**  
**Flagging and Traffic**

Covers basic knowledge, information, and awareness of directing traffic and setting up traffic control devices within Washington state. Learn to perform flagging and traffic control job duties safely. Covers the Evergreen Safety Council Flagger Handbook. This course is recognized by the Washington state Traffic Control Oversight Committee. Flagger certification earned in this course is good for three years and is recognized in Oregon and Idaho.

**INT 112 (5) S**  
**Tools and Trades**

Covers the use of hand tools, shop and manufacturing tools, shop safety, and personal protective equipment needed to work in a diversified manufacturing lab. Includes tours to employer sites, with the potential of job shadows with current employees. Complete an individual design and manufacturing project using the lab.

**INT 115 (3) S**  
**Intro to Lean Manufacturing**

Learn English language communication strategies and tools to grow and more fully participate in the implementation of the concepts of lean. Integrates English language learning with the Lean Manufacturing training environment.

**INT 120 (1) S**  
**Applied Hydraulics Manufacturing**

This is an introductory course designed to prepare students for industry relevant knowledge and applicable topics for work in a diversified manufacturing environment. Students will learn and apply basic principles and explain applications of hydraulic power. Students will identify and select appropriate hydraulic fluids. The course will be delivered from an applied perspective, with an emphasis on understanding the processes involved in checking, troubleshooting, and inspecting hydraulic systems.

**INT 121 (2) S**  
**Applied Pneumatics Manufacturing**

This is an introductory course designed to prepare students for industry relevant knowledge and applicable topics for work in a diversified manufacturing environment. Students will learn and apply basic principles and applications of pneumatics. The course will be delivered from an applied perspective, with an emphasis on understanding the processes involved in checking, troubleshooting, and inspecting pneumatic power systems.

**INT 122 (2) S**  
**Intro HVAC Manufacturing**

This is an introductory course designed to prepare students for industry relevant knowledge and applicable topics for work in a diversified manufacturing environment. Students will learn and apply basic principles and applications of sheet metal construction. The course will be delivered from an applied perspective, with an emphasis on demonstrating the processes involved in basic layout and fabrication of sheet metal and HVAC systems.

**INT 125 (5) S**  
**Electrical Safety**

Covers Federal OSHA and the State of Washington (WISHA) electrical safety standards for general industry. Includes types of hazards associated with electricity, single and three-phase systems, cord and plug connected equipment, hazardous locations and safety-related work practices, and understanding government regulations. Emphasis on electrical hazard recognition and OSHA inspection procedures.

**INT 130 (5) S**  
**Cranes & Material Handling**

Intro to various types of overhead cranes, hoists, and powered industrial trucks used in general industry. Covers overhead and gantry cranes, wire rope, slings, crane inspection and maintenance, and operations and maintenance of industrial trucks. Discusses appropriate OSHA and ANSI standards and related requirements.

**INT 155 (5) S**  
**Pipe Fitting & Plumbing**

Intro to the selection and use of pipe and tubing for purpose of supplying air, water, oil, and electrical wiring to machinery.

**INT 160 (1-3) S**  
**OSHA 10**

Covers both Federal OSHA (29 CFR 1910) and State of Washington (WISHA) general industry standards as they apply to the industrial manufacturing industry. Learn the hazards associated with the manufacturing industry and how to apply industry standards to ensure compliance with the occupational Health and Safety Act of 1970.

**INT 161 (5) S**  
**Applied Industrial Hygiene**

Intro to general concepts of industrial hygiene and sampling techniques. Includes common health hazards, such as air contaminants and noise, hazard evaluation through screening, and sampling and control methods for health hazards, including ventilation and personal protective equipment. Includes laboratories in the use and calibration of industrial hygiene equipment.

**INT 162 (5) S**  
**Construction Safety**

Covers both OSHA (20 CFR 1926) and the State of Washington (WISHA) construction standards as they apply to construction industry. Learn how to apply these standards to ensure compliance with the occupational Safety and Health Act of 1970.

**INT 163 (1) S**  
**Hazcom**

The goal of this course is to enable students to recognize and understand the required elements of OSHA's written hazard communication program, including how to identify and evaluate chemical hazards using Safety Data Sheets and chemical labels.

**INT 165 (3) S****OSHA 30 General Safety**

Orientation to occupational safety and health standards in general Industry. Provides comprehensive safety program knowledge and skills necessary to receive OSHA/MSDS certification and provides complete information on OSHA compliance issues.

**INT 180 (3) S****Intro to Composites**

Intro to materials science. Learn the properties and processing of solid materials used in manufacturing. Covers composite materials in general and focuses on a variety of materials used in manufacturing, including ceramics, metals, and fiber reinforced polymer composites. Learn the properties and manufacturing techniques of composite fabrications.

**INT 197 (1-5) S****Industrial Internship**

Spend time in the field under the guidance of an instructor and/or mentor to learn about operations, policies, procedures, cultures, and behavioral standards in a given private or public sector, paid or non-paid. Meet as a group during the internship. May be used as an internship during ongoing program coursework, upon completing the coursework, or both. Prereq: Permission.

**INT 210 (3) S****Industrial Ventilation**

Covers principles of industrial ventilation as a means of controlling hazardous air contaminants and both Federal OSHA and the State of Washington (WISHA) ventilation standards as they apply to general industry. Learn the classification of ventilation systems, fundamentals of air flow, make-up air, ventilation systems, surveys, and OSHA policy and procedures.

**INT 215 (5) S****Accident Investigation**

Covers industrial safety and health techniques used to conduct accident investigations in an industrial setting. Learn the proper techniques to conduct a complete and accurate investigation.

**INT 220 (5) S****Ergonomics**

Application of ergonomics principles for the reduction of stresses and strains to the employee's body. Includes work physiology, vibrations, anthropometry, cumulative trauma disorders, video display terminals, manual lifting, and temperature stress. Includes industrial case studies covering analysis and design of work stations and equipment, laboratory sessions in manual lifting, and demonstrations of instrumentation and equipment used in the field of ergonomics.

**Information Research****INFO 101 (1-5) C,N,S,V****Information Research**

Develops critical thinking in the research process. Examines strategies for locating and using information resources. Emphasizes proficiency using electronic resources and other research tools and retrieval techniques. Explores information policy issues such as copyright, censorship, and freedom of information. Prereq: Eligible for ENGL& 101.

**INFO 102 (1) C,S****Info in Action Research**

Covers the process to get started with a research project and gain a solid understanding of research options. Prereq: Eligible for ENGL& 101.

**INFO 103 (1) C,S****Info in Action Books Media**

Intro to the purpose, structure, and uses of books, e-books, and media as sources of in-depth or historical information on a subject. Covers use of local and regional library catalogs to find books, and strategies to evaluate them. Prereq: Eligible for ENGL& 101.

**INFO 104 (1) C,S****Info in Action Research**

Explores periodical databases for research purposes, including basic database structure and the variety of databases available. Focuses on research strategies and database features to retrieve and evaluate articles on a topic. Prereq: Eligible for ENGL& 101.

**INFO 105 (1) C,S****Info in Action Scholarly**

Intro to scholarly communications that form the basis of new information, including where these communications are published, how to search periodicals databases for scholarly articles, and how to evaluate and cite sources for academic research. Prereq: Eligible for ENGL& 101.

**INFO 106 (1) C,S****Info in Action Web Research**

Examines the Internet as a conduit for research information from a wide range of sources. Discover strategies for uncovering difficult to find "deep web" resources and evaluating content from multiple sources. Prereq: Eligible for ENGL& 101.

**INFO 110 (1-3) C,N,S****Information Age Issues**

Develops strategies to locate, evaluate, and use information safely and ethically. Includes extra language support for non-native English speakers. Prereq: Eligible for ENGL& 101.

**INFO 180 (5) C,S****Research for 21st Century**

Develops a framework for research in the online environment and helps build skills and techniques for success as online learners through a quarter-long research project on global issues. Prereq: Eligibility for English 101.

**INFO 300 (1-5) N****Information Literacy for Undergraduate Research**

Explores strategies, topics, and concepts to develop research practices for Bachelor's level study. Focuses on in-depth investigation of the organization, retrieval, and evaluation of professional and discipline-specific digital and print information sources. Prereq at North: Enrollment in a Seattle Colleges B.A.S. program and completion of ENGL&101 and ENGL& 102 with a grade of 2.0 or higher, or concurrent enrollment in English 102. Prereq at Central: Completion of ENGL& 102 with a grade of 2.0 or higher, or concurrent enrollment in English 102.

**Information Technology**

*Also see Computer Science, Computing Technology.*

*NOTE: Eligibility for ENGL& 101 is recommended.*

*Most Information Technology courses require a computer lab fee. Contact the division office for specific fee information.*

**BCT 111 (2) V****Computer Lit App Fund**

Introduction to computer use, concepts, terminology, word processing, presentation, and database software. Practical experience in business skills relative to the use of applications, the Internet, email, scheduling, contact management, directory and file management, and database software. Prereq: Permission.

**BCT 130 (4) V**  
**Word Processing**

Introduces the word processing cycle as used in a work setting. Microsoft Word is used to create, format, and edit documents: memos, form letters, tables, and reports. Topics include styles, templates, mail merging, graphics, and WordArt. Prereq: BOS 103 or instructor's permission.

**BOS 103 (2) V**  
**Keyboarding**

Development of touch keyboarding skills. Emphasis on proper technique, strategies, practice drills, and timed exercises to improve speed and accuracy. Prereq: Permission.

**IT 102 (5) N**  
**Intro to Programming**

Gain a basic understanding of the programming field. Learn to solve problems through programming logic and design and use efficient troubleshooting techniques to find and correct errors.

**IT 103 (5) N**  
**Intro to Database Use Design**

Learn Microsoft Access and SQL, the design, creation, and use of databases and strategies for keeping data current, accurate, and secure. Prereq: IT 100, or EET 131 and IT 101, 102.

**IT 109 (1) N**  
**ITIL Foundation Preparation**

Students will learn how IT services are managed so that they meet and exceed business expectations. Prepares students for the ITIL Foundations Certificate exam. Prereq: EET 131 or instructor permission.

**IT 111 (5) N**  
**Internet and Web Authoring**

Survey of basic Internet services and protocols and a comprehensive intro to web development with HTML5 and CSS3. Also emphasizes web page design and website set up and maintenance.

**IT 115 (5) S**  
**Networking 1: Networking Fundamentals**

This course explores computer and communications technologies, network hardware and software, protocols, and standards. It is designed to serve the needs of those interested in understanding the field of computer networking and how it relates to other areas of Information Technology (IT). Prereqs: Placement into English 107, Math 136, or Math 146, or by instructor permission. Coreqs: IT 118 Hardware Fundamentals.

**IT 118 (5) S**  
**Hardware 1: Hardware Fundamentals**

This course explores the inter-relationships between hardware and software at the system level. Topics covered include processors and chipsets, motherboards, memory, storage devices, and multimedia devices. Diagnostic software is used to identify and isolate faulty devices and sub-systems. This course is also for those preparing for (CompTIA) A+ certification exam. Prereqs: Eligibility for English 107; Math 136 or Math 146 or by instructor permission. Coreqs: IT 115; MATH 136 or MATH 146.

**IT 120 (5) N**  
**NET Essentials-Comptia +**

Understand core protocols, devices, and technologies for wired and wireless networking. Intro to current networking technology for local area networks (LANs), wide area networks (WANs), and the Internet. Introduces key concepts and practices for network security, management, and troubleshooting. Prereq: EET 131 (may be taken concurrently) or permission.

**IT 122 (5) N**  
**Installing and Configuring Windows Server**

This course offers in-depth coverage of core services, such as Active Directory and networking services, and provides validation of skills necessary to implement a core Windows Server Infrastructure into an existing enterprise environment. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized Information.

**IT 124 (5) N**  
**Network OS 2 Windows Server**

For those new to Microsoft Windows Server and responsible for installing, configuring, securing, managing, and supporting a network infrastructure using Microsoft Windows Server. Provides knowledge and skills for designing a Microsoft Windows Active Directory Services infrastructure. Prereq: IT 122

**IT 125 (5) N**  
**Using SQL and SQL Server**

Provides instruction in techniques for creating, modifying, deleting, and querying databases using SQL. Focuses on designing and understanding SQL queries using Microsoft SQL Server, although techniques can also be used with other relational DBMS, like MySQL, Oracle, and Access. Recommended: Work experience or class (such as IT 101) using a DBMS.

**IT 126 (5) N**  
**Network OS 3 – Windows Network Infrastructure**

Introduces Microsoft Active Directory. Students will learn to install and configure storage volumes, virtual machines, user accounts, groups, and policies. Provides the prerequisite knowledge and skills for IT 128. Prereqs: IT 124 or instructor permission.

**IT 128 (5) N**  
**Network OS 4 Windows Act**

Learn to plan, implement, secure, and manage Microsoft Windows Directory Services in an enterprise environment. Prereq: IT 126 or permission.

**IT 131 (5) S**  
**Linux Fundamentals**

This course will provide students with the fundamental concepts of Linux/UNIX operating systems. The course covers such topics as the Linux/UNIX file system, commands, utilities, text editing, shell programming, and text processing utilities. Students will learn command line syntax and features of the popular Linux/UNIX shells, including filename generation, redirection, pipes, and quoting mechanisms.

**IT 135 (5) N**  
**Introduction to UNIX**

Intro to the UNIX operating system using Linux. Includes the fundamental UNIX Commands, the UNIX file system, vi editor, UNIX shells, and shell programming. Strongly recommended: Computer and Windows Operating System experience.

**IT 138 (5) N**  
**UNIX for Network Administration**

Intermediate course. Covers the organization of UNIX-based hardware components and software tools used by the host administrator to control access, tune the system, and account for system resources used. Focuses on UNIX tools, network schedulers, security, remote access, performance monitoring, and networking aspects of UNIX. Includes multi-user, multi-tasking, time-sharing networked communications, and setup and maintenance of an Internet server. Prereq: IT 135 or permission.

**IT 140 (5) N**  
**UNIX Shell Scripts Perl**

Includes UNIX host administration with shell scripts and the use of Perl for administrative functions, basic Internet operations on UNIX systems. Focuses on data collection on the World Wide Web. Prereq: IT 138 or permission.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**IT 142 (5) N**  
**Network 2: Interconnecting Cisco Network Device 2**

This course introduces the student to the architecture, components, and operation of switches and routers, as well as the fundamentals of switching, routing, and the primary routing protocols. The course is designed to help students prepare for professional careers in the information and communication technology (ICT) field.

**IT 143 (8) S**  
**Network 3: Interconnect Cisco Network Device 3**

This course will equip students with the knowledge and skills needed to install, configure, operate, and troubleshoot a small enterprise network. It will ensure that students understand and are ready to deploy the latest shifts in technologies and solutions as follows: understanding of Quality of Service (QoS) elements and their applicability; how virtualized and cloud services will interact and impact enterprise networks.

**IT 144 (5) N**  
**Network Management – Cisco II**

Covers safety, networking, network protocols, LANs, WANs, Ethernet, LAN switching, Router IOS, TCP/IP Addressing, Router configuration, dynamic routing, static routing, and the network administrator's role and function. Includes decision-making and problem-solving techniques for networking. Prereq: IT 142 or instructor permission.

**IT 146 (5) N**  
**Network Management – Cisco III**

Continuation of IT 144. Covers configuring LANs, Novell Networks, Internet-work Packet Exchange (IPX) routing, Interior Gateway Routing Protocol (IGRP), Wide Area Networks (WANs), and network troubleshooting. Covers Integrated Services Data Networks (ISDN); Point-to-Point Protocols (PPP); and frame relay design, configuration, and maintenance. Prereq: IT 142, IT 144, or permission.

**IT 150 (5) N**  
**IT Systems Security +**

Provides both Windows and UNIX Network Administrators an awareness of security-related issues and the essential skills needed to implement security in such networks. First course in the Security Certified Network Professional Exam. Prereq: IT 122 and IT 138 or permission.

**IT 157 (5) N**  
**Ethical Hacking**

Students will learn offensive security techniques according to the Certified Ethical Hacker (CEH) methodology. Tools and testing networks will focus on the Linux operating system. Primary emphasis will be on open source platforms.

**IT 212 (5) S**  
**Introduction To Programming**

This course is an introduction to the Python programming language for students without prior programming experience. Content will include data types, control flow, object-oriented programming, and graphical user interface-driven applications. The examples and problems used in this course are drawn from diverse areas such as text processing, simple graphics creation and image manipulation, HTML and web programming, and genomics. Prereqs: IT 115, IT 118, MATH 136 or 146. Coreqs: IT 251, IT 223.

**IT 220 (5) N**  
**Desktop Management Virtualization Intermediate Level**

Covers desktop image optimization, image building and deployment, group policy application, DHCP fundamentals, virtualization and cloud computing, virtualization software, and desktop image deployment tools. Prereq: IT 126.

**IT 223 (5) S**  
**Administering Windows Server**

This course builds on IT 122 Configuring Windows Server by continuing to provide validation of skills necessary to implement a core Windows Server Infrastructure into an existing enterprise environment. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized Information Technology and security fields.

**IT 251 (5) S**  
**Security 1: Information Security Fundamentals**

This course offers in-depth coverage of the current risks and threats to an organization's data, combined with a structured way of addressing the safeguarding of these critical electronic assets. The course provides a foundation for those new to Information Security as well as those responsible for protecting network services, devices, traffic, and data.

**IT 252 (5) S**  
**Security 2: Network Security Fundamental**

This course prepares students for entry-level security specialist careers by developing an in-depth understanding of network security principles and the tools and configurations needed to secure a network.

**IT 254 (5) S**  
**Security 3: Ethical Hacking & System Defense**

This class will immerse the students into an interactive environment where they will be shown how to scan, test, hack, and secure their own systems. The lab intensive environment gives each student in-depth knowledge and practical experience with the current essential security systems. Students will learn how perimeter defenses work and then be led into scanning and attacking their own networks.

**IT 255 (5) S**  
**Security 4: Network Forensic & Incident Response**

The course combines an ethical hacking methodology with the hands-on application of security tools to better help students secure their systems. Students are introduced to common countermeasures that effectively reduce and/or mitigate attacks.

**IT 276 (5) S****Virtualization and Cloud Technologies**

Learn how Cloud computing and virtualization technologies work. Covers differences between Cloud computing and virtualization; the technologies, security concerns, and decision guidelines. IT departments are using/migrating to these technologies. "Bare Metal" virtualization, "application level" and container technologies will be discussed and/or used.

**IT 290 (5) N****Independent Study/Internship**

Provides advanced students with research opportunities or work experience in computer information systems. Variable credits. Prereq: Advanced standing and permission.

**IT 295 (2) S****Internship Network Security Administration**

Students apply Network Security knowledge and skills learned throughout the Network Security Administration program directly to the local industry. Course credit can be earned through current employment or the development of opportunities found in conjunction with the WorkSource Office. Student must complete hours and submit a Training Agreement, Learning Outcomes, and a Self-Evaluation in order to pass.

**IT 296 (2) N****Certification Test Prep**

et+CompTIA Network+ is a performance-based certification that helps you develop a career in IT infrastructure by validating the hands-on skills needed to troubleshoot, configure, and manage both wired and wireless networks.

**IT 297 (2) S****Certification Test Prep ICND 1**

This course introduces the student to the architecture, components, and operation of switches and routers, as well as the fundamentals of switching, routing, and the primary routing protocols. The course is designed to help students prepare for professional careers in the information and communication technology (ICT) field.

**IT 298 (2) N****Certification Test Prep ICND 2**

This course will equip students with the knowledge and skills needed to install, configure, operate, and troubleshoot a small enterprise network. It will ensure that students understand and are ready to deploy the latest shifts in technologies and solutions as follows: understanding of Quality of Service (QoS) elements and their applicability; how virtualized and cloud services will interact and impact enterprise networks.

**IT 299 (2) S****Certification Test Prep Security +**

CompTIA Security+ is the certification globally trusted to validate foundational, vendor-neutral IT security knowledge and skills. This course covers the essential principles for network security and risk management, preparing students to successfully pass the test and receive certification.

**ITC 102 (5) C,V****Information Systems Concepts**

Introduces computers and information systems, including hardware, software, data organization, data communications, systems development, the constantly changing roles of Information Technology (IT) professionals, and the evolving role of computers in society.

**ITC 110 (5) C****Programming Fundamentals**

Intro to basic computing concepts such as Input-Processing-Output, control structures, arrays, structured programming, and object oriented programming using C#.NET as an example language. Prereq: BTM 111 or equivalent and eligible for MATH 098.

**ITC 115 (5) C****Object Oriented Programming**

Intro to object oriented programming, structures, and concepts with Java. Intro to the C++ language. Create objects and understand how they relate to classes. Develop C++ code for practical applications. Prereq: ITC 110 with 2.0 or higher.

**ITC 134 (5) C,V****Intro to Software Development & Version Control**

Introduces hardware architecture and software systems that support web applications as well as development environments and systems used to build, test, and deploy applications. Explores processes utilized by developers to manage, version, test, and deploy their work across \*nixes, BSD's, and windows systems. Prereq: ITC 102 with 2.0 or higher.

**ITC 136 (5) C****UNIX Operating System**

Intro to the Linux/UNIX client operating system, including the fundamental Linux/UNIX commands in both the command line interface and graphics user interface. Not a Server Administration class. Prereq: BTM 111 with 2.0 or better, or previous computer work, or permission.

**ITC 140 (5) C,V****Intro to Computer Hardware**

Provides basic understanding of various hardware components, including installation and configuration. Learn how software interacts with and controls the computer's hardware elements. Emphasizes analytical logic, troubleshooting skills, and basic networking concepts. Prereq: BTM 111 or ITC 102 or equivalent.

**ITC 151 (5) C****Introduction to Security for Computing**

Introduces securing resources on computing infrastructure or computing as a service. A survey of concepts, techniques, tools, and processes to minimize attack surfaces, harden exposed access, create business continuity, and repair or recover from attacks. Multiple operating systems, platforms, and networks structures will be examined. CompTIA's S+ will be a guiding framework for class work. Prereq: NET 120 with 2.0 or higher, instructor-verified equivalent work experience, or instructor's permission.

**ITC 162 (5) C****Android Application Development 1**

Covers advanced Object Programming concepts and their application in a mobile environment. Includes OOP inheritance, interfaces, and good design principles. Covers installation and configuration of Android Studio and SDK. Develop a use interface design, write Java code (or Kotlin), code to work with an activity, work with layouts, widgets, and handle events. Work with themes and styles. Create a simple mobile application. Prereq: ITC 115 with a 2.0 or higher.

**ITC 164 (5) C****Android Development 2**

Builds on the basic Android development skills from ITC 162 and extends Android development to more advanced topics, such as working with menus and preferences, fragments, threads, services, notifications, databases, and content providers. Prereq: ITC 162 with a 2.0 or higher.

**ITC 165 (5) C****Intermediate Android Development**

Expands knowledge of Android Fundamentals with new concepts and functionality. Topics include working with threads, services, notifications, and broadcast receivers. Explore and implement persistent data storage, and work with app widgets and content providers. Examines how to deploy apps. Prereq: ITC 162 with a 2.0 or higher.

**ITC 172 (5) C****NET Web Programming**

Intro to object-oriented, event-driven programming using Visual Basic (VB) in the Visual Studio.NET environment. Create Windows applications and write Windows interfaces to existing applications. Study of Visual Basic forms and tools and writing VB code modules, processing, and functions. Intro to web applications. Prereq: ITC 110 or MIC 110.

**ITC 205 (2) C****Software Development Career Strategies**

Provides resources, strategies, and techniques for software development job search and placement. Learn how to research employers and understand the interview and hiring processes. Create industry-oriented resumés, cover letters, and portfolios. Practice programming interview questions, discuss problem-solving strategies, and learn about online resources. Soft, or behavioral, interview questions are also discussed. Prereq: ITC 110 with a 2.0 or higher, or ITC 115 with a 2.0 or higher.

**ITC 210 (5) C****Advanced Web Development**

Provides hands-on experience working on a web team with real-world client projects. Offered with WEB 210. ITC 210 students provide the main database and programming skills, while WEB 210 students provide the main design and development skills. Prereq: WEB 170 with 2.0 or higher.

**ITC 220 (5) C****Database Development**

Overview of database theory and systems. Work with relational databases, simple ADO, SQL, and XML. Prereq: BTM 111 and either MIC 110 or permission.

**ITC 222 (5) C****SQL**

Intro to the use of Structured Query language (SQL) to access and summarize database information, create and alter database objects, set constraints, and create views. Intro to SQL embedded in programming environments, such as ASP or CGI or Net. Learn to use SQL to create and manage databases on a relational database management system. Prereq: ITC 220 or permission.

**ITC 224 (5) C****Designing Database Solutions**

Explore developing, testing, and deploying database solutions. Focus on SQL Server 2008. May change as technologies change. Scenario and case driven. Prereq: ITC 110, 220, 222.

**ITC 226 (5) C****Database Administration**

Provides practice with administrative activities, security, and backup on a Relational Database Management System, using Administrative SQL and other tools offered by the Relational Database Management System. Prereq: ITC 222.

**ITC 230 (5) C****Advanced JavaScript**

Covers JavaScript technologies that power a modern full-stack development workflow, including server-side scripting, single-page web applications with Model-View-Controller (MVC) structure, package management, and JavaScript Object Notation (JSON) data storage. Includes building a fully-functional prototype application that can be referenced for job applications or future JavaScript-based projects. Prereq: WEB 150 with a grade of 2.0 or higher or instructor permission.

**ITC 240 (5) C****Web Application Programming 1**

Covers the fundamentals of programming using a server-side scripting language, such as Hypertext Preprocessor (PHP). Students learn basic programming skills in order to manage variables, control structures and arrays, and to elegantly incorporate their scripts into their websites to create dynamic web pages and gather data from HTML forms. Prereq: WEB 110 with 2.0 or higher, or instructor's permission.

**ITC 250 (5) C****Web Applications 2**

Covers more advanced server-side scripting. Learn how to collect data from forms and to store and retrieve data from a database. Emphasizes proper coding conventions, security, and code organization. Prereq: ITC 240 with 2.0 or higher or permission.

**ITC 255 (5) C****Systems Analysis**

Identify when a system needs to be upgraded or replaced. Analyze system components and requirements, charting process flow and data structures, determining feasibilities, and providing alternate solutions. Prereq: BTM 111 with 2.0 or higher or SAM Challenge test out. Recommended: ITC 110 or CSC 110.

**ITC 260 (5) C****Web Applications 3**

Builds on ITC 250. Covers more advanced server-side scripting. Intro to object oriented programming principles, more advanced database interaction, and popular frameworks. Prereq: ITC 250 with 2.0 or higher or permission.

**ITC 262 (5) C****Android Development Capstone**

Focuses on the utilization of Android Development skills from ITC 162 and ITC 164 to ideate, design, and build a more complex and robust app as part of a team project. The group project follows the Agile SCRUM methodology introduced to students in this course. Students use code collaboration tools. Prereq: ITC 165 with a 2.0 or higher.

**ITC 285 (8.5) C****Capstone Project Class**

Students define a project that summarizes what they have learned in their studies, document the project and the process, and present the results. The course will also include white-boarding some aspects of their projects as prelude to job interviews. Prereq: Student must be in the last quarter of the program, or instructor's permission.

**ITC 298 (1-5) C****Special Topics**

In-depth studies in new and emerging technologies relevant to the IT programs. Prereq: Permission.

**MIC 101 (4) C,V****Intro to Micro Comp Applications**

Intro to microcomputer applications for Windows. Includes an overview of Windows, the Microsoft Office System, featuring Word, Excel, Access, PowerPoint, Internet Browsers, email, along with emerging software application topics and concepts.

**MIC 175 (4) C,V****Computer User Support**

Designed to introduce students to the fundamentals of help desk operations. Emphasizes the basic components of a successful help desk, provide students with working knowledge of software to process and track calls, and present hands-on experience with problem analysis.

**Information Technology Web/  
Information Technology****WEB 105 (3) C****Working on a Web Project**

Overview of different web-related careers, including web team job descriptions, functions, workflow, processes, and overall project management.

**WEB 110 (5) C****Web Authoring I**

Covers the fundamental mechanics of web page production, starting with the absolute basics of creating properly structured websites using the HyperText Markup Language (HTML) and Cascading Style Sheets (CSS). Students will learn how to write their own code to create web pages that include text, links, images, tables, and forms, as well as how to launch their website on the Internet using the File Transfer Protocol (FTP). Prereq: BTM 111 with a 2.0 or higher, or appropriate score on SAM Challenge.

**WEB 112 (3) C****Typography**

Introduces the elements of traditional typography and brand identity as applied to web design to communicate information effectively using overall typographic principal and scale. Coreq: Concurrent enrollment in WEB 110 or instructor's permission.

**WEB 114 (4) C****Photoshop for the Web**

Gain insight and skill with Adobe Photoshop. Covers the basic concepts of pixel-based image editing and making graphics for the web. Prereq: WEB 110 or concurrent enrollment.

**WEB 120 (5) C****Web Authoring II**

Explores how to write code to create modularly-built responsive websites that include a proper page layout, navigational structure, form validation and interactivity, and well-formatted and readable text to ensure accessibility across major browsers and devices. This course follows WEB110, building on a student's existing knowledge of creating websites using HyperText Markup Language (HTML) and Cascading Style Sheets (CSS). Prereq: WEB 110 with 2.0 or higher, or instructor's permission.

**WEB 130 (5) C****Web Authoring III**

Design and develop a web standards compliant and responsive website. Utilize HTML5, CSS3, JavaScript and jQuery (client side) scripting, and Bootstrap. Introduces emerging web related technologies. Create a final project to include in student's portfolio. Utilize Agile methodology and Github workflow to participate in a group project. Prereq: WEB 120 and WEB 150, each with a 2.0 or higher.

**WEB 150 (5) C****Introduction to Javascript**

Examines computer programming theory and basics with the use of JavaScript language. Uses a hands-on approach to building interactive websites with JavaScript and demonstrates how to simplify the web development process with the use of jQuery. Studies several popular web techniques. Prereq: WEB 110 with a grade of 2.0 or higher or permission.

**WEB 160 (3) C****Writing for the Web**

Provides an overview and detailed look at the user-centered design techniques used to write successful human-readable and machine-readable search engine optimized copy for a website. Prereq: WEB 110 with a 2.0 or higher, or instructor's permission.

**WEB 170 (5) C****Content Management Systems with WordPress**

Overview of the basic principles and practices of professional website design and development while focusing on content management and custom theme creation using WordPress (an open source technology). Prereq: WEB 120 with 2.0 or higher, and ITC 240 with 2.0 or higher, or concurrent enrollment.

**WEB 200 (5) C****Theory of Web Design**

Examines the basic principles and practices of professional website design, including discovery, site structure, page layout, navigation, color theory, typography, and best coding practices. Prereq: WEB 110 with 2.0 or higher, or instructor's permission. Coreq: WEB 120.

**WEB 202 (5) C****User Interface & Experience Design for the Web**

Provides an overview and detailed look at how the User Interface & User Experience gets fulfilled via the design, functionality, features, and content of a website project while successfully achieving strategic business goals and user needs. Prereq: WEB 120 and WEB 200, each with 2.0 or higher.

**WEB 204 (5) C****Usability Research Methods for the Web**

Provides an overview of the different design and user research methods that are conducted throughout a web design or redesign process in order to improve designs and experiences for end users. Methods include Competitive Analysis, Heuristic Evaluation, Card Sorting, and Usability Testing. Prereq: WEB110 with a minimum grade of 2.0.

**WEB 205 (2) C****Web Career Strategies**

Presents various tools and skills needed to transition into the web industry. Learn about web careers, presenting skills, finding appropriate positions, and creating a portfolio. Prereq: WEB 120 with 2.0 or higher and ITC 200. Coreq: WEB 210 or permission.

**WEB 210 (5) C****Advanced Web Design & Development Projects**

Provides both design and development students with the hands-on experience of designing and producing an effective web site for a live client while practicing a team workflow process. Prereq: WEB 170 and WEB 200, each with a 2.0 or higher.

**WEBD 160 (5) S****Web Authoring I**

Introduction to responsive web page authoring. Includes ADA compliant and valid HTML and CSS. Emphasis on directory structure management and file naming conventions. Introduction to form objects and handlers and optimizing images. Search Engine and Social Media Optimization basics. Students will build a website to the specifications of a live client and identify the client's audience and build wireframe and site architecture documents for client approval.

**WEBD 161 (5) S****Web Authoring II**

This course builds on the skills gained in CTN 160. Covers intermediate to advanced elements of website/page development and production utilizing HTML and CSS. Introduces server side include files and conditional statements. Integration of third party APIs. Advanced CSS techniques and media queries. Student learns to work with a front end framework, such as Bootstrap and/or Foundation. Prereq: CTN 160 (2.0 or higher), permission, or equivalent.

**WEBD 161 (5) S****Web Applications II**

This course builds on the skills gained in WEBD160. Covers intermediate to advanced elements of website/page development and production utilizing HTML and CSS. Introduces server side include files and conditional statements. Integration of third party APIs. Advanced CSS techniques and media queries. Student learns to work with a front end framework, such as Bootstrap and/or Foundation. Prereq: WEBD160 (2.0 or higher), permission, or equivalent.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**

**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**WEBD 169 (5) S**  
**Web Authoring III**

Students will utilize their HTML and CSS skills to build their own portfolio sites. Students will build a resume, practice interviewing, and learn job search skills. Students will learn advanced topics, such as CSS pre-processors.

**WEBD 180 (5) S**  
**Web Programming I**

Introduces students to the fundamentals of programming in the context of building web applications. Students will utilize variables, constants, arrays, and objects to manipulate programmatic constructs via conditionals and loops to make web pages dynamic. Students will work with data structures and the document object model.

**WEBD 181 (5) S**  
**Web Programming II**

Students learn advanced web programming techniques, such as object oriented programming, connecting to data sources, and programmatic web frameworks. The students will learn database and data structure fundamentals required to power a dynamic web application.

**WEBD 182 (5) S**  
**Web Programming III**

Students will learn advanced web programming topics, such as integrating third party APIs, AJAX, implementing user session management, advanced data handling techniques, and test driven development. Students will learn cloud configuration fundamentals and deployment strategies. Students will learn design programmatic design principles.

**WEBD 190 (4) S**  
**Agile Methodologies I**

Introduces students to the core skills used in building programs in an agile manner. Students will learn to work together in small teams to research and build industry relevant white papers and make presentations to the class. Students will participate in group projects to learn software versioning systems and tactics and work with operating systems at the command line.

**WEBD 191 (5) S**  
**Agile Methodologies II**

Students continue to learn core skills used to build agile programs. Students will work in small groups to build web programs utilizing versioning systems and collaborative software tools and learn to program in pairs, practice whiteboarding, write documentation, code to standards, and give and receive peer code reviews.

**WEBD 192 (5) S**  
**Agile Methodologies III**

Students will utilize the core agile programming skills learned in previous classes and work together on a single group project. Students will learn and utilize agile development methodologies, such as scrum, and build a web application that will incorporate continuous integration to test and continuous deployment to upload their application to a cloud provider.

**Institutional Training  
Development**

**ITD 105 (0) C**  
**Computer Training**

Contractual course training students in computer basics, including MS Word, spreadsheets, MS Excel, and the Internet.

**International Business  
Bachelor of Applied Science**

*IBN courses under 300 may be taken for lower division credit toward certificates or degrees. Students must be enrolled in Bachelor of Applied Science in International Business to take 300 and above courses.*

**BN 203 (3) N**  
**International Trade: Export**

Learn to conduct a successful exporting operation. Study research and planning, market strategy, finance, legal considerations, and logistics of entering foreign markets. Develop skills and knowledge in practical aspects of exporting products and services.

**IBN 205 (3) N**  
**International Trade: Import**

Learn to conduct a successful importing operation. Study financing, pricing, logistics, and U.S. customs regulations. Develop skills and knowledge in practical aspects of importing products through case study analysis.

**IBN 210 (5) N**  
**Cultural Impact in International Business**

Designed to heighten cultural awareness through understanding how relationships impact successful business operations. Covers political environments, cultural and ethnic understanding, religion, history, trade patterns, customs, and cross-cultural communication. Focus on Asian countries of the Pacific Rim.

**IBN 225 (3) N**  
**Global Logistics**

Intro to international logistics and logistics management. Emphasizes the decision-making process, including the role of logistics in the firm and in the international environment; sourcing materials and manufacturing; product distribution, inventory/warehousing issues; distribution alternatives, transportation, financial, and organizational considerations; and the impact of government-imposed laws, treaties, and policies.

**IBN 301 (5) N**  
**International Management**

Covers fundamentals of the global business environment: varying political, economic, and legal environments; globalization; international organizations; regional integration. Explores the cross-cultural environment, the dimensions of culture, cross-cultural communication, motivation, leadership, and negotiation. Includes global human resources.

**IBN 302 (5) N**  
**International Marketing**

Covers fundamentals of marketing within a global context, including the impact of economic, cultural, political, legal, and other environmental influences on international marketing. Analyze international cases, considering product, pricing, placement, and promotion.

**IBN 303 (3) N**  
**Ethics and International Business**

Increase awareness of ethical issues of international corporate decision-making. Learn business strategies and frameworks needed to analyze and resolve ethical problems. Explore corporate social responsibility and moral decision-making processes.

**IBN 310 (5) N**  
**Operations Management**

Intro to processes that convert resources into goods and services and extends these to suppliers, distributors, and customers. Overview of operations, including operations strategy, system and process design, lean manufacturing, continuous improvement, global supply chain, production and workforce planning, inventory and materials management, and quality improvement.

**IBN 311 (3) N**  
**International Business Law**

Examines common legal issues and risks that affect business transactions in the global marketplace. Learn the international legal framework; methods of resolving disputes, including litigation, arbitration, and mediation; joint ventures; trade agreements; sales contracts; intellectual property issues; labor matters; and risks of foreign direct investment.

**IBN 320 (5) N**  
**International Finance**

Focuses on the international financial environment. Study the risks of doing business in a global environment and tools available to minimize those risks. Examines foreign exchange and political risks, working capital management, long-term investments, financing, and accounting controls. Familiarity with spreadsheets is needed.

**IBN 350 (5) N**  
**International Business Practicum**

This course is designed as an immersion experience in a student's non-native culture or language. The practicum can be completed through a variety of means, including (but not limited to) an educational excursion to a country where the primary culture or language is different from the student's native language or culture; working or volunteering in a non-profit or business that communicates primarily in a non-native language or serves a population from a non-native culture.

**IBN 401 (5) N**  
**International Project Management**

This course focuses on project management using the traditional approach of planning, scheduling, monitoring, and control within the broader global context. The course will cover the basic methodologies and tools of the project manager, the technical and management challenges he/she may face, and the strategic perspective of project management within the global environment. Prereq: Acceptance into the International Business BAS program.

**IBN 402 (5) N**  
**Management of Information Systems**

Overview of how businesses use information technologies and systems to achieve company objectives and attain competitive advantage in operations, product development, decision-making, and customer relations. Learn IT issues facing organizations: infrastructure, security, business intelligence, networking, the Internet, telecom, wireless, enterprise applications, e-commerce, and ethics.

**IBN 410 (3) N**  
**International Entrepreneurship**

Overview of the international entrepreneurial process, examination of the marketplace, and successful business strategies. Addresses product or service selection, selling, and marketing strategies, and sources of information and assistance.

**IBN 420 (5) N**  
**Global Business Strategy**

This course examines the fundamentals of business strategy development within a global context. Students learn to consider the impact of external environmental influences together with the constraints of an enterprise's internal strengths and weaknesses to develop a global strategy that competes in a competitive business environment.

**IBN 490 (2) N**  
**Research Skills for IBN**

An introduction to the organization, retrieval, and evaluation of electronic and print information sources. Overview of library classification systems, scholarly resources, and the concepts underlying the research process. Universal research techniques will be explored through the use of international business-specific information resources and topics. Prereq: Acceptance into the IB B.A.S. program/cohort.

**International Student Development****ISD 200 (1-3) N**  
**Orientation to American College**

Provides international students with the knowledge and skills necessary for success in an American community college. Prereq: Advisor permission.

**International Studies****ISP 101 (5) C,N**  
**The Global Society**

Intro to the globalization of cultures and societies in producing the current world system. Includes human interaction, social institutions, social stratification, socialization, deviance, social control, social and cultural change within the context of international inequality.

**ISP 201 (5) C,N**  
**Making of 21st Century**

Studies international political economy through facets/events of post-World War II era. Covers postwar changes leading to the creation of international financial institutions, rise of MNCs, emergence of the United States as a major power, globalization of production debt crisis, and structural adjustment policies. Emphasis on Asian Pacific, South Asian, Sub-Saharan African, and Latin American countries.

**ISP 205 (5) C,N**  
**Women in the Global Context**

Interdisciplinary intro to the study of women in Asia, Africa, Latin America, the Middle East, and/or indigenous women in some Western societies. Explores commonalities and differences among women in various societies and cultures. Specific societies or regions covered vary by instructor.

**ISP 220 (5) N**  
**World Hunger**

Comprehensive information about world food situations and the problem of hunger using an ecological/food system approach. Analyzes various components of the food system to identify causes of hunger. Examines acute, chronic, and hidden hunger and evaluates proposed strategies using scientific measures as well as the voices of people.

**ISP 261 (5) N****Japanese Civilization**

The development of Japan as a society and nation, including its origins, history, government, literature, economic institutions, material culture, social organizations, and religions.

**ITL 197 (5) C****International Coop Education**

Provides an opportunity to earn academic credit for work experience or volunteer service in an international setting. Supplemental assignments offer opportunities for research and reflection of experiences. NOTE: Job/internship/volunteer time and language school attendance must be verified.

**Italian**

*See Languages & Literature, page 318.*

**Japanese**

*See Languages & Literature, page 318.*

**Journalism****JRN 199 (5) C****Independent Study in Journalism**

Internship on a professional publication through arrangement between editor and journalism instructor, or management position on college publication. Prereq: CMST& 102 or JRN 101 and 104, plus permission.

**Landscape Horticulture****LHO 100 (1) S****Careers in Horticulture**

Explore career opportunities in horticulture, landscaping, urban food production, and sustainable land care. Learn about work requirements, training requirements, trade organizations, professional certification, continuing education opportunities, and related four-year degree programs. Create a personal career-development plan.

**LHO 108 (3) S****Weed Identification Management**

Recognize common landscape weeds and other invasive species. Use print and electronic weed identification tools. Explore weed biology, become familiar with various weed management strategies (cultural, biological, chemical), and learn how to develop an integrated approach to weed management. Helps prepare for the weed section of the WSDA pesticide license exam.

**LHO 109 (3) S****Integrated Pest Management**

Principles of integrated pest management (IPM). Covers pesticide laws, health and environmental concerns, and how to develop an IPM plan. Helps prepare for the WSDA pesticide license exam.

**LHO 110 (5) S****Integrated Pest and Weed Management**

Learn the principles of plant health care, integrated pest and weed management for landscape plants. Recognize common landscape weeds and invasive species. Basic information on integrated strategies for insect, disease, and weed management. Covers Washington state pesticide laws, safety, and environmental concerns. Preparation for the WSDA pesticide license exam, with the goal of obtaining a pesticide applicator/consultant license.

**LHO 111 (4) S****Greenhouse Operations**

Introduction to greenhouse operations and management, including production practices, maintenance methods, and environmental control systems. Involves propagation and maintenance in the campus greenhouse. Includes industry overview through field trips to local production greenhouses. Recommended for success: LHO 150.

**LHO 112 (3) S****Nursery Operations**

Examine the world of retail and wholesale nursery operations through field trips to local nurseries. Learn the basic methods of business operations and apply them in the campus retail garden center.

**LHO 115 (4) S****Fall Plant Identification**

Using fall seasonal features of interest, identify and properly use ornamental shrubs, trees, vines, and ground covers adapted to and utilized in the Pacific Northwest landscapes. Recommended for success: LHO 150.

**LHO 116 (4) S****Winter Plant Identification**

Using winter seasonal features of interest, identify and properly use ornamental shrubs, trees, vines, and ground covers adapted to and utilized in the Pacific Northwest landscapes. Recommended for success: LHO 150.

**LHO 117 (4) S****Spring Plant Identification**

Using spring seasonal features of interest, identify and properly use ornamental shrubs, trees, vines, and ground covers adapted to and utilized in the Pacific Northwest landscapes. Recommended for success: LHO 150.

**LHO 119 (3) S****Native Plants for Northwest Landscape**

Explore the successful use of native plants in landscapes: plant identification and culture, native plants in urban landscapes, native plant revegetation, and plant ecology. Prereq: Recommend LHO 150.

**LHO 120 (3) S****Perennial Plant Identification**

Identify and properly use plants adapted to and utilized for annual perennial plantings in the Pacific Northwest. Field trips to established gardens. Recommended: LHO 150. Prereq: Recommend LHO 150.

**LHO 122 (5) S****Landscape Design I**

Gain a conceptual foundation in manual drafting and design, an overview of tools, elements, computer assisted design software, and the process for residential landscape design. Covers horticultural graphics, survey, measurement, analysis of site and environmental field conditions, and development of an accurate scaled plot plan and base map.

**LHO 126 (5) S****Landscape Design II**

Information on how to complete the residential design process from the preliminary diagram to the final conceptual planting plan, including CAD and the digital design process. Emphasis on functional, aesthetic, spatial, and ecological use of plants and trees to achieve a predetermined style, theme, or user response. Prereq: LHO 122 with 2.0 or higher or permission.

**LHO 135 (3) S****Drain/Irrigation Systems**

Study basic principles of hydraulics, drainage and irrigation systems, irrigation fixtures and apparatus.

**LHO 137 (3) S****Landscape Management**

Covers sustainable maintenance practices, lawn management, tool and small equipment use, safety, landscape management plans, and the impact of design on maintenance requirements.

**LHO 139 (4) S****Landscape Maintenance**

Covers sustainable maintenance practices, lawn management, tool and small equipment use, safety, landscape management plans, and the impact of design on maintenance requirements.

**LHO 140 (4) S****Intro to Arboriculture**

Explore the current science and practice of managing trees in urban landscapes. This course will help students prepare for the International Society of Arboriculture's Certified Arborist Examination.

**LHO 141 (4) S****Sustainable Practices for the Urban Landscape**

Examine sustainability, with an emphasis on natural processes and ecological services in constructed and managed landscape systems. The use of "closed loop" systems to conserve site resources, including the integration of perennial edibles.

**LHO 150 (4) S****Horticulture Science**

Discover the basic principles of plant anatomy and physiology, growth and development, adaptations, and plant-soil-water relations. Exploration of ecology, people, plants, and the environment as they relate to horticulture.

**LHO 152 (3) S****Soils**

Uncover the mysteries of soil through in-depth study of soil properties, management and conservation. Explore the plant-soil-water relationship, urban soils, assessment of soils on site, soil fertility and plant nutrition.

**LHO 155 (4) S****Pruning**

Learn the art and science of pruning through lecture, demonstration, and extensive field practice. Develop skill at pruning broadleaf trees and shrubs, conifers, fruit trees, vines, and roses.

**LHO 160 (3) S****Garden Renovation**

Learn by renovating an existing garden. Includes site assessment, developing a timeline, removal and handling of materials, sourcing new plant material, installation, and final evaluation of the process.

**LHO 189 (3) S****Intro to Landscape Construction**

Introduction to the standards and procedures of the landscape construction industry. Covers the proper and accepted methods of a multitude of landscape installations. Includes construction specifications, project sequencing, and safety practices.

**LHO 197 (1-7) S****Internship in Landscape Horticulture**

Students apply horticultural knowledge and skills learned throughout the LHO program directly to the local industry. Course credit can be earned through current employment or the development of opportunities found in conjunction with the WorkSource Office. Student must complete hours and submit a Training Agreement, Learning Outcomes, and a Self-Evaluation in order to pass. Prereq: Approval from a faculty mentor (instructor) and embedded career specialist.

**LHO 198 (2) S****Greenhouse and Nursery Practicum I**

Hands-on practical application course for first year students pursuing the Horticulture Studies pathway. Work focuses on nursery and greenhouse production, propagation, and maintenance of plants. Prereqs: LHO 111 or concurrent enrollment, or instructor permission.

**LHO 210 (4) S****Plant Problem Diagnostic**

Learn to diagnose and manage plant problems and write prescriptions for their management: insect, disease, cultural, and environmental maladies. This course will stress a total plant health care approach that utilizes cultural, biological, and chemical strategies. Pesticide recertification credits available pending WSDA approval. Prereq: LHO 110 or instructor permission.

**LHO 215 (4) S****Plant Propagation**

Learn the art and science of plant propagation by seed, cuttings, and division. Examine the art of grafting. Hands on instruction and field trips to plant production facilities. Recommended for success: LHO 111.

**LHO 217 (3) S****Advanced Plant Propagation**

Explore propagation and plant production. Follow plant materials propagated in LHO 215. Production and management of specific species and quantities for sale in the campus retail garden center. Prereq: LHO 215 or permission.

**LHO 218 (5) S****Plant Production & Marketing**

Production of plant materials for marketing and nursery sales. Crop planning, propagation, maintenance, management, and finishing. Examine and apply nursery marketing and business methods to facilitate sales of plant material. Prereq: LHO 111 and LHO 215.

**LHO 236 (5) S****Advanced Irrigation System Design**

In-depth study of irrigation equipment, hydraulics, fluid behavior, micro-climatization, design theory, and application technology. Provide the knowledge to engineer, design, and layout irrigation systems for field installation and estimate purposes. Prereq: LHO 135 or permission from instructor.

**LHO 237 (5) S****Advanced Irrigation Diagnostics & Repair**

In-depth study of the diagnostic skills necessary to troubleshoot, locate, and repair problems associated with improper design and installation, malfunctions of equipment and parts, and the evaluation of a systems efficiency. Emphasis will be on turf and landscape areas. Mechanical, electrical, and hydraulic systems will be analyzed. Prereq: LHO 135 and LHO 236, or permission from instructor.

**LHO 238 (3) S****Maintenance Estimating/Bidding**

Estimating material cost and quantity for bidding individual jobs and writing annual contracts. Addresses specifications and maintenance practices, including the design of efficient residential and commercial landscapes with regards to maintenance needs and requirements. Provides an understanding of business operations. Recommended for success: LHO 139.

**LHO 239 (4) S****Advanced Landscape Management**

Advanced skills and practices pertaining to sustainable landscape maintenance programs, including developing landscape management plans, project management, supervising small maintenance crews, tool and small equipment maintenance and repair, and the impact of design on maintenance requirements. Prereq: LHO 139. Recommended for success: LHO 108 or 109, LHO 135, LHO 155.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
**HIN** . . . . . **Watch Technology**

**NAME TO PREFIX**  
**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**LHO 240 (3) S**  
**Ecological Restoration**

Explore the field of ecological, restoration as it applies to horticulturists attempting to repair damaged landscapes. This class will investigate the science and practice of restoration through meetings with restoration practitioners, visits to restoration sites, reading and discussion, and service learning.

**LHO 241 (3) S**  
**Ecological Restoration**

Study the recovery of degraded, damaged, or destroyed ecosystems. Learn to plan, implement, maintain, and evaluate the success of ecological restoration projects. Includes planning and implementing a restoration project near campus. Prereq: LHO 240 or permission.

**LHO 242 (3) S**  
**Intro to Permaculture**

Explore permaculture and sustainable land use design based on ecological principles. Covers ecosystems, soils, water catchment and conservation, the food forest, and zones. Learn to apply these concepts and methods.

**LHO 243 (5) S**  
**Ecological Restoration Principles and Practices**

Science and practices of ecological restoration and the process of repairing an ecosystem that has been degraded, damaged, or destroyed. Utilize site characteristics, including native plant selection, soils, water management, and other factors influencing the success of a restoration project. Gain practical skills in planning, developing, and managing a forest restoration project in the West Duwamish Greenbelt. Prereq: LHO 152 and one plant ID class, or instructor permission.

**LHO 250 (3) S**  
**Small Business Management for Horticulture**

Organization and operation of a horticulture-related small business. Topics include success and failure factors, legal forms of business organizations, financing, credit, and collections, marketing, record keeping, and interpreting financial statements, legal issues and considerations, and development of a business plan.

**LHO 255 (3) S**  
**Edible Trees, Shrubs, and Vines**

Explore plants and their uses for edible, medicinal, and health purposes. Covers selection, culture, maintenance, and siting of plants in the landscape, home, and community gardens. Includes site visits and service learning.

**LHO 263 (5) S**  
**Landscape Design III**

Increase sophistication and usage of plant selection, placement, planting patterns, and structures. Develop products using digital applications for individual portfolios. Discuss and practice on-site consulting and other professional services. Prereq: LHO 126 with 2.0 or higher or permission.

**LHO 265 (3) S**  
**Landscape Contracts & Specifications**

Practical applications for developing and writing bids with accurate specifications for the landscape industry. Identification of business operation expenses, calculating construction and business cost, project management, and minimizing and controlling risk. Familiarization with industry opportunities and standards. Recommended for success: LHO 238.

**LHO 267 (5) S**  
**Dynascape for Landscape Design**

Use Dynascape professional CAD software as a design tool. Design landscapes, generate planting plans and reports, design irrigation, make estimates and bids, track supplier and purchasing information, and customize data libraries and client reports.

**LHO 272 (4) S**  
**Construction Projects – Fall**

Application of standard trade procedures and techniques for residential landscaping. Covers care and safe use of tools used in garden structures and in trade. Prereq: LHO 189 with 2.0 or higher or permission.

**LHO 273 (4) S**  
**Construction Projects – Spring**

Application of standard trade procedures/ techniques for residential landscaping. Covers care and safe use of tools used in garden structures and in trade. Prereq: LHO 189 or permission.

**LHO 298 (2) S**  
**Greenhouse and Nursery Practicum II**

Continuation of LHO 198. Hands-on practical application course for second year students pursuing the Horticulture Studies pathway. Continues focus on nursery and greenhouse operations involved in the propagation, production, maintenance, and retail sales of plants. This course allows the student to apply and build upon the skills and knowledge from courses previously taken in the program. Prereqs: LHO 215 and 218, or instructor permission.

**LHO 299 (1-4) S**  
**Special Topics**

Special individual or group study topic in the landscape horticulture field. Prereq: Permission.

**Languages & Literature**

*NOTE: All listed world languages transfer to four-year colleges and universities. Students intending to transfer should be aware of differing world language requirements and consult with an advisor regarding requirements at specific colleges and universities.*

*The faculty recommend that students entering a world language 121 class have attained Eligibility for ENGL& 101. For information, contact the Humanities Division (N), Humanities & Social Sciences Division or Health & Human Services Division (ASL only) (C), or College Transfer Division (S).*

**American Sign Language**

**ASL 120 (5) C**  
**Intro to Deaf Studies**

Overview of the treatment and psychological aspects of Deafness, history and education of Deaf people, and Deaf culture.

**ASL& 121 (5) C,N****American Sign Language I**

Introduction to American Sign Language (ASL), the visual language created by Deaf people. Study of the basic vocabulary, grammar, functions of the language; introduction to the culture of the Deaf community. At Central, fulfills one of the distribution requirements for the Associate of Arts with Emphasis in Deaf Studies. Prereq: Eligibility for English 101.

**ASL& 122 (5) C,N****American Sign Language II**

Continuation of ASL& 121. The focus of the course is to develop ASL grammar skills, increase vocabulary, and continue to gain a deeper knowledge and appreciation of Deaf culture. At Central, may be used as an elective to fulfill requirements for the Associate of Arts with Emphasis in Deaf Studies. Prereq: Eligibility for English 101, successful completion of ASL& 121 with a grade of 2.0 or higher.

**ASL& 123 (5) C****American Sign Language III**

Continuation of ASL 122 with focus on certain grammatical features, such as spatialization, verb aspect, and inflection, with non-manual components. Intensive work in vocabulary development and continued study of Deaf culture. At Central, may be used as an elective to fulfill requirements for the Associate of Arts with Emphasis in Deaf Studies. Prereq: Eligibility for English 101, successful completion of ASL& 122 with a grade of 2.0 or higher.

**ASL 125 (5) C****American Deaf Culture**

Covers discussion of Deaf people as a culture, a group of people held together by strength of culture rather than disability. Examines Deaf minorities and current issues in the field.

**ASL 132 (4) C****Fingerspelling & Numbers**

Emphasis on receptive and expressive fingerspelling and number use within a range of contexts. Learn strategies for maintaining uninterrupted language flow. Prereq: ASL& 223 or ITP 165 with 2.5 or higher or permission.

**ASL& 221 (5) C,N****American Sign Language IV**

Emphasis on expressive skills development and ASL fluency. Attention to the correct formation of signs, movement, rhythm, phrasing, linking, and clarity; intensive vocabulary building; and proficiency in ASL grammar. Prereq: ASL& 123 with a 2.0 or higher or instructor permission.

**ASL& 222 (5) C****American Sign Language V**

Continued development of receptive and expressive skills. Produce/receive narratives at a near-native level and decrease dependency on English syntax structures. Prereq: ASL& 221 with a 2.0 or higher or permission.

**ASL& 223 (5) C****American Sign Language VI**

Continue vocabulary development and participate in most formal and informal conversations on general topics. At this level, signing errors seldom interfere with understanding and rarely disturb native signers. Prereq: ASL& 222 with a 2.0 or higher or permission.

**ASL 299 (1-10) C****Independent Study: ASL**

Independent study of selected topic(s) in ASL. A mutually desirable research project is assigned by faculty.

**SPS 201 (5) C****Introduction to Audiology**

Understand the process of hearing, interruptions in the normal hearing process, remediations options. Learn issues of the deaf community within the larger population of hearing-impaired individuals.

**Arabic****ARAB 101 (5) C****Arabic I**

Modern Standard Arabic (MSA) language within the cultural context of Arabic-speaking people. Provides students with elementary Arabic communication skills of listening, speaking, reading, and writing. No prior knowledge of Arabic required. Prereq: English 101 eligibility.

**ARAB 102 (5) C****Arabic II**

Continuation of 101. Emphasizes speaking skills on topics such as Arabic names and titles, family and friends, daily life activities, and cultural topics. Begin learning written language and grammar. Prereq: ARAB 101 or permission.

**ARAB 103 (5) C****Arabic III**

This course begins with a review of the material taught in Arabic II. Arabic III continues with a comprehensive and complex focus on Arabic speaking, reading, and writing skills. Students will be able to relay personal experiences using complex grammar and will gain a thorough understanding of Arabic culture.

**Chinese****CHIN& 121 (5) C,N****Chinese I**

Intro to the standard language, emphasizing correct pronunciation and basic structure, with oral practice and structure skills. Emphasis on systematic study of the phonetics (Pinyin) and basic grammar. Covers everyday expressions and vocabulary, and background on history, culture, and customs. Intended for students who have not previously studied Chinese. Recommended: Eligibility for ENGL& 101 (C).

**CHIN& 122 (5) C,N****Chinese II**

Continuation of CHIN& 121. Prereq: CHIN& 121 or permission.

**CHIN& 123 (5) C,N****Chinese III**

Continuation of CHIN& 122. Prereq: CHIN& 122 or permission.

**CHIN& 221 (5) C,N****Chinese IV**

Continuation of CHIN& 123. Emphasizes using Chinese language in speaking, listening, reading, writing, and translation. Prereq: CHIN& 123 or permission.

**CHIN& 222 (5) C,N****Chinese V**

Continuation of CHIN& 221. Studies similarities and differences between Chinese and English. Prereq: CHIN& 221 or permission.

**CHIN& 223 (5) C,N****Chinese VI**

Continuation of CHIN& 222. Use of Chinese in varied social settings. Includes writing academic papers and researching in Chinese. Prereq: CHIN& 222 or permission.

**English****ENGL 040 (5) S**  
**Comp I Career Link**

Assessment and development of skills in language and communications, including spelling, vocabulary, grammar, and usage in a pre-technical career-oriented context. Emphasizes sentence and paragraph development to describe situations, objects, and basic processes. Prereq: Appropriate testing and counseling.

**ENGL 041 (5) S**  
**Comp II Career Link**

Assessment and development of language skills and communications skills in a pre-technical career-oriented context. Emphasizes paragraph and multi-paragraph writing and revision in various formats and purposes. Research paper or project relating to educational or career opportunities. Prereq: Appropriate placement testing and counseling.

**ENGL 042 (5) N,S**  
**Senior Project Research C-Link**

Assessment and development of language and communications skills in academic and career contexts. Analysis of models of effective writing and speaking. Research paper or project on career-oriented topic integrated with a personal, historical, technical, or sociological perspective. Prereq: Appropriate placement testing and counseling.

**ENGL 080 (1-5) N,S**  
**English Skills Shop**

Support class for students enrolled in developmental English programs and students seeking to strengthen their academic writing skills. Individual and small group tutoring to improve listening; speaking; study skills; reading comprehension and rate; vocabulary; phonics and word skills; spelling; grammar; and writing sentences, paragraphs, and essays. Strongly recommended for students enrolled in developmental English courses.

**ENGL 093 (1-5) N**  
**Reading and Study Skills II**

Development of college reading and study skills. Includes strategies for taking lecture notes, studying for exams, improving memory and reading comprehension, and participating in small group discussions. Prereq: Placement Test.

**ENGL 094 (1-5) N**  
**Writing Improvement II**

Emphasis on paragraph structure and basic sentence grammar. Practice in thinking, writing, editing, and proofreading. Assignments in writing clear sentences and paragraphs. Prereq: Placement Test (S). For students who have completed ENGL 092 but still need more work at that level (C).

**ENGL 095 (1-5) N**  
**College Prep Read Study III**

Emphasis on increasing reading speed and vocabulary, identifying the main idea and supporting ideas in expository reading, making inferences and evaluations, and understanding figurative language. Includes study strategies for test-taking, note-taking, and outlining. Prereq: Placement Test.

**ENGL 096 (1-5) N**  
**College Prep Writing III**

Build writing skills through clear, correct sentences, well-developed paragraphs, and coherent short essays. Prereq: Placement Test.

**ENGL 097 (10) C,N,S**  
**Integrated Reading and Writing I**

Provides opportunities to develop reading, writing, and critical thinking skills needed to write in academic settings. Includes reading and writing processes, critical thinking strategies, study skills, and grammar. Emphasizes application of course content toward understanding a variety of academic and career-related texts and composing unified and coherent sentences, paragraphs, and short essays. Prereq: Placement.

**ENGL 098 (10) C,N,S**  
**Integrated Reading and Writing II**

This course provides students with opportunities to further develop the reading, writing, and critical thinking skills needed to write in academic settings. Topics include reading and writing processes, critical thinking strategies, study skills, and grammar instruction. Upon completion, students should be able to apply these skills toward understanding a variety of academic and career-related texts and composing a college-level essay. Prereq: Placement Test or appropriate prerequisite.

**ENGL 099 (5) C,N,S**  
**Supporting College Writing**

This course is intended for students who are English 098 ready who wish to move directly into English 101. Any students who choose to bypass English 098 must enroll in a hard-linked English 099 and English 101. The primary focus of this course is to provide students with more in-depth opportunities to acquire the reading, writing, and critical thinking skills needed to write at the career and college ready level.

**ENGL& 101 (5) C,N,S**  
**English Composition**

English 101 is a college-level writing course that emphasizes academic writing and major strategies of reading and writing analytically. Writing assignments focus on engaging with and responding to a variety of texts. Instruction encourages students to develop, through revision and reflection, as readers, writers, and critical thinkers. Prereq: Placement into ENGL& 101.

**ENGL& 102 (5) C,N,S**  
**Composition II**

Continuation of the composition sequence with further instruction and practice in the writing process, concentrating on critical reading and writing techniques needed for the preparation and completion of documented essays. Prereq: ENGL& 101.

**ENGL 103 (5) S**  
**Transitional English**

Improvement of skills required for professional-technical communications. Assessment of reading, writing, and oral improvement. Use of computer to teach principles of organizing, drafting, and editing technical reports. Prereq: Satisfactory performance on English placement test.

**ENGL 104 (5) C,N**  
**Advanced English Grammar**

Study of rhetoric and grammar of the English sentence. Includes sentence structure, grammar of the paragraph, usage, diction, and mechanics. This course is not remedial. Prereq: Eligible for ENGL& 101 or permission.

**ENGL 105 (3) C,S,V**  
**Applied Composition**

Covers skills and strategies needed to meet writing demands in college and on the job. Prereq: Satisfactory performance on English placement test.

**ENGL 106 (3) C,S**  
**Technical Writing**

Writing strategies geared to target audiences. Emphasis on research and problem-solving requiring critical reading and writing; development of ideas and argumentation. Includes layout and design, use of illustration, schematics, and mathematics. Prereq: ENGL 105 or permission.

**ENGL 107 (5) S**  
**Applied Composition**

This course designed to help students from a variety of majors to master the composition skills needed for careers in business and industry. Students will learn the principles and conventions of technical writing and practice those conventions in a variety of assignments that would typically be encountered in the work place. Attention will also be paid to strengthening the surface and stylistic aspects of their writing. Prereq: Satisfactory performance on English placement test.

**ENGL 108 (3) S**  
**Technical Report Writing**

Technical writing for the professional or student. Covers technical communication skills needed in industry. Provides examples of written or oral presentations typically required in a technical work setting. Prereq: ENGL 106.

**ENGL& 111 (5) C,N,S**  
**Intro to Literature**

Study and analysis of fiction, poetry, and drama, with emphasis on understanding the art and techniques of each genre. Prereq: Placement into ENGL& 101.

**ENGL& 112 (5) C,N,S**  
**Intro to Fiction**

Survey of 20th century fiction. Study and analysis of the art, elements, and techniques of short stories, novellas, and novels of American and international authors. Prereq: Placement into ENGL& 101.

**ENGL& 113 (5) C,N**  
**Intro to Poetry**

Study, appreciation, and analysis of the form, meaning, music, and metaphor of poetry. Includes poems from diverse sources. Prereq: Placement into ENGL& 101.

**ENGL& 114 (5) C,N,S**  
**Intro to Drama**

Study and analysis of great works of the theater, including major themes and trends of playwrights from the Greeks to the present. Prereq: Placement into ENGL& 101.

**ENGL 115 (5) C**  
**LGBT Literature**

Surveys lesbian, gay, bisexual, and transgender literature. Explores ideas, themes, historical contexts, and social issues in fiction, poetry, drama, creative non-fiction, and essays. Prereq: Placement into ENGL& 101.

**ENGL 116 (5) S**  
**Graphic Novels**

Graphic Novels surveys visual storytelling literature, such as graphic novels, manga, and comics. Covers a variety of genres (e.g., fantasy, science fiction, dystopian, classic literature, plays, short stories, autobiography, historic fiction, etc.) presented in graphic formats. Examines complex and culturally relevant literary themes related to history, politics, gender identity, ethnic diversity, sexuality, and many social justice issues.

**ENGL 117 (5) C**  
**American Dialects**

Survey of the contributions other languages and dialects have made to American English, its make-up and creative communicative dynamics.

**ENGL 120 (5) C**  
**Digital Literature**

Exploration of digital literature and authors who use digital media to present their work. Overview of history of digital literature and emerging digital literary forms, such as hypertext, interactive fiction, blogs, social media, apps, video games, and multimedia formats. No specialized software knowledge required. Access to computer and internet recommended. Prereq: Placement into ENGL& 101.

**ENGL 125 (5) C**  
**Writing About Science**

Explore and create works of non-fiction literature about the Physical, Earth, and Life Sciences, technology, the environment and related themes, contexts, and issues. Exploration of the role of science and science writing in public discourse, policy, debate, news reporting, and a variety of media presentation formats. No specialized science knowledge required. Prereq: ENGL& 101 placement.

**ENGL 130 (5) C**  
**Literature and the City**

Introduction to fiction, non-fiction, poetry, and drama that illustrate life in American cities and issues, such as race, politics, gender, class, family, education, and media. Prereq: ENGL& 101 placement.

**ENGL 135 (5) C**  
**The Spoken Word**

Survey of the study, writing, and performance of spoken word poetry and prose. Exploration of texts and performances and how multicultural spoken word writers and performers depict social issues, current events, and personal experience. Students enrolled in the course will create and perform their own spoken word poetry and prose. Prereq: ENGL& 101 placement.

**ENGL 140 (5) C**  
**Pacific Northwest Literature**

Exploration of ideas, themes, historical contexts, and social issues relevant to the Pacific Northwest region in fiction, poetry, drama, creative non-fiction, and essays. Prereq: Placement into ENGL& 101.

**ENGL 151 (5) C,N,S**  
**Creative Writing**

Creative writing with focus on development of language, imagery, style, voice, and emphasis on techniques. Prereq: ENGL& 101 or permission.

**ENGL 152 (5) C,N,S**  
**Creative Writing**

Continuation of ENGL 151. Prereq: ENGL 151, ENGL& 101 or permission.

**ENGL 153 (1-5) C,N,S**  
**Creative Writing**

Continuation of ENGL 152. Emphasis on writing, editing, and proofreading manuscripts. Includes literary magazine production experience in editing, design, and layout. Includes workshops and seminars for those with writing experience. Prereq: ENGL& 101, ENGL 151 and ENGL 152 or permission (N) (C).

**ENGL 160 (5) C**  
**Introduction to Writing for Media**

Introduction to writing for digital and online media, including social media, digital journalism, blogs, video games, web sites, mobile apps, and emerging new media formats. Emphasis on developing writing skills for presentation in digital media formats through examination of course readings and creation of digital media projects. No previous software knowledge required. Internet access recommended. Prereq: ENGL& 101 placement.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

HIN . . . . . Watch Technology

**NAME TO PREFIX**

Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**ENGL 161 (5) C****Writing for Media: News Writing & Reporting**

Introduction to online news reporting and writing. Emphasis on basic story structure models, information gathering, interviewing, source development, specialized reporting skills, audience awareness, media ethics, and laws. Introduction to online news story enhancement tools and platforms: video, audio, photography, interactive graphics, maps, live streaming, blogs, social media, apps. Prereq: ENGL& 101 or ENGL& 160 or instructor permission.

**ENGL 162 (5) C****Writing for Media: Multimedia News Writing**

News reporting and writing enhanced by multimedia digital tools for online publication. Overview of source gathering and news reporting using digital formats and platforms, such as live streaming, blogs, news web sites, social media, mobile devices and apps. Prereq: ENGL& 161 or instructor permission.

**ENGL 198 (3) S,V****English Workshop**

Emphasis on building skills in a variety of areas: vocabulary development, reading comprehension, grammar, punctuation, sentence structure, and strength. Addresses diagnosed student needs individually, with a mixture of workshop and lecture techniques.

**ENGL 199 (2) N****College Applications & Statements**

Focuses on writing effective Personal Statement essays and other college or scholarship application essays. Students will research application requirements and write essays that contribute to an engaging and effective application. Class sessions will focus on intensive essay work and support from college advisors. 8-week course; students will work on a schedule that fits their specific application deadlines. Prereq: Completion of ENGL& 101 or instructor permission.

**ENGL 204 (5) C****English Language & Linguistics**

Overview of the fundamental structures of English from the perspective of linguistic studies. Emphasis on the basic principles and tools of the field of linguistics, contemporary theories of morphology, syntax (grammar), semantics, and study of historical, geographical, and socioeconomic variations of the English language. Prereq: ENGL& 101.

**ENGL 205 (5) C****Creative Nonfiction**

Designed to familiarize students with the techniques and narrative structures of creative nonfiction. Reading and writing will focus on personal essays and memoir, but may also cover related sub-genres such as science writing, travel writing, and profiles/biography. Prereq: ENGL& 101.

**ENGL 214 (5) C****Major British Authors**

Covers 1920 to the present. Read a wide variety of authors and genres, with attention to the multi-cultural forces that shape British literature today. Study the historical and social forces surrounding the literature for context. Prereq: Eligible for ENGL& 101.

**ENGL 218 (5) C****Holocaust Literature**

Examines literature written by survivors of the Holocaust or the Shoah. Read accounts written by people who survived to write and publish their memories. Meet one of the authors. Develop an historical context for World War II and the rise of Nazi Germany to understand the literature.

**ENGL& 224 (5) C,N****Shakespeare I**

Study of a representative selection of Shakespeare's comedies, tragedies, romances, and history. Covers the range of Shakespeare's career (without duplication of materials from ENGL& 225). May take one or both classes. Prereq: ENGL& 101 placement.

**ENGL& 225 (5) C,N****Shakespeare 2**

Study of a representative selection of Shakespeare's comedies, tragedies, romances, and history. Covers the range of Shakespeare's career. Continuation of ENGL& 224. May take one or both classes. Prereq: ENGL& 101 placement.

**ENGL& 226 (5) C,N****British Literature I**

The early Celtic period, the Roman occupation, the Anglo Saxon period, the Norse invasions, the Middle Ages to the English Renaissance before Shakespeare. Emphasizes the historical forces, social shifts and significant cultural clashes that form the context for this literature. Prereq: Eligible for ENGL& 101 (N,C).

**ENGL& 227 (5) C,N****British Literature II**

From 1540–1800. Covers Shakespeare and the English Reformation and Renaissance, English global expansion, growing awareness of science, and The Age of Reason. Emphasizes the historical forces, social shifts, and cultural differences that form the context for this literature. Prereq: Eligible for ENGL& 101.

**ENGL& 228 (5) C,N****British Literature III**

Covers the French Revolution through the Romantic and Victorian periods through World War I (1785-1919). Emphasizes the historical forces, social shifts, and cultural differences that form the context for this literature. Prereq: Eligible for ENGL& 101.

**ENGL& 230 (3) C,N,S****Technical Writing**

Presents formats and mechanics of writing needed in occupational areas related to engineering technologies. Emphasis on project types, layout and design, use of illustrations, schematics and mathematics, writing for specific audiences, research and documentation, and résumé writing. Prereq: ENGL& 101.

**ENGL 231 (1-5) C,N,S****Children's Literature**

Explores a representative collection of children's and young adult literature from multiple cultures within the Western literary tradition. Includes close reading of texts such as fairy tales, traditional tales, illustrations, picture books, realistic and historical fiction, and fantasy. Emphasizes historical context, literary themes, cultural implications for reading audiences, and the role of children's narratives in the social construction of childhood. Recommended: Completion of ENGL& 101 (N,C).

**ENGL 232 (5) C,N,S****Young Adult Literature**

Exploration of young adult literature that represents culturally diverse populations within the United States, with emphasis on values reflected and the power and elements of story. Prereq: Placement into ENGL& 101.

**ENGL& 235 (5) N,S**  
**Technical Writing**

Explores basic formats and content of technical communication. Covers writing process; analysis of purpose and audience for various reports and documents; research, documentation, presentation of technical material; and communication in digital media. Projects include writing and editing, digital communication, and collaboration. Prereq: ENGL& 101.

**ENGL 240 (5) C,N**  
**Read/Write Autobiography**

Read autobiographies of well-known people and write your own. Involves both critical and personal writing assignments, with an emphasis on the personal dimension of writing. Prereq: ENGL& 101 placement.

**ENGL& 245 (5) C,N,S**  
**American Literature II**

Covers 19th century writers in all written forms. Prereq: Eligible for ENGL& 101.

**ENGL& 246 (5) C,N,S**  
**American Literature III**

Covers late 19th and 20th century writers, with emphasis on modern fiction, drama, poetry, and trends in literature. Practice critical techniques. Prereq: Eligible for ENGL& 101.

**ENGL 247 (5) C**  
**21st Century American Literature**

Survey of 21st Century United States literature, with emphasis on contemporary fiction, drama, poetry, and literary trends. Prereq: Placement into ENGL& 101.

**ENGL 251 (5) C,N**  
**Studies in the Novel**

Studies major novels associated with specific philosophical or chronological periods, such as the great Victorian novelists, the Naturalists, and American Realists. Usually covers 5 novels per quarter. Prereq: Eligible for ENGL& 101 (N).

**ENGL 252 (5) C,N**  
**Novels of Western Literature**

Emphasis on European and American novels from the past two centuries viewed in the philosophical and historical contexts. Prereq: ENGL& 101 placement.

**ENGL 253 (5) N**  
**Studies in the Novel**

Continuation of ENGL 252. Prereq: Eligible for ENGL& 101 (N).

**ENGL& 254 (5) C,N**  
**World Literature I**

Critical readings and discussion of the creation stories and early literature of several ancient cultures, examining the material as myth, as history, as literature, and as records of a culture's self-image. May include Enuma Elish, Gilgamesh, The Theogony, The Iliad, The Odyssey, the plays of Sophocles and Aeschylus, parts of the Bible, and writings of Virgil and Ovid. Prereq: ENGL& 101 placement.

**ENGL& 256 (5) C,N**  
**World Literature III**

Cross-cultural survey of contemporary world literature from Latin America, Africa, Asia, the Middle East, Europe, and the United States from the 20th Century to the present. Prereq: Placement into ENGL& 101.

**ENGL 257 (5) C,N**  
**Literary Masterpieces of the United States**

Illustrates the richness and variety of writing and represents enduring concerns and questions of American literature through selected works. Prereq: ENGL& 101 placement.

**ENGL 258 (5) C,N,S**  
**Literature of American Culture**

Survey of literature from a variety of U.S. cultures, including Asian American, African American, European American, Chicano and Latino American, Middle Eastern American, Native American, and others. Emphasis on analysis of social, cultural, political, and historical contexts. Prereq: Placement into ENGL& 101.

**ENGL 259 (5) C,N**  
**African American Literature**

Survey of African American literature (fiction, poetry, drama, essays) from the 19th Century to the present. Prereq: Placement into ENGL& 101.

**ENGL 260 (5) C,N,S**  
**Asian American Literature**

Focuses on fiction and poetry of Asian-Americans, covered in order of their immigration: Chinese, Japanese, Filipino, Korean, Southeast Asian, and the recent groups from Asia and the Pacific Islands. Prereq: Eligible for ENGL& 101.

**ENGL 263 (5) C,N**  
**The Bible as Literature**

Studies the Bible as an anthology of literary texts expressing the religious ideas of ancient Israel. Emphasizes reading the Old Testament and New Testament with literary and historical understanding. Prereq: Eligible for ENGL& 101.

**ENGL 265 (5) C,N**  
**Literature & Society**

Studies patterns of literary expression as a guide to social attitudes and value systems, the part society plays in shaping literature, and the degree to which literature reflects society. Prereq: Placement into ENGL& 101.

**ENGL 270 (5) C**  
**Beat Generation Writers**

Focus on the literature of the Beat Generation writers in the U.S. in the 1940s, such as Jack Kerouac, Allen Ginsberg, and William Burroughs, who continue to have an influence on American society today. Prereq: Eligible for ENGL& 101.

**ENGL 291 (5) C,N,S**  
**Literature by Women**

Surveys literature by culturally diverse American women authors. Analyzes fiction and non-fiction texts of various genres. Examines the ways in which women's literary voices have shaped society, culture, politics, and gender roles in the United States. Prereq: ENGL& 101 placement.

**ENGL 292 (5) C,N**  
**Literature by Women: Global Perspectives**

Survey of literature by women from African, Asian, Latin American, Middle Eastern, European, and other cultures. Prereq: Placement into ENGL& 101.

**ENGL 293 (5) C,N,S**  
**Science Fiction**

Examines selected readings in science fiction and fantasy from the 19th century to present. May include American, British, continental European, and other international writers. Prereq: Placement into ENGL& 101.

**ENGL 296 (1-3) C,N**  
**Special Topics English**

Special courses developed by instructors. Prereq: Permission.

**ENGL 298 (5) C,N,S**  
**Special Topics**

In-depth examination of current and emerging topics and themes relevant to the study of English. Consult Humanities & Social Sciences Division and quarterly class schedule for the specific topic to be offered. Prereq: Placement into ENGL& 101.

**ENGL 299 (1-5) C,N,S**  
**Independent Study**

Create an individual project, syllabus and outcomes with instructor. Prereq: Permission.

**English as a Second Language****ESL 007 (1-15) C,S**  
**ESL – Pre-Literacy**

For true beginners – students who are unable to read, write, speak or listen in English and who are pre-or-non-literate in their native language. Introduces beginning concepts of reading and writing and spoken English for aural comprehension to help students use English for meeting classroom and personal needs.

**ESL 010 (1-15) C,N,S,V**  
**English As A Second Language 1**

Emphasis on basic vocabulary, simple sentence structure, pronunciation, basic reading and writing needed for daily functioning. Concentrates on developing oral and listening skills through drills, dialogues, role-playing, dictation, and conversation. Work on literacy skills. Prereq: ESL placement test or instructor permission.

**ESL 011 (1-12) C,N,S**  
**ESL – Level 1a**

Beginning course for non-native speakers of English, with emphasis on vocabulary, pronunciation, basic reading and writing needed to meet daily survival situations.

**ESL 012 (1-12) C,N,S**  
**ESL – Level 1b**

Beginning course for non-native speakers of English, with emphasis on vocabulary, pronunciation, basic reading and writing needed to meet daily survival situations. Prereq: ESL 011 or placement.

**ESL 013 (1-15) C,N,S**  
**ESL – Level 1c**

Beginning course for non-native speakers of English, with emphasis on vocabulary, pronunciation, basic reading and writing needed to meet daily survival situations. Prereq: ESL 012 or placement.

**ESL 015 (1-15) C,N,S**  
**ESL Reading and Writing 1**

Designed for low-beginning ESL students, this practice-based course introduces basic English reading and writing skills in the context of daily life, jobs, and school for more success living in the United States. Prereq: Appropriate score on placement test or instructor's permission.

**ESL 016 (1-15) C,N,S**  
**ESL Speaking and Listening 1**

Designed for low-beginning ESL students, in this course students practice basic English speaking and listening skills in the context of daily life, jobs, and school for more success living in the United States. Prereq: Appropriate score on placement test or instructor's permission.

**ESL 017 (1-15) C,N,S**  
**Computer Assisted ESL 1**

Tutoring in specific areas for students in ESL Level 1. Prereq: Permission.

**ESL 018 (1-15) C,N,S**  
**Workplace ESL Level 1**

Beginning level for non-native speakers of English. Practice with job-related skills in reading, writing, speaking, and listening.

**ESL 019 (1-15) C,N,S**  
**Vocational ESL Level 1**

Designed to help prepare limited English-proficient students for entry into specific job training programs, such as electronic assembly, culinary arts, and wood construction. Focuses on the basic vocabulary and communication structures required in the job training class and on the job.

**ESL 020 (1-12) C,N,S,V**  
**ESL – Level 2**

ESL 020 is a high-beginning level English as a second language course which utilizes an integrated skills approach to language teaching. This class is intended for students who understand and use very basic oral and written phrases, statements, and questions. The content focus is on employability and readiness for vocational and academic programs. Prereq: ESL placement test, successful completion of ESL 010, or instructor permission.

**ESL 021 (1-15) C,N,S**  
**ESL – Level 2a**

For beginning ESL students. Learn beginning English vocabulary and grammar. Practice beginning reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States.

**ESL 022 (1-15) C,N,S**  
**ESL – Level 2b**

For high-beginning ESL students. Learn more beginning English vocabulary and grammar. Practice more beginning reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States.

**ESL 023 (1-15) C,N,S**  
**ESL – Level 2c**

Intermediate-level course for non-native speakers of English. Continued emphasis on vocabulary development, reading, and writing needed to function effectively in a job or daily situations. Prereq: ESL 022 or placement.

**ESL 024 (1-12) C,N,S**  
**ESL – Level 2d**

Fourth sub-level in the ESL Level (2) sequence. This sub-level is offered when the total contact hours of the other sub-levels is less than 10 hours per week.

**ESL 025 (1-15) C,N,S**  
**ESL Reading and Writing 2**

Designed for beginning ESL students, this practice-based course focuses on beginning English reading and writing skills in the context of daily life, jobs, and school for more success living in the United States. Prereq: Appropriate score on placement test, ESL 015 with an "S" grade, or instructor's permission.

**ESL 026 (1-12) C,N,S**  
**ESL Speaking and Listening 2**

Designed for beginning ESL students, this practice-based course focuses on beginning English speaking and listening skills in the context of daily life, jobs, and school for more success living in the United States. Prereq: Appropriate score on placement test, ESL 016 with an "S" grade, or instructor's permission.

**ESL 027 (1-5) C,N,S**  
**Intro to Digital Literacy ESL**

Introductory digital literacy course for non-native speakers of English, with emphasis on improving vocabulary, reading with understanding, and conveying ideas in writing. Prereq: Instructor permission.

**ESL 028 (1-15) C,N,S**  
**Workplace ESL Level 2**

Advanced beginning level for non-native speakers of English. Practice English skills needed to obtain or keep a job.

**ESL 030 (1-15) C,N,S,V**  
**ESL Level 3**

ESL 030 is an intermediate level English as a second language course which utilizes an integrated skills approach to language teaching. This class is intended for students who understand and use basic oral and written phrases, statements, and questions. The content focus is dependent on the specific contextualization of each ESL 030 course. Prereq: ESL placement test, successful completion of ESL 020, or instructor permission.

**ESL 031 (1-15) C,N,S**  
**ESL – Level 3a**

For low-intermediate ESL students. Learn low-intermediate English vocabulary and grammar. Practice low-intermediate reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States.

**ESL 032 (1-15) C,N,S**  
**ESL – Level 3b**

For low-intermediate ESL students. Learn more low-intermediate English vocabulary and grammar. Practice more low-intermediate reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States.

**ESL 033 (1-12) C,N,S**  
**ESL – Level 3c**

Intermediate-level course for non-native speakers of English, with continued emphasis on improving vocabulary, reading comprehension, and speed. Writing includes sentence construction and simple paragraphs. Prereq: ESL 032 or placement.

**ESL 034 (1-12) C,N,S**  
**ESL – Level 3d (Fast Track)**

Fast track course for students who are able to study at a faster pace than their classmates. Covers ESL 031, 032, and 033 in one quarter (North covers ESL 031 and 032). North students with less than a 75% average may return to other ESL classes as determined by their instructor. Prereq: Instructor recommendation only.

**ESL 035 (1-15) C,N,S**  
**ESL Reading and Writing 3**

Designed for low-intermediate ESL students. Focuses on practicing low-intermediate English reading and writing skills in the context of daily life, jobs, and school for more successful living in the United States. Prereq: Appropriate score on placement test, successful completion of ESL 025, or instructor's permission.

**ESL 036 (1-15) C,N,S**  
**ESL Speaking and Listening 3**

Designed for low-intermediate ESL students. Provides practice of low-intermediate English speaking and listening skills in the context of daily life, jobs, and school for more successful living in the United States. Prereq: Appropriate score on placement test, ESL 026 with an "S," or instructor's permission.

**ESL 037 (1-5) C,N,S**  
**Begin Digital Literacy ESL**

Beginning digital literacy course for non-native speakers of English, with emphasis on improving vocabulary, reading with understanding, and conveying ideas in writing. Prereq: Completion of ESL 027.

**ESL 038 (1-15) C,N,S**  
**Workplace ESL 3**

Low intermediate level for non-native speakers of English. Practice English skills needed to obtain or keep a job.

**ESL 039 (1-15) C,N,S**  
**Vocational ESL 3**

Intermediate level for non-native speakers of English. Focuses on workplace and survival English and beginning academic English. Includes career planning, test-taking, study skills, interview skills, résumé writing, and computer and math skills. May also cover health, finances, college/training programs, and/or citizenship.

**ESL 040 (1-15) C,N,S,V**  
**ESL Level 4**

ESL 040 is a high intermediate level English as a second language course which utilizes an integrated skills approach to language teaching. This class is intended for students who understand and use familiar oral and written phrases, statements, and questions with some difficulty. The content focus is dependent on the specific contextualization of each ESL 040 course. Prereq: ESL placement test, successful completion of ESL 030, or instructor permission.

**ESL 041 (1-15) C,N,S**  
**ESL Level 4a**

For intermediate ESL students. Learn intermediate English vocabulary and grammar. Practice intermediate reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States.

**ESL 042 (1-15) C,N,S**  
**ESL Level 4b**

For high-intermediate ESL students. Learn high-intermediate English vocabulary and grammar. Practice high-intermediate reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States.

**ESL 044 (1-10) C,N,S**  
**ESL Level 4d (Fast Track)**

Fast track course for students who are able to study at a faster pace than their classmates. Covers ESL 041 and ESL 042 in one quarter. Prereq: Instructor recommendation only (N).

**ESL 045 (1-15) C,N,S**  
**Focus on Writing Level 4**

For students who want to improve their writing skill. In-depth study of English word order, spelling problems, sentence boundaries, some persistent grammatical problems, and simple paragraph writing. Prereq: Placement at Level 4 or teacher recommendation.

**ESL 046 (1-15) C,N,S**  
**ESL Speaking/Listening Level 4**

Practice, develop, and improve speaking and listening skills needed for daily life, jobs, and student educational goals. Emphasis on communication skills, not specific pronunciation. Prereq: Placement at Level 4 for listening skills or teacher recommendation.

**ESL 047 (1-5) C,N,S,V**  
**Intermediate Digital Literacy ESL**

Intermediate digital literacy course for non-native speakers of English, with emphasis on improving vocabulary, reading with understanding, and conveying ideas in writing. Prereq: Placement at ESL 031 or higher and completion of ESL 037 or instructor permission.

**ESL 048 (1-15) C,S**  
**Workplace ESL Level 4**

Develop skills necessary to transition successfully into an American college. Practice taking standardized English proficiency and placement tests. Provides information about the application process for financial aid and support services. Explores issues of time management, students' own current abilities and styles of learning, barriers, learning deficiencies, or skills gaps. Covers strategies for improvement. Prereq: None.

**ESL 049 (1-15) C,N,S**  
**Vocational ESL Level 4**

Supports vocational, technical, and employment training.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

HIN ..... Watch Technology

**NAME TO PREFIX**

Watch Technology ..... HIN

Common Course Numbering explanation is on page 224.

**ESL 050 (1-15) C,N,S,V**  
**ESL Level 5**

ESL 050 is a low-advanced level English as a second language course which utilizes an integrated skills approach to language teaching. This class is intended for students who understand and use familiar oral and written phrases, statements, and questions. The content focus is dependent on the specific contextualization of each ESL 050 course. Prereq: ESL placement test, successful completion of ESL 040, or instructor permission.

**ESL 051 (1-15) C,N,S**  
**ESL Level 5a**

For very high-intermediate ESL students. Learn very high-intermediate English vocabulary and grammar. Practice very high-intermediate reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States. Begin to focus more on academic English skills to prepare for transitioning into college academic or professional/technical classes.

**ESL 052 (1-15) C,N,S**  
**ESL Level 5b**

For low-advanced ESL students. Learn low-advanced English vocabulary and grammar. Practice low-advanced reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States. Continue to focus more on academic English skills to prepare for transitioning into college academic or professional/technical classes.

**ESL 055 (1-15) C,N,S**  
**Focus on Writing Level 5**

For students who want to improve their writing skills. Study English word order, spelling problems, sentence boundaries, some persistent grammatical problems, and simple paragraph writing. Prereq: Placement at Level 5 or teacher recommendation.

**ESL 056 (1-15) C,N,S,V**  
**ESL Speaking/Listening Level 5**

Upon completion, be able to listen actively and speak so others can understand and participate effectively and independently in conversations on everyday survival, work, and social situations, in person and on the telephone.

**ESL 057 (1-5) C,N,S**  
**Advanced Digital Literacy ESL**

Advanced digital literacy course for non-native speakers of English, with an emphasis on improving vocabulary, reading with understanding, and conveying ideas in writing. Prereq: ESL 041 or higher and completion of ESL 047 or instructor permission.

**ESL 058 (1-10) N**  
**English for Business & Accounting Prep**

This course is designed to prepare ESL students for study in Business and Accounting programs. Topics will include business and workplace vocabulary. Also covers skills related to computers, studying, job searches, and employability.

**ESL 059 (1-15) C,N,S,V**  
**Vocational ESL**

Provides specific support in vocational ESL and assists students pursuing career and professional technical programs.

**ESL 060 (1-15) C,N,S,V**  
**ESL Level 6**

ESL 060 is an advanced level English as a second language course which utilizes an integrated skills approach to language teaching. This class is intended for students who understand and use every day oral and written phrases, statements, and questions comfortably. While detailed content focus is dependent on the specific contextualization of each ESL 060 course, the overall focus is transition to Prof/Tech or Academic college programs. Prereq: ESL placement test, successful completion of ESL.

**ESL 061 (1-15) C,N,S**  
**ESL Level 6a**

For advanced ESL students. Learn advanced English vocabulary and grammar. Practice advanced reading, writing, listening, and speaking skills in the context of daily life, jobs, and school for living in the United States. Focus especially on academic English skills to prepare for transitioning into college academic or professional/technical classes.

**ESL 062 (1-15) C,N,S**  
**ESL Level 6b**

Emphasis on composition, reading a variety of texts, grammar, and vocabulary expansion. Prereq: ESL 061 or placement.

**ESL 063 (1-10) C,S**  
**ESL for IT 1**

1 of 3 non-sequential courses which integrate the Washington state Adult Basic Education ESL Levels 5 and 6 reading, writing, listening, and speaking standards with MIC courses, which provide the context for ESL learning outcomes and activities.

**ESL 064 (1-10) C,S**  
**ESL for IT 2**

1 of 3 non-sequential courses which integrate the Washington state Adult Basic Education ESL Levels 5 and 6 reading, writing, listening, and speaking standards with MIC courses, which provide the context for ESL learning outcomes and activities.

**ESL 065 (1-3) C,N,S**  
**Focus on Writing Level 6**

For students who want to improve their writing skills. Study English word order, spelling problems, sentence boundaries, some persistent grammatical problems, and simple paragraph writing. Prereq: Placement at Level 6 or teacher recommendation.

**ESL 066 (1-15) C,N,S**  
**ESL Speaking/Listening Level 6**

On completion, be able to listen actively and speak so others can understand.

**ESL 067 (1-15) C,N,S**  
**Computer Assisted ESL 6**

A self-paced, individualized instructional setting for ESL Level 6 students to build on English skills learned in core ESL classes.

**ESL 068 (1-3) C,N,S**  
**Educational Interview**

Helps ESL students at all competency levels identify their current abilities, characteristics, styles, and readiness to learn. Intro to campus resources.

**ESL 069 (1-15) C,N,S**  
**Vocational ESL**

For ESL students concurrently enrolled in a professional-technical program. Provides specific support in content courses and vocational ESL and assists students in completing their programs and building job-related language skills. Prereq: Permission.

**ESL 070 (1-10) C,S  
ESL for IT 3**

1 of 3 non-sequential courses which integrate the Washington state Adult Basic Education ESL Levels 5 and 6 reading, writing, listening, and speaking standards with MIC courses, which provide the context for ESL learning outcomes and activities.

**ESL 071 (1-15) C,N,S  
ESL Citizenship 1**

Beginning level preparation for the United States citizenship examination through the practice of listening, speaking, reading, and writing skills and through the study of U.S. history and government. Prereq: ESL Level 3 or higher.

**ESL 072 (1-15) C,N,S  
ESL Citizenship 2**

Intermediate level preparation for the United States citizenship examination through the practice of listening, speaking, reading, and writing skills and through the study of U.S. history and government. Prereq: ESL 071 or permission.

**ESL 073 (1-15) C,N,S  
ESL Citizenship 3**

Continued preparation for the United States citizenship examination through the practice of listening, speaking, reading, and writing skills and through the study of U.S. history and government. Prereq: ESL 072 or permission.

**ESL 075 (1-3) N,S  
English Pronunciation 2**

Intro to the basics of accurate English pronunciation, such as vowel and consonant sounds and sentence intonation. Prereq: Placement in Level 3, 4, or permission.

**ESL 076 (1-5) C,N,S  
English Pronunciation**

Intro to some of the basics of accurate English pronunciation for non-native speakers of English: some stressed and unstressed vowel sounds, basic word stress patterns, sentence stress and rhythm, and other features.

**ESL 077 (1-15) C,N,S  
Advanced English Pronunciation 1**

Advanced course on accurate English pronunciation: troublesome vowel and consonant sounds, word stress, and sentence intonation. Prereq: Placement into ESL 061 or 092/093 or instructor permission.

**ESL 078 (1-15) C,N,S  
Advanced English Pronunciation 1**

Advanced course on accurate English pronunciation: troublesome vowel and consonant sounds, word stress, and sentence intonation. Prereq: Placement into ESL 061 or 092/093 or instructor permission.

**ESL 079 (1-5) C,N,S  
College Transitional English**

Pre-college course to develop reading skills. Practice in note taking, listening, and study skills. Prereq: Concurrent enrollment in ESL 080.

**ESL 080 (1-5) C,N,S  
College Transitional English**

Pre-college course to develop reading skills and increase vocabulary.

**ESL 081 (10-15) C  
College and Career Readiness ESL**

Provides ESL students with practice of integrated English reading, writing, listening, and speaking skills for the workplace and successful transition into college academic and professional-technical courses. Prereq: Placement Test or completion of ESL 055A and ESL 056A with an "S," or permission.

**ESL 082 (1-5) C  
ESL Special Topics**

Designed to allow for special course offerings that are responsive to student need and/or current and emerging topics that are related to but not offered as part of the regular Basic ESL curriculum.

**ESL 083 (1-5) N,S  
Strategic Learning**

Supports strategic learning in a college credit class through concurrent enrollment in the college class and ESL 083. Learn appropriate study skills, such as metacognitive strategies, previewing, skimming and scanning of written materials, summarizing and paraphrasing, note-taking, revision and expansion of notes, and research techniques. Understand and meet content teacher expectations.

**ESL 084 (1-5) C,N,S  
English for Non-Native Speak**

Thirty-hour Telecourse to help high beginning ESL students improve their speaking, listening comprehension skills, and vocabulary. Do speaking, listening, comprehension, and vocabulary development exercises. Required attendance for ten three-hour class meetings on campus.

**ESL 085 (1-5) C,N,S  
Survey of English Grammar**

For students under-prepared for college level English. Covers basic English grammar, with a focus on writing simple, compound, and complex sentences and paragraphs. Learn and practice academic English vocabulary to enhance writing skills. Prereq: Placement on ESL COMPASS test.

**ESL 086 (1-5) C,N,S  
Survey of English Grammar II**

Covers intermediate to advanced English grammar, with an emphasis on sentence and paragraph writing using simple, compound, and complex sentences. For students under-prepared for college level. Continue developing academic English vocabulary to enhance writing skills. Prereq: Placement on the ESL COMPASS test.

**ESL 087 (1-5) S  
Language Skill Support L**

Work out an individualized program with the instructor, which could include the use of computer software/Internet resources. Focuses on content area, grammar, reading, writing, punctuation, spelling, and vocabulary building.

**ESL 088 (1-3) C,N,S  
Advanced English Pronunciation**

Advanced course on accurate English pronunciation. Covers features such as certain vowel and consonant sounds, word and sentence stress. Prereq: Placement in ESL 092/093 or higher or permission.

**ESL 089 (1-5) C,N,S  
Pronunciation Practice/Vocabulary Development**

Advanced class on accurate English pronunciation. Practice pronunciation, listening, conversation, and writing skills to reinforce the work of ESL classes or other vocational or academic courses. May be repeated a maximum of eight quarters (ESL 089A-H). Must be taken in conjunction with recommended ESL classes. Coreq: Enrollment in ESL 092-099 or permission (C). Prereq: ESL 094/095 placement or permission (N).

**ESL 090 (1-5) C,N,S  
Pronunciation for Non-Native Speakers**

Emphasizes improving pronunciation and comprehension of spoken English by non-native speakers. Focuses on general and individual pronunciation problems, especially stress and intonation. Includes class presentations and group communications. Prereq: Permission.

**ESL 091 (1-5) C,N,S**  
**Listening/Note Taking – ESL**

Improve listening, speaking, and note-taking skills necessary for college lecture courses. Participate in lectures, workshop and video-taped lectures. Prereq: Placement on ESL COMPASS test.

**ESL 092 (1-5) C,N,S**  
**English: Non-Native Speakers**

For non-native speakers reading below the seventh-grade level. Emphasis on reading comprehension and study skills. Prereq: Placement on English placement test or permission (S), ESL 051, or placement in English placement test (N). Coreq: ESL 093.

**ESL 093 (1-5) C,N,S**  
**English for Non-Native Speakers**

Provides English language learners the opportunity to master control of the English sentence, with a strong focus on incorporating grammar into paragraph writing. Through the combination of lectures and workshops, students will build awareness of specific problems in their writing and will learn strategies for reducing them. Prereq: Placement on ESL COMPASS Test (C).

**ESL 094 (1-5) C,N,S**  
**English for Non-Native Speakers II**

For non-native speakers of English who need practice with basic academic reading, vocabulary, and writing responses to readings. Emphasizes reading comprehension and speed. Prereq: Placement on ESL COMPASS test. Coreqs: ESL 085 and 095.

**ESL 095 (1-5) C,N,S**  
**English for Non-Native Speakers II**

For non-native speakers of English. Focuses on mastering sentence control and developing clear, coherent paragraphs. Prereq: Placement on ESL COMPASS test. Coreqs: ESL 085 and 094.

**ESL 096 (5) C**  
**College Prep English For Non-Natives I – Reading**

For non-native speakers. Increase reading comprehension and speed, improve vocabulary, and build confidence using college preparatory materials. Respond to readings using academic vocabulary in writing. Prereq: Minimum passing grade of 2.5 in ESL 094, English Placement Test, or instructor permission (S). Prereq: ESL 081 with a grade of S, or ESL 055B with a grade of S and ESL 056B with a grade of S, or ESL 093 with a 2.5 or higher, or placement on English placement test, or permission (C).

**ESL 097 (5) C,N,S**  
**College Prep Eng for Non-Nat Speakers I – Writing**

For non-native speakers. Practice developing coherent, multiple paragraph compositions. Review English writing styles and their application to academic writing. Prereq: Minimum passing grade of 2.5 in ESL 095, ESL COMPASS placement, or instructor permission (S). Prereq: ESL 081 with a grade of S, or ESL 055B with a grade of S and ESL 056B with a grade of S, or ESL 093 with a minimum grade of 2.5, or placement on the English placement test, or permission (C).

**ESL 098 (1-5) C,N,S**  
**College Prep/Non-Natives**

Emphasis on vocabulary, increasing comprehension, and formulation of answers to essay questions. Reading includes college-level academic and vocational texts. Concurrent enrollment in ESL 091 or ESL 099 strongly recommended. Prereq: ESL 096, placement on the English placement test, or permission.

**ESL 099 (1-5) C,N,S**  
**College Prep/Non-Natives**

Develop coherent paragraphs and short essays. Emphasis on complex paragraphs using appropriate style and techniques of paraphrasing and summarizing. Includes library research skills. Preparation for college-level writing. Prereq: ESL 097, placement on the English placement test, or permission. Recommended coreq: ESL 091 or ESL 098.

**French****FRCH& 121 (5) C,N**  
**French I**

For students who have not previously studied French. Covers fundamentals of grammar and syntax, oral and written exercises, pronunciation, reading and conversation, and cultural aspects of the countries in which French is spoken. Requires oral practice with CDs outside of class. Recommended: Eligibility for ENGL& 101 (C).

**FRCH& 122 (5) C,N**  
**French II**

Intended for students who have completed French 121 or its equivalent. Continued study of the fundamentals of grammar and syntax, pronunciation, reading and conversation, and cultural aspects of the countries in which French is spoken. Emphasis on written and oral communication.

**FRCH& 123 (5) C,N**  
**French III**

Intended for students who have completed French 121 and French 122 or their equivalents. Continued study of the fundamentals of grammar and syntax, pronunciation, reading and conversation, and cultural aspects of the countries in which French is spoken. Increased emphasis on oral communication. Requires oral and listening practice with CDs outside of class.

**FRCH& 221 (5) C,N**  
**French IV**

Detailed review of French grammar and syntax. Focus on writing, conversation, and discussion of literary texts. Includes oral presentations on aspects of francophone cultures. Prereq: FRCH& 123 or permission.

**FRCH& 222 (5) C,N**  
**French V**

Continuation of FRCH& 221. Prereq: FRCH& 221 or permission.

**FRCH& 223 (5) C,N**  
**French VI**

Continuation of FRCH& 222. Prereq: FRCH& 222 or permission.

**FRCH 231 (5) N**  
**Advanced French Language & Literature**

Advanced review of all major concepts of French grammar and broadening of vocabulary base, with more challenging reading and writing assignments. Some tutoring in small group work with FRCH& 221 students is expected. Prereq: FRCH& 223 or permission.

**FRCH 232 (5) N**  
**Advanced French Language & Literature**

Continuation of FRCH 231. Prereq: FRCH 231 or permission.

**FRCH 233 (5) N**  
**Advanced French Language & Literature**

Continuation of FRCH 232. Prereq: FRCH 232 or permission.

**FRCH 298 (1-5) C,N**  
**Independent Study/French**

Independent study of selected topic(s) in French. To be arranged with instructor. Prereq: Permission.

**FRCH 299 (1-5) C,N**  
**Independent Study/French**

Independent study of selected topic(s) in French. Prereq: Permission.

**German**

**GERM& 121 (5) C,N**  
**German I**

Covers fundamentals of grammar and syntax, oral and written exercises, pronunciation, reading and conversation, and cultural aspects of the countries in which German is spoken. Requires oral practice with online audio programs. For students who have not previously studied German.

**GERM& 122 (5) C,N**  
**German II**

Continued systematic study of German focusing on listening, speaking, reading, writing, and cultural understanding. Prereq: GERM& 121 or permission.

**GERM& 123 (5) C,N**  
**German III**

Continuation of GERM& 122. Emphasis on speaking, reading, writing, and grammatical concepts and cultural discussions. Prereq: GERM& 122 or permission.

**GERM 299 (5) C,N**  
**Independent Study in German**

Further skills beyond the level of GERM& 123. Uses an intermediate text of contemporary short stories. Prereq: Permission.

**Italian**

**ITAL 121 (5) C,N**  
**Italian I**

For beginning students. Intro to spoken and written Italian, with emphasis on speaking, listening, and reading comprehension. Covers phonetic system and basic grammar concepts. Includes Italian culture and contemporary customs as an aid in learning the language.

**ITAL 122 (5) N**  
**Italian II**

Continuation of ITAL 121. Emphasizes pronunciation, oral, and written communication.

**ITAL 123 (5) N**  
**Italian III**

Continuation of ITAL 122. Emphasizes pronunciation, oral, and written communication.

**Japanese**

**JAPN& 121 (5) C,N,S**  
**Japanese I**

For students who have not previously studied Japanese. Intro to Japanese conversation, grammar, culture, and the Japanese hiragana writing system. Recommended: Eligible for ENGL& 101 eligibility (C).

**JAPN& 122 (5) C,N,S**  
**Japanese II**

Continuation of JAPN& 121. Includes development of speaking, listening, reading, and writing skills. Introduces the kanji (Chinese character) writing system and up to 30 basic characters. Prereq: JAPN& 121 or permission.

**JAPN& 123 (5) C,N,S**  
**Japanese III**

Continues the development of language skills in all areas. Presents another 60 characters. Prereq: JAPN& 122 or permission.

**JAPN& 221 (5) C,N**  
**Japanese IV**

Expands basic grammar, vocabulary, and writing systems to intermediate level speaking, reading, writing, and aural comprehension of the language. Acquire mastery of hiragana, katakana, and 100 kanji. Prereq: JAPN& 123 or permission.

**JAPN& 222 (5) C,N**  
**Japanese V**

Continuation of JAPN& 221. Further expands grammar, vocabulary, and writing systems to intermediate level of speaking, reading, and writing. Intro to new kanji. Prereq: JAPN& 221 or permission.

**JAPN& 223 (5) C,N**  
**Japanese VI**

Continuation of JAPN& 222. Further expands basic grammar, vocabulary, and writing systems to intermediate level of speaking, reading, and writing. Intro to new kanji and the use of the Japanese dictionary. Prereq: JAPN& 222 or permission.

**JAPN 298 (1-10) C,N**  
**Study Abroad/Japan**

Independent study of selected topic(s) in Japanese arranged with faculty. Prereq: Permission.

**JAPN 299 (1-5) C,N,S**  
**Independent Study/Japanese**

Independent study of selected topic(s) in Japanese arranged with faculty. Prereq: Permission.

**Linguistics**

**LAN 101 (5) C**  
**Intro to Linguistics**

Intro to the study of natural language. Presents the similarities in the basics of language as an instrument of thought and communication. Covers the sources for cultural differentiation between all linguistic materials.

**LAN 110 (5) C**  
**Comparative Linguistics: American Sign Language & English**

Introduction to linguistics as applied to English and American Sign Language. Examination of phonology, morphology, syntax, and language use. At Central, fulfills one of the distribution requirements for the Associate of Arts with Emphasis in Deaf Studies. Prereq: ENGL& 101 and ASL& 221 with a minimum GPA of 2.0, or permission.

**Spanish**

**SPAN& 121 (5) C,N,S**  
**Spanish I**

Begins the systematic study of Spanish, focusing on listening, speaking, reading, writing, grammar, and cultural aspects of the countries in which Spanish is spoken. No prior knowledge of Spanish required. Prereq: Eligibility for ENGL& 101 (C).

**SPAN& 122 (5) C,N,S**  
**Spanish II**

Continued systematic study of Spanish, focusing on listening, speaking, reading, and writing. Includes study of the cultural aspects of the regions where Spanish is spoken.

**SPAN& 123 (5) C,N,S**  
**Spanish III**

Continuation of SPAN& 122. Prereq: SPAN& 122 or permission.

**SPAN& 221 (5) C,N**  
**Spanish IV**

Continuation of SPAN& 123. Review of grammatical structures, intensive practice in writing, conversations, and reading on a variety of topics. Intro to Hispanic culture, literature, and art. Prereq: SPAN& 123 or permission.

**SPAN& 222 (5) C,N**  
**Spanish V**

Continuation of SPAN& 221. Emphasis on the four aspects of language: reading, writing, listening, and speaking, through composition, oral presentation, and guest speakers. Prereq: SPAN& 221 or permission.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
**HIN** . . . . . **Watch Technology**  
**NAME TO PREFIX**  
**Watch Technology** . . . . . **HIN**

Common Course Numbering explanation is on page 224.

**SPAN& 223 (5) C,N**  
**Spanish VI**

Continuation of SPAN& 222. Prereq: SPAN& 222 or permission.

**SPAN 236 (5) C,N**  
**Latin American Colonial Literature**

Surveys literary expressions of Colonial times through 18th century in Spanish America and Peninsular Spain. Covers representative and outstanding prose works of 16th and 17th centuries. Also offered as LIT 236.

**SPAN 238 (5) C,N**  
**Chicano Narrative**

Intro to significant works in Chicano literature. Study of genre development. Understand the implications of interdependence among diverse cultural groups. Also offered as LIT 238.

**SPAN 299 (1-5) C,N**  
**Independent Study**

Spanish Independent study of selected topics in Spanish arranged with instructor. Prereq: Permission and completion of 100 and 200 series or equivalent.

**SSC 330 (1-5) C**  
**Information Literacy for Undergraduate Research**

Explores strategies, topics, and concepts to develop research practices for Bachelor's level study. Focuses on in-depth investigation of the organization, retrieval, and evaluation of professional and discipline-specific digital and print information sources.

**Vietnamese**

*A three-course sequence in Vietnamese for beginners. Learn basic communicative skills in modern conversational Vietnamese. Emphasizes the systematic study of phonics, basic grammar, everyday expressions, and vocabulary and background in culture and customs.*

**VIET& 121 (5) C**  
**Vietnamese I**

Prereq: SLEP/ASSET scores indicating ENGL& 101 readiness or permission.

**VIET& 122 (5) C**  
**Vietnamese II**

Prereq: VIET 121, SLEP/ASSET scores indicating ENGL& 101 readiness or permission.

**VIET& 123 (5) C**  
**Vietnamese III**

Prereq: VIET 121 & VIET 122, SLEP/ASSET scores indicating ENGL& 101 readiness or permission.

**VIET& 221 (5) C**  
**Vietnamese IV**

Vietnamese for second-year students. Increase ability to communicate and interact through speaking, listening, reading, and writing. Prereq: VIET 123, SLEP/ASSET placement scores indicating ENGL& 101 readiness, or equivalent and/or permission.

**Linguistics**

*See Languages & Literature, page 318.*

**Logistics**

**LOG 197 (5) S**  
**Logistics**

Internship Optional. Provides significant experience in the areas of transportation, logistics management, or cargo handling and security. Apply classroom learning to real-life logistical issues. Each credit requires 55 working hours.

**LOG 235 (3) S**  
**Intro to Transportation and Logistics**

Covers fundamentals of commercial transportation: operations and processes in efficient movement of cargo, logistics, supply chain management, and the impact of these on the financial performance of business. Includes major transportation modes, the legal and regulatory environment, costing and pricing, security issues, managing transportation partnerships, and use of information and technology in the logistics sector.

**LOG 236 (4) S**  
**Intro to Air and Sea Operations**

Intro to the structure, organization, and operation of a modern airport and seaport, including current issues and challenges. Covers the critical interface with private sector providers of agency, terminal, stevedoring, tug, and line-handling services. Examines roles of customhouse brokers, freight forwarders, cargo consolidators, and government regulatory agencies.

**LOG 237 (4) S**  
**Supply Chain Management**

Examines the global supply chain, with an emphasis on supply sources, distribution, production planning, information systems, customer service, inventory management, warehouse management, supply chain relationships, and challenges facing managers today. Covers supply chain management systems and relationships.

**LOG 238 (4) S**  
**Domestic and International Freight**

Examines current and enduring issues of freight operations, air and surface modes, inbound and outbound logistics, and private and public policies. Focuses on expectations: customers want reliable service and reasonable prices; employees and regulators want greater safety and security, citizens want access to services and responsible care of the environment without tax increases, and shareholders want at least market returns on their investments.

**LOG 239 (4) S**  
**Transportation Border Security**

Covers border and transportation security, including the protection of seaports, ships, aircraft, trains, trucks, and pipelines. Includes physical and procedural controls, and regulations of the Department of Homeland Security, Transportation Security Administration, Federal Aviation Administration, and the U.S. Coast Guard. Discusses current threats, counter terrorism, new technologies, and the importance of passenger and cargo security to the global economy.

**Manufacturing Technician**

**MFGT 102 (5) S**  
**Introduction to Machining**

This course will provide instruction relating to safety, basic schematics, and overviews of manual and CNC machining.

**MFGT 104 (5) S****Introduction to Lasers and Optics**

This course will provide instruction relating to basic operation of the laser cutter and optical comparator.

**MFGT 105 (20) S****Basic Manufacturing**

This course is an introduction to machining using lecture, online, and hands-on classroom experience. The class will cover conventional machining, basic blueprint reading, math, health and safety, and an introduction to CNC machining. The class also introduces technology sectors, team concepts, team development, and problem solving. It is the first in a three quarter certificate.

**MFGT 106 (20) S****Intermediate Manufacturing**

This course prepares individuals as CNC machinists. Instruction covers programming, set-up and operation of CNC machines and turning centers, blueprint reading, math, machine tool theory, CMM inspection, surface plate techniques, and lean manufacturing.

**MFGT 115 (6) S****Manufacturing Technology Programming**

This course presents introductory concepts of machining technology as it affects part design, part programming, and part production. In addition, students will learn about numerical controls and its impacts on the manufacturing industry, and absolute and incremental dimensioning as it applies to numerical control machines.

**MFGT 120 (20) S****Advanced Manufacturing**

This course is designed to prepare individuals as CNC Machinists. Instruction covers advanced programming, set-up and operation of CNC machining and turning centers, geometric dimensioning and tolerance, trigonometry, machine tool theory, statistical process control.

**MFGT 196 (4 - 9) N****Manufacturing Internship**

This course is a cooperative work experience with local industry. Students will apply learned skills, gain actual on-the-job experience, and receive credit for work experience appropriate to their level of education.

**MFGT 244 (3) N****Preventative Maintenance**

This course provides an overview of Preventive Maintenance practices, including safety, plan development and implementation, technical documents, machine systems, measurement, alignment, coolants and lubricants, conduct and documentation of periodic checks, inspection, troubleshooting, and monitoring of machine operation.

**MFGT 245 (1) N****10 Hour OSHA**

This course is intended to raise the safety awareness and hazard identification knowledge of those working in the manufacturing field and to lead to OSHA 10-Hour General Industry Safety Certification.

**MFGT 246 (5) N****Mechanical Maintenance**

Course provides basic knowledge of machine maintenance as applied to mechanical components and systems. Topics include safety, documentation, mechanics, systems, setup, troubleshooting, and performance of maintenance. This course develops skills in alignment with NIMS Levels II and III Machine Building and Maintenance certifications.

**MFGT 247 (5) N****Motive Maintenance**

This course provides basic knowledge of machine maintenance as applied to motive components and systems. Topics include safety, documentation, setup and maintenance of pumps, motors, and mechanical and fluid power systems. This course develops skills in alignment with MIMS Levels II and II Machine Building and Maintenance certifications.

**MFGT 280 (5) N****Robot Certification**

This course provides an opportunity to learn how to setup, program, and operate industrial robots in both the virtual and real worlds

**Marine Technology****MGO 100 (24) C****Deckhand Cook**

Two-quarter class. Learn cooking theory and train to prepare crew meals at sea. Also includes seamanship, specifically securing ropes and wires to barges, vessel and equipment maintenance checks and repairs, and watch-keeping skills.

**MGO 101 (2) C****Principles of Marine Mechanics**

Provides training in proper use of hand tools, power tools (both hand and stationary), and measuring instruments commonly used in mechanical trades. Covers safe work practices, including safety equipment, work procedures, etiquette, and regulatory considerations. Includes fastenings, bearings, seals, gasketing methods, and other relevant materials and equipment.

**MGO 103 (3) C****Survival Craft**

A study of survival craft commonly found aboard ships today. Training in lifeboat operation and handling congruous to that required for the U.S. Coast Guard rating of Lifeboatman. Includes lifeboat nomenclature and equipment, launching procedures, handling by oars, inflatables, and other types of lifesaving equipment.

**MGO 105 (3) C****Leadership & Management**

Examines relevant concepts and principles in management, leadership, and organizational communication as they apply aboard ship. Emphasis on instilling an attitude and work ethic required to realize the objectives of "social Responsibility" advocated by the STCW Code. Satisfies the General Education Requirement in human relations.

**MGO 111 (3) C****Seamanship**

Study in seamanship to prepare for employment aboard ship. Includes training in seamanship congruous to that required for the U.S. Coast Guard rating of Able Seaman (AB). Includes nomenclature, ship structure, vessel equipment, deck fittings, knots and splices, rigging, and watchstanding duties.

**MGO 112 (2) C****Marlinspike**

Practical instruction in use of line, cordage, wire rope, and splicing methods. Includes reeving tackles and rigging stages, boat-swains' chairs, pilot ladders, and emergency steering gear.

**MGO 113 (3) C****Marine Safety**

Covers basic damage control, marine fire-fighting, and other safety topics to prepare for employment in the marine industry. Includes stability changes to a damaged vessel, emergency repairs to hull and vessel systems, proper use of marine fire-fighting equipment, vessel safety equipment, shipboard emergency procedures, and survival at sea.

**MGO 117 (4) C****Marine Engineering Orientation**

This course is the introductory underway practicum for first quarter students. The student receives and indoctrination to shipboard responsibilities for designated duty engineers and practical experience in engine room watchstanding. In addition, the student will receive instruction in the fundamentals of seamanship and will learn to perform preventive maintenance chores while underway. Student will make 8-hour voyages weekly throughout the academic quarter aboard MTC's training vessels.

**MGO 119 (3) C****Marine Mathematics**

Reviews algebraic and trigonometric methods. Includes the basics of signed numbers, linear equations, fractions, percentages, plane geometry, measurement, and variables which represent additional aspects of mathematics required to solve shipboard problems. Satisfies the General Education Requirement in computation. Prereq: Math placement exam or permission.

**MGO 120 (2) C****Vessel Maintenance**

Practical experience in vessel cleaning maintenance procedures and routine operation of a ship. Tasks include washing, sanding, scaling, chipping, grinding, priming, painting, stenciling, and other assigned work, both on the interior and exterior of training vessels. Focus on proper technique, optimal resource utilization, cost effectiveness, and corrosion prevention.

**MGO 123 (3) C****Basic Piloting & Navigation**

Introductory course focuses on chart navigation and basic methods of piloting. Emphasis on the use of charts and nautical publications, the IALS "B" buoyage system, and solving standard navigation problems. Learn to determine geographic and luminous ranges of lights; correct for compass error, set, and drift; plot dead reckoning tracks, running fixes, and lines of position; solve time, speed, and distance equations; predict tides and tidal currents; calculate simple ETA; formulate anchorage procedures.

**MGO 124 (2) C****Basic Vessel Handling**

Covers fundamentals of ship handling for small vessels, based on single-screw theory. Instruction in ship handling techniques includes backing and filling, "Y-backing," emergency stopping, flanking, and docking and undocking. Uses a small training vessel.

**MGO 127 (4) C****Fundamentals of Marine Electricity**

Fundamentals of AC and DC electricity and elementary electronics. Focuses on basic theory, measurements and instruments, routine maintenance of electrical components, and general operation of shipboard electrical systems. Prereq: MGO 119, MATH 098, or permission.

**MGO 133 (6) C****Seamanship Practicum**

Introductory underway practicum. Receive indoctrination to both watchstanding duties and shipboard responsibilities of an able seaman. Perform all deck-related tasks one might expect to encounter when actually at sea. Involves 12-hour voyages weekly aboard SMA's training vessels.

**MGO 137 (2) C****Electronic Navigation**

This course introduces the student to standard electronic equipment and systems used to aid navigation and communication. (NB: This course is not designed to satisfy the requirements of either 46 CFR 10.480 or 15.815. Will need to take a USCG-approved radar observer course from an organization certified by the Coast Guard.)

**MGO 140 (3) C****Nautical Rules of Road**

Comprehensive study of navigation rules and regulations, including purpose, technical provisions, and application. Provides a comparative study of the international (COLREGS) and inland (U.S. domestic) rules, with emphasis on practical interpretation and application.

**MGO 147 (6) C****Marine Engineering**

Practicum Introductory underway practicum. Receive an indoctrination to both watchstanding duties and shipboard responsibilities of a marine engineer. Covers how to read vessel blueprints, trace machinery systems, and troubleshoot simulated malfunctions. Involves 12-hour voyages weekly aboard SMA's training vessels.

**MGO 166 (6) C****Navigation Practicum**

Advanced underway practicum. Under supervision, assume role of mate aboard ship and be responsible for navigating the training vessel and operating all related navigational equipment as well as directing the deck crew while underway. Demonstrate competency, proficiency, and confidence in navigating a vessel without guidance. Includes 12-hour voyages weekly aboard SMA's training vessels. Prereq: MGO 133.

**MGO 177 (6) C****Advanced Engineering Practicum**

Advanced underway practicum. Under supervision, assume the role of Designated Duty Engineer aboard ship and be responsible for all facets of the operation of the engine room and related equipment while the training vessel is underway. Demonstrate competency, proficiency, and confidence in running an engine room without guidance. Involves weekly 12-hour voyages aboard SMA's training vessels. Prereq: MGO 147.

**MGO 200 (1-5) C****At Sea Internship**

Provides real-world at-sea experience on vessels of at least 500 gross tons that operate beyond the boundary line. During 30-60 day internship, demonstrate mastery of the competencies outlined in Table A-II/4 of STCW for ratings forming part of navigational watch or Table A-III/4 of STCW for ratings forming part of an engineering watch.

**MRT 101 (14) C****Intro to Composites**

Introduces fiberglass boatbuilding as well as wood joinery. Students work in teams to lay up, by hand, a complete fiberglass hull and then trim it with wood. Industry standards in safety and production will be modeled. Prereq: WCO 110 with a minimum GPA of 2.0.

**MRT 102 (4) C****Intro to Marine Electric**

Introduces basic AC and DC electrical systems as found on recreational and small commercial vessels. Safe installation and troubleshooting of engine starting and charging systems, DC house systems for lights, pumps, navigational gear, and shore power AC systems. Prereq: WCO 110 with minimum GPA 2.0.

**MRT 103 (10) C****Wooden Boat Repair**

Construction and repair of both contemporary and traditional wooden boats. Topics include tools, wood types, adhesives, pattern making, and interior joinery on wood and composite vessels. Personal and shop safety are emphasized. Prereq: MRT 101 and MRT 102 with a minimum GPA 2.0 for each course.

**MRT 104 (8) C****Marine Mechanical**

Introduces basic gas and diesel engine operating principles, service, maintenance, and troubleshooting. Course also covers marine sanitation systems, various marine pumps, and plumbing. Prereq: MRT 101 and MRT 102 with a minimum GPA 2.0 for each course.

**MRT 105 (14) C****Advanced Composites**

Complex fiberglass boatbuilding and repair problems, including repair of damaged fiberglass structures, plug and mold building, and advanced composites, including resin infusion. Direct hands-on experience in safe and productive use of machinery and supplies is emphasized. Prereq: MRT 103 and MRT 104 with a minimum 2.0 GPA for each course.

**MRT 106 (4) C****Marine Electrical II**

Advanced vessel electrical systems, sizing of battery banks, AC battery charging systems, inverter systems, engine operation gauge systems, gen-sets, and galvanic corrosion. Preparation for ABYC Marine Electrical Certification exam. Prereq: MRT 103 and MRT 104 with a minimum 2.0 GPA for each course.

**MRT 108 (10) C****Advanced Wooden Boat**

Provides the opportunity to build one's own boat or undertake a more comprehensive boat-restoration project. Emphasis is on performance in a professional manner in safety and project execution. Course is optional. Prereq: MRT 105 and MRT 106 with a minimum GPA of 2.0 for each course.

**MTS 202 (2) C****Stability**

Covers principles, terms, and procedures used in the determination of transverse, longitudinal, and damage stability of ships. Includes physical laws affecting a floating body, effects of cargo operations, loose water, fuel consumption, grounding, and flooding on vessel stability. Includes analyses of case studies involving loss of stability and how to perform trim and stability calculations.

**MTS 210 (2) C****Marine Meteorology**

A non-mathematical intro to meteorology, with specific emphasis on marine applications. Focuses on ocean weather phenomena as they impact vessel operations and the role of the ship's officer in observing, recording, and analyzing developing weather patterns.

**MTS 212 (4) C****Auxiliary Machinery & Ship Design**

Intro to auxiliary machinery and naval architecture. Includes heat exchangers, pumps, air ejectors, steering gear, distilling plants, pressure vessels, piping systems, cargo handling equipment, vessel design, vessel structure, and stability.

**MTS 217 (4) C****Diesel Engine Maintenance**

A course in marine diesel engines that includes theory, operation, troubleshooting, and repair. Students will learn fundamental operating procedures for marine diesel engines. Instructional format combines classroom lectures with applied training in diesel engine labs.

**MTS 221 (4) C****Applied Marine Electric**

An applied course in AC and CD motors and generator applications. In this course, the student will apply AC and DC electrical theory to typical marine equipment. Topics covered include: 3-phase circuits and transformers, DC machines, AC machines, batteries, and power electronics. The student receives practical experience in operating marine electrical equipment in the laboratory, on a panel board simulator, and aboard ship.

**MTS 223 (3) C****Advanced Piloting & Navigation**

Continuation of MGO 123. Emphasizes advanced aspects of navigation and piloting essential to ocean voyaging. Studies methods for determining ETA of CPA by distance off; learn navigational techniques for ocean sailing and perform advanced ETA computations involving time conversion. Includes use of a sextant in determining position and range, measuring speed by RPM, fuel consumption, and use of the speed log.

**MTS 228 (5) C****Marine Hydraulics**

Basic survey course utilizing lectures, laboratory experiments, and practical demonstrations. Students will perform routine maintenance, troubleshooting, and repair of marine hydraulic equipment. The student will be required to disassemble, analyze, and re-assemble various hydraulic components.

**MTS 233 (5) C****Marine Refrigeration**

Fundamentals of refrigeration cycles, system components, common refrigerants, theory of operation, and preventive maintenance techniques as they apply in the marine industry.

**MTS 257 (4) C****Advanced Diesel Engines**

Continuation of MTS 217. Advanced training in the disassembly and rebuilding of marine diesel engines. Special emphasis on air intake systems, fuel injectors, governors, lubrication systems, cylinder wear, ring wear, piston clearances, bearing wear, and crankshaft alignment. Prereq: MTS 217.

**MTS 294 (2) C****License Seminar**

Seminar on licensure knowledge requirements for deck/engineering candidates preparing to take the U.S. Coast Guard deck/engineering exams. Learn to consult and reference the Code of Federal Regulations, Title 46, and other publications.

**Materials Science****MSC 101 (5) N****Intro to Materials Science**

A one quarter introductory course describing the molecular structure of different materials and how that affects the materials' macroscopic characteristics, such as tensile strength and heat transmission. The emphasis of the course is on semiconductors and their application to electronic devices. Prereq: MATH 098 and CHEM& 121.

**Mathematics**

*Courses prepare students for advanced mathematics courses or application to work settings. Courses may include individual laboratory, lecture, or lecture/laboratory combination. Computers, graphing calculators, or both may be introduced and/or used. Collaborative learning may be emphasized. Consult with an advisor to determine how a particular class will be taught, its specific content, and credits awarded.*

**MATH 070 (5) C,N,S****Basic Math Skills HCP**

Designed for advanced ESL (level 5 and above) and ABE students who plan to enter Allied Health programs at North Seattle. Includes math and critical thinking skills needed for success in health care courses at North. Covers whole numbers, fractions, decimals, ratios, percents, metrics, graphs, basic accounting, and medicinal calculations. Particular attention is given to the healthcare context. Prereq: Instructor permission.

**MATH 080 (5) C,N,S****Preparatory Mathematics**

Computer-based, self-paced math course covering all topics from Basic College Mathematics through Intermediate Algebra. Provides an opportunity to accelerate through the developmental math sequence. Online access code required. Currently requires eligibility for MATH 081, 094, 095, or 098.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

HIN . . . . . Watch Technology

**NAME TO PREFIX**

Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**MATH 081 (5) C,N,S**  
**Basic Math Skills**

Covers operations with whole numbers, fractions, decimals and signed numbers, order of operations, ratios, proportions, percents, measurement, and geometry.

**MATH 083 (5) N,S**  
**Arithmetic**

Course covers operations with whole numbers, fractions, decimals and signed numbers, order of operations, ratios, proportions, percents, measurement, and geometry.

**MATH 084 (5) N**  
**Algebra I**

Basic operations with algebraic expressions, solving and graphing linear equations and inequalities, word problems, systems of equations. Prereq: MATH 081 or higher or placement exam.

**MATH 085 (5) N**  
**Algebra II**

Factoring polynomials, rules of exponents, solving quadratic equations and graphs, roots and radicals, solving rational equations, problem-solving. Prereq: MATH 084.

**MATH 086 (5) N,S**  
**Geometry I**

Covers points, lines and angles, triangles, parallel lines, polygons, proofs on congruence, and similarity of triangles. Calculator required. Prereq: MATH 085 with a 2.0 or higher.

**MATH 087 (5) C**  
**Foundations of Algebra**

Basic concepts of algebra that form a foundation for Intermediate Algebra. Topics include evaluating expressions, properties of variables, solving basic linear equations and inequalities, graphing lines in slope-intercept form, interpreting slope and intercepts, solving systems of linear equations by graphing, basic rules of exponents, basic rules of roots, solving simple quadratic equations, and basic polynomial arithmetic. Prereq: MATH 081 with a minimum grade of 2.0 or placement exam score.

**MATH 088 (5) C**  
**Algebra in Context**

A quantitative reasoning course in which ideas, concepts, and skills from algebra are applied to real-world contexts. Designed, with MATH 087, to prepare non-STEM students for courses such as MATH 107, 116, and 146. Extensive collaborative learning is utilized. Technology is applied appropriately. Reading and writing are both central elements of the course. Prereq: MATH 087 with a minimum grade of 2.0 or placement exam score or instructor permission.

**MATH 090 (1-5) N,S**  
**Mathematical Modules**

Review class on different topics in math ranging from arithmetic to precalculus to help students meet necessary prerequisites. Taken together, MATH 091, 092, and 136 in sequence result in credit for a college-level statistics course.

**MATH 091 (5) C,S**  
**Des Statistics with Algebra I**

For non-STEM majors. First of 3 Statway courses for teaching statistics with integrated algebra. Covers concepts and methods of statistics, with emphasis on data analysis, collecting data, graphical and numerical descriptions, correlation, and simple linear regression. Application problems are multidisciplinary and multicultural. Completion of Statway sequence results in credit for college-level statistics course. Prereq: Eligible for MATH 084 and ENGL& 101.

**MATH 092 (5) C,S**  
**Des Statistics with Algebra 2**

For non-STEM majors. Second of 3 Statway courses for teaching statistics with integrated algebra. Continuation of content from MATH 091. Completion of Statway sequence results in credit for a college-level statistics course. Prereq: MATH 091 with 2.0 or higher or permission; eligible for ENGL& 101.

**MATH 094 (5) S**  
**Intro/Intermediate Algebra I**

Covers basic math review, linear equations, and inequalities in one and two variables, systems of linear equations, and exponents and polynomials. Prereq: MATH 083 or COMPASS core of 48.

**MATH 095 (5) S**  
**Intro/Intermediate Algebra II**

Covers factoring and the use of factoring to solve equations; quadratic equations and methods to solve them; simplifying and solving rational expressions; basic math review, linear equations, and inequalities in one and two variables, systems of linear equations, exponents, and polynomials. Prereq: MATH 094.

**MATH 096 (2) C**  
**Preparation for Intermediate Algebra**

A bridge course between the Foundations of Algebra course (MATH 087) and our Intermediate Algebra course (MATH 098). Designed for future STEM majors and those wishing to fulfill an Intermediate Algebra (MATH 098) prerequisite for transfer to a 4-year institution. Covers polynomial math, square root math, solving quadratic equations, and graphing parabolas. Prereq: MATH 87 with minimum grade of 2.0, or placement exam, or instructor permission.

**MATH 097 (5) C,N**  
**Elementary Algebra**

Fast-paced, for those with previous success in algebra. Includes linear and quadratic equations and graphs, inequalities, exponents, polynomials, rational expressions, and radicals. Prereq: Placement exam.

**MATH 098 (5) C,N,S**  
**Intermediate Algebra**

Covers real number system, polynomial and rational expressions, exponents and radicals, first and second degree equations, linear systems of equations, and graphs. Intro to functions and logarithms. Prereq: Placement or Math 085 or Math 097 with 2.0 or better. Prereq: One year of high school algebra and placement exam, or MATH 087 and MATH 096 with 2.0 or better, or MATH 084 and MATH 96 with a 2.2 or higher, or permission of instructor (C).

**MATH 102 (5) C,N,S**  
**College Algebra**

For students in Math and Science. Bridges the gap between Intermediate Algebra and Pre-Calculus functions. Strongly recommended in preparation for MATH& 141 (S). Required for entry into MATH 120 (N). Prereq: MATH 098.

**MATH 103 (5) N****Geometry & Visualization**

Uses physical and computer constructions to investigate Euclidian and some non-Euclidian geometry in 2 and 3 dimensions. Covers point, line, and plane symmetry, with examples from tilings, rosette groups, wallpaper patterns, and symmetries of Polyhedra. Includes Platonic and Archimedean solids and the geometry of perspective drawing. Prereq: MATH 098 or placement test.

**MATH 104 (3) N****Trigonometry**

For students with no high school trigonometry or who need a review. Elementary plane geometry, right triangle trigonometry, general angles, identities, equations, and selected topics. Prereq: MATH 098 or placement exam.

**MATH 106 (5) N****Applied Algebra/Trigonometry I**

Focuses on mathematical models and their applications. Includes study of right triangle trigonometry, introductory vector applications, linear functions, systems of equations and inequalities, quadratic functions, rational expressions and models, integral and rational exponents, and radical and complex numbers. Equivalent in skill level to MATH 098. Prereq: MATH 097 or equivalent or placement test.

**MATH& 107 (5) C,N,S****Math In Society**

Primarily for liberal arts majors. Designed to enhance mathematics literacy. Instructors choose college-level topics centered around a theme such as Environmental Math, History of Math, or General Topics in Math. Fulfills QSR requirement for A.A. degree. Minimum 2.0 required to meet Intermediate Algebra proficiency and QSR. Prereq: MATH 098 or placement test. Prereq: Completion of MATH 088 or 098 with a 2.0 or better or placement exam (C).

**MATH 110 (3) C,N,S,V****Applied Math for Technician**

Emphasizes application of mathematics in professional technical courses. Prereq: Satisfactory score on College's math placement test.

**MATH 111 (1-5) N,S****Applied Mathematics I**

Intro to applied algebra, geometry, and trigonometry. Includes algebraic operations, integral exponents, scientific notation, dimensional analysis, metric system, radicals, calculator fundamentals, first-degree equations, plane and solid geometry, solution of right triangles, systems of equations, graphs, determinants, and applications. Prereq: Satisfactory performance on Math placement test.

**MATH 112 (5) N,S****Applied Mathematics II**

Includes factoring, algebraic fractions, fractional and quadratic equations, rational exponents, operations with radicals, oblique triangles, law of sines and cosines, and trigonometric graphs. Prereq: MATH 111 or permission.

**MATH 113 (5) N****Applied Mathematics III**

Covers vector analysis, resolution of vectors, properties of logarithms, exponential and logarithmic equations, radical equations, analytic geometry, statistics, inequalities, and applications. Prereq: MATH 112 or permission.

**MATH 115 (3) N****Solution Word Problems/Algebra**

Helpful in business, technical, physics, and college transfer courses. Covers systematic techniques for solution of algebraic word problems. Prereq: MATH 085 or concurrent enrollment.

**MATH 116 (5) N****Applications of Math: Mngmnt, Life and Soc Sci**

Explores functions and graphs as found in business and the social sciences. Students utilize linear, polynomial, exponential, and logarithmic functions; solve systems of equations and inequalities; and learn applications of the growth of money.

**MATH 118 (5) N****Applied Algebra/Trigonometry II**

Activity-based math course focuses on mathematical models and their applications. Includes the study of operations on functions, mathematical variation, exponential and logarithmic functions, numbers of other bases, trigonometric representation of complex numbers, polar coordinates, and the trigonometry of oblique triangles. Prereq: MATH 098 or MATH 106.

**MATH 119 (3) C****Math Behind Information Technology**

Learn basic aspects of discrete mathematics common to information technology: scientific notation, binary and hexadecimal number systems, logical operations and the design of logical networks, set theory, relations and functions, combinatorics, graphs and directed graphs, regular expressions, and finite-state machines.

**MATH 120 (5) N****Elementary Functions**

Studies the general nature of functions: polynomial, rational, exponential, logarithmic, and trigonometric. Fulfills QSR requirement for A.A. degree. Prereq: MATH 102 or MATH 098 (with grade of 3.5 or better) and high school trigonometry or placement.

**MATH& 131 (5) N,S****Math for Elementary Education I**

Covers the mathematics elementary teachers are responsible for teaching at K-8 levels, including computing with whole numbers, fractions, decimals, and percents; multiplicative comparisons and reasoning; ratio, rates, and proportions; negative numbers; algebra and graphing; relationships between time, distance, and rate; patterns and functions. Fulfills QRS requirement for A.A. degree. Prereq: MATH 098 with 2.0 or higher.

**MATH& 132 (5) N,S****Math for Elementary Education 2**

Covers the mathematics elementary teachers are responsible for teaching at K-8 levels, including polyhedra, polygons, symmetry, tessellations, size changes, curves and curved surfaces, transformations, length, angles, area and surface area, volume, measure formulas, quantifying uncertainty, simulating probabilistic situations; sampling; and organizing and interpreting data with one and two variables. Fulfills QSR requirement for A.A. degree. Prereq: MATH 098 or 131 or permission.

**MATH 136 (5) C,N,S****Inferential Statistics**

For non-STEM majors. Third of 3 Statway courses (MATH 091, 092, 136) for teaching statistics with integrated algebra. Continuation of content from MATH 092. Completion of Statway sequence results in credit for a college-level statistics course. Fulfills QSR requirement for A.A. degree through 2015 only. Prereq: MATH 092 with 2.0 or higher or permission; eligible for ENGL& 101.

**MATH 140 (5-10) C****Precalculus: Computer Based**

Examines polynomial, rational, exponential, logarithmic, and trigonometric functions, and related functional, algebraic, and geometric topics and applications. Computer-based, self-paced course requiring online access code. Replaces Math&141 &/or Math&142. Prereq: MATH&141 (MATH 098 with 2.5 or higher, OR 1.5 years of high school algebra AND placement exam within the last three years); MATH&142 (MATH&141 with 2.2 or higher, OR 2 years of high school algebra AND placement exam within the last 3 years).

**MATH& 141 (5) C,N,S****Precalculus I**

The sequence Math& 141 and Math& 142 covers polynomial, rational, exponential, and logarithmic functions; related functional and algebraic topics; topics in analytic geometry; systems of equations; trig and inverse trig functions; right triangle and oblique triangle trig; polar coordinates; vectors; and related trig applications. Fulfills the QSR requirement for A.A. degree. Prereq: MATH 095 or Math 098 with a 2.5 or higher, MATH 102 with a 2.0 or higher (S), or placement test.

**MATH& 142 (5) C,N,S****Precalculus II**

The sequence Math& 141 and Math& 142 covers polynomial, rational, exponential, and logarithmic functions; related functional and algebraic topics; topics in analytic geometry; systems of equations; trig and inverse trig functions; right triangle and oblique triangle trig; polar coordinates; vectors; and related trig applications. Fulfills the QSR requirement for A.A. degree. Prereq: MATH 095 or MATH 098 with a 2.5 or higher, MATH 102 with a 2.0 or higher (S), or placement test.

**MATH& 146 (5) C,N,S****Introduction to Stats**

(Formerly MATH 109) Covers descriptive methods, probability and probability distributions, samples, decisions, hypothesis testing, and statistical inferences. Fulfills QSR requirement for A.A. degree. Prereq: MATH 095, 098, or placement.

**MATH& 148 (5) C,N,S****Business Calculus**

Explores introductory topics in differential and integral calculus, with particular emphasis on understanding the principal concepts and their applications to business.

**MATH& 151 (5) C,N,S****Calculus I**

The sequence MATH&151, &152, and &163 covers limits, differential calculus and its applications, integral calculus and its applications, intro to differential equations, series including Taylor series, vector geometry in three dimensions, multivariable calculus, partial differentiation, double integrals in Cartesian, and polar coordinates and applications. Fulfills QSR requirement for A.A. degree. Prereq: MATH& 142 or placement test or MATH 120 (N).

**MATH& 152 (5) C,N,S****Calculus II**

The sequence MATH& 151, &152, and &163 covers limits, differential calculus and its applications, integral calculus and its applications, intro to differential equations, series including Taylor series, vector geometry in three dimensions, multivariable calculus, partial differentiation, double integrals in Cartesian, and polar coordinates and applications. Fulfills QSR requirement for A.A. degree. Prereq: MATH& 151.

**MATH& 163 (5) C,N,S****Calculus 3**

The sequence MATH&151, &152, and &163 covers limits, differential calculus and its applications, integral calculus and its applications, intro to differential equations, series including Taylor series, vector geometry in three dimensions, multivariable calculus, partial differentiation, double integrals in Cartesian, and polar coordinates and applications. Fulfills QSR requirement for A.A. degree. Prereq: MATH& 152.

**MATH 198 (1-5) C,N,S,V****Mathematics Workshop**

A problem-solving workshop using math topics considered appropriate by the instructor. May include study skills, note-taking systems, test-taking strategies, and group problem-solving approaches.

**MATH 211 (5) N****Elements of Statistics**

Statistical estimation and confidence intervals, t-tests and chi-square tests, linear regression theory, the analysis of variance. Prereq: MATH 116 or MATH& 141 with a 2.0 or higher or placement test.

**MATH 215 (2) N****Word Problems for Math& 151**

Covers word problems. Develops critical thinking skills to transition between applied and theoretical calculus. May use new technologies for problem-solving. Enhances skills necessary to compete more successfully in math/science programs at four-year schools. Coreq: MATH& 151.

**MATH 216 (2) N****Word Problems Math& 152**

Covers word problems. Develops critical thinking skills and bridges the gap between applied and theoretical calculus. May use new technologies for problem-solving. Enhances skills necessary to compete more successfully in math/science programs at four-year schools. Coreq: MATH& 152.

**MATH 220 (5) C,N,S****Linear Algebra**

Intro to linear algebra and its implications. Includes systems of linear equations, matrices, determinants, vector spaces, inner product spaces, eigenvalue problems, and similarity transformations. Prereq: MATH& 163 with a 2.0 or higher or permission.

**MATH 224 (5) C,N,S****Vector Calculus**

Continuation of MATH& 163. Includes vector-valued functions, vector fields, line and surface integrals, and the theorems of Green, Gauss, and Stokes, vector operators, and the extension of the calculus to the vectors in 2-D and 3-D space. Prereq: MATH& 163 with a 2.0 or higher or permission.

**MATH 238 (5) C,N,S****Differential Equations**

Covers first order differential equations, second order differential equations, their applications, and Laplace transforms. Covers the elementary theory of differential equations and the interrelationship between pure mathematics and applied mathematics.

**MATH 239 (5) N****Linear Systems of Differentials**

Continuation of MAT 220 and 238. Includes analysis of systems of ordinary differential equations using eigenvalues and eigenvectors, and using the phase plane. Also includes solving partial differential equations and boundary value problems using the method of separation of variables and Fourier series. Fulfills QSR requirement for A.A. degree. Prereq: MATH 220 & 238.

**MATH 298 (1-5) C,N,S****Special Topics in Math**

Problem-solving for special math topics. Prereq: Permission.

**MATH 299 (1-5) C,N,S****Independent Study**

Independent study of problems or topics of special interest. Prereq: Permission.

**Mechanical Engineering Technology****MET 102 (4) S****Creative Tech Problem Solving**

Intro to systematic procedures for engineering problem-solving. Review of basic math principles, geometry, algebra, trigonometry, and basic physical principles related to analysis of technical engineering problems.

**MET 180 (15) S****Electronics Assembly**

Intro to wire harness construction, mechanical assembly, and soldering skill for "through hole" and SMT. Includes small electric motor assembly, soldering of various terminals, wire tinning, passive and active components, integrated circuits, and other special devices. Emphasis on component removal techniques through hole printed circuit boards, surface mount technology, and basic soldering processes.

**MET 181 (5) S****Wire Harness Construction**

Second of three module course. Designed to give hands-on experience in the development of basic skills in wire harness construction techniques. Upon completion, student will be able to enter employment where basic wire harness skills are essential.

**MET 205 (4) S****Technical Statics**

Study of forces and force systems in equilibrium. Includes analysis for forces in trusses, frames, and machine components; friction; location of centroids; and evaluation of area moments of inertia. Prereq: MATH 113.

**MET 210 (4) S****Tech Strength Materials**

Studies principles of tension, compression, and shear stress to determine the correct size for structural beams and shafts. Examination of distribution and magnitude of stress in welded and riveted joints, thin-walled cylinders, torsional members, and beams. Prereq: MET 205.

**MET 220 (4) S****Basic Hydraulics**

Intro to the various components used in industrial hydraulic systems. Includes construction, characteristics, schematic symbols, and typical applications. Build a hydraulic circuit with actual components in the fluid power laboratory.

**MET 298 (10) S****Topics – Mech Engineering**

Special topics for individual or group study in the mechanical engineering technology field. Prereq: Permission.

**Medical Administrative Assistant****MAA 179 (3) V****MAA Scope and Practice**

Introduction to foundational information relative to healthcare and the Medical Administrative Assistant's role. The healthcare industry, health information management, privacy in the physician's office, health insurance, and medical practice marketing are included in this course. Prereq: Permission.

**MAA 195 (2.5) V****MAA Practicum**

An unpaid, required, 80-hour supervised practicum/internship opportunity to apply basic outpatient administrative and clinical skills in an ambulatory care/clinic setting. Practicum opportunities are decided through a competitive interview process. The acceptance to a clinic practicum site is a part of the educational process of the Medical Administrative Assistant program and does not guarantee employment. Prereq: Instructor or director's permission.

**MAA 196 (1) V****MAA National Exam Prep**

This course prepares students for the Medical Administrative Assistant national certification examination through the National Health Career Association (NHA). Students will utilize knowledge they have acquired throughout the Medical Administrative Assistant program. Prereq: Permission.

**Medical Assisting**

*The Medical Assisting Program includes short options in Medical Office Administration, Medical Reception, Clinical Lab Assisting, and Medical Fundamentals for Clinical Research Professionals.*

*There are basic health requirements needed for many Medical Assisting courses. See Advisor.*

**AMA 100 (3) N****Intro to Healthcare**

Provides students with an overview of the various medical specialties, types of practices, and the members of the healthcare team. Personal characteristics, certification, and professional organizations and career opportunities are explored. The role of managed care is discussed. A brief history of medicine as well as the effects of attitudes and culture on the delivery of healthcare is also presented. Critical thinking for the Medical Assistant will be emphasized.

**AMA 101 (3) N****Intercultural Communication**

Students will be introduced to various methods of effective communication, both oral and written. Basic psychology related to communication in healthcare is addressed and also includes cultural perspectives on illness, life threatening illness, stress, and burnout. The intent of this course is to focus on effective communication skills required in a medical setting in order to recognize individual needs and adapt communication accordingly to insure accuracy and quality of information.

**AMA 102 (2) N****Medical Law and Ethics**

This course introduces the student to legal and ethical terms and concepts related to ambulatory healthcare. Topics include but are not limited to medical ethical and bioethical issues, AAMA Code of Ethics, AMA Ethical Guidelines, death and dying, civil and criminal law, consent, and physician directives.

**AMA 103 (1) N****Ethical Concepts**

Intro to ethical terms and concepts related to ambulatory health care. Includes medical, ethical, and bioethical issues, AAMA Code of Ethics, AMA Ethical Guidelines, allocation of scarce resources, abortion and fetal tissue research, genetic engineering, artificial insemination and surrogacy, and dying and death.

**AMA 104 (2) N****Office Emergencies**

Provides knowledge of various emergency situations that may occur in a medical office or clinic and the related equipment and actions required of the health care team. Does not qualify for first aid certification, nor does it include practice in CPR.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**  
HIN . . . . . **Watch Technology**

**NAME TO PREFIX**  
**Watch Technology** . . . . . HIN

Common Course Numbering explanation is on page 224.

**AMA 105 (1) N**  
**Asepsis & Infection Control**

Provides information vital to all health care workers in infection control in the ambulatory care setting. Includes the process and chain of infection, inflammatory and immune responses, stages of infectious disease, standard (and other) precautions, state and federal laws and regulations, medical and surgical asepsis, sterilization of instruments and equipment. Prereq: Health requirements.

**AMA 106 (1) N**  
**Patient History**

Covers first patient contact, including the patient history and important information and initiating the patient medical record and charting methods. Presents the components of a physical examination from the assistant's and physician's perspectives. Prereq: Health requirements.

**AMA 107 (1) N**  
**Vital Signs/Measurements**

Take a patient's temperature, pulse and respirations, blood pressure, height, and weight. Practice in a simulated ambulatory care setting. Includes normal ranges and abnormalities, factors that affect the vital signs, the physiology of the vital signs, and related material. Prereq: Health requirements.

**AMA 108 (1) N**  
**Nutrition and Developmental Basics**

Intro to nutrition and digestion through studying types of nutrients, how to read food labels, various life stages and nutrition, therapeutic diets, and culture in relation to diet and nutrition.

**AMA 109 (1) N**  
**Pharmacology**

Explores principles of pharmacology, including history, origin, sources, properties, uses, and effects of drugs on living organisms. Covers uses and names of drugs, regulations and legal classifications, the PDR, and other drug reference sources. Examines drug actions, routes of administration, and forms of drugs, as well as the storage and handling of medications and controlled substances and emergency medications.

**AMA 110 (1) N**  
**Intro to Lab Safety**

Focuses on safety, laws, and regulations concerning the physician's office laboratory as well as an intro to the lab's departments, personnel, and testing procedures. Covers quality control, lab requisitions and reports, specimen collection, and the use of the microscope.

**AMA 112 (1) N**  
**Credentials & Employment**

Preparation for obtaining appropriate credentials, certification, and registration, and for the examination. Focuses on the medical assistant and offers information on credentialing of various allied health professionals, such as limited x-ray technician, lab assistant, medical transcriptionist, medical office manager, and EKG technician. Develop a job search strategy, prepare a résumé and cover letter, complete an employment application, and learn about interviews.

**AMA 114 (1) N**  
**Basic Psychology Principles**

Covers principles of psychology as well as the various theories of Jung, Erickson, and others. Studies influences on behavior, including heredity, culture, and environment. Prereq: 2.0 GPA and permission.

**AMA 115 (1) N**  
**HIV/AIDS**

Includes curriculum topics for a 7-hour HIV/AIDS education program as outlined by the Washington state Department of Health. Includes the etiology and epidemiology of HIV, transmission and infection control, testing and counseling, clinical manifestations and treatment, legal and ethical issues, and psychosocial issues.

**AMA 116 (1) N**  
**Principles of IV Therapy**

Presents the theory of intravenous (IV) therapy and its application in ambulatory care. Includes related anatomy and site selection, equipment and supplies, ongoing maintenance, calculations, risks, and complications. Also covers professional standards, national and state laws, and the role of the medical assistant. Prereq: 2.0 GPA and permission.

**AMA 117 (5) N**  
**Medical Terminology**

This course covers the terminology surrounding anatomy, physiology, pathology, tests, and treatments. The student will learn basic medical word structure and language. An overview of the body, including cavities and regions, anatomical planes and directional terms, divisions of the spine, and individual body systems. Spelling, pronunciation, and listening are practiced. Open to all students in healthcare professions.

**AMA 118 (5) N**  
**Disease and Pathology for MAs**

The course begins with a review of basic terminology, structure, and anatomy. Includes cavities, regions, anatomical planes, and directional terms. This course covers diseases, pathology, related tests, and procedures of all body systems. Prereq: Instructor permission.

**AMA 119 (5) N**  
**Anatomy and Physiology for MAs**

Anatomy and Physiology for Medical Assistants covers the structure and function of the human body as they complement each other in a normal healthy human body in Homeostasis. Students learn to integrate isolated factual information into a cohesive and understandable whole. Prereq: Instructor permission.

**AMA 120 (4) N**  
**Front Office Basics**

Introduction to medical front office responsibilities and functions. Covers the office environment as well as computer basics, their medical applications, and telephone techniques. Also covers medical scheduling, medical records and filing, business correspondence, and daily financial tasks in the medical office.

**AMA 121 (1) N**  
**Patient Scheduling**

Learn patient scheduling in an ambulatory care setting. Includes basic triage skills in gathering patient information verbally.

**AMA 122 (1) N****Medical Records & Correspondence**

Addresses the scope of medical records procedures, from how to initiate a new patient chart to entering data in the chart. Covers legal aspects, various types of filing systems, and types of reports filed in a medical record. Intro to types of business correspondence, computer applications, USPS rates and regulations, and faxing.

**AMA 123 (1) N****Daily Financial Management**

Learn medical practice daily financial tasks, including both manual and computerized bookkeeping, banking documents, and functions. Covers common tasks, such as using petty cash and purchasing, accounts receivable, and working with credit procedures.

**AMA 125 (5) N****Intro to Medical Insurance Coding**

Provides knowledge of medical insurance and the terminology necessary to understand and submit claims. Compares various types of medical insurance, including PPOs, HMOs, Medicare, Medicaid, Tricare. Teaches basic skills in CPT, ICD9/10, and HCPC coding. Also discusses DRGs, RBRVS, drug formularies, referrals, use of a fee schedule, and legal and ethical issues.

**AMA 140 (5) N****Patient Care**

Students will learn the theory and practice of patient care, including vital signs and the practices of charting, initiating patient records, and electronic medical records. Includes study of how to screen and evaluate the urinary, digestive, sensory, musculoskeletal, and neurological systems in a physical exam. Course covers aspects of prenatal, infant, child, and adult care.

**AMA 170–181 (2) N****AP/Terminology/Pathology I**

AMA 170-181 is a series of individual 1-unit courses which introduce anatomy, physiology, pathology, tests, and treatments. Study basic medical word structure and language, and practice spelling and pronunciation in each course.

**AMA 226 (1) N****Medical Insurance Coding I**

Provides practice in performing various medical insurance coding projects utilizing knowledge and skills obtained in AMA 125. Practice performing primarily ICD-9 and CPT coding, but includes all aspects of coding to simulate the process in an ambulatory health care setting. Prereq: AMA 125.

**AMA 227 (2) N****Medical Insurance Billing**

Provides advanced practice in performing medical insurance billing using skills obtained in AMA 125. Practice more complex medical insurance billing to build coding skill and accuracy. Prereq: AMA 125 and AMA 226 (AMA 226 may be taken concurrently) or permission.

**AMA 230 (3) N****Medical Office Management**

Introduction to managing a medical office. Explore management styles, teamwork, supervision, time management, marketing, financial management, facility management, and liability coverage. Create a procedure manual. Covers HR policies, hiring, training, evaluating, dismissing employees, personnel records, and laws.

**AMA 231 (3) N****Pharmacology**

Presented are the principles of pharmacology, which include history, origin, sources, properties, uses, and effects of drugs on patients. Uses and names of drugs, regulations and legal classifications, the PDR, and other drug reference sources will be covered. Includes drug actions, routes of administration and forms of drugs, the storage and handling of medications (including controlled substances), and emergency medications.

**AMA 232 (4) N****Sterile Procedures**

The student will learn theory and procedures for assisting a physician with minor surgery. Included are asepsis and sterile principles, surgical methods and common procedures, instruments, equipment, supplies, sterile field setup, and the process of sterile procedure. The vital areas of patient education and consent, preparation, and post-procedure follow-up care are also a focus. Includes information on the roles of the CDC and OSHA.

**AMA 233 (4) N****Diagnostic Procedures**

Introduction to diagnostic imaging radiation therapy and nuclear medicine. Includes safety, contrast media, patient preparation, and positioning. Students learn theory and practical procedures in performing a standard electrocardiogram, including equipment, lead placement, basic interpretation of emergency conditions, the cardiac cycle and its relation to the tracing, and artifacts. Covers basic theory of a stress EKG and Holter monitor exams related to spirometry.

**AMA 234 (3) N****Phlebotomy**

The student will learn theory and practical procedures for blood collection by venipuncture and capillary puncture. The anatomy and physiology of the cardiovascular system, equipment needed for venipuncture, and technique are covered. This course also includes patient interaction, selecting the proper site, safety, evacuated tube vs. syringe method, the use of a butterfly collection system, capillary puncture, and troubleshooting the unsuccessful venipuncture.

**AMA 235 (4) N****Laboratory Skills**

Covers safety and regulations concerning the physician's office laboratory, the importance of urinalysis in the diagnosis and treatment of various diseases, and how to correctly perform a urinalysis. Students are introduced to the basics of microbiology/chemistry as related to the medical assistant in a physician's office laboratory. Also includes CLIA waived lab testing theory, procedures, and values, as well as the practical application of skills.

**AMA 236 (2) N****Credentials Preparation**

Medical Assisting students for the CMA exam and applying for Washington state credentials. Includes job search and professional skills, such as writing a resume and cover letter, completing applications, interviewing, and professionalism. Students will learn to develop a job search strategy and prepare for externships. Mock interviews are done to prepare the student for a real interview, and a portfolio is created to show at interviews.

**AMA 240 (1) N****Gynecology Pediatrics**

Learn the theory and practice of assisting with typical OB/GYN and pediatric office visits and procedures. Includes prenatal visits, pregnancy complications, parturition and postpartum, GYN exam, measuring, vital signs, collecting specimens, screening hearing and vision, and common childhood disorders.

**AMA 241 (1) N****Male Reproductive/Gerontology**

Presents various disorders, exams, and procedures of the male reproductive system. Covers gerontology, including facts and biases about aging, physiological and psychological changes in each body system. Also addressed are memory- or visually-impaired elderly patients and the issue of elder abuse. Prereq: Health requirements.

**AMA 242 (2) N****Exams by Body Systems**

Theory and practice in various examinations and procedures grouped by body system. Includes urinary catheterization, spirometry, visual acuity, irrigations, casting and cast removal, sputum collection, and oxygen administration. Presents signs and symptoms of diseases in each system. Prereq: Health requirements.

**AMA 243 (1) N****Rehabilitation**

Intro to using physical and mechanical agents to aid patients. Covers the principles of body mechanics for the health care worker as well as transferring patients, assisting with ambulation, and using assistive devices, therapeutic exercises, and modalities. Emphasizes safety. Prereq: Health requirements.

**AMA 244 (1) N****Intro to Imaging**

Intro to diagnostic imaging with an emphasis on radiology. Includes ultrasound, PET and CT scans, as well as MRI, radiation therapy, and nuclear medicine. Radiology includes safety, contrast media, patient preparation, and positioning.

**AMA 245 (2) N****Minor Surgery**

Learn theory and procedures for assisting a physician with minor surgery. Includes asepsis and sterile principles, surgical methods, common procedures, instruments, equipment, supplies, sterile field setup, and the process. Focuses on the vital areas of patient education and consent, preparation, and post-procedure follow-up care. Prereq: Health requirements.

**AMA 246 (1) N****Patient Prioritizing Instruction**

Covers accurate prioritizing of patients and good patient instruction. Using effective oral and written communication, learn to prioritize a patient's needs by phone or in-person and to interview them. Explain general office policies and general information, instruct in health maintenance, teach about disease prevention, and locate community resources.

**AMA 250 (5) N****Medication Administration**

Learn theory and practical procedures in calculating medication dosages and administering medications. Includes legal and ethical factors, the medication order or prescription, dosages, drug labels, calculating dosages, the six rights of drug administration, and various routes to deliver medications. Practice giving oral medications, various parenteral routes, and injections intradermally, subcutaneously, and intramuscularly.

**AMA 251 (1) N****EKG**

Learn theory and practical procedures for performing a standard electrocardiogram. Includes the equipment, lead placement, basic interpretation of emergency conditions, the cardiac cycle, and its relation to the tracing and artifacts. Includes the basic theory of a stress EKG and Holter monitor, although not practiced. Prereq: Health requirements.

**AMA 252 (2) N****Phlebotomy**

Learn theory and practical experience in procedures for blood collection by venipuncture and capillary puncture. Covers the anatomy and physiology of the cardiovascular system, equipment needed, and technique. Includes patient interaction, site selection, safety, evacuated tube vs. syringe method, use of a butterfly collection system, capillary puncture, and troubleshooting the unsuccessful venipuncture. Prereq: Health requirements.

**AMA 253 (1) N****Hematology**

Learn the theory and practical procedures in hematology testing for the physician's office laboratory. Tests include white and red blood cell counts, white cell differential, erythrocyte indices, erythrocyte sedimentation rate, and automated hematology. Also covers specimen preparation, testing, quality assurance, normal ranges of results, and documentation. Prereq: Health requirements.

**AMA 254 (1) N****Urinalysis**

Covers the importance of urinalysis in the diagnosis and treatment of various diseases and how to correctly perform a urinalysis. Includes safety, quality control, equipment and supplies, collection methods, and the examination of urine physically, chemically, and microscopically. Prereq: Health requirements.

**AMA 255 (1) N****Basic Microbiology**

Intro to the basics of microbiology as related to the medical assistant in a physician's office laboratory. Includes classification, cell structure, equipment, safety, specimens, collection procedures, and the microscopic examination of bacteria. Covers culture media and the microbiological culture, biochemical tests, identification systems, sensitivity testing, parasitology, and mycology. Prereq: Health requirements.

**AMA 256 (1) N****Specialty Lab Tests & Chemistry**

Includes a variety of lab tests not covered elsewhere, including pregnancy testing, infectious mononucleosis, blood typing, semen analysis, phenylketonuria, tuberculosis, blood glucose, cholesterol, triglycerides and blood urea nitrogen (BUN) testing. Learn theory, procedure, equipment, supplies, values, and safety. Perform the tests in the classroom laboratory. Prereq: Health requirements.

**AMA 290 (9) N****MA Externship**

Provides the opportunity to practice Medical Assisting skills and gain valuable experience in the ambulatory health care setting. Share experiences and information with peers and instructors. On site, the student is guided by the externship site supervisor in performing various administrative and clinical tasks as expected of an entry-level medical assistant. Requires 198 unpaid hours in the clinical setting. Includes review and preparation for the CMA exam.

**Medical Assisting Pathology****AHM 101 (1) N**  
**Pathology 1**

Series of 5 one-unit courses (to total 5 credits of Pathology) which cover a basic review of terminology, structure, and basic anatomy, including cavities, regions, anatomical planes, and directional terms for various systems and their related tests and procedures.

**AHM 102 (1) N**  
**Pathology 2**

Series of 5 one-unit courses (to total 5 credits of Pathology) which cover a basic review of terminology, structure, and basic anatomy, including cavities, regions, anatomical planes, and directional terms for various systems and their related tests and procedures.

**AHM 103 (1) N**  
**Pathology 3**

Series of 5 one-unit courses (to total 5 credits of Pathology) which cover a basic review of terminology, structure, and basic anatomy, including cavities, regions, anatomical planes, and directional terms for various systems and their related tests and procedures.

**AHM 104 (1) N**  
**Pathology 4**

Series of 5 one-unit courses (to total 5 credits of Pathology) which cover a basic review of terminology, structure, and basic anatomy, including cavities, regions, anatomical planes, and directional terms for various systems and their related tests and procedures.

**AHM 105 (1) N**  
**Pathology 5**

Series of 5 one-unit courses (to total 5 credits of Pathology) which cover a basic review of terminology, structure, and basic anatomy, including cavities, regions, anatomical planes, and directional terms for various systems and their related tests and procedures.

**AHM 117 (1) N**  
**Intro to Lab Clinic Safety**

Covers safety, state and federal laws, regulations, organization, personnel, and testing procedures of a laboratory. Includes requisitions, reports, specimen collection, infection, inflammatory and immune responses, infectious disease, standard precautions, and quality control.

**AHM 118 (1) N**  
**Intro to Patient History**

Covers medical records: starting a chart, entering data, charting methods, legal aspects, confidentiality, types of filing systems, and types of reports. Includes patient history and important information and components of a physical examination.

**AHM 124 (1) N**  
**Intro to Medical Transcription**

Intro to the career of medical transcription and the American Association for Medical Transcription. Covers transcription equipment and tools, basic guidelines, reports that are transcribed, turnaround time, and correcting work. Presents the laws and ethics of medical transcription. Prereq: Successful completion of medical terminology or permission.

**AHM 140 (1) N**  
**Phlebotomy 2**

Presents more advanced techniques and increased skills in phlebotomy and difficult blood draws. Builds on skills learned in AMA 252. Prereq: AMA 252, health requirements.

**AHM 141 (1) N**  
**Lab Equipment/Measurement**

Intro to lab equipment, measurements and calculations related to lab specimen collection, processing, and testing. Learn how math is used in collecting and preparing specimens, the use of military time, preparing reagents, dilution of specimens, and calculating amount of preservative needed. Prereq: Assessment test score or placement into MATH 084/085 or 097 or higher, health requirements.

**AHM 142 (1) N**  
**Non-Blood Specimen Collection**

Covers knowledge and skills required to obtain specimens of body fluids or tissues other than blood. Includes techniques for collecting stool, sputum, urine, wound cultures, and the preparation and testing of such specimens. Practice with other students. Prereq: Health requirements.

**AHM 151 (1) N**  
**OB GYN Pediatric Theory**

Learn theory of typical OB/GYN and pediatric office visits and procedures. Includes prenatal, pregnancy complications, parturition and postpartum, GYN exam and related conditions and procedures, measuring an infant or child, taking vital signs, collecting specimens, screening hearing and vision, and common disorders of childhood.

**AHM 152 (1) N**  
**Theory of Exams by Body**

Covers theory in various examinations and procedures grouped by body system, such as urinary catheterization, spirometry, visual acuity, irrigations, casting and removal, sputum collection, and oxygen administration. Also includes symptoms of diseases in each system and intro to pathology.

**AHM 153 (1) N**  
**Theory of Medical Calculations Administration**

Learn theory of calculating dosages and administering medications. Includes legal and ethical factors, medication order or prescriptions, dosages, drug labels, the six rights of drug administration, and various routes to deliver medications.

**AHM 154 (1) N**  
**EKG Theory**

Covers theory and practicum of a standard electrocardiogram, including equipment, lead placement, basic interpretation of emergency conditions, the cardiac cycle, and its relation to the tracing and artifacts. Covers basic theory of a stress EKG and Holter monitor.

**AHM 155 (1) N**  
**Phlebotomy Theory**

Learn theory for blood collection by venipuncture and capillary puncture, anatomy, and physiology of the cardiovascular system, equipment needed for venipuncture, and techniques.

**AHM 160 (1) N**  
**Proofreading and Editing**

Provides the basic skills for proofreading and editing medical documents, including language mechanics, steps of editing, proofreading guidelines, and standard notations. Addresses legal and ethical considerations, such as editing that will not alter meaning and context. Prereq: Completion of medical terminology course or permission. Type 25 wpm and know MS Word.

**AHM 161 (1) N**  
**Medical Transcription Practice 1**

Provides practical experience in medical transcription and completing medical reports using recorded dictation. Use AHM 124 skills and word processing to produce accurate documents with increasing speed. Prereq: AMA 124 or permission.

**AHM 162 (1) N**  
**Medical Transcription Practice 2**

Gain complex practical experience in transcribing various medical reports using recorded dictation. Prereq: AHM 161 or permission.

**AHM 163 (1) N**  
**Medical Transcription Practice 3**

Gain complex practical experience in transcribing various medical reports using recorded dictation. Build speed and accuracy transcribing a wide variety of documents. Prereq: AHM 162.

**AHM 231 (3) N**  
**Exam Review and Prep**

For those who have graduated an accredited medical assisting program and who are eligible to sit for the National CMA (Certified Medical Assistant) Exam offered through the AAMA (American Association of Medical Assistants). Variable credit lecture course that can be offered either on campus or onsite at a facility that requests review for their employees.

**FINDING COURSES**

Course names and course prefixes are cross-referenced in an index beginning on page 225. For example:

**PREFIX TO NAME**

HIN . . . . . Watch Technology

**NAME TO PREFIX**

Watch Technology . . . . . HIN

Common Course Numbering explanation is on page 224.

**CMA 101 (5) N**  
**Introduction to Medical Assisting**

A history and overview of medical practices and the healthcare team, certification and professional organizations. Effective communication related to communication in healthcare is addressed; includes cultural perspectives on illness. This course introduces the student to legal and ethical concepts related to ambulatory healthcare. Emphasizes critical thinking, HIV/AIDS education, and emergency preparedness.

**CMA 102 (4) C [SVI]**  
**Fundamentals of Administrative Medical Assisting**

Provides students with opportunities to acquire knowledge of the medical front office, focusing on skills and techniques required for the clinical and administrative functions of a medical assistant in an ambulatory care setting. Covers the office environment as well as computer medical application, telephone techniques, professional correspondence, and medical records management relative to electronic health records. Prereq: Instructor's permission.

**CMA 103 (6) N**  
**Fundamentals of Clinical Medical Assisting**

Students learn medical assisting theory and how to apply it to medical assisting clinical practice. Clinical practice will include, but not be limited to, vital signs, equipment sterilization, diagnostic procedures, and role responsibilities when assisting physicians with their work. Medical device knowledge will include wheelchairs, crutches, nebulizers, and audiometry. Communication, documentation, and patient education topics are also discussed. Instructor permission.

**CMA 104 (5) C [SVI]**  
**Billing and Coding Procedures**

Covers insurance and the electronic billing processes, financial accounting aspects of medical practices, and health insurance and numeric/alphanumeric codes utilized in healthcare for the purpose of maintaining accurate medical records and ensuring efficient claims processes. Provides students with opportunities to apply their knowledge within a simulated medical office setting. Emphasizes various types of health insurance, billing, and bookkeeping. Prereq: Instructor's permission.

**CMA 105 (10) C [SVI]**  
**Phlebotomy and Laboratory Procedures**

Provides students with a professional environment within a simulated clinic setting focused on invasive procedures. Students are introduced to phlebotomy, CLIA waived tests theories, procedures and values, specimen handling and transport, safe clinical practices, and effective medical record documentation and practical application of skills as related to the medical assistant in a healthcare provider environment. Prereq: Instructor's permission.

**CMA 106 (7) N**  
**Administrative and Clinical Practice/Review**

This course will be a full quarter of review of all administrative and clinical procedures. Students will practice as if they were in an actual medical clinic. This course will be mostly hands on with minimal lecture.

**CMA 107 (8) N**  
**Medication Administration & Pharmacology**

The student will learn theory and practical procedures in calculating medication dosages and administering medications. Theory includes legal and ethical factors, the medication order or prescription, dosages, drug labels, calculating dosages, the seven rights of drug administration, and various routes to deliver medications. These routes include practice in oral medications, various parenteral routes – injections intradermal, subcutaneously, and intramuscularly.

**CMA 08 (12) N**  
**Medical Assisting Practicum**

Students will create their resume and cover letter and participate in mock interviews as well as acquire study skills for the national CMA exam for the first weeks. Students will then participate in an unpaid practicum (externship) of 180 hours in a medical clinic. Students will also apply for CMA exam, MA-C WA State License, and graduation.

**CMAA 101 (9) S**  
**Basic Clinical Skills, Patient Exams, Acute Care**

This is an apprenticeship course for the Washington Association of Community and Migrant Health Centers. Students learn to measure patients, perform diabetic foot checks, assess eyes and ears, assist with gynecological and prenatal exams, position and drape patients, measure infants, and understand medical asepsis.

**CMAA 102 (6) S**  
**Acute Care, Advanced MA, Specimen Collection**

This course is part of the Certified Medical Assisting Apprenticeship program, offered through Washington Association of Community and Migrant Health Centers. Students learn the principles of sterilization and disinfection, how to assist with minor office surgery, the administration of medication, cardiopulmonary procedures, point-of-care testing, specimen collection, and urinalysis.

**CMAA 103 (8) S**  
**Lab Skills and Principles of Team-Based Care**

This is a Certified Medical Assistant Apprenticeship course for the Washington Association of Community and Migrant Health Centers. Students learn phlebotomy, hematology, blood chemistry and immunology, medical microbiology, and an introduction to the Patient-Centered Care, including how to work as a key member of a patient-centered care team.

**CMAA 104 (10) S**  
**Principles of Patient-Centered Care**

This is a Certified Medical Assistant Apprenticeship course offered through the Washington Association of Community and Migrant Health Centers. Students learn innovative approaches to providing and coordinating care. Students also learn to help patients self-manage chronic illnesses, such as diabetes and hypertension.

## Medical Vocabulary

**AHI 100 (3) N**  
**Intro to Medical Vocabulary**

General survey of medical terminology introducing health service workers to the basic rules and fundamentals in medical vocabulary-building.

**Meteorology****MEY 100 (5) C****Meteorology**

Intro to the composition, structure, motions, and origin of the atmosphere; forecasting; climates and how they have changed through time; and effects of human activities on weather and climate.

**MEY 298 (5) C****Special Topics**

Seminar on selected topics or activities in meteorology. Prereq: MEY 100 or permission.

**MEY 299 (5) C****Independent Study**

Independent study of approved topics in meteorology. Prereq: MEY 100 and permission.

**MTA – Pre-Apprenticeship Construction Training****MTA 100 (1) V****Strategies for Success for PACT Students**

Explore opportunities for greater academic, professional, and personal success. Learn that change is possible, using tools to develop cognitive skills so change can take place.

**MTA 160 (2) V****Construction Job Skills**

Study workplace issues, develop professional attitudes and workplace ethics, and learn how to survive in today's working environment.

**MTA 161 (5.5) V****Construction Job Readiness**

Prepare for entry-level employment as a beginning apprentice in a building/construction trade. Focuses on job hunting materials and skills, entry requirements for various trades, and knowledge of the union apprenticeship system.

**MTA 162 (6) V****Trades Math I**

Review fundamentals and develop competency in basic mathematical/arithmetic functions with applications to building/construction trades.

**MTA 163 (3.5) V****Blueprint Reading**

Learn basic blueprint terms and symbols and follow the plan in a construction application.

**MTA 164 (0.5) V****Industrial First Aid/CPR**

Covers cardiopulmonary resuscitation (CPR) and basic industrial first aid as it applies to the building and construction trades. Learn to apply correct life saving techniques, assess, and treat the sick and injured.

**MTA 165 (0.5) V****Road Flagging**

Prepare for road flagging certification. Learn to establish and maintain a safe traffic flow in a construction zone, understand hazardous and safe behaviors in flagger situations, and review material to successfully pass the Washington state 3-year flagger certification examination. Continuing Education class.

**MTA 167 (3) V****Construction Trades Training I**

Survey of skills and responsibilities of 12 building/construction trades. Visit the training centers of several trades: carpentry, laborer, electrician, plumber, drywall installer, brick layer, painter, cement mason, sheet metal worker, and ironworker.

**MTA 168 (3.5) V****Construction Trades Training II**

Intro to terminology of carpentry trade. Includes basic components and methods of frame construction and wallboard installation, accurate measuring techniques using appropriate tools, proper use of hand and power tools, workplace safety, and protection from falls.

**MTA 169 (2) V****Construction Trades Training III**

Continuation of MTA 168. Includes more skill training, construction safety, and hands-on experience through community projects.

**MTA 170 (2) V****Asset Preparation**

Review and/or learn language arts, mathematical computation, and reading comprehension skills to achieve at least minimum required test scores of the ASSET exam for placement into apprenticeship. Practice taking tests.

**MTA 172 (1) V****Forklift Operation & Control**

Covers functions and parts of a forklift, OSHA forklift regulations, safety habits, and proper picking, placing, and moving of a variety of loads through a work site. Take the test to become an OSHA certified forklift operator, a federal requirement in industry.

**MTA 174 (2) V****Tools/Material Identification/Handling**

Intro to construction-related tools and building materials. Learn proper use of tools and materials: lumber, brick, blocks, scaffolds, wheelbarrows, and shovels. Emphasizes occupational safety.

**MTA 175 (2) V****Forms and Grades**

Learn form-building for pouring concrete, including proper techniques of measuring, digging, compacting, leveling, laying out and building concrete forms.

**MTA 176 (2.5) V****Trades Math II**

Continuation of MTA 162. Develop competency and review fundamentals of general mathematics with applications to building and construction trades.

**MTA 177 (2) V****Fitness and Nutrition I**

Develop competency in personal dietary management and physical fitness through regular stretching and aerobic exercise to assure a more injury free and healthier career in construction.

**MTA 178 (2.5) V****Fitness and Nutrition II**

Continuation of MTA 177. More stretching, dietary information, aerobic exercise, and upper body strengthening exercises.

**MTA 179 (1) V****OSHA 10**

Safety Occupational Safety and Health Administration regulates construction safety and certifies workers on safety practices. OSHA 10 (first level) provides 10 hours of safety training: intro to OSHA, personal protective equipment, stairways and ladders, electrical, fall protection, confined space, scaffolds, cranes, excavations, and materials handling.

**Music****MUSC 100 (5) C,S****Music In Western World**

Intro to classical music. Provides an understanding of musical expression through works of the great composers. Emphasizes music listening through recordings, films, and special performances.

**MUSC& 105 (5) C,N**  
**Music Appreciation**

Explores the elements, forms, and styles of music in genres such as Classical, Rock, Pop, Rap, Hip Hop, and Jazz. Students will develop listening perception to increase their enjoyment and understanding of various musical styles, and discover commonalities among various styles of music. Prereq: Eligibility for ENGL 101.

**MUSC 109 (5) S**  
**World Beat**

Study Examines societal beliefs, identity, history, world view, values, and aspirations expressed by selected non-Western cultures (or groups within these cultures) through music. Features both traditional and contemporary popular music.

**MUSC 110 (5) C,N**  
**Intro to World Music**

Covers the music of selected societies of the world within their cultural context. Using musical concepts on a cross-cultural basis, examine various cultural areas and societies.

**MUSC 113 (5) C,N**  
**Music in the U.S.**

Overview of musical developments in the United States, from Colonial times to the present, using live performances, videotapes, and recordings. Examines contributions of ethnic/minority groups and the relevant social issues connected with these musical experiences.

**MUSC 116 (5) C,N,S**  
**Rock Music I**

Examines rock music as a musical, social, cultural, economic, and political force in the United States. Emphasizes early rock music development.

**MUSC 117 (5) C,S**  
**Rock Music II**

Examines rock music as a musical, social, cultural, economic, and political force in the United States. Emphasis on the later decades of rock music development.

**MUSC 119 (1-3) C,N**  
**Beginning Group Instruction Voice**

Emphasis on beginning techniques of breath control, placement of tone, posture, and other basic concepts. Recommended: Enrollment in MUSC 125 for students without experience in reading music (C,S).

**MUSC 120 (2) C**  
**Beginning Group Instruction Voice**

Continuation of MUSC 119. Prereq: MUSC 119 or permission.

**MUSC 125 (5) C,N,S**  
**Fundamentals of Music**

Intro to reading and writing music for non-majors. Builds musical knowledge and skills to complement student's natural music ability.

**MUSC 126 (2) C,N,S**  
**Beginning Group Piano**

1st Qtr Class piano for general student to develop reading skills and technical proficiency.

**MUSC 127 (2) C,S**  
**Beginning Group Piano**

2nd Qtr Class piano for students with previous keyboard experience. Prereq: MUSC 126 or permission.

**MUSC 128 (2) C,S**  
**Beginning Group Piano**

3rd Qtr Continuation of MUSC 127. Prereq: MUSC 127.

**MUSC 130 (1-2) C,N**  
**Individual Instruction: Voice**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 134 (1-2) C,N**  
**Individual Instruction: Woodwinds**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 135 (1-2) C,N**  
**Individual Instruction: Percussion**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 136 (1-2) C,N**  
**Individual Instruction: Composition**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 137 (2) C,N**  
**Individual Instruction: Harpsichord**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 138 (1-2) C,N**  
**Individual Instruction: Guitar**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 139 (1-2) C,N**  
**Individual Instruction: Harp**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 140 (1-5) C,N,S**  
**College Choir**

Focus on musicianship, vocal techniques, and performance skills for the large choral ensemble through study of literature from all stylistic periods. Present one concert per quarter in various musical styles and cultures. Daily attendance required. May be repeated for up to 15 credits. Prereq: Ability to match pitch.

**MUSC& 141 (5) C**  
**Music Theory I**

Covers rudiments of music notation, scales, intervals and triads, rhythmic and melodic sight-reading, and dictation. Increases simple four-part writing and analysis and correlated keyboard exercises. For music majors and minors.

**MUSC& 142 (5) C**  
**Music Theory II**

Continuation of MUSC& 141. Elementary harmony and ear training, including 4-part harmony. Prereq: MUSC& 141 or permission.

**MUSC& 143 (5) C**  
**Music Theory III**

Continuation of MUSC& 142. Prereq: MUSC& 142.

**MUSC 144 (2) C**  
**Vocal Jazz Ensemble**

Small vocal ensemble which performs jazz music.

**MUSC 145 (2) C**  
**Pop Vocal Ensemble**

Singing group featuring pop, Broadway show tunes, and jazz. Focus on enjoyment and enrichment. Performances quarterly.

**MUSC 146 (5) C**  
**Popular Music Ensemble I**

Introduces how to read a lead sheet, chord charts, and rhythm patterns to gain the skills needed as instrumentalists and vocalists to perform in today's commercial music world. Students practice and perform classic songs from a variety of genres within the commercial music field: Pop, Rock, Soul, Folk, Jazz, Rap, and Hip Hop. Students cover current hits and compose original music. Open to all students and all levels of musicianship.

**MUSC 147 (5) C**  
**Popular Music Ensemble II**

Continues the learning and performance activities of the MUSC 146 (Popular Music Ensemble I). Provides students an opportunity to write, perform original songs, lead an ensemble, and perform covers of current popular music hits. Focuses on interaction of instrumental and vocal performance groups in a variety of musical genres and provides opportunities for students to design their own solo performances in concert and the recording studio. Prereq: MUSC 146 with a 2.0 or higher, or instructor's permission.

**MUSC 148 (5) C**  
**Jazz Ensemble III**

Provides opportunity to perform in a small-combo and big band jazz ensemble. Explores the literature associated with modern jazz composers, such as Dizzy Gillespie, Herbie Hancock, Thelonious Monk, Charles Mingus, Chick Corea, and more. Examine and perform avant-garde and contemporary jazz styles in a small group setting. Prereq: Ability to read music at a 12th grade level or higher.

**MUSC 149 (2) C**  
**Jazz Combo**

Performance class requiring reading and improvisational skills. Develops small ensemble skills in the jazz musician as a vocalist or instrumentalist.

**MUSC 150 (5) C**  
**Studio Jazz Orchestra**

Emphasis on big band concept. Covers style and performance techniques. Prereq: Performance ability.

**MUSC 151 (1-3) C,N**  
**Performance Experience**

Instruction on presenting a public performance the skills beyond the notes. Work as soloists or in small combinations. All styles. Prereq: Performance ability.

**MUSC 153 (2) C**  
**Contemporary Jazz Ensemble**

Membership by audition. Combines talents of professional and student musicians in the big-band experience. Practice and perform in concert the newest big-band arrangements which cover all styles of big-band jazz. Evening rehearsals. Prereq: Ability to perform at group level and permission.

**MUSC 154 (1-2) C,N**  
**Symphonic Band**

Features the finest in Wind band literature, both contemporary and traditional. Membership by audition.

**MUSC 156 (5) C**  
**Jazz Improvisation I**

Develops skills in improvisation and confidence in playing or singing in solo and combo settings, representing standard compositions from the art of jazz. Prereq: Ability to sight read music at a 12th grade level or higher.

**MUSC 157 (5) C**  
**Jazz Improvisation II**

Continues study of jazz improvisation, with theoretical and technical concepts relating to the art of spontaneous improvisation. Work closely within a professional performance setting and learn the skills necessary for individual and group interaction in the traditional jazz combo and large ensemble presentations. Prereq: Knowledge of major/minor scales and basic keyboard skills.

**MUSC 158 (5) C**  
**Jazz Improvisation III**

Augments repertoire by studying compositions of modern jazz improvisers such as Chick Corea, Herbie Hancock, and Wayne Shorter. Learn techniques associated within the style, and receive instruction on the fundamentals, repertoire, and technical studies introduced in MUSC 156 and 157. Recommended: MUSC 157. Prereq: Knowledge of major/minor scales, modes, and basic keyboard skills, and permission.

**MUSC 160 (5) C,S**  
**Blues and Its Influence**

Explores the development of the blues and its influence on jazz, rock, classical music, and literature. Covers the social, economic, and political forces that shaped African-American experiences in the U.S. as chronicled in blues music.

**MUSC 161 (5) C**  
**History/American Pop Music**

History of American popular music from colonial times to contemporary styles. Analysis of musical characteristics as well as social/cultural contexts of development.

**MUSC 163 (5) C**  
**Musical Theater/Stage**

Covers principles of voice production, resonance, and projection. Learn effective presentation of varied materials. Fills the gap between the teacher's studio and professional performance.

**MUSC 164 (2) C**  
**College Chorus**

Vocal ensemble. May be repeated for additional credit.

**MUSC 165 (1-2) C**  
**Community Chorale**

Performs literature for the large choral ensemble. Meets one evening weekly.

**MUSC 166 (2) C,N**  
**Vocal Ensemble**

Small vocal ensemble performs music from several different periods, including contemporary.

**MUSC 171 (1-2) C,N**  
**Individual Instruction: Piano**

Individual piano instruction. Credit hours vary. May be repeated. Additional fees are required. Prereq: Instructor's permission.

**MUSC 172 (1-2) C,N**  
**Individual Instruction: Strings**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 173 (1-2) C,N**  
**Individual Instruction: Brass**

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. Prereq: Permission.

**MUSC 182 (4) C**  
**Intro to Musical Theatre**

Basic instruction in dramatic and vocal discipline of musical theater. Learn basic techniques of analysis, rehearsal, and performance of musical theater through the study of scenes and in-class performance. Recommended: MUSC 119, 130 and/or DRMA& 101.

**MUSC 185 (5) C**  
**Computer Music Recording**

Intro to the technical skills of electronic music production and recording. Covers the basic elements of music, including listening, improvising, recording, arranging, mixing, and digital editing. Create original music using stimuli. Learn mixing and audio production, including sound shaping, effects use, and midi sequencing. Open to all students.

**MUSC 186 (5) C**  
**DMPS**

Sequel to Music 185. Expands knowledge of digital music production through learning intermediate level techniques for composing, producing, and performing songs. Covers computer-based recording, synthesis, and notation for the composer/arranger. Focuses on fundamentals of MIDI, sequencing, sampling, basic signal processing, and practical production skills using current digital technology. Includes writing of original material during lab sessions. Prereq: MUSC 185 minimum passing grade 2.0.

**MUSC 204 (5) C,N**  
**History of Jazz**

Traces the roots of jazz in America, through films, lectures, recordings, and live performances. Includes Rag, New Orleans, New York, Chicago, Kansas City, the Big Band era, Blues, Be-bop, Hard Bop, the New Thing, Free Form, Electric, and Fusion Styles.

**MUSC 205 (5) C**  
**Jazz Masters 20th Century**

A music literature course for the general student who wishes to study jazz music in more depth. Lectures, selected readings, and major recordings by each artist.

**MUSC 213 (3) C**  
**Post-1830 Romantic**

Chronological survey of Romantic Period. Emphasis on stylistic and historical trends through extensive listening, class discussion, and illustrated lectures.

**MUSC 221 (2) C,S**  
**Group Piano 4th Quarter**

Continuation of MUSC 128. Technique, repertoire, and theory, with emphasis on classical compositions. Prereq: MUSC 128 or permission.

**MUSC 222 (2) C,S**  
**Group Piano 5th Quarter**

Continuation of MUSC 221. Prereq: MUSC 221 or permission.

**MUSC 223 (2) C,S**  
**Group Piano 6th Quarter****MUSC& 231 (3) C**  
**Music Theory IV**

Continuation of MUSC& 143, completing the periods up to Impressionism. Chromatic harmony, modulations, and related modern concepts. Prereq: MUSC& 143.

**MUSC& 232 (3) C**  
**Music Theory V**

Continuation of MUSC& 231. Advanced 4-part harmony, especially relating to form and development. Prereq: MUSC 231.

**MUSC& 233 (3) C**  
**Music Theory VI**

Continuation of MUSC& 232. Advanced music theory and practice, from common practice to chromatic harmony. Prereq: MUSC& 232.

**MUSC 298 (5) C,N**  
**Practicum in Music**

Practicum in various skills in music, such as tutorial assistant in piano theory, coaching vocal students, or apprenticeship in use of electronic equipment (Broadway Performance Hall).

**MUSC 299 (1-5) C,N,S**  
**Practicum in Music**

Research musical performance in an area of interest determined by student and instructor. Prereq: Permission.

**Nanotechnology****NANO 101 (5) N**  
**Intro to Nanotechnology**

Introduction to nanotechnology principles, applications, and industry. Topics include basic concepts of nano/microelectronics-mechanical materials and why they lead to different materials properties; applications of nano/microelectronics-mechanical materials to electronics, magnetics, mechanics, fluidics, optics, photonics and smart, biological materials; micro and nano sensors and actuators; introduction to processing, fabrication, modeling and testing; overview of industry, ethics and careers as they relate to the fast evolving field of nanotechnology. Prereq: MATH 098.

**NANO 220 (5) N**  
**Micro/Nanofabrication**

Covers the fabrication technologies used in the nano/micro fabrication laboratory and production environments. Includes cleanroom basics and proper technique: lithography; methods of physical and chemical materials deposition and etching. Prereq: NANO 101 (with a 2.0 or higher), MATH& 098, CHEM& 121, and MSC 101, or instructor permission.

**NANO 230 (5) N**  
**Nano/Micro Characterization, Packaging and Testing**

Intro to nano/micro device and material characterization testing and packaging. Covers surface and bulk material characterization methods, including composition and property analysis of nano/micro devices materials, and structures. Prereq: NANO 220, CHEM& 131 with a 2.0 or higher and MATH 098 with 2.0 or higher or permission. Recommend PHYS& 121. Recommend PHYS& 114.

**NANO 250 (5) N**  
**Capstone/Practicum II**

Provides direct experience in a nano/micro-fabrication facility. Complete a design and fabrication project related to a nano/micro-device, document, and report on the project. Prereq: Permission. Prereq: NANO 220 with 2.0 or higher, AND Instructor permission.

**Network Technology**

*Also see Computer Support Technician at SVI.*

*North courses formerly listed as NET are now listed under Information Technology (IT).*

*Courses are designed to prepare a student to meet IT industry benchmarks and vendor certification programs.*

**NET 120 (5) C,N,V**  
**Network Essentials**

Intro to networking technologies for local area networks (LANs), wide area networks (WANs), and the Internet. Prereq: MIC 101 or ability to use MS Office.

**NET 122 (5) C,N**  
**Network Operating Systems 1 – Client**

Covers the installation and configuration a managed enterprise client operating system on stand-alone clients/computers that are part of a workgroup, domain, or cloud infrastructure. Includes configuration and implementation skills for creating a client for a LAN/WAN server structure using a directory based network. IaC (Infrastructure as Code) from the client perspective is introduced. Prereq: NET 120 with a 2.0 or higher, or similar work-experience. Coreq: NET 124.

**NET 124 (5) C,N****Network Operating Systems – Part 2**

Learn to install Windows Server and various file systems and to administer and manage Active Directory services and objects. Use Microsoft Management Console to monitor system performance and to administer Internet Information Services and user accounts, group accounts, and group policies. Study print services, network protocols, virtual private networking, Routing and Remote Access Service, DHCP, WINS, and DNS. Learn to back up data, implement disaster protection, and recover from a disaster. Prereq: NET 122 with 2.0 or higher or concurrent enrollment in NET 122.

**NET 126 (5) C,N****Network Operating Systems 3 – SysOp Applications**

Focuses on administering enterprise class servers. Investigates IaC (Infrastructure as Code). Learn to deploy advanced directory services. Explore enterprise server tools using PowerShell and Python. Develop a foundation in the use and manipulation of enterprise systems operation applications. Specific attention to Authentication, Authorization, and Access to enterprise/Cloud objects. Prereq: NET 124 with 2.0 or higher, similar work experience, or instructor's permission. Coreq: NET 134.

**NET 134 (5) C,N****Network IaC (Infrastructure as Code) & Design**

Analyze and construct a networked application environment. Examine network path availability, fault tolerance, and cost in homogenous and diverse environments on many scales. Evaluate tool selection for best-of-breed and monolithic system environments. Perform maintenance, deployment, and auditing using PowerShell and Python. Prereq: NET124 with a 2.0 or higher, or instructor's permission (who evaluates previous work experience, etc.). Coreq: NET126.

**NET 138 (5) C,N****UNIX for Network Administrator**

Covers the organization of UNIX-based hardware components and software tools used by the host administrator to control access, tune the system, and account for system resources used. Covers advanced concepts with multi-user, multi-tasking, time-sharing networked communications, UNIX tools, network schedulers, security, remote access, performance monitoring, and networking aspects of UNIX. Examines operational considerations, including host initialization, suspension and termination, and the system's physical environment. Prereq: ITC 136.

**NET 142 (5) C,N****Network Management – Cisco I**

Provides experience in current and emerging networking technology for future employment and/or further education. Content standards based on current industry standards. Examines safety, networking, network terminology and protocols, LANs, OSI model, cabling, cabling tools, IP addressing, and network standards. Emphasis on decision-making and problem-solving techniques. Prereq: NET 122 (may be taken concurrently) or permission.

**NET 144 (5) C,N****Network Management – Cisco II**

Continuation of NET 142. Covers safety, networking, network protocols, LANs, WANs, Ethernet, LAN switching, router IOS, TCP/IP addressing, router configuration, dynamic routing, static routing, and the network administrator's role and function. Emphasis on techniques to solve networking problems. Prereq: NET 142.

**NET 146 (5) C,N****Network Management – Cisco III**

Continuation of NET 144. Extends knowledge and practical experience with configuring LANs, hubs, switches, Internet-work Packet Exchange (IPX) routing, Interior Gateway Routing Protocol (IGRP), Wide Area Networks (WANs), and network troubleshooting. Covers Integrated Services Data Networks (ISDN), Point-to-Point Protocols (PPP), and frame relay design, configuration, and maintenance. Prereq: NET 142, 144, or permission.

**NET 200 (10) C****Enterprise Applications**

Capstone course for network infrastructure students. Simulate a small business environment in hardware and software from a case study and apply the skills from the foundation networking courses. Further explore enterprise applications and server needs of businesses as directed by industry standards and trends. Prereq: NET 126 with 2.0 or better or permission.

**NET 298 (5) C,N****Special Projects for LAN**

Study of selected topics considered appropriate by the instructor and/or faculty. Content and format vary. Could include Microsoft Back Office IIS, Proxy Server, Site Server, Transaction Server, SNA server, and SQL server. Prereq: NET 126 (C) and permission.

**NTI 310 (5) C****Linux Applications**

Builds on existing Linux automation and configuration skills by introducing Product Data/Product Lifecycle Management tools, custom code compilation, and package creation. Includes administering, patching, and updating various development, testing, and production versions of server services and configuring internally facing services for Windows compatibility. Prereq: NTI-300 with a 2.0 or higher, or equivalent Linux automation experience (permission).

**NTI 320 (5) C****Monitoring and Trending of Enterprise Networks**

Define optimization and monitoring techniques for enterprise networks and applications. Analyze deployment, implementation, and configuration for availability, capacity, performance, security, reporting, storage, alerts, recovery, backup, and archival. Demonstrate optimization and monitoring by implementation techniques. Prereq: NTI 300 and NTI 310, each with a 2.0 or higher, or instructor's permission.

**NTI 340 (5) C****Software Defined Networking I**

Introduces knowledge and skills needed to plan, implement, and monitor a scalable routed network. Focuses on routing protocols for both IPv4 and IPv6: Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) for an enterprise, and Border Gateway Protocol (BGP) for enterprise Internet connectivity. Includes learning how to redistribute routes, implement path control, and secure Cisco routers. Prereq: Instructor's permission.

**NTI 350 (5) C****Software Defined Networking 2**

Covers the knowledge and skills needed to create an efficient and expandable enterprise network. Focuses on Layer 2 and multi-layer switch functions, including VLANs, trunks, inter-VLAN routing, port aggregation, spanning tree, first hop redundancy, as well as network security and high availability features. Prereq: NET 146 with 2.5 or higher, or instructor's permission.

**NTI 360 (5) C**  
**Software Defined Networking 3**

Focuses on techniques to monitor and troubleshoot routed and switched networks through extensive hands-on lab exercises. Explore troubleshooting methods, approaches, procedures, and tools. Introduction of a series of different organizations for troubleshooting scenarios. Solve troubleshooting tickets, debrief, and review info that will help further understanding of the specific issues raised. Prereq: NTI 340 with 2.5 or higher, or instructor's permission.

**NTI 400 (5) C**  
**Identity & Information/Content Security**

Explores architectures and technology to enhance the security and trustworthiness of information delivery processes. Examines identity management in a global marketplace, key laws managing content/data, and methods of risk management and risk control. Explores brand management and continuous delivery/content management for cloudcentric business models, and methods for information governance when working with enterprise and cloud content. Prereq: ITC 110, or NET120, with 2.0 or higher, or instructor's OK.

**NTI 410 (5) C**  
**Network Security for the Enterprise**

Introduces the tools and techniques of penetration testing for the persistent threat environment of the cloud enabled world. Details the elements of an application, app, or database exploit. Examines the configuration of penetration tools for use in the cloud and the enterprise. Demonstrates processes for managing coding errors. Explores case studies to examine penetration tools as applied to the DevOps process. Prereq: ITC 110 or ITC 151 w/2.0 or higher or instructor permission.

**NTI 430 (5) C**  
**Big Data and Collaboration Management**

Investigates the dynamics of data and examines the marketplace for data. Explores diverse data storage environments, tools, and systems to provide secure or insecure access to that data. Covers enterprise, cloud, and hybrid environments. Delves into security processes to manage collaboration for a variety of business models that use data natively and/or for analytics. Prereq: ITC 110 OR ITC 151 with a 2.0 or higher, OR instructor's permission.

**NTI 440 (5) C**  
**DevOps and Enterprise Admin for the Cloud (SRE)**

Focuses on DevOps and SRE (Site Reliability Engineering) administration practices for Internet Services. Examine techniques to design, build, and run cloud services. Use core skills: UNIX/Linux system administration, networking, and hardware-based operating systems maintenance. Not a coding class. Investigate highly available, fast, and secure scalable services. Evaluate cloud systems against performance metrics. Prereq: ITC136 or NET124, either with 2.0 or higher, or instructor's permission.

**NTI 460 (5) C**  
**DevOps Practicum, BAS IT Networking**

Develop and deploy DevOps tools for either an external client/approved project. Determine suitability, cost benefit analysis, ongoing maintenance needs in deploying DevOps. For example, develop/implement a deployment plan to orchestrate infrastructure builds programmatically in the public cloud, use configuration management, and work with cloud native templates. Prereqs: Must be in the last quarter of program, completed all other BAS-IT Networking courses with 2.0 or higher, and instructor's permission.

**NTI 470 (5) C**  
**Internship/Capstone Project, BAS IT Networking**

For the IT Networking (Bachelor of Applied Science) program. Students complete an internship or arrange to complete a capstone project, applying the skills learned in the classroom to the workplace. Students write a culminating paper reflecting on their experience and integrating it with their classroom learning. Prereq: Must be in the last quarter of program, completed all other BAS-IT Networking courses with 2.0 or higher, and instructor's permission.

**New Media****NME 110 (6) C**  
**New Media I**

Use authentic tasks and projects to prepare for real-world work demands encountered in respective fields. Work collaboratively in projects, exploring the role of communications in the context of New Media and society.

**NME 120 (6) C**  
**New Media II**

Use authentic tasks and projects to prepare for real-world work demands encountered in respective fields. Work collaboratively in projects, exploring the role of communications in the context of New Media and society.

**NME 130 (6) C**  
**New Media III**

Use authentic tasks and projects to prepare for real-world work demands encountered in respective fields. Work collaboratively in projects, exploring the role of communications in the context of New Media and society.

**Nursing**

*NOTE: Most courses require concurrent enrollment. Please check program section for specific requirements.*

**NUR 100 (1) N**  
**Modern Fundamentals of Care**

For nursing assistants who have a current, unencumbered WA state NA-C license. To be taken as follow-up or concurrently with NUR 104.

**NUR 101 (5) C**  
**Nursing I: Fundamentals of Nursing**

Intro to core nursing concepts, organized around the individual as a biopsychosocial being, constantly interacting with and adapting to a changing environment. Covers principles of critical thinking, the nursing process, the role of the nurse, cultural views of health, and principles of growth and development, with emphasis on the aging process. Addresses images and impressions of nursing, current trends in health care delivery, and legal and ethical issues in nursing. Coreq: NUR 111, 122, and MATH& 107.

**NUR 102 (3) C**  
**Nursing II: Medical-Surgical Nursing**

First of 4 medical-surgical theory courses. Develop a comprehensive understanding of homeostasis and the adaptation of clients to the complex processes of the physiologic mode. Emphasis on alterations in fluid and electrolyte balance, acid-base balance, endocrine functions, compromise in wound healing, and peripheral vascular circulation. Prereq: Completion of first quarter with 2.5 or higher. Coreq: NUR 112, 123 & NTR 150.

**NUR 103 (4) C****Nursing III: Medical-Surgical Nursing**

Second of 4 medical-surgical theory courses. Develop a comprehensive understanding of homeostasis and adaptation with emphasis on alterations in neurologic, musculoskeletal, chronic respiratory, and chronic cardiovascular systems. Covers key concepts of adaptation to the complex processes of movement and cognition, oxygenation, and circulation. Prereq: Completion of second quarter with 2.5 or higher. Coreq: NUR 113, 185, and PSYC& 200 or PSY 206.

**NUR 104 (2) N****Nursing Delegation for NAC – Diabetes**

For current WA licensed NA-Cs or NA-Rs. Understand and perform RN-delegated tasks, focusing on diabetes and its management. Includes theory, insulin injections as a delegated task, recognizing low/high blood sugars and adverse effects of treatment, taking correct actions when low/high blood sugars occur. Prereq: Permission.

**NUR 105 (2) N****CPR First Aid Healthcare Provider**

Provides support for ESL and Adult Basic Education students. Covers American Red Cross (ARC) or equivalent CPR/AED for the Professional Rescuer and Healthcare Provider, with 2-year valid certification, and First Aid Certificates required to work in skilled nursing facilities, adult family homes, and hospitals. Coreq: NUR 107.

**NUR 106 (8) C****LPN/RN Transition**

Designed for the LPN to make a successful transition to RN student at the 4th quarter level. Emphasis on applying critical thinking and nursing process to selected physiological and psycho-social alterations. Individualized instruction based on initial diagnostic assessment. Coreq: NUR 120.

**NUR 107 (8) N****Nursing Assistant – Theory**

Introduction to basic nursing care theory and concepts, including HIV/AIDS education. Coreq: NUR 109. Students without CPR and first aid certification may also need to enroll in NUR 105.

**NUR 108 (3) N****Clinical Hospital Experience for NAC**

This course is for Nursing Assistants-Certified who wish to increase their hospital-based skills for employment in an acute care facility or emergency department. Successful completion of this course requires mastery of a list of skills that were developed by Acute Care Facilities. After certification or after successful completion students will be eligible to apply for employment with Acute Care Facilities if other conditions of employment are met.

**NUR 110 (1) N****Body Mechanics Healthcare**

Covers the anatomy involved in back injuries, all aspects of proper techniques for lifting, transferring, and positioning of patients, with a goal of prevention of injuries to the healthcare provider. Certificate issued upon successful completion.

**NUR 111 (3) C****Nursing Practice I**

Apply nursing concepts from NUR 101. Assess four adaptive modes in the clinical setting: physiologic-physical, self-concept-group identity, role function, and interdependence. Covers basic assessment and care planning. Apply principled application of nursing skills in practice lab and clinical setting. Coreq: NUR 101, 122, and MATH& 107.

**NUR 112 (3) C****Nursing Practice II**

Builds on NUR 111. Apply concepts relevant to adaptation in the basic physiological and psychosocial modes, client response, and administration of medications. Assess the four adaptive modes. Gain experience in complete assessment, care planning, and principled application of nursing skills in practice lab and clinical setting. Prereq: Completion of first quarter with 2.5 or higher. Coreq: NUR 102, 123, and NTR 150.

**NUR 113 (4) C****Nursing Practice III**

Builds on NUR 112. Emphasizes integrating nursing theory, clinical data, skills in providing nursing care, and developing priorities. Assess the four adaptive modes, gain experience in individualized assessment and care planning, and apply nursing skills in practice lab and clinical setting. Prereq: Successful completion of second quarter. Coreq: NUR 103, 185, and PSYC& 200.

**NUR 114 (4) C****Nursing Practice**

Builds on the foundation established in NUR 111, 112, and 113.

**NUR 115 (2) N****Intro to Patient Care**

Intro to supervised clinical experience in a long-term care environment. Includes communication and documentation skills. Coreqs: NUR 116, 117, & 130.

**NUR 116 (6) N****Nursing Fundamentals**

Provides the theoretical background for basic nursing skills, including intro to nursing process, microbiology, nutrition, medical terminology, and math equivalents. Coreqs: NUR 115, 117, and 130.

**NUR 117 (2) N****Nursing Fundamentals Lab**

This is an introductory course in nursing skills and procedures. The course includes demonstration of basic skills and laboratory practice. Beginning communication skills are also included. Coreqs: NUR 115, 116, and 130.

**NUR 118 (2) N****Clinical Nursing Skills I**

Covers laboratory content linked to NUR 127 and 131. Intermediate level nursing practice. Prereq: First-quarter NUR courses. Coreq: NUR 127 and 131.

**NUR 119 (1) N****Clinical Nursing Skills II**

Continuation of NUR 118; theory and labs linked with NUR 128 and 141. Prereq: First two quarters NUR courses. Coreq: NUR 128 and NUR 141.

**NUR 120 (1) C****LPN/RN: Assessment & Intervention**

Integrates critical thinking in practical caregiving situations. Emphasis on principles used in performing selected nursing skills in various contexts. Coreq: NUR 106.

**NUR 122 (2) C****Psychosocial Nursing I**

First of 2 psychosocial nursing courses. Focuses on communication pertinent to the care of clients in various health care settings throughout the lifespan. Practice therapeutic and professional communication techniques. Assess adaptation in self-concept, role function, and independence of clients who are coping with acute and chronic illness. Learn group process. Coreqs: NUR 101, 111, and MATH& 107.

**NUR 123 (4) C****Pharmacology for Nursing**

Intro to basic concepts of drug therapy, roles and responsibilities of nurses, and applying critical thinking and the nursing process for safe medication administration. Includes terminology, resources, and regulations related to drug therapy and principles of pharmacokinetics, pharmacodynamics, and pharmacotherapeutics. Major classifications of drugs include autonomic nervous system agents; parenteral fluids; electrolytes; vitamins and minerals; endocrine, neurologic, respiratory, and selected cardiovascular agents; anesthetic, immune system, and gastrointestinal agents. Coreqs: NUR 102, 112, and NTR 150.

**NUR 126 (3) N****Role of the LPN**

Assist the student to further understand the role of the LPN and legal issues related to practical nursing. Prereq: First three quarters NUR courses. Coreq: NUR 139 and 154.

**NUR 127 (6.5) N****Medical/Surgical Nursing**

Covers common conditions of illness throughout the life span. Prereq: All first-quarter NUR courses. Coreq: NUR 118 and 131.

**NUR 128 (6) N****Medical-Surgical: Child/Adult II**

Continuation of NUR 127. Prereq: First two quarters NUR courses. Coreq: NUR 119 and 141 and permission.

**NUR 129 (1) N****End of Life Care for NA**

Offers the nursing assistant an understanding of the hospice and palliative care concepts of end of life care and provides the tools for nursing assistants to assist persons who are experiencing profound loss and grief that accompany the dying process.

**NUR 130 (2) N****Critical Thinking in Nursing**

Intro to critical thinking skills in nursing and the nursing process with practice applying theory and skills. Coreqs: NUR 115, 116, and 117.

**NUR 131 (3.5) N****Clinical Nursing Practice I**

Supervised hospital and nursing home practice in medical/surgical care of the child/adult and chronic and convalescent patients. Includes communication and documentation skills. Prereq: All first-quarter NUR courses. Coreq: NUR 118 and NUR 127.

**NUR 133 (1.5) N****Family Nursing Theory**

Study of the care of families, perinatal clients, and their partners, infants, and children. Nursing care for children will center on health promotion and wellness maintenance as well as parenting. Coreq: NUR 134.

**NUR 134 (1.5) N****Family Nursing Clinical**

Application of practical nursing care of families, including perinatal clients and their partners, infants, and children, in a childbirth center and pediatric setting. Nursing care for children will center on health promotion and wellness as well as parenting. Coreq: NUR 133.

**NUR 139 (4) N****Transition to LPN Practice**

Provides experience in full-shift nursing care on a work-like schedule. Expands medical/surgical nursing experience. Coreqs: NUR 126 and 154.

**NUR 141 (2) N****Clinical Nursing Practice II**

Supervised hospital and nursing home practice with related ward conferences, to expand basic nursing care skills for the convalescent and chronically ill patient, medical/surgical patient, child, or adult. Includes communication and documentation skills. Prereq: First two quarters NUR classes. Coreq: NUR 119 and 128.

**NUR 145 (1.5) N****Mental Health Training**

For nursing assistants and other healthcare providers who care for patients with mental illness. Covers the major mental disorders and dementia, culturally competent caregiving, respectful communication, and strategies for caregiving.

**NUR 154 (1) N****IV Therapy Skills**

Intermediate course in intravenous therapy, which provides theoretical background for intravenous infusion and clinical application skills using the nursing process. Prereq: First three quarters NUR courses. Coreq: NUR 126 and 139.

**NUR 155 (1-6) N****Special Topics – Practical Nursing**

Assists foreign students, pre-nursing, and advanced placement students to meet special needs for licensure or other student interests. Tailored to meet State Board (LPN) or faculty recommendations to accomplish student/program objectives. Prereq: Permission.

**NUR 185 (2) C****Gerontology for Nurses**

Study adaptations of normal aging, differentiating these adaptations from disease, and learn the implications for nursing care. Covers psychosocial, legal, and ethical issues common in gerontological nursing practice. Prereq: Completion of second quarter with a 2.5 or higher. Coreq: NUR 103, 113, and PSYC& 200.

**NUR 190 (2) C****ADN Prog Study Group I**

Enhances the lecture material presented in required core nursing courses each quarter. Focuses on understanding concepts relevant to adaptation in the basic physiological and psychosocial modes. Emphasizes the nursing process as the scientific basis for practice. Coreqs: Enrollment in all concurrent Nursing courses for the quarter specified.

**NUR 191 (2) C****ADN Prog Study Group II**

Enhances the lecture material presented in required core nursing courses each quarter. Focuses on understanding concepts relevant to adaptation in the basic physiological and psychosocial modes. Emphasizes the nursing process as the scientific basis for practice. Coreqs: Enrollment in all concurrent Nursing courses for the quarter specified.

**NUR 192 (2) C****ADN Prog Study Group III**

Enhances the lecture material presented in required core nursing courses each quarter. Focuses on understanding concepts relevant to adaptation in the basic physiological and psychosocial modes. Emphasizes the nursing process as the scientific basis for practice. Coreqs: Enrollment in all concurrent Nursing courses for the quarter specified.

**NUR 199 (1-12) C****LPN Practice**

Independent clinical practicum for LPN graduates to practice in a clinical setting with a preceptor, gaining in-depth experience in a chosen specialty area. Carry out full-shift nursing care and hone nursing skills in real-life situations in preparation for jobs or further LPN-RN studies. Prereq: NUR 170, 171, 172, 173, 174, NCLEX, and LPI/J Washington State certification.

**NUR 201 (2) C****Nursing IV A: Psychosocial Nursing II**

Second of 2 psychosocial nursing courses. Builds on NUR 122 (or NUR 106). Focuses on caring for clients with mental illness using a system with cognator and regulator subsystems to maintain adaptation in the four adaptive modes. Covers psychosocial assessment and therapeutic interventions in psychiatric disorders at three levels: integrated, compensatory, and compromised. Prereq: Completion of third-quarter or LPN/RN Transition courses with 2.5 or higher. Coreq: NUR 211, 206, 216.

**NUR 206 (3) C****Nursing IV B: Medical/Surgical**

Third of 4 medical-surgical courses. Builds on NUR 101, 102, and 103. Develop a comprehensive understanding of homeostasis and the adaptation of clients to the complex processes of the physiologic mode. Emphasizes alterations in select integumentary and immune or protective responses and surgical therapies. Prereq: Completion of third-quarter or LPN/RN Transition courses with 2.5 or higher. Coreq: NUR 201, 211, 216.

**NUR 207 (4) C****Nursing V: Medical/Surgical Nursing**

Fourth of 4 medical surgical courses. Builds on NUR 101, 102, 103, and 206. Develop a comprehensive understanding of homeostasis and the adaptation of clients to the complex processes of the physiologic mode. Emphasizes acute respiratory, acute cardiovascular, gastrointestinal, and renal alterations. Prereq: Completion of fourth quarter with 2.5 or higher. Coreq: NUR 217, 220.

**NUR 208 (6) C****Nursing VI – Family Nursing**

Develop a comprehensive understanding of homeostasis and the adaptation of maternal, newborn, and pediatric clients to the complex processes of the physiologic mode. Emphasizes learning and promoting normal family development and understanding adaptive and maladaptive physiologic and psychosocial responses to childbearing, childrearing, and illness in childhood. Prereq: Completion of fifth quarter with 2.5 or higher. Coreq: NUR 218, 230.

**NUR 211 (3) C****Nursing Practice IV A**

In a psychiatric setting, focus on adaptation in the basic physiological and psychosocial modes and client response. Integrates nursing theory, clinical data, and skills in nursing care and developing priorities. Assess the four adaptive modes in clinical setting, gain experience in individualized assessment and care planning, and apply therapeutic skills in practice lab and clinical setting. Prereq: Completion of third-quarter LPN/RN Transition courses with 2.5 or higher. Coreq: NUR 201, 206, 216.

**NUR 216 (3) C****Nursing Practice IV B**

Focuses on concepts relevant to adaptation in the basic physiological and psychosocial modes and client response. Emphasizes comprehensive care and the relationships of the various components of client data and health care interventions. Assess the four adaptive modes, gain experience in individualized assessment and care planning, and apply nursing skills in practice lab and clinical setting. Prereq: Completion of third-quarter Nursing or LPN/RN Transition with 2.5 or higher. Coreq: NUR 201, 206, 211.

**NUR 217 (5) C****Nursing Practice V**

Study adaptation in the basic physiological and psychosocial modes and client response. Emphasizes analysis of client data and health care interventions, initiating nursing assessments and interventions, health promotions and education, and developing leadership skills. Assess the four adaptive modes, gain experience in individualized assessment and care planning, and apply nursing skills in a variety of clinical settings. Prereq: Completion of fourth quarter with 2.5 or higher. Coreq: NUR 207 and 220.

**NUR 218 (3) C****Nursing Practice VI**

Emphasis on adaptation in the developing family. Apply concepts from NUR 208 relevant to adaptation in the basic physiological and psychosocial modes and client response. Assess the four adaptive modes in the clinical setting. Obtain experience in individualized assessment, care planning, and principled application of nursing skills in a variety of clinical settings. Coreqs: NUR 208, 230.

**NUR 220 (2) C****Health Promotion/Managing Care**

Intro to theoretical foundations of health promotion, education, and wellness maintenance across the lifespan and to the leadership role in Nursing. Emphasizes planning health promotions and managing care in a variety of settings. Addresses leadership in nursing: traits, styles, problem-solving, change, team communication, conflict management, delegation, time management, and the implications of health care trends. Linked to final medical-surgical rotation. Prereq: Completion of fourth quarter with a 2.5 or higher. Coreq: NUR 207 and 217.

**NUR 223 (2) N****Advanced Nursing Skills**

This is the third of four courses designed to introduce basic concepts of drug therapy. The focus is on developing a knowledge base essential for safe medication administration. The major categories of drugs studied are those that effect neurologic, cardiovascular, endocrine, and respiratory function. The role and responsibilities of the nurse in drug therapy are emphasized throughout the course. Prereq: Successful completion of NUR 100 and NUR 123.

**NUR 224 (2) N****Health Promotion Education Nursing**

Provides theoretical knowledge related to planning and implementing educational processes in a health care setting. Prereq: Washington state LPN license. Coreq: NUR 226, 227, and 228.

**NUR 225 (6) N****Family Nursing**

With NUR 231, develops theoretical knowledge of the continuum of wellness and complex health conditions related to family nursing, to prepare for employment as an RN. Prereq: Washington state LPN license. Coreq: NUR 223 and 231.

**NUR 226 (2) N****Care Management and Leadership**

Intro to theoretical foundations of leadership in nursing. Emphasizes leadership, change and motivational theories, conflict management, problem-solving, and group dynamics. Includes principles of time management and delegation. Prereq: Washington state LPN license. Coreq: NUR 224, 237, and 238.

**NUR 227 (7) N****Complex Medical/Surgical Psych Nursing**

Expands theoretical knowledge and nursing care related to various complex medical/surgical and psychiatric health conditions throughout the life span. Prereq: Washington state LPN license. Coreq: NUR 228.

**NUR 228 (5) N**  
**Complex Medical/Surgical Clinical**

Covers supervised ambulatory, community-based, acute, or long-term care practice (medical-surgical), which enhances nursing skills in order to plan and implement care for patients with acute medical/surgical illnesses and psychiatric disorders. Promotes health through the life span. Prereq: Washington state LPN license. Coreq: NUR 227.

**NUR 230 (2) C**  
**Transition to Professional Nursing Role**

Covers the transition from the role of student to Registered Nurse. Focuses on the role of the RN in health care, the community, and organizations. Emphasizes professional and legal obligations, obtaining and maintaining licensure, professional organizations, continuing education, and job searching. Includes preparation for the NCLEX/RN exam. Prereq: Completion of fifth quarter with a 2.5 or higher. Coreq: NUR 208 and 218.

**NUR 231 (4) N**  
**Family Nursing Clinical**

With NUR 223 and 225, prepare for work as an RN. Clinical hours focus on family nursing, normal growth and development, and adaptation of children and families to illness. In a supervised pediatric setting, practice assessment, planning, implementing care, and gain clinical experience with childbearing. Prereq: Washington state LPN license.

**NUR 233 (0.5) N**  
**Advanced Nursing Skills II**

Provides theory and laboratory practice of advanced nursing skills. Prereq: Washington state LPN license. Coreq: NUR 226, 234, 237, and 238.

**NUR 234 (1.5) N**  
**Imp Health Promotion Care Education**

With NUR 224 provides theory and practical experience in planning health promotion and health education activities. Prereq: Washington state LPN license. Coreq: NUR 226, 233, 237, and 238.

**NUR 235 (1.5) N**  
**Legal Aspects/Care Systems**

Understand the role of a Registered Nurse in health care, the community, and other health organizations. Explore the history of nursing, current health care, nursing, and job market trends. Work with case studies involving legal and ethical nursing issues. Includes Washington state Nurse Practice, licensing, and uniform disciplinary laws and OBRA regulations. Intro to health care systems, funding, organization, and function. Prereq: Successful completion of the first two quarters with 2.0 or better in all required courses. Coreq: NUR 223, 227, and 228.

**NUR 237 (3) N**  
**Advanced Medical/Surgical Nursing Care**

Covers theory needed to plan and implement culturally competent care for diverse populations related to various complex conditions of illness throughout the lifespan. Study how this care may impact treatment modalities. Prereq: LPN license in Washington state. Coreq: NUR 224, NUR 226, and 238.

**NUR 238 (5) N**  
**Transition to RN Practice**

Provides supervised ambulatory, community-based, acute, critical, long-term care practice medical/surgical. Develop further skills in assessment, analysis, planning, implementation, and evaluation. Prereq: Washington state LPN license. Coreq: NUR 224, 226, and 237.

**NUR 290 (2) C**  
**ADN Prog Study Group IV**

Enhances the lecture material presented in required core nursing courses each quarter. Focuses on understanding concepts relevant to adaptation in the basic physiological and psychosocial modes. Emphasizes the nursing process as the scientific basis for practice. Coreqs: Enrollment in all concurrent Nursing courses for the quarter specified.

**NUR 291 (2) C**  
**ADN Prog Study Group V**

Enhances the lecture material presented in required core nursing courses each quarter. Focuses on understanding concepts relevant to adaptation in the basic physiological and psychosocial modes. Emphasizes the nursing process as the scientific basis for practice. Coreqs: Enrollment in all concurrent Nursing courses for the quarter specified.

**NUR 292 (2) C**  
**ADN Prog Study Group VI**

Enhances the lecture material presented in required core nursing courses each quarter. Focuses on understanding concepts relevant to adaptation in the basic physiological and psychosocial modes. Emphasizes the nursing process as the scientific basis for practice. Coreqs: Enrollment in all concurrent Nursing courses for the quarter specified.

NUR 299 (1-5) C,N

Independent Study in Nursing

Independent study in selected nursing topics under faculty supervision. Prereq: Permission.

**Nursing Educational Outreach****NEO 101 (7) N**  
**Foundations Nursing Theory**

Covers concepts of nursing practice, theoretical background for nursing skills, the nursing process, critical thinking, microbiology, nutrition, medical terminology, and math equivalence. Also outlines LPN roles as caregiver, collaborator, decision-maker, communicator, teacher, and professional. Coreq: NEO 111.

**NEO 102 (7) N**  
**Basic Nursing Theory I**

Builds on NEO 101. Intro to basic medical-surgical nursing care of clients with selected health challenges throughout the lifespan, including endocrine, respiratory, immune, cardiovascular, hematological, lymphatic, and musculoskeletal disorders. Coreq: NEO 112.

**NEO 103 (7) N**  
**Basic Nursing Theory II**

Builds on NEO 101 and 102. Intro to basic medical-surgical nursing care of clients with selected health challenges throughout the lifespan, including gastrointestinal, urinary, neurological, acid-base, fluid and electrolyte, cancer, eye, ear, and mental health disorders. Coreq: NEO 113.

**NEO 104 (7) N**  
**Family Nursing Transitions**

Two part course. Focuses on family care, including perinatal clients, infants, children, and their families. Builds on previous concepts and prepares for transition to licensed nurse. Coreq: NEO 114.

**NEO 111 (5) N**  
**Clinical Nursing P S I**

Apply NEO 101 learning and develop nursing skills related to roles of caregiver, collaborator, decision-maker, communicator, teacher, and professional. Focuses on the older adult patient. Coreq: NEO 101.

**NEO 113 (5) N**  
**Clinical Nursing P S III**

Apply NEO 103 learning with performance in the roles of caregiver, collaborator, decision-maker, communicator, teacher, and professional. Focuses on medical/surgical nursing care. Coreq: NEO 103.

**NEO 114 (5) N**  
**Clinical Nursing P S IV**

Apply NEO 104 learning by expanding performance in the roles of caregiver, collaborator, decision-maker, communicator, teacher, and professional. Focuses on the family. Coreq: NEO 104.

**Nutrition****NUTR& 101 (5) N,C,S**  
**Nutrition**

Introduction to human nutrition, with an emphasis on the relationship of nutrition to growth, development, health, and physical and mental functioning across the lifespan. Sources, functions, interrelationships, and human requirements of proteins, carbohydrates, fat, minerals, vitamins, and water will be examined. Topics also include analysis of personal dietary habits, public health issues such as obesity and access to food and food security, and the role of nutrition in chronic disease. Prereq: Eligibility for MATH 084, 087, or 091, and completion of ENGL& 101 with a 2.0 or better (C).

**Oceanography****OCEA& 100 (5) C,N**  
**Intro to Oceanography**

Survey of the ocean in terms of physical, chemical, geological, and biological processes and the human influence upon the ocean's natural equilibrium processes. Prereq: Eligibility for MATH 084, 087, or 091 (C).

**OCEA& 101 (5) C,N**  
**Introduction to Oceanography with Lab**

Explores the basic fields of ocean science: geological, biological, chemical, and physical oceanography. Investigates challenges related to the ocean, such as natural disaster potential, climate change, whaling, and fisheries decline. Lab science. Eligibility ENGL& 101 and Math 098 or Math 136 or Completion of Math 088 with a grade of 2.0 or higher

**OCEA 298 (5) C**  
**Special Topics: Oceanography**

Selected topics or activities in oceanography. Prereq: Permission.

**Parent Ed/Senior Ed****Parent-Child Study Laboratory**

*Students with children birth through 6 years of age enroll in classes according to the age of their child. The students attend the laboratory class one day a week with their child and one evening class each month. Course content focuses on child development, positive guidance, health and safety, living in a diverse society, family issues, and other parenting concerns depending on the age of the student's child.*

**FAM 012 (3) C,N**  
**Life Enrichment for Seniors**

Provides opportunities for seniors to stay informed on current social issues and meet the challenge of continual learning. Includes subjects in the fine arts, social sciences, humanities, and sciences.

**FAM 013 (3) C,N**  
**Living Skills for Seniors**

Covers information, resources, and skills, helping seniors to live healthy, independent lives. Includes topics in health, nutrition, consumer education, community resources, exercise, crime prevention, lip-reading, and memory improvement.

**FAM 014 (1-3) C,N**  
**Personal Growth/Seniors**

Includes classes in self-image, writing your life story, decision-making, widowhood, interpersonal communication, and similar topics.

**FAM 045 (3) C,N**  
**Parent Education Childstudy/Lab**

Parent/infant, parent/pre-three, father/infant, parent cooperative preschools. Parents participate in planning and leading learning activities for children and adults. Classes are located in campus Parent-Child Centers and local neighborhood locations. Parents manage preschools, and instructors function as resource persons, facilitators, and early childhood educators.

**FAM 046 (3) C,N**  
**2nd Parent Childstudy /Lab**

Parent/infant, parent/pre-three, father/infant, parent cooperative preschools. Parents participate in planning and leading learning activities for children and adults. Classes are located in campus Parent-Child Centers and local neighborhood locations. Parents manage preschools, and instructors function as resource persons, facilitators, and early childhood educators.

**FAM 047,048,049 (3) S**  
**Classes are for Parents of Infants**

Classes meet on campus for parents with their infant. In small and large group discussion, parenting education seminars, individual consultation, parents gain practical knowledge and skills they utilize at home as well as with the children in class while developing a network of support.

**FAM 053,054,055 (3) S**  
**Classes are for Parents of One Year Olds**

Classes meet on campus in a parent cooperative preschool for one year olds. In small and large group discussion, parenting education seminars, individual consultation, parents gain practical knowledge and skills they utilize at home as well as with the children in class while developing a network of support. Parents work in the classroom as assistant teachers under the guidance of the preschool teacher and parenting education instructor.

**FAM 063,064,065 (3) S**  
**Classes are for Parents of Two Year Olds**

Classes meet in local neighborhood locations in a parent cooperative preschool for two year olds. In small and large group discussion, parenting education seminars, individual consultation, parents gain practical knowledge and skills they utilize at home as well as with the children in class. Parents work in the classroom one class session per week as an assistant teacher, manage preschool business, develop a network of support and parenting instructors function as resource persons, facilitators, and early childhood educators.

**FAM 073,074,075 (3) S**  
**Classes are for Parents of Three Year Olds**

Classes meet in local neighborhood preschool locations in a parent cooperative preschool for three year olds. In small and large group discussion, parenting education seminars, individual consultation, parents gain practical knowledge and skills they utilize at home as well as with the children in class. Parents work in the classroom one class session per week as an assistant teacher, manage preschool business, develop a network of support and parenting instructors function as resource persons, facilitators, and early childhood educators.

**FAM 083,084,085 (3) S**  
**Classes are for Parents of Four Year Olds**

Classes meet in local neighborhood locations in a pre-K parent cooperative preschool for four year olds. In small and large group discussion, parenting education seminars, individual consultation, parents gain practical knowledge and skills they utilize at home as well as with the children in class. Parents work in the classroom one class session per week as an assistant teacher, manage preschool business, develop a network of support and parenting instructors function as resource persons, facilitators, and early childhood educators.

**FAM 093,094,095 (3) S**  
Classes are for parents with multi-age children in one class.**FAM 145,146,147,148 (3) N**  
**Parent Education 0-12 Months**

Students with children, birth through 12 months of age, enroll in Parent Education/Child Study Laboratory classes. Students attend the laboratory class one day a week with their child and one evening each month.

**FAM 149 (3) N**  
**Parent Education/Child Study Lab: 2nd Parent**

Students are parents of children, birth through 6 years of age, who enroll in Parent Education/Child Study Laboratory. Students participate in the laboratory and attend parent education opportunities as scheduled. The class is intended primarily for a second parent of a child in a Parent Education/Child Study Laboratory class, with the first parent enrolled in a FAM 145-146-147-148, 155-156-157-158, 165-166-167-168, 175-176-177-178, 185-186-187-188 course.

**FAM 155,156,157,158 (?) N**  
**Parent Education 12-24 Months**

Students with children 12-24 months of age enroll in Parent Education/Child Study Laboratory classes. Students attend the laboratory class one day a week with their child and one evening each month.

**FAM 165,166,167,168 N**  
**Parent Education 24-36 Months**

Students with children 24-36 months of age enroll in Parent Education/Child Study Laboratory classes. Students attend the laboratory class one day a week with their child and one evening each month.

**FAM 175,176,177,178 N**  
**Parent Education 36-60 Months**

Students with children 36-60 months of age enroll in Parent Education/Child Study Laboratory classes. Students attend the laboratory class one day a week with their child and one evening each month.

**FAM 180 (1-3) C,N**  
**Effective Black Parenting**

Covers cognitive-behavioral principles and techniques to foster effective family communication, healthy African American identity, extended family values, child growth and development, and healthy self-esteem. Includes prevention and treatment roles in community efforts to address learning disorders, behavioral problems, and emotional disturbance.

**FAM 181 (1-6) C,N**  
**Star Parenting**

Online class. The STAR process (Stop, Think, Act, Review) encourages those who work with children to investigate children's temperament and development and to focus on long-range goals. Use the child's current behavior to teach skills/values the adult wants. Guide by avoiding problems, responding to cooperation, acknowledging feelings, setting limits, and teaching new skills. May be repeated for credit.

**FAM 182 (5) N**  
**Special Topics Child Care**

Course for experienced family child care providers covering a variety of topics, such as working with parents, special needs children, multi-cultural curriculum, dealing with stress and burnout, and management and personnel issues. Students attend a weekly seminar and receive credit for development and completion of learning objectives to be accomplished in their family day care home. Completion of the learning objectives is supervised by a faculty mentor.

**FAM 183 (5) N**  
**Special Topics Child Care**

Special topics for childcare providers focusing on working with parents, special needs children, multi-cultural curriculum, dealing with stress and burnout, and management and personnel issues.

**FAM 185,186,187,188 (?) N**  
**Parent Education 48-72 Months**

Students with children 48-72 months of age enroll in Parent Education/Child Study Laboratory classes. Students attend the laboratory class one day a week with their child and one evening each month.

**FAM 189 (2) N**  
**Principles & Tools for Effective Parenting**

This course is designed for students with children 1 to 12 years of age in their care (parents, teachers, childcare workers). It introduces students to principles and tools they need to guide the children in their care. Students will apply the principles and tools to their own individual child or issue(s). A student may retake the class with a different child (or issue) in mind.

**FAM 196 (1-3) C,N**

Parent Education: Special Program This class is for students enrolled in Parent Education/Child Study Laboratory: Special Programs classes. The course format includes lectures, discussions, and laboratory experiences designed to explore current research as it applies to child development. Students also fulfill specific obligations of individual classes. The course enables students to extract and adopt principles applicable to parenting, teaching, and child development.

**FAM 197 (1-3) N****Parent Education: Special Program**

Students in this class may include children's teachers, as well as parents and caregivers, who enroll in the Parent Education/Child Study Laboratory. Students participate in the laboratory as able and attend parent education opportunities as scheduled. Students are welcomed and encouraged to attend other related workshops or classes offered in Parent Education or Child Development.

**FAM 198 (1-3) N****Parent Education: Special Programs**

Students in this class may include children's teachers, as well as parents and caregivers, who enroll in the Parent Education/Child Study Laboratory. Students participate in the laboratory as able, and attend parent education opportunities as scheduled. Students are welcomed and encouraged to attend other related workshops or classes offered in Parent Education or Child Development.

**FAM 199 (1-3) N****Parent Education: Special Programs**

This class is for students enrolled in Parent Education/Child Study Laboratory: Special Programs classes. The course format includes lectures, discussions, and laboratory experiences designed to explore current research as applies to child development. Students also fulfill specific obligations of individual classes. The course enables students to extract and adopt principles applicable to parenting, teaching, and child development.

**Pastry**

See *Culinary Arts*, page 267.

**Pharmacy Technician****PHA 112 (2) N****Pharmacy Law**

Intro to federal and state laws regulating pharmacy practice. Emphasis on Washington state pharmacy law regulating pharmacy technicians.

**PHA 115 (3) N****Orientation to Pharmacy Practice**

Intro to pharmacy technician as a career. Includes history, pharmacy information resources, and drug distribution control. Visit job to observe typical job tasks.

**PHA 116 (1) N****HIV/AIDS and HIPAA**

Intro to the basic concepts of HIV/AIDS, including the treatment and prevention guidelines for patient care and a review of the HIPAA federal law as it pertains to the pharmacy technician.

**PHA 120 (3) N****Pharmacy Calculations**

Covers mathematics review and an intro to calculations encountered in pharmacy practice.

**PHA 130 (2) N****Over-the-Counter Drugs**

Overview and uses of drugs available without prescriptions (over-the-counter drugs).

**PHA 140 (3) N****Sterile Procedures & Aseptic Technician**

Covers aseptic technique in preparing sterile solutions and pharmaceuticals. Learn laminar flow hood usage, preparation of intravenous fluids and hyperalimentation fluids. Practice filling unit dose carts and preparing IV fluid labels using hospital-based software.

**PHA 141 (3) N****Sterile Procedures/Aseptic Technician II**

Continuation of PHA 140. Focus on the preparation of cardiac and other iterable drips, IV antibiotics, chemotherapy, IVPs, and TPNs. Intro to hospital application software. Includes lab.

**PHA 145 (1) N****Pharmacy Ethics**

Focuses on commonly encountered ethical dilemmas from pharmacy practice. Intro to ethical decision-making models and problem-solving solutions.

**PHA 146 (2) N****Communications in Pharmacy Practice**

Examination of communication processes to see how they are influenced by the values, behaviors, and beliefs that are defined by society and culture. Also explores communication within the pharmacy setting and how present laws influence this communication.

**PHA 150 (3) N****Pharmacology I**

Covers the principles of drug action, including pharmacokinetics, anatomy and physiology of the nervous system, and the drugs used in the treatment of disorders of the nervous system.

**PHA 151 (2) N****Pharmacology II**

Continuation of PHA 150. Covers the anatomy and physiology of the cardiovascular, gastrointestinal, endocrine, and respiratory systems. Emphasis on the treatment of diseases of cardiovascular, gastrointestinal, and respiratory systems.

**PHA 155 (1-3) N****Special Topics**

Covers a variety of communication and leadership activities, including staff relationships, preparing a résumé, and interviewing. Prereq: Permission.

**PHA 160 (3) N****Pharmacy Technology I**

Covers many uses of computers in pharmacy practice. Gain proficiency using two different pharmacy prescription-filling software programs. Fill real prescriptions in pharmacy lab.

**PHA 161 (3) N****Pharmacy Technology II**

Continuation of PHA 160. Intro to the top 200 drugs. Use pharmacy software to process real prescriptions in the pharmacy lab. Study computerized insurance billing and report generation. Intro to hospital and nursing home application software.

**PHA 170 (5) N****Pharmacy Records Management**

General overview of skills required to work in a retail pharmacy (ambulatory care). Introduces the skills to interpret prescriptions, such as Latin abbreviations, the top 200 drugs, and apothecary symbols. Covers inventory control, third party insurance billing, and pharmacy record-keeping.

**PHA 190 (1-13) N****Pharmacy Technician Externship**

Gain pharmacy technician experience in participating agencies, classroom guidance in assimilating experience, and classroom assistance with problems. (13 credits generally provided over two-quarters, 5 + 8 credits.)

**PHA 191 (1) N****Job Skills National Exam Pre**

Covers job search skills, résumé and cover letter writing techniques and the interview process to prepare students to seek a job as a pharmacy technician. Also reviews the subjects and process for the national exam for pharmacy technician.

**Philosophy****PHIL& 101 (5) C,N,S****Intro to Philosophy**

Introduction to philosophical thought and issues, intellectual systems, and writings of the great philosophers. Covers the nature of philosophy, the meaning of knowledge, values, reality, and related subjects.

**PHIL 102 (5) C,N****Cont. Moral Problems**

Covers philosophical consideration of some of the major moral problems of modern society and civilization, such as discrimination, abortion, euthanasia, animal rights, world hunger, and homelessness. Examines the issue of what means are justified in trying to bring about social change.

**PHIL 110 (5) S, N****Intro to Social Ethics**

Includes philosophical analysis of current or perennial issues in public affairs, such as the nature and scope of freedom in society, the justification of democratic government, and the nature of social justice.

**PHIL 111 (5) N****Intro to Bioethics**

Examines ethical questions surrounding clinical medical practice, ethical issues in biomedical research, and more general ethical questions concerning the maintenance and improvement of the health and well-being of communities at local and global levels. Focuses on newly emerging infectious diseases (AIDS, drug-resistant tuberculosis) and on environmentally-induced diseases, such as asthma, cancers, chemical sensitivity, and reproductive disorders.

**PHIL& 120 (5) C,N,S****Symbolic Logic**

Symbolic logic provides a tool for analyzing and evaluating statements and deductive arguments. Focuses on both sentence and quantificational logic. Covers the meaning of language and its place in the reasoning process. Fulfills QSR requirement for AA degree. Prereq: MATH 098.

**PHIL 160 (5) C****Philosophy of Science**

Covers the historical development of selected concepts from science and the philosophy of science.

**PHIL 205 (5) C****Philosophy for Children**

Introduction to philosophical thinking through learning about pedagogical methods of doing philosophy with children, such as facilitating communities of inquiry; students will also observe and participate in philosophical discussions with children in an elementary school classroom. Prereq: English 102 eligibility.

**PHIL 210 (5) C****Comparative Religion**

This course introduces the academic study of religion by using a comparative approach to a variety of religious traditions. We'll ask, "What is religion?" We also will explore the ethical, metaphysical, and other philosophical stances found within and between various religions by examining their beliefs, rituals, texts, and practices. Prereq: ENGL& 101 eligibility.

**PHIL 215 (5) C,N,S****Introduction to Ethics**

Deals with questions: What am I to do? and Why? What am I to be? and How can I be what I choose to be? Examines ethical principles of Aristotle, Mill, Aquinas, Kant, existentialism, and situation ethics. Includes current problems in medical ethics. Explores ideas of duty, justice, responsibility, virtue, and human excellence.

**PHIL 220 (5) N****Environment Human Rights**

Addresses ethics and human rights standards in general as well as the relevance of norms and instruments for environmental concerns. Examines ways ethical principles and international human rights norms apply to specific environmental and sustainability issues. Covers practical measures taken by human rights organizations to effect change.

**PHIL 240 (5) C,N****Liberation Ethics**

Examines the morality of liberation, through general theoretical and conceptual analysis, with the focus of inquiry on conceptions of liberty, oppression, and justice. Also examines personal identity and individual community/social interaction, social/cultural groups within the United States and North America, and social/cultural groups outside of North America and Western Europe.

**PHIL 250 (5) C****Feminist Perspectives**

Focuses on questions such as the nature of sexism and feminism; "sisterhood" as an empowering, unifying truth or an oppressive, difference-stifling myth; the relationship between sexism and other forms of oppression; and between sex and gender. Is celebrating feminism a uniquely female way of knowing, or is it being morally judgmental, sexist or feminist? Prereq: Eligibility for ENGL& 101.

**PHIL 255 (5) C****Marxist Philosophy Exam**

Examines Marxist philosophy: What is the nature of capitalism? What is exploitation? What are some Marxist criticisms of capitalism? Does Marxism clarify or distort the phenomenon of racism? What reasons, if any, are there why lesbians, gays, or bisexuals should support Marxism? Is Marxism Eurocentric? Can a person consistently support both Marxism and feminism? Must a Marxist be opposed to religion? What is political freedom? Prereq: Eligibility for ENGL& 101.

**PHIL 267 (5) C,N,S****Philosophy of Religion**

Explores major issues of religion, including the nature of religious experience, the idea of the holy, God and gods, the problem of evil, the quest for transcendence, the question of authentic and unauthentic religious forms, religious relativism, mysticism, and the contemplative life.

**PHIL 298 (1-5) C,N,S****Independent Study In Philosophy**

Independent study in selected philosophical topics under faculty supervision. Prereq: Permission.

**PHIL 299 (1-5) C,N,S****Seminar in Philosophy**

Examines great philosophical questions and philosophers by instructor and student agreement.

**Phlebotomy****PHL 110 (7) V****Phlebotomy I**

Phlebotomy 110 addresses the role of the Phlebotomist and daily functions performed in a variety of health care settings and includes live venipuncture procedures. Medical asepsis/hand washing, anatomy and physiology, medical terminology, patient reception, patient rights, consent, assessment, patient interaction, and specimen custody are included in this course.

**PHL 120 (6.5) V****Phlebotomy II**

Phlebotomy 120 addresses the advanced role of the Phlebotomist and daily functions performed in a variety of health care settings and includes live venipuncture procedures. Accessioner duties, the theory of arterial blood gases, capillary puncture, microcollection, drug testing, point of care testing, advanced/critical patient assessment, dehydration, anticoagulation therapy, lymphedema, edema, obesity, intravenous therapy, hemoconcentration, and hemolysis are included in this course.

**Photography****PHO 110 (3.5) C**

Survey Photography

Explores the varied career paths found in professional photography. Emphasis is placed on the creative styles and trends in image making, from the first Daguerreotypes to the HDSLR storytellers of today. Entry-level issues such as working conditions, time management, organizational strategies, and professional ethics will also be examined. Prereq: Permission.

PHO 111 (3.5) C

#### Digital Capture Technology

Addresses the terminology and ethics of capturing digital images. Covers the functions and operation of HDSLR cameras. Introduces techniques for determining optimum exposures and basic compositional aesthetics. Includes development of an organized file management system utilizing Adobe Lightroom and parametric editing in Capture One. Prereq: Permission.

PHO 112 (3.5) C

#### Light Tech I

Covers the basic methods of commercial lighting; the laws, principles, and practices of light; the qualities of direct/indirect sunlight and tungsten light sources; lighting for form, texture. Introduces standards for the safe operation of lighting equipment in a studio environment. Prereq: Permission.

PHO 113 (3.5) C

#### Audio Production

Covers sound theory and the best practices for sound recording and audio editing to develop skills as effective audio storytellers. Includes use of various microphones and audio recorders to effectively record sound or voice on location and in a controlled environment. Introduces use of Adobe Audition and Premiere to layer sounds to create audio narratives. Includes development of skills to become more critical in hearing sound. Prereq: Permission.

PHO 120 (3.5) C

#### Concept Development

Introduces visual conceptualization skills required in commercial photography. Includes attention to techniques and processes that support creative and aesthetic development. Explores approaches to critique and the art market. Fosters creativity and aesthetic development. Prereq: Successful completion of first-quarter commercial photography program courses with a minimum grade of 2.0 in each course.

PHO 121 (3.5) C

#### Digital Image I

Covers the creative and technical requirements of digital image optimization using Adobe Photoshop Creative Cloud. Includes interface navigation, tools, layers and filters, creation and manipulation of image selections, adjustments of color and contrast, use of retouching, masking, cropping, and basic image compositing, and the export of images for print and web. Prereq: Successful completion of first-quarter commercial photography program courses with a minimum grade of 2.0 in each course.

PHO 122 (3.5) C

#### Lighting Techniques II

Covers studio techniques for lighting people. Addresses safe operation of studio equipment for "portrait lighting" setups. Introduces three-dimensional contrast in a traditional portrait studio setting. Includes subject rapport, subject posing, and development of a theme-based narrative using advanced lighting techniques while demonstrating set construction skills. Prereq: Successful completion of first-quarter commercial photography program courses with a minimum grade of 2.0 in each course.

PHO 123 (3.5) C

#### Video Production I

Introduces basic video capture techniques, including HDSLR camera operation. Includes an overview of Adobe Premiere's interface, tools, features, and a basic production workflow. Covers working in production teams, environmental aesthetics, establishing a point of view, capturing "the decisive moments" in short clips, and assembling final video in the editing process. Prereq: Successful completion of first-quarter commercial photography program courses with a minimum grade of 2.0 in each course.

PHO 131 (3) C

#### Darkroom Techniques I

Intro to digital darkroom procedures and file processing, including white point, tone curves, hue, saturation, and luminance. Create a file management system using Adobe Lightroom. Experiment with printing papers, finishing, and presentation techniques. Learn folder hierarchy, metadata, copyright, and database file management.

PHO 132 (3) C Darkroom Techniques II

Explore digital darkroom procedures and digital file processing using advanced techniques in Lightroom. Learn redundant data protection systems, global and selective image manipulation, and integration solutions with assorted image manipulation software. Learn to see color and produce accurate color output.

PHO 133 (3) C

#### Retail Photography

Learn advanced retail portrait and wedding photography techniques: seeing and using available light, using on-camera strobe units, choosing pleasing poses and flattering lighting, sequencing photos to tell a wedding story, and adding words and music to increase emotional and saleable impact. Includes retail sales materials, presentations, and pricing strategies.

PHO 141 (3) C

#### Survey of Photography

Examines the multiple opportunities and challenges of professional photography as a career. Covers technical history from Daguerreotypes to HDSLR storytellers, and master photographers of many styles. Additional emphasis on business practices: working conditions, time management, organizational strategies, and professional ethics.

PHO 142 (4) C

#### Digital Imaging

Intro to Photoshop software for creating and manipulating bitmapped graphics. Develop non-destructive, image-editing workflows for digital image processing and enhancement, color management, image selection, compositing, burning, dodging, retouching, tonal or color correction, and modification. Adapt print resolution, size and format for print, video, and web.

PHO 143 (3) C

#### Digital Media Production

Learn multimedia storytelling, narrative forms, and techniques. Develop a better understanding of using images and audio to advocate, communicate, or address a specific subject or Issue.

PHO 197 (1-5) C

#### Work Experience/Photography

Earn work experience credit in the photography field. Contact the Photography program for details.

PHO 214 (4) C

#### Catalogue Production

Create professional quality images for a multiple-page catalog layout by producing a mini-catalog using traditional and digital photographic techniques. Explore personal photographic style. Collaborate on advertising assignments.

PHO 215 (4) C

#### Advertising Production

Working with a local, community-based non-profit organization, develop and produce an advertising campaign. Learn all aspects of advertising production, including business components such as negotiating fees and expenses. Present completed campaigns to a panel of industry professionals.

PHO 224 (4) C

#### Communication Production

Intro to shooting motion/video with a DSLR camera. Research, plan, direct, and produce a completed video project. Learn techniques for writing treatments, scripts, and storyboards. Covers video shooting techniques and use of video production equipment.

PHO 225 (3) C

#### Conceptual Development

Intro to visual conceptualization skills, elements, and principles of 2-D design. Study techniques and processes that support creativity and aesthetic development. Explore the critique process. Focus on developing individual creativity and photographic style.

PHO 234 (3) C

#### Professional Business Practices I

Intro to small business development and management for the professional photographer. Learn to write a business plan for commercial or retail markets. Covers retirement planning, insurance, taxes, copywriting, budgeting, accounting, estimating, pricing, and negotiating. Follow an assignment from first phone call to invoice. Acquire business licenses and join professional organization(s).

PHO 235 (3) C

#### Professional Business Practices II

Focuses on marketing practices. Write and implement a marketing plan, create self-promotion materials for mail, web, social media and in-person presentations. Present final marketing plan to industry professionals for critique.

PHO 244 (3) C

#### Visual Narrative

Learn to use industry standard video editing software for post-production, non-linear editing of digital video. Covers basic digital video and audio editing workflows. Learn to support a narrative by incorporating continuity and logical sequencing of both video and audio clips.

PHO 245 (3) C

#### New Media

Broaden understanding of image editing techniques including advanced retouching, layering, masking, and color adjustments for basic web design. Learn to use templates to build sites. Create and publish online a basic website using image editing and design software.

PHO 254 (4) C

#### Portfolio I

Intro to the processes of creating a professional-level portfolio as a marketing and job search tool. Includes various presentation methods, including electronic portfolios. Create marketing materials: business card, stationery, and self-promotion pieces.

PHO 255 (4) C

#### Portfolio II

Continuation of PHO 254. Produce portfolio-quality images and computer-generated portfolio pages. Investigate traditional and electronic alternatives for portfolios. Create a résumé and an information page for a website. Meet with industry professionals to discuss tools needed after graduation.

PHO 256 (4) C

#### Portfolio III

Assemble a final portfolio of images that represents the student's creative voice and professional direction, for presentation to multiple clients, representatives, and agencies. Continue learning about production stages of multiple, complex location shoots.

PHO 266 (3) C

#### New Media Workshop

Edit, sequence and prepare images for the website project from previous quarter. Finalize the website and all promotional materials. Complete a printed portfolio. Create a shot list and shot plan for the week-long Port Townsend Portfolio Shoot-out.

PHO 276 (3) C

#### Portfolio Workshop

Prepare materials for the annual Portfolio Show. Design individual show stations and work with committees to plan the two-day event. Work with faculty to edit and select images. Meet with industry professionals in one-on-one interviews and portfolio reviews.

PHO 286 (3) C

#### Special Projects

Focus on career entry and development by studying various projects, such as employment strategies, technological innovations, and global marketplace opportunities. Seek critical feedback on portfolios from professionals, and develop professional relationships.

## Physical Education

*NOTE: All physical education courses are co-ed.*

PEC 050 (5) S

#### PE-Career Link

Introductory fitness class designed to increase students' awareness of the importance of fitness. We plan to empower students to have the knowledge to design their own fitness programs and understanding of health based topics. Includes a variety of physical activities and exercise that may be adapted to your personal fitness performance. For all fitness levels.

PEC 104 (2) C,N,S

#### Beginning Martial Arts

Learn the practical self-defense techniques and philosophies of Goju Ryu Karate-do, including fundamentals of stances, blocks, strikes, kicks, movement, and offensive and defensive strategies.

PEC 105 (2) C,N

#### Intermediate Martial Art

For individuals at intermediate skill level. Adjust to the type of self-discipline and interaction required in the Goju Ryu Karate. Prereq: PEC 104 or formal rank up to and including green belt.

PEC 106 (2) C,N

#### Advanced Martial Arts

For advanced skill levels. Foster self-improvement and appreciation of Karate as an art, sport, physical conditioning, and self-defense tool. Prereq: Intermediate skills, successful completion of PEC 105, or formal rank of brown belt or higher.

PEC 109 (2) C,N

#### Slimnastics, Co-Ed

Exercise course adapted to individual needs for body muscle toning and weight control.

PEC 110 (2) C,N,S

#### Cardio-Fitness

Improve cardio-respiratory fitness through rhythmic, dynamic, large-muscle exercise performed to music. Workouts consist of warm-up, workout, cool-down, strengthening, and flexibility. Current fitness-related issues, trends, and topics included.

PEC 111 (2) C,N

#### Beginning Swimming

Swimmers of all abilities are taught to improve their swimming strokes according to Red Cross Standards and to improve their fitness levels.

PEC 112 (2) C,N

#### Intermediate Swimming

Skills and techniques of swimming. Prereq: Beginning Swimming.

**PEC 113 (2) C,N****Beginning Badminton**

Intro to basic skills of badminton: clears, serves, and drives. Covers rules of play and basic singles and doubles strategies. Opportunity for game play and tournament play.

**PEC 114 (2) C,N****Beginning Tennis, Co-Ed**

Intro to the rules, history, techniques, skills, and strategies of tennis. Reinforce and apply learning through game play and competition.

**PEC 115 (2) C,N****Beginning Volleyball**

Learn basic volleyball skills: forearm and overhead passing, serving, and spiking. Includes basic offensive and defensive strategies for 6-on-6 team play. Opportunities for modified game play and tournament play.

**PEC 118 (2) C,N****Intermediate Tennis, Co-Ed**

Provides the opportunity to practice the proper techniques and strategies associated with tennis and focus on advanced technical skills.

**PEC 121 (2) C,N****Handball**

Development of basic ballroom dancing skills. Dance styles include the waltz, rumba, cha cha, samba, foxtrot, and swing.

**PEC 129 (2) C,N****Intermediate Volleyball**

Covers intermediate level attacking, passing, and serving techniques, and multiple offensive systems and defensive patterning practice. Assumes basic volleyball skills. Prereq: PEC 115 or permission.

**PEC 130 (2) C,N****Beginning Basketball**

Covers basic individual skills of dribbling, passing and shooting, team skills, and strategies. Includes in-class drills, modified game play, structured scrimmage, and tournament play.

**PEC 131 (2) C,N,S****Beginning Weight Training**

Beginning Weight Training develops muscular fitness through resistance training, using free weights, and weight machines. Workouts consist of individualized programs developed to align with student goals and established weight training principles. In-time instructional feedback and assistance is provided to correct form and technique and to answer student questions. Related information may include muscle anatomy and physiology, training tactics and supplementation, fitness trends, and myths.

**PEC 132 (2) C,N,S****Intermediate Weight Training**

Designed for students with previous weight training experience and knowledge, Intermediate Weight Training develops muscular fitness through resistance training, using free weights, and weight machines. Workouts consist of individualized and instructor-driven programs that align with student goals, proper technique, and weight training principles. Intermediate skills and workout designs are presented, advanced exercise assistance is provided, and nutrition and fitness information are included.

**PEC 136 (2) C,N,S****Yoga**

Covers postures or asanas, breathing, meditation exercises for physical and mental fitness. Presents yoga as a philosophy and an art form, introducing a number of poses with their purposes.

**PEC 137 (2) C,N,S****Yoga II**

Builds on PEC 136 with stronger asana/postures and further discussion of Yoga principles and philosophy. Prereq: PEC 136 or permission.

**PEC 139 (2) N****Yoga Pilates**

Yoga poses and Pilates matwork exercises are integrated into an exercise training program to improve posture, strength, flexibility, coordination, and balance. Breathing and relaxation practice are added to connect body-centered activity with mind-centered activity. Other topics of interest include movement mechanics, fundamental yoga and Pilates principles, nutrition, and other fitness- and health-related themes.

**PEC 143 (2) C,N,S****Walking for Fitness**

Develops cardio-respiratory fitness through progressive workouts, including warm-ups, walking sessions, and cool-downs. Covers safety, walking technique, and issues and trends related to walking and physical fitness.

**PEC 145 (2) C,N,S****Jogging**

Develop cardio-respiratory fitness through progressive workouts including warm-ups, walking sessions, and cool-downs. Covers safety, jogging technique, and issues and trends in jogging and physical fitness.

**PEC 150 (1-3) C,N,S****Beginning Physical Fitness**

Beginning Physical Fitness includes instruction in developing, executing, and maintaining individualized fitness programs that highlight cardiorespiratory endurance, muscular strength and endurance, and flexibility. Students learn to use cardio and weight machines, free weights, and other equipment, as well as participate in a variety of activities, to help meet personal goals. Information about anatomy and physiology, nutrition, injury prevention, and fitness trends are also included.

**PEC 151 (1-3) C,N,S****Intermediate Physical Fitness**

For students with previous fitness training experience, Intermediate Physical Fitness develops cardiorespiratory endurance through walking, jogging or aerobic machines, and muscular fitness via free weights, weight machines, and stretching activities. Individualized and instructor-driven workouts align with student goals, best practices, and established training principles. Intermediate level skills and workout designs are presented, and supplemental fitness information is provided.

**PEC 154 (1) N****Smart Cycling**

Go By Bike Classroom and on-bike study of principles of traffic, traffic laws, safety equipment, bicycle safety checks, health and nutrition, bicycle handling skills, lane positioning, safer practices for riding in traffic, and critical thinking for smart cycling. Emphasizes safety, utility, and fun.

**PEC 155 (3) C,N,S****First Aid & Personal Safety**

American Heart Association Heartsaver First Aid CPR AED certification (adult, child, infant). Basic Life Support (BLS) for Healthcare Providers certification is available as an option. Provides instruction in advanced rescue skills, including two-person CPR, pocket mask, and bag-valve-mask.

**PEC 160 (2) C,N,S****Step Aerobics**

Development of cardio-respiratory and musculoskeletal fitness by incorporating choreographed, rhythmical movements performed on a bench or step. Discussions include current fitness-related issues and trends.

**PEC 162 (2) N**

### Step and Sculpt

For all experience levels. Gain or maintain overall fitness levels. Workouts include warm-up, cardiovascular, cool-down, strengthening, and flexibility components. Perform dynamic, large-muscle movements on a bench designed for step aerobics. Sculpting incorporates hand-held weights, resistance bands, body bars, and other equipment.

**PEC 165 (2) C,N,S**

### Body Conditioning

Body Conditioning uses hand-held weights, resistance bands, kettlebells, and/or similar equipment to improve muscular strength, muscular endurance, and flexibility in all of the body's major muscle groups. A variety of exercises and activities are practiced, and particular attention is given to proper technique, safety, and fitness progression. Wellness-related information, such as nutrition, proper hydration, and fitness trends, are also included.

**PEC 170 (2) C,N**

### Intro to Jazz Dance

Covers fundamentals of dance technique while improving strength, flexibility, and anaerobic capacity. Builds postural awareness and develops motor skills through jazz style, which borrows from ballet and contemporary street dance. Includes safety, injury prevention, spinal health, and nutrition.

**PEC 171 (2) N**

### Intro to Dance

Introduction to Dance teaches the fundamentals of dance technique while increasing levels of strength, flexibility, and anaerobic capacity. A brief history of each style and how it has evolved, as well as vocabulary synonymous with dance, will also be introduced. Topics include ballet, modern, and hip-hop styles of dance along with basic composition of dance. The class will be taught in four sections: a brief lecture, dance technique and warm-up, traveling motor skills, and a movement combination.

**PEC 172 (2) C**

### Intro to Salsa & Latin Dance

Students learn dance posture, rhythm, and the techniques of leading and following for four styles of dance from Latin America, including Salsa. The class includes an introduction to Latin music theory and emphasizes the rich history and culture that surrounds these dances. No partner necessary.

**PEC 173 (2) C**

### Intro to Swing

Students learn dance posture, rhythm, and the techniques of leading and following for four styles of dance from the United States, including East Coast Swing, Lindy Hop, Charleston, and Shim Sham jazz steps. This class includes an introduction to Jazz music and emphasizes the rich history and culture that surrounds these dances. No partner necessary.

**PEC 175 (2) C,N**

### Ballet Basics

Covers fundamentals of ballet style. Stresses proper technique and body mechanics to avoid dance-related injury. Emphasis on flexibility and strength, focusing on basic movements (plie, tendu, développé, and battement), joint stability, and range of motion. Includes kinesthetic memory, basic nutrition, rest, and the application of ballet to other dance and movement styles.

**PEC 177 (1 - 2) N**

### Introduction to Ballroom Dance

An introduction to the most popular social dances, such as Rumba, Waltz, Swing, Cha Cha, Fox Trot, Tango, and Salsa. Lead and Follow principles, partnering technique, footwork, basic patterns, spins and turns, and traditional dance etiquette will be presented and practiced.

**PEC 179 (2) N**

### Dance Fusion

Learn various dance genre (hip hop, contemporary, modern, classical, ballroom, and Latin) basics in a fast-paced, cardio dance environment with choreography performed to contemporary, hip-hop, Latin, and pop music. Students should plan to sweat, burn calories, learn more about cardiovascular training and aerobic exercise, as well as meet others with similar fitness goals.

**PEC 180 (2) N,S**

### Total Body

Training Incorporates an overall conditioning plan through a variety of activities selected to improve aerobic stamina, muscular strength and endurance, and flexibility. Activities may include high-low and step aerobics, weight training/sculpting, kickboxing, yoga, Pilates, and circuit training.

**PEC 181 (3) C**

### Wellness Management

Covers the fundamentals of a complete wellness program. Principles of fitness, healthy eating, stress management, goal setting, positive lifestyle choices, and application of these components. Includes physical activity, self-monitoring, on-line and in-person lecture, and group interaction. Class requires participation online and in-person, on-campus.

**PEC 182 (2) N**

### Fusion Fitness

Fusion Fitness incorporates a three-component conditioning plan to challenge and improve aerobic stamina, muscular strength and endurance, power, and flexibility. The three components include "Turbo" (kickboxing, running, interval training, stair climbing, and similar aerobic activities), "Pump" (body weight training, sculpting, core training, circuits, and similar muscular training activities), and "Power" (boot camp, Tabata, burpees, mountain climbers, and similar power activities).

**PEC 298 (1-5) C,N,S**

### Special Topics

Seminar on selected topics and/or activities in physical education. Prereq: Variable, depends on topic.

**PEC 299 (1-5) C,N,S**

### Independent Study

Independent study of approved topics in physical education. Prereq: Permission.

## Physics

**PHYS& 100 (5) C,N,S**

### Physics Non-Science Majors

Basic laws of physics, such as motion, sound, gravitation, energy, heat and temperature, electricity and magnetism, light, relativity, quantum theory, and nuclear physics. For non-majors. Non-lab course. Prereq: Eligibility for MATH 084, 087, or 091 (C).

**PHYS 111 (5) S**

### Technical Physics I

Includes force, linear and angular motion; work, energy, and power; rotation, torque, and power transmission; friction and the analysis of basic machines; structure of materials and the properties of solids. Prereq: MATH 111.

**PHYS 112 (5) S****Technical Physics II**

Explores properties of solids, liquids, and gases; temperature and the effects of heat; specific heat, heat transfer, basic thermodynamics, heat engines; wave motion; illumination; refractions, resonance and interference. Prereq: Basic algebra and PHYS 111.

**PHYS 113 (5) S****Technical Physics III**

Covers electrostatics, direct current circuits, magnetism, electromagnetic induction, alternating current, capacitance, inductance, resonance, vacuum tubes, and transistors. Prereq: Basic algebra and PHYS 112.

**PHYS& 114 (5) C,N,S****General Physics I with Lab**

First of three algebra-based courses covering the field of physics. Includes kinematics, vectors, forces, dynamics, work, energy, momentum, torque, and gravitation. Lab included. Prereq: Completion of MATH 098 with a 2.5 or better (C).

**PHYS& 115 (5) C,N,S****General Physics II with Lab**

Continuation of PHYS& 114. Includes fluids, heat, gas laws, electricity, magnetism, and electrical circuits. Lab included. Prereq: PHYS& 114 (with 2.0 or higher) or permission.

**PHYS& 116 (5) C,N,S****General Physics III with Lab**

Continuation of PHYS& 115 Covers electromagnetic waves, optics, atomic and nuclear physics. Lab included. Prereq: PHYS& 114 (with 2.0 or higher) or permission (N); PHYS& 115 or permission (C,S).

**PHYS 198 (5) C,N****Physics Workshop**

A problem-solving workshop approach to physics topics considered appropriate by the instructor and/or physics faculty. Prereq: Permission.

**PHYS& 221 (5) C,N,S****Engineering Physics I**

Calculus-based study of kinematics, Newton's Laws of Motion, dynamics, energy, and momentum in linear and rotational coordinates. Lab Included. Prereq: MATH& 151 with a 2.0 or higher.

**PHYS& 222 (5) C,N,S****Engineering Physics II**

Covers Maxwell's classical laws of electricity and magnetism which developed from the study of the Laws of Coulomb, Ampere, Gauss, and Faraday. Lab included. Prereq: PHYS& 221 and MATH& 152.

**PHYS& 223 (5) C,N,S****Engineering Physics III**

Intro to waves and oscillations and the study of sound, geometric and physical optics. Covers the dualistic particle-wave nature of microscopic phenomena as an intro to modern physics. Lab included. Prereq: MATH& 152, PHYS& 222 (N,S); MATH& 152 with 2.0 or higher, PHYS& 222 (C).

**PHYS 298 (1-5) C,N,S****Special Topics**

Independent work in physics laboratory and/or library. Prereq: Permission.

**PHYS 299 (1-5) C,N,S****Independent Study**

Independent study of physics problems or topics. Prereq: Permission.

**Political Science****POLS& 101 (5) C,N****Intro Political Science**

Explores the origin and development of the study of political science. Examines the origins of government systems, political theory, comparative systems, political socialization, public administration, political parties and elections, technology, political economy, globalization, and international relations. Foundation course for political science studies.

**POLS 170 (5) C,N****Minority Politics in USA**

Focuses on socio-political developments leading to current status of minorities in America. Surveys U.S. legislative history and citizenship. Covers critical review of proposed solutions to minority tensions.

**POLS& 202 (5) C,N,S****American Government**

Survey of the origin and functions of the U.S. government. Examines the Articles of Confederation, the Constitution, and the creation of the federal system, as well as the three branches of American Government. Analyzes the functions of institutions through the lens of political history and through analysis of current events. Topics include political culture, elections and campaigns, interest groups, the media, and public policies.

**POLS& 203 (5) C,N,S****International Relations**

Introduction to international relations and governmental organizations. Examines major issues in the international arena, including nationalism, national sovereignty, globalization, international law, economics, security, environmentalism, and foreign policy. Emphasis on issues that foster or frustrate world peace and prosperity. Transfer class.

**POLS 205 (5) C,N****Political Economy**

Study of basic economic terms and concepts by surveying various nations and regions politically and economically. Study how nations and regions economically compete with one another. Includes study of human and non-human resources, the international monetary system, government business activity, development, and international law.

**POLS 213 (5) C,N****Women and Politics**

Intro to concepts of power and policy issues as they relate to women. Covers theoretical, historical, and empirical studies of women's participation in social and political movements nationally and internationally. Studies women's diverse roles in relation to family, economics, labor, government, and law.

**POLS 255 (5) C,N****Government & Politics of Middle East**

Problems of traditional society versus construction of a modern state. Emphasis on Arab-Israeli relations and impact on international affairs.

**POLS 298 (1-5) C,N,S****Independent Study in Political Science**

Independent research and writing on selected political science topics under faculty supervision. Prereq: Permission.

**POLS 299 (1-5) C,N****Seminar in Political Science**

Seminar requiring study and written reports on political science topics. Prereq: Permission.

## Professional Technical Education and Instructional Design Bachelor of Applied Science

*Students must be accepted into the program in order to take these courses.*

**PTE 301 (3) S****Workforce Instructional Methods & Materials**

Provides an overview of established training principles and practices for aspiring instructors or trainers. A variety of instructional methods will be focused on, including lecture, discussion, demonstration, and small group work. Different learning options will be addressed, including Prior learning assessment (PLA), competency-based, project-based, and apprenticeship. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 302 (3) S****Course Development Design**

This course presents models and processes for curriculum design appropriate to the adult setting. Content includes scope and sequence, competency-based models, syllabus development, writing course objectives, and creating assignments. Program planning, technical advisory boards, industry standards, and accreditation standards will be discussed. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 310 (3) S****Manage Learn Environment**

This course is designed to help students develop a management plan for instructional materials and supplies. Emphasis is on shop, laboratory, and classroom safety practices. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 311 (3) S****Technology in Learning**

This course covers how to identify, evaluate, and implement new and emerging technologies relevant to instruction. A variety of applications will be covered to include in student-created curriculum. The focus will be on current curriculum development practices. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 312 (3) S****American Community College**

This course explores the history, present status, student diversity, student services, ethical issues, and future directions of the American community college. Students will research and develop at least one grant proposal relevant to their discipline. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 313 (3) S****Online Teaching Methods**

Provides an overview of best practices for creating online content, teaching online, and student management of online courses. Students will practice skills during class and will begin to create an online course using the Canvas LMS. This course is intended for Professional Technical instructors who would like to teach online. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 314 (3) S****Professional Portfolio**

This course will require students to document prior work experience by developing a portfolio and will culminate in receiving Workforce Experience Practicum credit. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 315 (1-10) S****Workforce Experience**

Practicum Credits earned will be based on the successful completion of the Professional Portfolio course (PTE 314). Students must have demonstrated 2 or more years of relevant work experience in their area of interest. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 345 (5) S****Adult Learning**

This course introduces students to adult learning theory, learning styles, learning processes, learning development, and student motivation. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 401 (3) S****Student Support Guidance**

Evaluate student completion theories and develop the skills necessary to respond to student needs, including scheduling and holding office hours, providing multiple modes of communication, and understanding professional obligations regarding student contact. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 402 (3) S****Assessment of Learning**

Students will learn how to design and develop evaluation processes to be integrated into classroom learning. Course content will include prior learning assessment, formative assessment, summative assessment, and will be linked to learning outcomes. Accreditation standards and processes will be addressed. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 420 (3) S****Legal Issues Ethics Education**

An introduction to how legal implications from local, state, and federal sources guide professional practice. Evaluate social, economic, and political issues that influence professional ethics and practice. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 460 (3) S****Diversity Globalism Education**

Examine cultural competence and the effects of globalism in the educational setting. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 468 (3) S****Project Management Recruitment**

Learn all aspects of program management and leadership, including student recruitment. Covers program budgets, staffing, facilities, and scheduling. Develop a recruiting plan for a current program or intended area of instruction. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 489 (1) S****Professional Development Cert**

Develop a professional development plan per WAC 131-16-92 and attain an Initial Washington state Professional Technical Teacher Certification. Additional requirements for certification include CPR and First Aid. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 490 (1-10) S****Teaching Internship**

Observe, reflect, and practice teaching adult learners in a technical, post-secondary environment. Find a technical teaching placement in their field of interest and work with an adult educator (site supervisor) to develop and deliver relevant curriculum. Both the site supervisor and college faculty advisor will evaluate the internship. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 495 (3) S****Capstone**

Project-based course offered during the student's last quarter of study. Draws on all previous classes and internship experiences. Prereq: Current enrollment in Professional Technical Teacher Education B.A.S. program or instructor permission.

**PTE 498 (1-10) S****Special Topics**

Special topics in teaching or leadership as agreed upon by the student and a faculty member.

**Psychology****PSG 110 (2) V****Behavioral Psychology**

This course addresses the psychological aspects of the health professional relative to work environment, patient care/interactions, and daily living. Throughout the course aspects of hierarchy of needs, effective communication, death and dying, the grieving process, conflict resolution, verbal and non-verbal communication, spatial separation, cultural diversity, managing stress, motivation, the need to belong, and achievement motivation are discussed. Prereq: Permission.

**PSYC& 100 (5) C,N,S****General Psychology**

Intro to the scientific study of human behavior, including learning and thinking, development, perception, motivation, emotion, personality and individual differences, social and abnormal behavior, and research methods.

**PSYC 120 (5) C,N****Psychology of Adjustment**

Covers the study of personality within the framework of the social system and the application of proven psychological principles to problems of adjustment and conflict faced in daily living.

**PSYC& 200 (5) S****Lifespan Psychology**

Survey of human physical, psychological, and social development from conception through death. Emphasis on major developmental theories, research, and research methods of studying life-span development. Prereq: PSYC& 100 or permission.

**PSYC 205 (5) N****Health Psychology**

The psychological, biological and social factors behind health, illness, and overall well being is presented. Topics include: stress, pain, coping, chronic diseases, and behavioral health.

**PSYC 207 (5) C,N****Developmental Psychology**

Analysis of psychological development of the child in relation to biological, physical, and sociological antecedent conditions from conception through adolescence. Prereq: PSYC& 100 or permission.

**PSYC 209 (5) C,N****Fundamentals of Psychological Research**

Examines the scientific method, hypothesis testing, and designs of qualitative and quantitative research. Covers the search and evaluation of research literature in psychology, descriptive statistical analysis, fundamentals of scientific writing, ethical issues, and cross-cultural considerations in psychological research. Includes a research project. Prereq: PSYC& 100 or equivalent.

**PSYC 210 (5) C,N****Personality & Individual Differences**

Introduces the study of personality and individual differences, including theory, measurement, and research. Application of psychological principles to problems of everyday living. Prereq: PSYC 100 with a 2.0 or higher and eligibility for ENGL 101.

**PSYC 217 (5) N****Introduction to Probability and Statistics**

Focuses on an introduction to descriptive statistics, probability theory, distributions, including the normal distribution, sampling, experiments, hypothesis testing, t-tests, and correlations. Prereq: MATH 098.

**PSYC& 220 (5) C,N,S****Abnormal Psychology**

Intro to theories of psychopathology and behavioral changes associated with abnormal behavior. Emphasizes ethical issues of diagnosis and treatment and major diagnostic categories, such as schizophrenia, depression and anxiety disorders, and disorders of childhood and old age.

**PSYC 222 (5) C,N****Survey of Physiological Psychology**

Covers workings of the nervous system. Explores the brain's capacity in language, hunger and thirst, learning and memory, emotions, sexual behavior, depression, schizophrenia, and repair after injury. Prereq: Eligible for ENGL 101. Recommended: PSYC 100 with a 2.0 or higher, or a biological science 100-level course with a 2.0 or higher.

**PSYC 225 (5) S****Psychology of Addiction**

Psychology of addiction, a critical examination of the behavior and mental processes associated with addiction. Systemic approaches to investigation through psychosocial, biological, cognitive, and sociobehavioral areas in psychology. Lecture, research, presentation, and critical examination. 5 credit class. 200 level course. Prereq: PSYC 100 General Psychology or SOC 101 Intro to Sociology. This is a dual PSYC/SOC course.

**PSYC 230 (5) C,N,S****Human Sexuality**

Survey of current literature on development of sexual behavior. Includes historical, physiological, psychological, and social components of sexuality and its deviations. May be taken as SOC 230.

**PSYC 240 (3) C,N,S,V****Psychology of Human Relations**

Covers dynamics of organizations and human resources in the workplace: motivational theory, leadership, group processes, organizational theory, participatory management, conflict management and counseling. Primarily for professional-technical students. Prereq: Satisfactory performance on placement test (S).

**PSYC 245 (5) C,N,S****Social Psychology**

Examines the effect of others on self-concept, social cognition, aggression, conformity, helping, loving and liking, competition and cooperation, and prejudice and discrimination. May be taken as SOC 245.

**PSYC 250 (5) C,N****Psychology of African Americans**

Provides an in-depth look at contemporary psychological research and issues involving African Americans. Includes Black personality, institutional racism and the educational system, counseling African Americans, and methods of dealing with racism in daily life.

**PSYC 255 (5) C**  
**Cognitive Psychology**

Overview of the field of cognitive psychology. Addresses current theory and research in the areas of attention, perception, learning, memory, decision-making, language, problem-solving, and creativity in both clinical and real world contexts. Prereq: PSYC 100 with a 2.0 or higher or instructor's permission.

**PSYC 257 (5) C,N**  
**Psychology of Gender**

Explores major psychological theories of sex differences. Examines studies of sex-role development and biological and environmental influences that may determine and maintain sex differences in aggression, cognitive abilities, achievement, motivation, affiliation, and sexuality. May be taken as WMN 257.

**PSYC 260 (5) C**  
**Psychology of Racism**

Overview of theories and research concerning factors and contexts that contribute to racial/ethnic discrimination in the U.S. and the multilevel consequences for minority groups and the broader U.S. society. Covers socioeconomic, political, and historical structures and their consequences on racial/ethnic identity. Emphasizes how multiculturalism can have a positive impact and provide a safe space for discussion.

**PSYC 294 (5) C,N**  
**Practicum in Psychology**

Practicum in the application of basic psychology principles. Specific seminar and practicum areas and evaluation criteria established by an educational contract. Prereq: PSYC& 100 and permission.

**PSYC 298 (1-5) C,N,S**  
**Independent Study In Psychology**

Independent study in selected psychology topics under faculty supervision. Prereq: Permission.

**PSYC 299 (1-5) C,N**  
**Psychology Seminar**

Small group seminar for study and discussion of selected psychology topics. Prereq: Permission.

**Real Estate**

*All real estate courses meet Department of Licensing (DOL) requirements for renewal and educational clock hours of real estate and/or appraisal licenses.*

**RCPM 301 (3) N**  
**Principles of Residential Property Management**

Introduction to Property Management and management of residential property. Employees, management tools, government involvement, client acquisition and tax requirements, leasing and managing property, and understanding agents' pre-licensing and brokerage requirements.

**RCPM 302 (4) N**  
**Stakeholder Relations & Prof Development**

Prepare property management students as professionals in a global community. Role-play emphasis on professional presentation, etiquette, culture, business communication, problem identification and solving, network and relationship building with all stakeholders.

**RCPM 303 (3) N**  
**Intro to Development and Construction Management**

An introduction to the fundamental principles and procedures of real estate development, sustainable construction, and vendor relationships to broaden student understanding of the scope of construction within property management field. Topics include development process, construction management, and tenant improvements.

**RCPM 304 (2) N**  
**Principles of Commercial Property Management**

Examine and practice management of four types of commercial properties, learning the necessary competencies, such as time management, relationship building (owner, staff, tenant, customer, and public), problem identification and solving, operations and maintenance management, sustainability, budgeting, leasing and lease administration, safety, security, and emergency procedures.

**RCPM 310 (2) N**  
**Specialty and Affordable Housing**

Contemporary issues affecting residential property management, including student, senior, military, tax credit housing, Real Estate Investment Trust (REIT), and Accessory Dwelling Units (ADU).

**RCPM 311 (2) N**  
**Marketing & Leasing of Residential Real Estate**

Effective marketing practices, leasing strategies, and tactics designed to attract and retain qualified residential tenants to income producing properties. Students will learn how to gather market data, develop marketing plans, formulate leasing workflows, and utilize metrics to improve their marketing and leasing process.

**RCPM 313 (3) N**  
**Marketing and Leasing of Commercial Real Estate**

Gain an understanding of effective commercial real estate marketing strategies and the leasing processes for commercial real estate. Create a marketing plan to set rental rates, secure new tenants, and effectively position the property to meet the owner's project requirements. Identify technology and social media as tools utilized to market commercial real estate. Understand lease processes, contract components, and negotiation.

**RCPM 315 (2) N**  
**Introduction to Negotiations**

Introduction to negotiation techniques and styles. How to structure agreements to meet your goals. Practice dealing with common challenges in property management field.

**RCPM 320 (4) N**  
**Financial Accounting for Property Management**

Introduces students to the software used by asset management and real estate investment companies.

**RCPM 330 (3) N**  
**Leadership and Team Building**

Examine the foundational elements of leadership and team building. Review current management thought. Examine and practice the application of current and emerging management topics, emphasizing leadership, inspiration, communication, relationship building, team dynamics, organizational development, and management of a diverse workforce. Introduces leadership, culture, service, brand, and innovation as essential to sustained business excellence.

**RCPM 350 (2) N**  
**Revenue Management for Property Management**

Study of accounting for corporations, methods of raising capital, analysis of financial statements, introduction to management accounting, product cost accounting systems, profit planning, management performance measures, and capital budgeting.

**RCPM 401 (5) N**  
**Project Management for Property Management**

This course is an overview of project management from a business perspective, with a focus on activities common in property management. Topics will include project estimation, project feasibility, planning, risk management, communication and responsibility planning, scheduling, and project control.

**RCPM 402 (4) N**  
**Supervision and Management**

Organization and coordination of personnel practices and methods. Consideration given to communication, employment, staff orientation and training, working conditions, supervision, performance evaluation, collective bargaining, salary administration, and health and well-being of a diverse work force employed in domestic and international settings.

**RCPM 403 (4) N**  
**Real Estate and Fair Housing Law**

Examines the concepts and goals of real estate laws and fair housing laws at the federal, state, and local levels. Attention will be given to how fair housing laws are designed to prevent discrimination in housing. The class will look at the Civil Rights Act of 1964, key court decisions involving fair housing laws, and the 1968 Fair Housing Act and applicable state and local laws. Real estate law principles of transfer of interests, contracts, sustainability, agency, and escrow will be analyzed.

**RCPM 410 (2) N**  
**Professional Ethics In Property Management**

Analysis of ethical decisions in property management and case studies affecting property management codes of ethics.

**RCPM 420 (5) N**  
**Sustainable Facilities Management**

Fundamental theory and application of sustainable facilities management, including building envelope, heating, ventilation, air conditioning, plumbing, indoor air quality, and fire suppression systems for buildings. Emphasis on system integration and sustainable topics as related to design, construction, and management of mechanical construction scope of work. Basic understanding of high performance building and energy efficiency, including fundamentals of residential operations and maintenance.

**RCPM 494 (4) N**  
**Practicum Portfolio**

The property management practicum project is the opportunity for the student to demonstrate the application of RCPM BAS program course content, processes, and principles. Student projects focus on a specific asset type and location. Faculty guide and supervise the student's property management field project, which will be compiled in a portfolio and culminate in a professional presentation.

**RES 100 (5) N**  
**Real Estate Fundamentals**

Covers fundamentals of real estate industry, including sales and listing practices, financing, appraising, title, real estate law, escrow, and property management. With RES 140 prepares students for the WA State Real Estate Broker Licensing Exam. (60 DOL clock hours)

**RES 101 (5) N**  
**Technology for Real Estate**

Learn Microsoft's Word, Excel, Outlook, Publisher, and the internet to create marketing materials, manage time and contacts, communicate, create spreadsheets and professional letters. Learn internet resources specifically for Real Estate Industry. Some computer experience highly recommended. (50 DOL clock hours)

**RES 106 (1) N**  
**Real Estate Fraud**

Covers real estate fraud in the sales, finance, and appraisal industries. Study fraud cases, the local and national extent of the problem, and the impact on the market place. Learn to avoid potential fraudulent acts. Recommend RES 100 or concurrent. (10 DOL clock hours)

**RES 107 (1) N**  
**Foreclosures Short Sales**

Learn the foreclosure process. Examine the legal issues professionals and investors should consider before being part of a foreclosure or short sale/mortgage elimination. (10 DOL clock hours)

**RES 110 (3) N**  
**Intro to Commercial Real Estate**

Learn about the opportunities in commercial real estate and how to list, sell, and lease various types of investment properties. Use finance as a tool to increase profits. Learn to establish market value and return for investments in office buildings, industrial properties, apartments, shopping centers, and retail stores. (30 DOL clock hours)

**RES 120 (1.5) N**  
**Principles of Maintenance & Repair**

Study maintenance and repair for residential and commercial properties. Learn to recognize maintenance problems and schedule preventative maintenance and repairs. Explore HVAC, roofing, landscaping, and janitorial services. Analyze maintenance and service contracts. (15 DOL clock hours)

**RES 125 (2) N**  
**Applications of Real Estate Math**

Develop skills in basic real estate mathematics using the HP12C programmable calculator. Apply principles for real estate transactions, valuation, finance, and other investment analysis. Students bring HP12C calculator to first class or borrow HP12C from the Real Estate Program while supplies last. Recommend RES 100 concurrently. (20 DOL clock hours)

**RES 130 (3) N**  
**Green Real Estate**

Learn how sustainability and green building are transforming the real estate market. Focus on basic building science to value green strategies related to water, energy, design, materials, site development. Recognize emerging demographics of green-minded consumers. Distinguish between traditional and the spectrum of green building. WA licensed real estate broker prep course for BUILT GREEN® RE Pro Certification. (30 DOL clock hours)

**RES 131 (2) N**  
**Green Building Materials**

Learn how material choices affect real estate home sales and listings. Includes smart material choices affecting indoor air quality and occupant health, energy efficiency, and water conservation products that enhance comfort and increase utility savings. Learn how to talk to green home buyers about material choices and how to work with clients preparing for sales and listing. Prereq: Recommend RES 130. (DOL clock hours).

**RES 132 (3) N**  
**Marketing Education & Ethics in Sustainable Development**

Understand needs of green clients and communicate effectively. Covers marketing green projects through traditional strategies, new technologies, and creative approaches. Emphasizes education of clients and ethical responsibilities of agents in selling green properties. Intro to greenwashing. Prereq: Recommend RES 130. (30 DOL clock hours)

**RES 133 (2) N****Energy Efficient Design**

Learn green techniques for upgrading, constructing, and maintaining energy efficient homes. Covers design, building processes, alternative envelopes, energy generation systems, energy saving products, home performance testing such as infrared thermography, rebate and incentive programs, regional greenhouse gas issues, and planning. Recommend RES 130 or concurrent. (DOL clock hours)

**RES 134 (1.5) N****Smart Locations Integration**

Covers integrated planning and strategies to lessen the impact of homes and communities on the environment and local watersheds. Includes transit, mixed-use development, habitat protection, green master planned communities, and urban villages in low impact design. Prereq: Recommend RES 130 or concurrently. (DOL clock hours)

**RES 135 (2) N****Healthy Buildings & Indoor Air Quality**

EPA says air in homes is 3-5 times more polluted than outside air. Discover sources of indoor pollution and learn to avoid or mitigate them. Covers construction practices that reduce mold and dust, and energy efficiency strategies that enhance air quality. Learn how choices about materials, site, and landscaping relate to air quality. Recommend RES 130 or concurrent. (DOL clock hours)

**RES 140 (3) N****Real Estate Sales & Practice**

Pre-license course for the Washington Real Estate Broker's License Exam and to enter the residential real estate sales industry. Includes sales techniques and practices; evaluating, pricing, and showing property; listing and purchase/sale agreements; obtaining and servicing listings; qualifying the buyer; negotiating and servicing the sale, agency, planning, and budgeting.) Prereq: RES 100 or RES 210 or concurrent enrollment or real estate experience or permission. (30 DOL clock hours)

**RES 141 (3) N****Land Use Principles & Practices**

Introduces federal and state laws and regulations governing land use and environmental issues. Includes in-depth study of local (King County) regulations. Provides practical land use knowledge including the permit process. (30 DOL clock hours)

**RES 142 (3) N****Inspecting Real Estate**

Find deficiencies in residential and commercial buildings including site drainage, weatherproofing, structure, heating, plumbing, and electrical systems. Emphasizes inspection techniques and handling the identified problems. (30 DOL clock hours)

**RES 143 (3) N****Intro to Home Inspection Prof**

Covers home inspection basics: WA laws, rules, and codes; business practices and reports; exterior foundation, roofing, site, and structural components; interior plumbing, electrical, HVAC systems. Prepare for WA and National Home Inspection Licensing exams. With RES 142 & 151, fulfills class and field prereqs for WA Home Inspector License. Prereq: RES 142 or concurrently. (90 DOL clock hours)

**RES 144 (4) N****Inspecting Structural Framing**

Learn to inspect foundations, wall, floor, ceiling and roof framing, public and private water systems, water heaters, drain piping, fixtures, and faucets. Meets Domain 2. Structural Components: Tasks 1.1-1.4 and Domain 4. Plumbing: Tasks 4.1-4.5 of ASHI Home Inspector Training. Prereq: RES 143 or concurrent enrollment or permission. (40 DOL clock hours)

**RES 145 (4) N****Inspecting Exteriors & Roofing**

Gain practical knowledge in the proper inspection of the entire exterior, including roofs, skylights, siding, porches, decks, balconies, eaves, soffits, fascia, walkways, driveways, vegetation, grading, surface drainage, retaining walls, garages, carports, and various types of roofs and flashings. Meets Domain 2. Exteriors: Tasks 2.1-2.5 and Domain 3. Roofing: Tasks 3.1-3.3 of ASHI Home Inspector Training. Prereq: RES 143 or concurrent enrollment or permission. (40 DOL clock hours)

**RES 146 (2) N****Inspecting Heating Systems I**

Gain hands-on skills for inspecting heating systems and identifying the energy source, type, material, condition, safety concerns, and other issues related to gas and oil-fired forced-air furnaces and hot water heating plants as well as their distribution systems. Meets Domain 5. Heating: Tasks 5.1-5.3 of ASHI Home Inspector Training. Prereq: RES 143 or concurrent enrollment or permission. (20 DOL clock hours)

**RES 147 (3) N****Inspecting Heating Systems II**

Learn to inspect masonry and metal chimneys and exhaust vents, wood-burning furnaces and boilers, wood stoves, fireplaces, steam heating systems, electrical heating systems, wall and floor furnaces, room heaters, and gas appliances to identify type, material, condition, and safety concerns. Meets Domain 5. Heating, Tasks 5.1, 5.2, 5.3, and Domain 10. Fireplaces and Solid Fuel Burning Appliances, Tasks 10.1 and 10.2 of the ASHI Home Inspector Training. Prereq: RES 146 or concurrent enrollment or permission.

**RES 148 (3) N****Inspecting Electrical Systems**

Learn to inspect electrical systems. Study service boxes and their components, grounding and bonding, distribution panels, branch circuit wiring, outlets, switches, and junction boxes. Prereq: RES 143 or concurrent enrollment or permission. (30 DOL clock hours)

**RES 149 (4) N****Inspecting Heat Pumps AC**

Learn to inspect various types of heat pumps and air conditioning. Study inspection procedures for interiors: insulation, walls, floors, ceilings, crawl space, attics, exhaust fans, and windows. Identify foundation defects, basement leakage, and methods of correction. Prereq: RES 143 or concurrent enrollment or permission. (40 DOL clock hours)

**RES 150 (1.5) N****Residential Sales & Lease**

Covers Washington real estate broker and agent practices, emphasizing agency law, contracts, torts, and Multiple Listing forms. Prereqs: RES 100, 110, 170, or 210, or concurrent enrollment, or six months' experience in real estate. (15 DOL clock hours)

**RES 151 (4) N****Home Inspection Field Training**

Field training in home inspection of insulation, ventilation, hazardous materials, plumbing, electrical, HVAC systems, communication, and report-writing. Prepare for WA and National Home Inspection Licensing exams. With RES 142 and 143, fulfills class and field prereqs for WA Home Inspector License. Recommend RES 142 and/or 143 or concurrently. (40 DOL clock hours)

**RES 160 (1) N****Ethics for Loan Origination**

Covers ethical mortgage loan origination practices, RCW (statutes), and WAC (regulations) regarding prohibited practices, disclosure requirements, and advertising. Includes identification and prevention of loan fraud and predatory lending. Covers Mortgage Broker Practices Act (MBPA) and Consumer Loan Act (CLA). (10 DOL clock hours)

**RES 164 (5) N****Real Estate Finance Residential**

Explore various financing programs for residential real estate. Learn to prequalify borrowers and generate closing cost worksheets. Gain knowledge about credit reports and credit scoring. Discover how underwriters determine who gets mortgages. Recommend RES 100 and/or RES 125 or concurrent. (50 DOL clock hours)

**RES 165 (3) N****Real Estate Loan Origination**

Examines the loan process, typical mortgage loan products, and loan merchandising skills. Includes relevant laws and regulations and business development techniques. Coreq: RES 100 recommended. (30 DOL clock hours)

**RES 166 (4) N****Real Estate Loan Process**

Learn to process residential Conventional/Conforming, Subprime, Jumbo, FHA, and VA mortgages, from application to closing. Use CALYX Point Loan Processing Software, including Loan Applications, Good Faith Estimates, Truth-In-Lending, and other required documents. Analyze credit reports, verifications of employment, and assets. Prereq: Recommend RES 100 or taken concurrently. (40 DOL clock hours)

**RES 168 (1.5) N****Loan Origination Auto**

Hands-on training for originating residential loan applications using Interlinq's MortgageWare software. Prereq: RES 165 or RES 166 or concurrent enrolment or real estate experience. (15 DOL clock hours)

**RES 170 (3) N****Real Estate Law**

Review the principles of real estate law, including acquisition, encumbrance, transfer, rights and obligations of parties, and WA State regulations. Prereq: RES 100 or 110 or real estate experience or permission. (30 DOL clock hours)

**RES 175 (3) N****Introduction to Title**

For those in real estate sales, finance, escrow, or title insurance fields. Covers fundamentals of title insurance, various types of liens, methods of clearing title, and other items of record and off-record that affect real property. (30 DOL clock hours)

**RES 176 (1) N****Using Tax-Deferred Exchanges**

Study Section 1031: Exchanges of the Internal Revenue Code pertaining to business and investment real property. Includes tax-deferred exchanges and advanced tax planning strategies, processes, and pitfalls. (15 DOL clock hours)

**RES 177 (1.5) N****Real Estate Taxes**

Covers U.S. income taxes pertaining to real estate. Learn what constantly changing federal income tax laws affect residential, business, and investment properties. (15 DOL clock hours)

**RES 178 (1.5) N****Buyers Agency**

Presents torts, contract, and agency laws pertaining to real estate Buyer's Agents while emphasizing Washington law. Provides and discusses useful forms for a Buyer's Agent. Prereq: RES 100 or taken concurrently or real estate experience. (15 DOL clock hours)

**RES 180 (3) N****Basic Appraisal Principles**

Revised to meet the January 1, 2008, Real Property Appraiser Qualification Criteria. Intro to the appraisal process. Investigate influences on the types of real estate values. Overview of real estate markets and analysis. Recommend RES 100 concurrently. (30 DOL clock hours)

**RES 181 (1.5) N****Standards Professional Practice/Appraisal**

Focuses on requirements for ethical behavior and competent performance set forth in the Uniform Standards of Professional Appraisal Practice and Washington state Regulations. Prereq: RES 180 or appraisal experience. (15 DOL clock hours)

**RES 183 (3) N****Basic Appraisal Procedures**

Revised to meet the January 1, 2008, Real Property Appraiser Qualification Criteria. Presents methodologies used in valuation procedures. Understand property descriptions for appraisal reporting and apply these to residential and commercial appraisal applications. Prereq: RES 180 or appraisal experience or permission. (30 DOL clock hours)

**RES 184 (1.5) N****Residential Market Analysis**

Research residential markets by using supply and demand analysis. Learn and apply highest and best use analysis through case studies. Meets Jan. 1, 2008, Real Property Appraiser Qualification Criteria. Prereq: RES 180 or real estate or appraisal experience or permission. (30 DOL clock hours)

**RES 185 (1.5) N****Residential Appraiser Site**

Learn advanced methods for site valuation and the cost approach in determining value of real property. Meets Jan. 1, 2008, Real Property Appraiser Qualification Criteria. Prereq: RES 180 or real estate or appraisal experience or permission. (15 DOL clock hours)

**RES 186 (3) N****Residential Sales Comparison**

Learn to estimate value using cost and sales comparison approaches. Learn to compute Capitalization Rates, Gross Rent Multipliers, finance, and cash equivalency on the HP12C financial calculator. Bring your HP12C or borrow one from RES program if available. Meets Jan. 1, 2008, Real Property Appraiser Qualification Criteria. Prereq: RES 125 and RES 183 or real estate or appraisal experience or permission. (30 DOL clock hours)

**RES 187 (1.5) N****Residential Report Writing**

Gain writing and reasoning skills to complete the standard residential appraisal report. Overcome common report writing problems and learn options. Meets January 1, 2008, Real Property Appraiser Qualification Criteria. Prereq: RES 186 or concurrent enrollment or appraisal experience or permission. (15 DOL clock hours)

**RES 188 (1.5) N****Statistics Modeling Finance**

Study elementary statistical concepts and their application to real estate issues. Cover measures of central tendency, linear and non-linear trend analysis, linear regressions, complex multivariate automated valuation models (AVMs) and their application to mass appraisal, and real estate finance. Uses HP12C calculator and Microsoft XL. Meets January 1, 2008, Real Property Appraiser Qualification Criteria. Prereq: RES 101, 125, and 186, or concurrent enrollment or appraisal experience or permission. (15 DOL clock hours)

**RES 189 (1.5) N****Advanced Residential Application**

Discover the property and design elements, market conditions, and other factors that create complexities in residential real estate and how these impact valuation. Measure supply and demand factors and their impact. Case studies include market analysis and feasibility determinations. Meets January 1, 2008, Real Property Appraiser Qualification Criteria. Prereq: RES 187 and RES 188 or concurrent enrollment or appraisal experience. (15 DOL clock hours)

**RES 190 (3) N****Real Estate Escrow I**

Intro to escrow principles and procedures covering laws, real estate and escrow documents, escrow closings, and title exceptions. (30 DOL clock hours)

**RES 191 (2) N****Advanced Escrow Closing Systems**

Covers computerized escrow closing: information entry, trust accounting, producing documents, letters, and closing statements through the use of Advanced Escrow Closing software. Prereq: RES 190 or concurrent enrollment or six months' escrow closing experience. (20 DOL clock hours)

**RES 195 (3) N****Real Estate Escrow II**

Includes extensive work in real estate contracts, assumptions, mortgages (FHA, VA, and conventional), and wraparounds. Prereq: RES 190 or six months' recent experience in escrow. (30 DOL clock hours)

**RES 197 (5) N****Real Estate Taxes, Title & Escrow**

Covers US income taxes pertaining to real estate. Learn how changing federal income tax laws affect residential, business, and investment properties. Covers methods of clearing title. Provides a foundation in title insurance, various types of liens, encumbrances, and other items of that affect real property. Presents escrow principles and procedures covering laws that govern and control escrow closing. Learn to work with real estate and escrow documents, escrow closings, and title exceptions.

**RES 200 (5) N****Seminar In Real Estate Issues**

Covers the latest information and laws on appraisal, sales, land development, title, finance, and current issues. Assists with career development through discussions with professionals and work-related research projects. (50 DOL clock hours)

**RES 201 (3) N****Principles of Real Estate Management**

An Institute of Real Estate Management course (IREM 201). Covers basic principles of property management, including property analysis, management and planning, marketing, staffing, and maintenance of real estate. IREM provides a certificate toward a CPM designation. (30 clock hours)

**RES 202 (3) N****Multi-Family Property Management**

Learn important functions in residential property management, property analysis, rental policies, rental surveys, lease provisions, inspection, building codes, tenant relations, operating policies, and financial result analysis. (30 DOL clock hours)

**RES 203 (3) N****Property Management – Commercial**

Covers commercial property management, including personnel policies, marketing, tenant management, property maintenance, security, collection, lease provisions, and record-keeping systems. (30 DOL clock hours)

**RES 204 (3) N****Community Association Management**

Learn how successful associations are established, operated, and managed. Explore the fundamental principles and procedures of various types of community associations, such as Home Owners Associations, Resort Association, and more. Applicable for property managers, association Boards, developers, condo sales agents, loan officers, escrow officers, and paralegals. (30 DOL clock hours)

**RES 210 (3) N****Residential Property Investment**

Learn to invest in different types of residential properties, including the principles and techniques used to determine the advantages and disadvantages of buying, selling, and renting investments. Study financing options for various residential investments. Recommend RES 100 or concurrent. (30 DOL clock hours)

**RES 215 (3) N****Real Estate Business BKR Sales/App**

Explore the specialized field of buying and selling business opportunities. Cover all aspects from prospecting for buyers and sellers to closing the transaction and estimating value. (30 DOL clock hours)

**RES 217 (3) N****Real Estate Development and Sustainability**

Explore the fundamental principles and procedures in developing residential, commercial, and industrial real estate, including all development stages of a project. Oriented to developers, but appropriate to investors. Focus on how sustainable development is applied. (30 DOL clock hours)

**RES 220 (3) N****Real Estate Economics**

Use economic principles to analyze the impact that national, regional, community, and neighborhood trends have on real estate values. Study trends in the money market, community growth patterns, land use controls, and taxations in the Puget Sound region. Prereq: RES 100 or 110 or 180 or 210 or concurrently, or real estate experience or real estate license or permission. (30 DOL clock hours)

**RES 221 (3) N****Corporate Real Estate**

Learn acquisition, disposal, and management of properties in the corporate environment. Focus on best practices for maneuvering in the corporate real estate setting and understand asset management vs. property management. Use situational analysis and study typical legal documents. (30 DOL clock hours)

**RES 225 (1.5) N****Current Trends: Real Estate Market Ana**

Presents current economic, political, and real estate information affecting the Puget Sound Region. Provides practical methodology to distill information into useful market report. Learn techniques to understand, modify, and create forecasts and scenarios. Prereq: RES 220 or concurrent enrollment. (15 DOL clock hours)

**RES 230 (5) N****Business Practices of Broker Management**

Covers real estate brokerages operations: general business concepts, management practices, and broker responsibilities. Fulfills WA state requirements of 30 hours' Brokerage Management and 30 hours' Business Management. Prep for Managing Broker exam. Prereq: RES 100 or licensed RE Broker for 12 months or permission. (60 DOL clock hours)

**RES 235 (3) N****Sales and Marketing**

Increase business and/or market share by incorporating sales and marketing techniques, including an action plan. Learn to differentiate yourself/business from your competition and generate effective marketing media strategy. Recommend RES 100 or RES 110 or RES 180 or concurrent enrollment. (30 DOL clock hours)

**RES 241 (3) N****Appraising Small Residences**

Provides a foundation in the principles, concepts, and methods applicable to appraising 2-4-unit small residential income properties. Prereq: RES 180 and RES 125 or concurrent enrollment. (30 DOL clock hours)

**RES 242 (3) N****Advanced Residential Appraisal**

Study and apply advance principles, concepts, methodologies, and computer technology applicable to appraising residential properties. Use popular appraisal software to aid in the required appraisal calculations. (Fulfills 30 DOL continuing education clock hours.) Prereq: RES 240, or taken concurrently, or appraisal experience.

**RES 260 (5) N****Real Estate Finance – Commercial**

Gain an understanding of commercial real estate investment. Course outline includes the real estate lending environment, borrowing and lending decisions, and loan underwriting and processing. Determine the value of commercial real estate property with tools that include operating statements and discounted cash flow analysis. (Fulfills 50 DOL continuing education clock hours.) Recommended: RES100, RES125, and BUS124, or real estate experience.

**RES 266 (3) N****Real Estate Loan Underwriting**

Intro to underwriting residential loans. Includes underwriting documents, analyzing appraisals, applications, verifications, and formulas for buyer qualification. Prereq: RES 165 or 166, or concurrent enrollment or real estate experience. (30 DOL clock hours)

**RES 280 (3) N****Commercial Real Estate: Markets & Income**

Learn research and analysis techniques in the appraisal of income property, including property characteristics, sources of data, analysis of supply and demand, and forecast of performance. Uses case studies in the multi-family, retail, and lodging markets. Prereq: RES 125 and RES 183 (concurrent enrollment) or real estate experience. (30 DOL clock hours)

**RES 281 (1.5) N****National USPAP Course**

Focus on ethical behavior and competent performance set forth in the USPAP and Washington Regulations. Prereq: RES 183 or six months' appraisal experience or permission. (15 DOL clock hours)

**RES 282 (3) N****Real Estate Applications**

Increase ability to apply appraisal methods, techniques, and procedures using case studies. Prereq: RES 125 and RES 281, or appraisal experience or approval; HP12C or similar financial calculator. (30 DOL clock hours)

**RES 290 (3) N****Commercial Sales Leasing**

Study the opportunities and responsibilities of representing commercial property owners, buyers, tenants, and landlords. Learn to list, sell, and lease various commercial properties. Explore basic evaluation and marketing tools. Learn to complete market surveys, commercial listing, sales and leasing agreements. Prereq: RES 100 or 110, or Washington Real Estate License or permission. Coreq: RES 125 recommended. (30 DOL clock hours and initial license renewal under RCW 18.85.095(2)(a))

**RES 295 (2) N****Commercial Real Estate Investment Analysis**

Learn commercial real estate investment analysis, including fundamentals of commercial leases, pro forma analysis, use and selection of discount and capitalization rates, tax laws, and applications of decision-making tools. Bring programmable financial calculator to class. Prereq: RES 110 and 125, and RES 290 or concurrently or real estate experience or permission. (20 DOL clock hours)

**RES 298 (1-6) N****Special Projects – Real Estate**

To provide advanced students with research opportunities or work experience in real estate applications parallel with those encountered in an actual job environment and to allow students to pursue independent study on special projects. Credits vary depending on amount of work. Prereq: Advanced-level standing and permission.

**Religion****REL 150 (5) S****Intro to Western Religions**

A social-historical survey of religions that have developed west of the Indus River. Promotes a better understanding of those traditions and their cultural influences on history.

**REL 151 (5) S****Intro to Eastern Religions**

A social-historical survey of religions that have developed east of the Indus River. Promotes a better understanding of those traditions and their cultural influences on history.

**Respiratory Care Bachelor of Applied Science in Allied Health – Respiratory Care Track**

*Students must be accepted into the program in order to take these courses.*

**RCP 101 (1) C****Respiratory Care Orientation**

Intro to concepts and principles of the Respiratory Care program. Emphasizes preparation for school, college resources, financial assistance, classroom, study and communication skills, strategies for taking exams, time management, stress and anger management.

**RCP 110 (2) C****Intro to Respiratory Care**

Explores the respiratory care profession. Focuses on historical development as well as current overview of the respiratory care practitioner role. Emphasis on professionalism, ethical thought, death and dying, and working in a multicultural environment.

**RCP 112 (2) C****Applied Microbiology**

Focus on microbiology in respiratory disease, including the history of microbiology, cell structure, and relationships between humans and microbes. Covers microorganisms, differentiation of microorganisms, factors in disease and resistance, infection control, and therapeutics for infectious processes in respiratory care.

**RCP 114 (4) C****Respiratory Care Fundamentals I**

Intro to procedures used to assess and treat common respiratory diseases. Emphasis on skills needed to safely and effectively work in the hospital environment and to assess patients with cardiopulmonary disease. Covers hospital safety, gas physics, medical gas and aerosol therapy, bronchial hygiene, and hyperinflation therapies.

**RCP 115 (1) C****Pharmacology I**

Intro to the principles and practices of Respiratory Care Pharmacology, with emphasis on the safe delivery of medications. Explores the basic concepts of pharmacology, aerosol delivery, dosage calculations, and bronchodilator therapies for treatment.

**RCP 117 (4) C****Cardiopulmonary Anatomy & Physiology**

Provides an in-depth investigation into the structure and function of the cardiopulmonary and related body systems, emphasizing the interdependence of the body systems, including pulmonary, cardiac, vascular, renal systems. Covers the effects of aging, exercise, and extreme environments on the cardiopulmonary system.

**RCP 120 (4) C****Clinical Practice I**

Respiratory care practicum. Continues the development of skills in real clinical situations at partner facilities around the Puget Sound area. Emphasis on hospital safety, patient assessment, and the application of therapeutic procedures.

**RCP 123 (1) C****Pathophysiology I**

Study of the concepts and principles by which disease alters the normal function of the cardiopulmonary system. Emphasizes recognizing obstructive diseases, recommending and applying therapeutic measures, and analyzing clinical data and responses to treatment.

**RCP 124 (5) C****Respiratory Care Fundamentals II**

Continuation of RCP 114. Emphasis on skills to safely and effectively care for patients with artificial airways. Covers artificial airways, bedside diagnostic testing, arterial blood gas analysis, and non-invasive ventilation.

**RCP 125 (1) C****Pharmacology II**

Continuation of RCP 115. Emphasis on medications used to treat primary respiratory disorders such as asthma. Covers steroid and non-steroidal asthma controllers, xanthine medications, mucus controlling drugs, and aerosolized anti-infective medications.

**RCP 130 (5) C****Clinical Practice II**

Respiratory care practicum. Continues the development of skills in real clinical situations at partner facilities around the Puget Sound area. Emphasis on more advanced techniques and diagnostics in acute care.

**RCP 132 (3) C****Cardiopulmonary Pharmacology**

Basic concepts and knowledge necessary for safe administration of drugs used in the practice of respiratory care. Emphasis is on pharmacy as a science, and prescriptions commonly used in critical care settings are included.

**RCP 133 (1) C****Pathophysiology II**

Continuation of RCP 123. Study of concepts and principles by which disease alters the normal function of the cardiopulmonary system. Emphasis on recognizing respiratory failure and infectious diseases, recommending and applying therapeutic measures, and analyzing clinical data and responses to treatment.

**RCP 230 (4) C****Transition: Adv Stm in Respiratory Care**

Preparation for fourth-quarter of respiratory care program. Combination of self-study, lecture, and lab demonstration. High motivation level required. Prereqs: ZOO 113, ZOO 114, BIO 280, CHE 101, ENG 101, and PSY 110. Must be graduate of respiratory care tech program, transfer student, or O.J.T. student.

**RCP 240 (4) C****Clinical Practice III**

Respiratory care practicum. Continues the development of skills, with emphasis on respiratory care in the intensive care setting. Apply skills in real clinical situations at partner facilities around Puget Sound area.

**RCP 241 (2) C****Respiratory Care for Critically Ill**

An exploration of respiratory care in the intensive care environment. Emphasis on the application of respiratory care for patients with traumatic injury and critical illness. Covers trauma, burns, shock, and Adult Respiratory Distress Syndrome.

**RCP 243 (1) C****Pathophysiology III**

Continuation of RCP 133. Study of concepts and principles by which disease alters the normal function of the cardiopulmonary system, with emphasis on the pathophysiology of critical illness.

**RCP 244 (3) C****Respiratory Care Fundamentals IV**

Continuation of RCP 134. Emphasis on intensive care monitoring techniques. Covers electrocardiogram interpretation, hemodynamic monitoring, and advanced cardiac life support.

**RCP 245 (1) C****Pharmacology IV**

Continuation of RCP 135. Emphasis on drugs used to treat the cardiac system as well as medications used in pediatric/neonatal respiratory care. Covers antihypertensive, medications to treat shock, antiarrhythmics, surfactant, nitric oxide, and other medications used in critical care.

**RCP 250 (6) C****Clinical Practice IV**

Respiratory care practicum. Continues the development of skills in the intensive care and emergency settings. Apply skills in real clinical situations at partner facilities around the Puget Sound area.

**RCP 251 (2) C****Respiratory Care**

For Infants. An in-depth study of neonatal and pediatric respiratory care. Focuses on diseases specific to caring for our smallest patients. Covers fetal growth and development, labor and delivery, resuscitation, disease processes, assessment, and therapy.

**RCP 253 (1) C****Pathophysiology IV**

A continuation of RCP 243. Study of concepts and principles by which disease alters the normal function of the cardiopulmonary system, with emphasis on the pathophysiology of cardiovascular, neuromuscular, fibrotic diseases, and sleep-disordered breathing.

**RCP 254 (5) C**  
**Respiratory Care Fundamentals V**

Continuation of RCP 244. Emphasis on advanced concepts and skills needed to care for neonatal and pediatric patients. Covers techniques and equipment to manage neonatal and pediatric patients in the acute care environment, including oxygen therapy, bronchial hygiene, airway care, Continuous Positive Airway Pressure, and mechanical ventilation.

**RCP 260 (6) C**  
**Clinical Practice V**

Respiratory care practicum. Continues the development of skills with pediatric or adult critical care patients. Apply skills in real clinical situations at partner facilities around the Puget Sound area.

**RCP 262 (1) C**  
**Entry Level Exam Review**

Survey of material on the National Board for Respiratory Care's (NBRC) Certified Respiratory Therapist (CRT) exam. Emphasis on test taking and exam content.

**RCP 264 (3) C**  
**Respiratory Care Fundamentals VI**

Continuation of RCP 254 exploring the equipment and techniques of respiratory care. Emphasis on Cardiopulmonary diagnostic studies. Covers pulmonary function testing, exercise physiology and testing, bronchoscopy, and polysomnography.

**RCP 266 (2) C**  
**Pulmonary Rehab & Home Care**

Introduction to the concepts, knowledge, and procedures specific to the respiratory care of adults and children with chronic cardiopulmonary disorders. Emphasis on patient education. Prereq: Completion of RCP 110-RCP 254 and concurrent enrollment in RCP 260, RCP 261, RCP 264, RCP 298.

**RCP 267 (2) C**  
**Advanced Mechanical Ventilation**

In-depth exploration of the application of mechanical ventilation across the age spectrum. Emphasis on the clinical application of mechanical ventilators and advanced modes of mechanical ventilation.

**RCP 270 (6) C**  
**Clinical Practice VI**

Respiratory care practicum. Continues the development of skills with pediatric or adult critical care patients. Apply skills in real clinical situations at partner facilities around the Puget Sound area.

**RCP 272 (4) C**  
**Comp. Review Respiratory Care**

Survey of material on the National Board for Respiratory Care Advanced Practitioner exam, NBRC Written Registered Respiratory Therapist exam (WRRT).

**RCP 274 (2) C**  
**Pulmonary Rehab & Homecare**

Continuation of RCP 264. Explores the equipment and techniques of respiratory care. Emphasis on respiratory care in alternative settings. Covers pulmonary rehabilitation, home care, patient education, and health promotion.

**RCP 276 (3) C**  
**Advanced Patient Assessment**

Develop further critical thinking skills for assessing patients through history, physical examination, lab data, chest x-rays, pulmonary function tests, and EKG data. Use clinical reasoning skills to develop and implement plans of care for the cardiopulmonary patients presented and discuss equipment, modifying treatment, and evaluating patient progress. Practice with the National Board for Respiratory Care's (NBRC) Clinical Simulation Exam.

**RCP 299 (1-3) C**  
**Independent Study in Respiratory Care**

Independent study in selected respiratory care topics under the supervision of the program director. Topics coincide with the quarter's curriculum.

**RCP 320 (4) C**  
**Clinical I**

Covers direct application of respiratory care skills in the hospital setting. Focuses on skills for respiratory care practice in acute care. Students treat patients using basic respiratory care techniques and perform physical assessments, chart review, hand washing, and bronchial hygiene techniques. Builds on respiratory care knowledge and skills established in the classroom, lab, and clinical setting. Prereq: Successful completion of courses from first quarter with a minimum GPA of 2.0.

**RCP 323 (2) C**  
**Pathophysiology for Respiratory Care**

Encompasses a study of the concepts and principles by which disease alters the normal function of the cardiopulmonary system. Emphasis will be on development of the respiratory care plan in the context of Respiratory Failure, Asthma, Chronic Obstructive Pulmonary Disease, Cystic Fibrosis, Postoperative Atelectasis, Interstitial Lung Disease, Neuromuscular disease, Bacterial Pneumonia, Tuberculosis, and Sleep Disordered Breathing. Prereq: Completion of first-quarter courses with minimum GPA of 2.0.

**RCP 328 (4) C**  
**Advanced Therapeutic Approaches**

The second course in the therapeutic approaches series, this course builds upon concepts, knowledge, and skills acquired in AHE 218. Emphasis is on the knowledge and skills necessary to safely and effectively provide artificial airway care, Arterial Blood Gas (ABG) drawing and analysis, bedside monitoring techniques, and non-invasive positive pressure ventilation. Prereq: Completion of first-quarter Respiratory Care program courses with minimum GPA of 2.0.

**RCP 329 (1) C**  
**Advanced Therapeutic Approaches Equipment and Tech**

Covers the application of Respiratory Care therapeutics learned in RCP 328. Learners will apply theory acquired in RCP 328 using models, simulation, and laboratory partners for practice. Focuses on the safe and effective application of artificial airway care, Arterial Blood Gas drawing and analysis, bedside monitoring techniques, and non-invasive positive pressure ventilation. Prereq: Completion of first-quarter Respiratory Care program courses with a minimum GPA of 2.0.

**RCP 330 (5) C**  
**Acute Care Clinical II**

Further familiarizes students with hospital-based respiratory care. Students practice direct patient care, treat patients using basic respiratory care techniques, and perform physical assessments. Chart review, hand washing, and bronchial hygiene techniques emphasized. Students use techniques learned in lab and on-site and build on the foundation of respiratory care knowledge and skills established in the classroom setting. Prereq: 2.0 or higher in previous SCC Resp. Care program courses.

**RCP 338 (4) C****Fundamentals of Mechanical Ventilation**

The third course in the Respiratory Care Fundamentals series, this course builds upon concepts, knowledge, and skills acquired in RCP 328. Emphasis will be placed on the knowledge and skills necessary to safely prepare, institute, monitor, and modify mechanical ventilation in the care of the critically ill adult patient. Successful completion of second-quarter Respiratory Care Program courses with a 2.0 or higher GPA.

**RCP 339 (1) C****Mechanical Ventilation Equipment and Technology**

Covers the application of Respiratory Care therapeutics learned in RCP 338. Learners will apply theory acquired in RCP 338 using models, simulation, and laboratory partners for practice. Focuses on safe and effective application of basic, adult mechanical ventilation. Prereq: Successful completion of second-quarter Respiratory Care Program courses with a 2.0 or higher GPA.

**RCP 340 (4) C****Adult Critical Care Clinical I**

RCP 340 is the third course in the Respiratory Care clinical series. Emphasis will be placed on integrating respiratory theory knowledge with skills performance by providing the student therapist, with the opportunity to practice direct patient care. The learner will be assigned to the Critical Care Unit and will perform the duties associated with the management of the critically ill patient on mechanical ventilation.

**RCP 347 (2) C****Cardiology for Respiratory Care**

Emphasis will be placed on the integration of hemodynamic measurements in the care of the critically ill patient. Various clinical applications and critical care monitoring will be covered in depth. Further emphasis will be placed on the principles of Advanced Cardiac Life Support (ACLS) and the interpretation of electrocardiogram (ECG) data.

**RCP 348 (2) C****Advanced Mechanical Ventilation**

In-depth exploration of the application of mechanical ventilation across the age spectrum. Emphasis on the clinical application of mechanical ventilators and advanced modes of mechanical ventilation. Prereq: Successful completion of second-quarter B.A.S. Respiratory Care Program courses with a 2.0 or higher GPA.

**RCP 349 (1) C****Advanced Ventilation Equipment & Technology**

Covers the application of Respiratory Care therapeutics learned in RCP 348. Learners will apply theory acquired in RCP 348 using models, simulation, and laboratory partners for practice. Focuses on safe and effective application of advanced mechanical ventilation across the age spectrum. Prereq: Successful completion of second-quarter B.A.S. Respiratory Care Program courses with a 2.0 or higher GPA.

**RCP 450 (6) C****Adult Critical Care Clinical II**

RCP 450 is the fourth course in the Respiratory Care clinical series. Emphasis will be placed on integrating respiratory theory knowledge with skills performance by providing the student therapist, with the opportunity to practice direct patient care. The learner will be assigned to the Critical Care Unit and will perform the duties associated with the management of the critically ill patient on mechanical ventilation.

**RCP 451 (2) C****Neo/Peds Pathology**

An in-depth study of neonatal and pediatric respiratory care. Focuses on diseases specific to caring for our smallest patients. Covers fetal growth and development, labor and delivery, resuscitation, disease processes, assessment, and therapy. Prereq: Successful completion of the previous quarter's Respiratory Care Program courses with a minimum GPA of 2.0.

**RCP 455 (2) C****Advanced Pharmacology**

Continues the study of medications in the critical care setting and introduces the learner to medications used in the pediatric/perinatal disciplines. Emphasis is on drugs used to treat emergent cardiac abnormalities, common critical care medications, pediatric/perinatal medications, and resuscitation products. Prereq: Completion of previous quarter Respiratory Care classes with 2.0 or above.

**RCP 458 (4) C****Neo/Peds Respiratory Care**

Emphasis on advanced concepts and skills needed to care for neonatal and pediatric patients. Covers techniques and equipment to manage neonatal and pediatric patients in the acute care environment, including oxygen therapy, bronchial hygiene, airway care, Continuous Positive Airway Pressure, and mechanical ventilation. Prereq: Successful completion of prior quarter's coursework with a GPA of 2.0 or greater.

**RCP 459 (1) C****Neo/Peds E&T**

Covers the application of Respiratory Care therapeutics in the neonatal/pediatric population learned in RCP 458. In this class learners will apply theory acquired in RCP 458 using models, simulation, and laboratory partners for practice. Focuses on safe and effective application of mechanical ventilation and respiratory care therapeutics in the neonatal/pediatric age population. Prereq: Successful completion of the prior quarter's courses with a 2.0 or better.

**RCP 460 (6) C****Neo/Peds Clinical Practice V**

RCP 460 is a continuation of prior clinical experience and is designed to build on the foundation of respiratory care knowledge and skills established in the previous five quarters of the program. This course is designed to provide the student with the knowledge, skills, and techniques necessary to safely and effectively treat newborn infants and children suffering from various cardiopulmonary disorders through hands-on experience with the neonatal and/or pediatric patient.

**RCP 463 (2) C****Advanced Pathology Respiratory Care**

A study of the concepts and principles by which disease alters the normal function of the cardiopulmonary system in critically ill patients. Covers cardiopulmonary assessment and development of the respiratory care plan in the context of Shock, Pulmonary Thromboembolic disease, Heart Failure, Smoke Inhalation and Burns, Trauma, Near Drowning, Acute Respiratory Distress Syndrome, Chest Trauma, Pneumonia in the critically ill patient, and Lung Cancer.

**RCP 464 (2) C****Pulmonary Rehab and Home Care**

Pulmonary Rehabilitation and Home Care is designed to give the advanced practitioner the knowledge and skills to successfully integrate the technical aspects of Respiratory Care into challenging alternate care settings ethically and safely. Focuses on the concepts, knowledge, and procedures specific to the respiratory care of adults and children with chronic cardiopulmonary disorders receiving care in the alternative care setting. Emphasis is placed on patient education and health promotion.

**RCP 467 (2) C****Advanced Cardiopulmonary Physiology**

Builds on the topics covered in AHE 217. Covers the interrelationship of cardiopulmonary systems and how the application of therapeutic procedures can alter those normal relationships. Topics include the immunology and fluid transport of the lung, hemodynamics and pulmonary circulation, and additional concepts of acid base physiology. Provides in-depth study of the cardiopulmonary system in the context of critically ill patients.

**RCP 468 (3) C****Advanced Cardiopulmonary Diagnosis**

Emphasis will be placed on the theory, application, and interpretation of pulmonary function regimens, exercise testing, bronchoscopy, blood gas sampling and analysis, indirect calorimetry, and polysomnography. Further emphasis will be placed on the equipment utilized for the aforementioned tests as well as their calibration and quality control.

**RCP 469 (1) C****Diagnostic Equipment & Technology**

Covers the application of cardiopulmonary diagnostics learned in RCP 468. In this class, learners will apply theory acquired in RCP 468 using models, simulation, and laboratory partners for practice. Focuses on safe and effective application of diagnostic equipment and procedures across the age spectrum. Covers diagnostic equipment, spirometry, diffusion studies and lung volume determination, cardiopulmonary exercise testing, metabolic studies, bronchoscopy, and polysomnography.

**RCP 470 (6) C****Adult Critical Care Clinical III**

Culmination of all previous clinical experiences. Designed to build on the foundation of respiratory care knowledge and skills established in the previous six quarters of the program. Students will be assigned to the Critical Care Unit and will perform all of the required duties of a respiratory therapist in the critical care environment. Emphasis on gaining autonomy and independence in the care of the patient.

**RCP 479 (5) C****Respiratory Care Capstone**

A capstone course in the respiratory care program representing the culmination of student learning throughout the program. Students will take on a project using a faculty and/or community mentor to showcase the work they have done in the respiratory care program. The content varies based on student projects and can take on many forms. Projects will be developed in collaboration with faculty and community mentors and are aligned with student interest.

**Retail Skills****SAL 112 (3) C****Basics of How to Sell**

Role of salesmanship in a free market economy. Assignments and activities related to techniques implicit in developing a sales personality.

**SAL 197 (1-15) C****Coop Work Experience: Sales**

Supervised employment during the fifth quarter of the program. Four hours daily, five days per week. Five credits awarded for each quarter of supervised employment.

**Science****SCI 090 (5) S****General Science Career – Lin**

Covers major concepts and ideas in science, exploring biology, physics, chemistry, geology, astronomy, and ecology. Lab included. Satisfies science requirement of the high school completion program.

**SCI 100 (5) C,N****Intro to Science**

Covers basic principles and current scientific thought in the major fields of science, including history, philosophy, and methodology. No credit for students who have completed major-level science courses. Non-lab course.

**SCI 101 (5) C,N****Intro to Physical Science**

Through selected topics in the physical sciences, learn the process of science: Question, Observe, Organize/Analyze, and Report. At each stage, ask: Which aspects of this step are culturally dependent and which are not? Hands-on explorations guided by inquiry-based material.

**SCI 104 (5) C,N****Physical Science**

Intro to the physical world through everyday applications of physical science principles. Examines fundamentals of physics and chemistry in light of the scientific method.

**SCI 107 (4) C,N****Applied Bioengineering**

Covers water-related issues in the developing world: availability, sanitation, food production, and environmental degradation. Includes integrative resource management using local human and material resources combined with developing technologies that are safe, adaptable, and affordable. Promotes scientific critical thinking and problem-solving.

**SCI 110 (5) C****Intro to Robotics**

Intro to design, construction, and programming of autonomous mobile robots. Using complete robot kits (micro-controller, sensors, motors, building parts), work in teams to study design issues of mechanics, sensors, motors, and control. Design and construct a robot that will accomplish a particular task.

**SCI 111 (1) C,N****Geology Field Day**

Covers the best of the region's geology, including the Seattle Fault, ancient glaciers, fossil forests, landslides, Cascade Mountains, and northeastern Oregon. Lab credit. May be taken as GEOL 111.

**SCI 112 (1) C,N****Northwest Fieldtrip – Seashore Life**

Explores seashore life in the Pacific Ocean and Puget Sound.

**SCI 113 (1) C,N****Marsh Ecology – Northwest Field**

Explore local wetlands and the organisms that inhabit wetlands ecosystems, with a focus on the local animals and plants. Field trips. Lab.

**SCI 114 (1) C,N****Northwest Fieldtrip – Astronomy**

Covers astronomy from a hands-on perspective in the field.

**SCI 116 (1) C,N****Edible Plants – Northwest Field**

Focuses on edible and medicinal plants of the Pacific Northwest. Lab credit.

**SCI 117 (1) C,N****Wildflowers – Northwest Field Trip**

Classification and ecology of lowland to alpine wildflowers of the Pacific Northwest. Lab credit.

**SCI 118 (1) C,N****Volcano Field Day**

Intro to the origin and destruction of Cascade volcanoes, such as Mount St. Helens, Mount Rainier, and Glacier Peak. Lab credit. May be taken as GEOL 118.

**SCI 119 (3) N****National Historic Field Study**

Study aspects of biology, zoology, hydrology, meteorology, geology, botany, and/or soil and environmental sciences through field observation and lab work. Includes a multi-day trip or multiple single-day trips. Transportation fee will be assessed. Previous students should take SCI 129.

**SCI 121 (5) N****Natural Disasters**

Investigate local and national earthquakes, volcanoes, floods, tsunamis, mudflows, landslides, avalanches, and forest fire natural disasters. Examine the science behind natural disasters, exploring the disciplines of geology, meteorology, oceanography, and astronomy. Lab and field trip include fees. Placement into ENGL& 101 is strongly recommended.

**SCI 122 (1) N****Zoo Science Field Trip**

A field trip-based short course that introduces the concept of zoos in general and the running of Woodland Park Zoo in particular. Includes five hours of lecture and a one-day field trip. Lab science.

**SCI 129 (3) N****Cascades to Puget Sound**

Study aspects of biology, zoology, hydrology, meteorology, geology, botany, and/or soil and environmental sciences through field observation and lab work involving some aspect of the water cycle in the greater Puget Sound area. Includes a multi-day trip or multiple single-day trips. Lab and transportation fees will be assessed.

**SCI 131 (5) C,N****Interdisciplinary Science 1**

Intro to science and scientific method for non-science majors and for students in the Associate in Elementary Education – DTA program. Covers measurements, the metric system, matter and energy, physical and chemical properties and changes, the atom, nuclear chemistry, and the importance of science.

**SCI 132 (5) C****Interdisciplinary Science 2**

Intro to science and scientific method for non-science majors. Covers mechanics, some topics in astronomy, electricity, and the importance of science.

**SCI 133 (5) C****Interdisciplinary Science 3**

For students in Associate in Elementary Education, DTA program. 3rd course of 3. Overview of Life Sciences of cellular biology, organismal biology, and ecology and Earth Sciences of geology and biogeology. Prereqs: SCI 131 and 132, each with 2.0 or higher or permission.

**SCI 197 (1-15) C,N****Co-Op Work Science**

Allows students to earn work experience credit in the science field. Prereq: Permission.

**SCI 296 (1-10) C,N****Travel: Tropical Ecosystem**

Hands-on learning opportunities for undergraduates and others who undertake domestic and/or foreign travel. Learn outside the classroom and take advantage of cross cultural materials, flora and fauna, geographical locations, geologic formations, museums, terrestrial ecosystems, regional customs and foods, natural history, marine ecosystems, and field trips which are available only through travel.

**SCI 297 (1-10) C,N****Travel: Tropical Ecosystem**

Hands-on learning opportunities for undergraduates and others who undertake domestic and/or foreign travel. Learn outside the classroom and take advantage of cross cultural materials, flora and fauna, geographical locations, geologic formations, museums, terrestrial ecosystems, regional customs and foods, natural history, marine ecosystems, and field trips which are available only through travel.

**SCI 298 (1-5) C,N****Special Topics**

Seminar of selected topics or activities in the sciences. Prereq: Variable, dependent on topic.

**SCI 299 (1-5) C,N****Special Problems**

Independent study of approved topics in the sciences. Prereq: Permission.

**Science, Technology, Engineering, & Math****STEM 101 (2) C****Orientation to Science & Engineering**

Intended for STEM majors. Gives STEM students the techniques to apply active learning strategies to further their personal and professional growth, study skills, critical and creative thinking, and career development. Focuses on identifying college resources, social justice in the sciences and implicit bias in the research field, the scientific method and how to be an ethical scientist, and helping students explore careers in STEM and build their professional network.

**Service Learning**

*Service-learning is an educational program that combines community involvement with academic instruction and is linked to specific classes as either a requirement or an option. Course assignments and final grades are determined by the faculty of the linked course. Advantages of service-learning include the opportunity to enhance understanding of course content, build experience for a resume, explore career options, and earn college credit. Registration is coordinated by the Service-Learning Program and faculty of the linked course during the second week of the quarter. Permission of Service-Learning Program is required for registration in SLN courses*

**SLN 101 (1-3) N****Service Learning/Leaders**

Serve the campus and/or local community in conjunction with class seminars that require reading, writing, and observation related to the work. Prereq: Instructor permission.

**SLN 102 (3) N****Service Learning/Leaders**

Continuation of SLN 101. Prereq: Instructor permission.

**SLN 103 (3) N****Service Learning/Leaders**

Continuation of SLN 102. Prereq: Instructor permission.

SLN	110,111,112,113 (1-2)	C,N
<b>Service Learning: Communications</b>		
SLN	115,116,117,118 (2)	C,N
<b>Service Learning: English</b>		
SLN	130,131,132,133 (2)	C,N
<b>Service Learning: Humanities</b>		
SLN	135,136,137,138 (2)	C,N
<b>Service Learning: Inter Prg</b>		
SLN	140,141,142,143 (2)	C,N
<b>Service Learning: Language &amp; Cultures</b>		
SLN	145,146,147,148 (2)	C,N
<b>Service Learning: Math</b>		
SLN	150,151,152,153 (2)	C,N
<b>Service Learning: Science</b>		
SLN	155,156,157,158 (2)	C,N
<b>Service Learning: Social Science</b>		

## Social & Human Services

### CDS 197,198,199 (3-4) C Field Practice/Chemical Dependency

Supervised community-based field experience in which students apply knowledge and develop skills by working in public and private agencies and organizations. Prereq: Permission.

### SHS 100 (5) C Intro to Human Services

Provides an overview of the social and human services field from the perspective of the individual human services worker. Explores societal conditions, assumptions, and needs that impact delivery of services. Includes discussion of areas of knowledge, professional values, and skills. Examines the characteristics of the human services agency, including professional roles, career opportunities, and challenges. Prereq: Eligibility for ENGL& 101 and MAT 087 (or equivalent)

### SHS 103 (5) C Social Welfare Policy

Introduction to social welfare policy, social justice, and systems. Emphasis on social welfare policies, systems, and services designed to respond to social issues: public welfare, child welfare, mental health, chemical dependency, aging, poverty, health, disabilities, and corrections. Prereq or coreq: SHS 100 with a minimum 2.0 grade point average. Eligible for ENGL& 101 and MATH 084 or 087 or 091.

### SHS 106 (5) C Principles/Interviewing & Counseling

Intro to beginning-level interviewing and counseling skills in multicultural settings. Demonstration of human services values and knowledge of diverse populations' needs through counseling techniques: developing relationships; identifying problems, solutions, and goals; and evaluating progress. Prereq: ENGL& 101, SHS 100, and SHS 103 with a minimum 2.0 grade point average. Eligible for MAT 084.

### SHS 108 (5) C Group Dynamics & Counseling

Intro to group work, including group processes, communication patterns, group and individual goal-setting, leadership, and decision-making. Includes group participation, role-playing, and simulations. Prereq or coreq: ENGL& 101. Prereq: SHS 100 with a 2.0 minimum GPA. Eligible for MATH 084 or equivalent.

### SHS 120 (3) C Intro Disabilities Study & Practice

This course surveys the historical perspectives, cultural attitudes, and stereotypes that create barriers to personal and collective empowerment for individuals with disabilities. The course covers the social-political aspects of the disability rights movement and examines laws governing civil rights of individuals with disabilities. Students explore the intersection of gender, class, race, and the human body, with emphasis on social justice and privilege. Prereq: Eligibility ENGL& 101 and Math 084.

### SHS 122 (5) C Care Navigation: Systems of Care

Explores at an advanced level: healthcare communication strategies, health insurance systems, population health management, transitions of care, risk and protective factors in wellness promotion, preventive care, information technology in healthcare, and care plans. Prereq: Eligibility for ENGL& 101, eligibility for MATH 084 (or equivalent), and eligibility for SHS 121, or instructor's permission.

### SHS 123 (5) C Advanced Care Coordination and Navigation

Third in a three-course certificate in Care Coordination and Navigation. Focuses on client characteristics, rehabilitation systems, care transitions, technology trends in healthcare, preventive care, resource identification and mapping, chronic illness in the context of population management strategies, and advanced care planning. Prereq: Eligibility ENGL& 101, MATH 084, or equivalent, and SHS 121 and 122 or instructor permission.

### SHS 125 (3) C Care Navigation for Older Adults

Explores the role of the care coordinator and navigator with older adults. Presents theories of aging. Focuses on individual and family centered coordination, communication and health literacy specific to older adults, chronic diseases and preventive care, working with an interdisciplinary team, care transitions, resource and referral, and end of life issues. Prereq: Eligibility for ENGL& 101, and eligibility for MATH 084 (or 087 or 091) or instructor's permission.

### SHS 150 (1) C HIV/AIDS Brief Risk Intervention

Includes history, trends, transmission, infection control, testing, counseling, BRI, and psychosocial issues. Meets requirements for human services and chemical dependency professionals. Approved by the WA State Division of Alcoholism and Substance Abuse.

### SHS 197 (3) C Field Practice/Social & Human Services

Supervised community-based field experience in which students apply knowledge and develop skills by working in public and private agencies and organizations. Prereq: Permission.

### SHS 198,199 (1-5) C Field Practice/Social & Human Services

Work experience in human services agencies, with individual and group supervision provided by agency professionals to share experiences and further develop work-related skills. Prereq: Permission.

### SHS 200 (4) C Theories of Counseling

Intro to psychopathology and assessment and counseling theories. Covers ethics, personality theory, counseling techniques and issues, and development of a personal style of assessment and counseling. Prereq: SHS 106.

### SHS 205 (3) C Crisis Intervention

Intro to crisis theory and techniques for the beginning mental health/human services professional. Students will develop assessment techniques and interviewing skills with high-stress populations presenting with psychiatric, health, drug and alcohol, sexual assault, intimate partner and domestic violence, bereavement, and suicide and homicide crises. Prereq: Eligible for ENGL& 101 and MAT 084.

**SHS 207 (3) C****Behavior Management**

For human service professionals working with children, adolescents, and adults with behavioral problems. Covers learning theory and its application to clients in a variety of settings. Includes knowledge and skills needed to effectively help clients manage their behavior. Understand and practice behavior modification and management. Prereq: ENGL& 101 and eligible for MATH 084.

**SHS 209 (5) C****Grief and Loss in Social and Human Services**

Explores both the grief and loss experiences in the context of the helping professions. Analyzes models and types of grief and loss. Researches resources and interventions for clients in the social and human services. Examines transitions, situations, and circumstances that result in grief and loss, as well as cultural responses. Prereq: Eligibility for ENGL& 101 and MAT 087.

**SHS 210 (3) C****Human Service Diversity**

This course examines U.S. society and the diversity within it as well as the effects of societal structures on clients. Topics include an overview of general principles of cultural diversity and cross-cultural services delivery to individuals from many diverse backgrounds. Prerequisite or corequisite of ENGL& 102; prerequisite SHS 100, 103 with a minimum GPA of 2.0; eligibility MATH 084.

**SHS 215 (5) C****Adolescent Development & Treatment**

Focuses on adolescent development and concurrent social, cultural, and sexual problems. Includes theory of normal and deviant behavior development, treatment theory and practice, and effective use of community resources. Prereq: SHS 235.

**SHS 220 (3) C****Independent Living I**

Revolves around three themes: 1) delineating the nature and scope of problems related to the attainment of functional independence; 2) providing methods to assess the readiness of youths preparing to achieve and adequate level of self-sufficiency in the adult world; 3) providing methods to facilitate the learning process so youths might acquire the skills necessary for interdependent living in the community. Prereq: None.

**SHS 222 (3) C****Conflict Management**

Intro to understanding and responding effectively to conflict situations. Assess real life conflict cases and design corresponding intervention strategies through video and case studies. Complete a conflict style inventory and practice conflict communication skills. Prereq: Eligible for ENGL& 101 and MATH 084.

**SHS 223 (3) C****Human Services Practice with LGBTQ Populations**

Overview of Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) cultures and issues in relation to social and human services. Covers theory, research, and practices associated with LGBTQ multicultural competence, as well as the intersections of LGBTQ cultures and race, ethnicity, gender, religion, sexuality, and social class. Prereq: ENGL 101 with a 2.0 or higher; eligibility for Math 084, Math 087, or Math 091.

**SHS 224 (3) C****Leadership Theory Skills**

Covers selected major theories of effective leadership and application of leadership skills in the work setting. Examines the characteristics of effective leaders and evaluates students' professional strengths for potential leadership development. Prereq: ENGL& 101 and MATH 084.

**SHS 225 (1) C****Relapse Prevention**

Defines behavioral and chemical characteristics of relapse and what relapse prevention involves. Focuses on relapse prevention categories, requirements of clients for a relapse prevention program, characteristics that have an impact on relapse, antecedents to relapse, and some of the dysfunctional thinking patterns. Covers clinical and practical techniques and skills in an experiential environment. Prereq: SHS 235 and eligible for ENGL& 101 and MATH 084.

**SHS 226 (1) C****Adolescent Assessment**

Intro to adolescence from developmental, clinical, and treatment perspectives. Focus on normal and dysfunctional adolescent development; assessment and diagnosis; progression of addiction/disease for the adolescent and the family; and implications for inpatient/outpatient treatment, aftercare, and relapse. Prereq: Eligible for ENGL& 101 and MATH 084

**SHS 230 (3) C****Suicide Risk Assessment**

This class provides an introduction to suicide assessment and prevention. Students will be introduced to topics such as signs and symptoms of suicidal/self-harm behavior, facts and myths about suicidal behavior, conducting an assessment interview, risk factors and protective factors, the treatment of suicidal individuals, the contagion effect, and self-care for those working with suicidal/self-harm individuals. Prereq: eligible for ENGL& 101 and MAT 084.

**SHS 231 (5) C****Pharm of Addictions**

Overview of the effects of drug use and chemical dependency on the body, including physiological, emotional, and behavioral effects. Focuses on effects of various chemicals on body systems, drug interactions, and management of chronic and acute conditions of drug abuse. Prereq: SHS 235 and eligible for ENGL& 101 and MATH 084.

**SHS 232 (3) C****Chemical Dependency & Family**

This class provides an overview of how families function as systems and examines the impact of chemical dependency upon the family system. Students will think about theories not only in terms of how well they fit for clients but in terms of their own personal histories. The theoretical models are relevant for families of a variety of cultural, ethnic, and sexual identities. Prereq: Eligibility for ENGL& 101 and MAT 084.

**SHS 233 (5) C****Chemical Dependency Counseling**

An overview of drug addiction counseling using evidence-based theories and assessments. Emphasis will be placed on cultural and social diversity, motivational interviewing/engagement, stages of change, S-BIRT and ASAM, ethical behavior, and harm-reduction. Prereq: Successful completion of SHS 106 and SHS 235.

**SHS 235 (5) C****Drug Addiction and Society**

Overview of physiological, psychological, psycho-social, and systemic concerns related to drug addiction. Explores prevention, intervention, and treatment. Prereq: Eligibility for ENGL 101 and Math 087 (or equivalent).

**SHS 242 (5) C****Mental Health Diagnosis**

Introduction to the DSM IV system of determining diagnosis and current theory for the etiology of the primary Axis I and Axis II disorders. Prereq: Eligibility for ENG 101 and MAT 085.

**SHS 245 (3) C****Mental Health Overview**

Provides an overview of mental health and community mental health systems. Covers major psychiatric disorders and their common symptoms, examines evidence-based practices in mental health treatment, and reviews mental health resources. Prereq: ENGL& 101 with a minimum grade of 2.0.

**SHS 250 (4) C****Client & Community Advocacy**

Covers the role of the advocate in a helping situation, use of community advocacy resources, and effective use of the media, law, negotiation, and political processes to achieve needed services for people. Prereq: Eligible for ENGL& 101 and MATH 084.

**SHS 255 (5) C****Co Occurring Disorders**

Explores skills and knowledge needed for working with clients with mental illness and chemical dependency. Covers symptomatology of frequently diagnosed mental disorders, criteria for substance and dependence, identifying referral needs and processes, treatment needs and barriers, and local services and case management available for the mentally ill chemically abusing (MICA) client. Prereq: SHS 235 and eligible for ENGL& 101 and MATH 084.

**SHS 265 (5) C****Management & Supervision**

Covers management skills for first-line supervisors in alcohol, drug, mental health, correctional, youth, and other human service programs. Includes supervision, time management, motivation, leadership, discipline, personnel management, performance appraisals, communications, training, and self-development. Prereq: Eligible for ENGL& 101 and MATH 084.

**SHS 270 (3) C****Ethics in Human Services and Chemical Dependency**

Explores the WA Administrative Code, federal codes, and professional codes of ethics that apply to human services and chemical dependency professionals. Examines ethical theory, ethical reasoning processes, and ethical analysis. Prereq: Eng 101, Math 87, and SHS 100, each with a 2.0 or higher.

**SHS 275 (3) C****Chemical Dependency and Domestic Violence**

Specifically designed for those working with chemically addicted, abusive clients, and their interactions with family members. Study of treatment goals for domestic violence to foster client understanding of anger, making anger a useful tool, and using healthy and appropriate modes of communication. Prereq: Eligible for ENGL& 101 and MATH 084.

**SHS 280 (3) C****Chemical Dependency Case Management**

Emphasis on oral and written communication skills. Formulate up-to-date, accurate, and understandable case files and records. Learn federal and state confidentiality regulations in handling chemical dependent client records. Formulate concise treatment plans in accordance with legal requirements. Prereq: SHS 235; eligible for ENGL& 101 and MATH 084.

**SHS 296 (1) C****Special Topics**

Receive credit for participation in approved human services professional workshops on topics such as stress management, welfare rights, aging, alcoholism, family therapy, depression, law, and mental health.

**SHS 297 (2) C****Special Topics**

Receive credit for participation in approved human services professional workshops on topics such as stress management, welfare rights, aging, alcoholism, family therapy, depression, law, and mental health.

**SHS 298 (5) C****Special Topics**

Receive credit for participation in approved human services professional workshops on topics such as, but not limited to, stress management, welfare rights, aging, alcoholism, family therapy, depression, law, and mental health. Prereqs: Eligible for ENGL& 101 and MATH 084/091/087.

**SHS 299 (1-5) C****Independent Study or Research**

Individual or group research projects on human service programs and problems. May include field or library research. Prereq: Requires a learning contract.

**Social Sciences****SSC 101 (3) N****Intro to Info Resources for Social Science**

Develop critical thinking as applied to the research process by examining strategies for locating, evaluating, and applying information resources in the social sciences. Explore information policy issues, such as copyright, censorship, and freedom of information. Emphasis on developing proficiency using various electronic resources, including library information networks, the library catalog the web, and other research tools and retrieval techniques.

**SSC 197 (1-15) C,N,S****Social Science Work Experience**

Earn work experience credit in the social science field. Prereq: Permission.

**Sociology****SOC& 101 (5) C,N,S****Intro to Sociology**

Introduces students to the scientific study of society and to several sociological concepts, including socialization, stratification, research methods, social theory, group dynamics, social class, gender, sexuality, race, ethnicity, media, family, deviance, and social and cultural change. Students learn how to connect research to concepts and use the sociological imagination, the relationship between self and society, to deepen their understanding of social life.

**SOC 102 (5) C,N****Introduction to American Culture**

Examines American cultural values, beliefs, and practices. Students explore core social institutions, such as the family, politics, and the media, and learn about patterns of inequality associated with race, ethnicity, social class, gender, and sexuality. Field trips, films, participation in campus events, and observation activities may support cultural learning and facilitate cross cultural analysis.

**SOC 105 (5) C,N,S****Sociology of Black Americans**

Evaluation of the sociological impact of the African-American experience in relation to various social systems in America.

**SOC 106 (5) C,N**  
**Sociology of Asian Americans**

Examines Asian American experiences in the United States from a sociological perspective. It focuses on Asian-American racial/ethnic communities and social institutions and explores settlement patterns, education, employment, anti-Asian violence, media representations, family and gendered identities, and political empowerment. Patterns of inequality, including prejudice, discrimination, and the model minority myth, are core themes.

**SOC 120 (1-5) C,N**  
**Sociology of the Media**

Uses the sociological perspective to examine print and electronic media, including television, film, news, and advertising. Students analyze the impact of media institutions on identity formation and on social, political, and cultural discourse. Students also assess how American cultural values shape and are shaped by the media, both historically and in the present.

**SOC 150 (5) C,N**  
**Race/Ethnic Relations**

Examines the majority-minority pattern of interaction in American society. Includes theories of race relations and issues shaping intra- and interracial ethnic relations.

**SOC& 201 (5) C,N**  
**Social Problems**

Introduces students to core sociological concepts and theories through the lens of social problems. The focus is on examining processes by which members of society define social issues as problems and evaluating social change strategies. Students apply concepts and theories to a range of social problems, such as poverty, crime, discrimination, economic inequality, addiction, health issues, war and terrorism, and environmental issues.

**SOC 215 (5) N**  
**Criminology**

Covers legal definitions, research methods, types of criminal behavior, trends and patterns, recidivism, characteristics of offenders, environmental influences, theories of crime and delinquency prevention, and social policy.

**SOC 220 (5) C,N**  
**Sex Roles and Society**

Explores the social construction of sex, sexuality, and gender over time and across cultures. Examines gender as a fundamental organizing aspect of social life and study patterns of gender inequality. Students learn about ways in which social structures and personal experiences interact to both reproduce and challenge hierarchical systems.

**SOC 225 (5) S**  
**Psychology of Addiction**

Psychology of addiction, a critical examination of the behavior and mental processes associated with addiction. Systemic approaches to investigation through psychosocial, biological, cognitive and sociobehavioral areas in psychology. Lecture, research, presentation, and critical examination. 5 credit class. 200 level course. Prereq: PSYC 100 General Psychology or SOC 101 Intro to Sociology. This is a dual PSYC/SOC course.

**SOC 230 (5) C,N,S**  
**Human Sexuality**

Survey of sexual behavior. Covers historical, physiological, psychological, and social components of sexuality and its deviations. May be taken as PSYC 230.

**SOC 245 (5) C,N,S**  
**Social Psychology**

Examines the effect of others on the individual in areas, such as self-concept, social cognition, conformity, helping, loving and liking, competition and cooperation, and prejudice and discrimination. Research and autobiography by two of the following groups provide content and illustration: African Americans, Asian Americans, Native Americans, and Hispanic Americans. May be taken as PSYC 245.

**SOC 250 (5) C,N**  
**Marriage, Family, Intimate Relationships**

Surveys the concept of family as a mode for personal living. Analyzes personal adjustment, parent-child relationships, marital and alternative structures, and contemporary issues facing today's family systems.

**SOC 253 (5) S**  
**Organizational Behavior**

Organizational behavior as seen through sociological theory. Concepts show how managers can improve organizational effectiveness by attending to the human side of the enterprise. Topics such as leadership, conflict theory, motivation, social interaction theory, power, politics, group dynamics, and organizational design are examined for the effects on employees and their performance.

**SOC 298 (1-5) C,N,S**  
**Special Topics in Sociology**

Independent study in selected sociology topics under faculty supervision. Prereq: Permission.

**SOC 299 (1-5) C,N**  
**Special Problems in Sociology**

Small group seminar to discuss selected sociology topics. Prereq: Permission.

**SMG 100 (3) S**  
**Leadership & Supervision**

Intro to management. Covers leadership theories, style skills in various organizational settings; developing techniques for productive work groups; managing a diverse work force; motivating employees; handling difficult people and situations; running effective meetings; and handling the responsibilities of being a leader, manager, and supervisor.

**Spanish**

*See Languages & Literature, page 315.*

**Supervision and Management****SMG 103 (3) S**  
**Supervise a Diverse Workforce**

Examines perceptions held by supervisors and employees in connection with culturally and behaviorally diverse workers. Examines working with and supervising diverse population groups. Explores current legislation and challenges of an evolving workforce.

**SMG 110 (3) S**  
**Financial Management**

Covers budget preparation at the organizational level using both private sector and public organization formats and formulas. Emphasis on budget development, presentation, and justification of proposed allocations. Prereq: Basic understanding of business computations.

**SMG 120 (3) S**  
**Hiring Personnel**

Examines supervisor's role in staffing. Covers job analysis, descriptions and classifications, recruiting, selection, EEO, and new employee orientation.

**SMG 131 (3) S**  
**Group Behavior & Supervisor**

Overview of group dynamics, moderation, strategies, and productivity in the work place, with emphasis on diversity. Prereq: SMG 100.

**SMG 197 (1-15) S****Supervision and Management Internship**

Provides practical work experience and employment contacts by integrating academic studies with actual on-the-job training. Orientation to Internships required prior to registration. Prereq: Permission.

**SMG 201 (3) S****Entrepreneurial Manager**

Study of the major steps, formation, and growth for setting up a new small business or department, project, or contract within a large organization. Focuses on entrepreneurial characteristics and the task of moving from concept to commercialization. Emphasis on time management, planning and projections, securing capital, and marketing plans. Prereq: SMG 100.

**SMG 210 (3) S****Project Management**

Covers project planning basics: timelines, evaluation, implementing budgeting concepts, and formulating a budget request strategy, with specific and measurable outcomes. Focuses on team concepts. Includes computer lab applications.

**SMG 213 (2) S****Fundraising and Grantwriting**

Especially for nonprofits. Explores fundraising and grant writing, including identifying fund-raising needs and goals, designing a viable fund-raising program (campaign), creative fund-raising activities, writing grants, understanding grant requirements and their relationship to the nonprofit.

**SMG 217 (3) S****Organizational Behavior**

Intro to strategies for developing an effective organization. Provides history of the field, overview of areas in which organizational behavior interventions can be of use, and the types of interventions used in work environments.

**SMG 220 (3) S****Personnel Performance Management**

Covers principles and techniques for employee performance programs, appraisals, coaching and counseling, disciplinary process, and wage surveys. Explores reward systems, common disciplinary practice, and employment law. Covers assessment of training needs, planning, development, and evaluation of training programs.

**SMG 222 (3) S****Management Labor Relations**

Covers the supervisory role in employee and labor relations. Includes history of management thought, labor negotiations, laws affecting labor agreements, union contracts, and the supervisor's role in the negotiating process.

**SMG 223 (2) S****Marketing Meetings and Presentation Skills**

Explores the dynamics of the marketing process. Includes the relevance of marketing a nonprofit and communicating to its numerous constituencies. Covers productive meetings and presentational skills and techniques for nonprofit leadership.

**SMG 233 (2) S****Nonprofit Staff Board and Volunteers**

Covers the development of staff, board, and volunteers. Explores election of staff and board members, developing and capitalizing on their talents and skills, effective use of staff, drawing on the expertise of board members, and expanding programs through the cultivation of volunteer/member development.

**SMG 243 (2) S****It's the Law: Contracts**

Covers the law as it relates to contracts and liabilities in nonprofits. Focuses on legal issues that nonprofit staff and boards need to be aware of, including personnel contracts, grant contracts, personal service contracts, fund-raising contracts, service provider contracts, antitrust, and related liabilities. Includes employment laws, officer/director liabilities, and indemnification.

**SMG 253 (2) S****Executive Development**

Focuses on the role of executives in a nonprofit. Explores dynamic and practical leadership skills, including characteristics and styles, team-building, organizational leadership and board relations, constituent leadership, fund-raising, crisis management, and political leadership. Covers self-nurturing and expansion of professional competencies.

**SMG 263 (2) S****Nonprofit Strategic Plan**

Focuses on nonprofit planning including mission statement, program goals and objectives, annual plan, and long range strategic plan. Covers membership development, fund-raising plans and board, staff and constituent development.

**SMG 298 (1-10) S****Independent Study – Supervision & Management**

Provides opportunity for research, advanced study, or special projects. Work independently with an instructor. Credits vary. Prereq: Permission.

**SMG 299 (1-10) S****Special Topics**

Study an approved topic, such as marketing, sales, advertising, retail management, promotion, customer service, consumer behavior, marketing research, entrepreneurship, and business communication. May include a portfolio, project, or activity to demonstrate competencies. Includes an oral presentation evaluated by faculty and industry representatives. Prereq: Permission.

**WTL 301 (3) S****Introduction to Supervision & Management**

This course is an overview of supervision and management skills. Students will learn the basics of business writing, critical thinking skills, and how to communicate decision making. Topics reviewed in this course include Management Theory and Practices, Organizational Development, Ethical and Legal Aspects of Leadership, Supervision of a Diverse Workforce, Budgeting and Cost Concerns, Risk Management, Sustainability, and Workplace Health and Safety.

**WTL 302 (3) S****Risk Management**

This course will equip students with communication skills and other strategies to address the risk management process. Through a variety of experiences, students will learn to visualize next steps, identify potential liabilities, and communicate issues with all levels of the organization.

**WTL 310 (3) S****External Relations**

This course will prepare students to manage customer and partner relations. Through simulations and real life experiences, students will learn to collaborate with contractors and suppliers to design and deliver products based on agreed upon schedule and plans. Students will learn the basics of resolving disputes while maintaining professionalism.

**WTL 311 (3) S****Productivity and Diversity in the Workplace**

This course is designed to integrate productivity and diversity theory into practice by examining motivational research and applying it to simulated or real workplace practices. Students will learn a range of communication, organizational, and accounting skills to implement strategies, including agenda development, group facilitation, and adopting policy into practice.

**WTL 312 (3) S****Human Resource Development**

This course will cover basic labor relations, the principles of human motivation in the workplace, and recruiting, training, development, and evaluating employees. Emphasis will be placed on developing and effectively managing a diverse team of employees. In addition, students will learn labor contract negotiation skills. Students will learn how to develop, implement, and manage company HR policies regarding collective bargaining contracts and local, state, and federal regulations.

**WTL 314 (1) S****Professional Portfolio**

This course will require students to document prior learning experience (PLA) by developing an e-portfolio and will culminate in receiving Workforce Experience Practicum credit.

**WTL 315 (10) S****Workforce Experience Practicum**

Credits earned will be upon successful completion of the Professional Portfolio (WTL 314). Students must have demonstrated at least 2 years of relevant work experience in their area of interest.

**WTL 325 (2) S****Organizational Leadership**

This course will focus on the study of group and individual behavior at the work site. Students will learn how to blend technical leadership skills with the realities of organizational norms and expectations. Human factors, including safety and sustainability, diversity, and motivation, will be explored.

**WTL 345 (5) S****Workplace Health and Safety**

The focus of this course is creating a safe and healthy work site and maintaining all local, state, and federal regulations. Students will learn how to establish accountability of safety efforts and ensure compliance, conduct training and maintain staff certifications, conduct accident investigations and act on safety violations. Students will earn a CPR and First Aid Certificate as part of this course.

**WTL 401 (3) S****Project Management**

This course is designed for student to identify a simulated or real project and develop a comprehensive project management plan. Students will evaluate multiple project management techniques and strategies. Students will research possible Project Management certifications and student chapter memberships.

**WTL 402 (5) S****Cost Controls**

This course is designed to provide the basics of industry cost control management by using standard cost control ratios to track labor and other expenses. Basic accounting, project budgeting, estimating, and budget tracking will be covered. Students will conduct research on effective contract budgeting and forecasting.

**WTL 420 (3) S****Labor Law and Ethics in Leadership**

This is an overview class designed to address workplace risk management. Students will analyze legal aspects of the collective bargaining contract as well as how to develop policies, processes, and procedures that comply with local, state, and federal laws while maintaining ethical leadership standards. Students will also learn legal aspects of project contract management, change management, and purchasing.

**WTL 460 (3) S****Technology and Leadership**

This course will teach students how to use technology such as software applications to help manage processes. Students will be introduced to the range of technology tools used in the workforce development, manufacturing, and construction industries (e.g., client management systems), and how to conduct research to stay informed about the latest technological changes in the field.

**WTL 489 (1) S****Professional Development**

This course will focus on professional development, including research on job development and future work and education plans. Students will identify professional organizations that advance the field they are interested in pursuing.

**WTL 490 (5) S****Internship**

The leadership internship provides students with the opportunity to observe, reflect, and practice leadership in a technical, work-site environment. Each student will find a leadership placement in their field of interest and work with a site supervisor to provide relevant leadership experiences.

**WTL 491 (5) S****Internship**

The leadership internship provides students with the opportunity to observe, reflect, and practice leadership in a technical, work-site environment. Each student will find a leadership placement in their field of interest and work with a site supervisor to provide relevant leadership experiences.

**WTL 495 (2) S****Capstone**

This is a project-based course integrating all components of the curriculum. Students will conduct a self-evaluation of program outcomes met.

**Surgical Technology****SURG 111 (6) C****Surgical Lab**

Covers principles and techniques of operating room procedures. Includes gowning and gloving, aseptic technique, creating and maintaining a sterile field, draping materials, basic instrumentation, and patient transport. Prereq: Permission.

**SURG 113 (10) C****Surgical Theory I**

Intro to surgical technology, including legal and ethical aspects, relationships with coworkers, hospital organization and inter-departmental relations, physical and psychological aspects of patient care, operating room techniques and procedures. Prereq: Permission.

**SURG 115 (2) C****Clinical Orientation**

Covers observation of the environment, routines, supplies and equipment, patient-team interaction, and application of scientific principles. Prereq: Permission.

**SURG 121 (6) C**  
**Surgical Spec/Prof Prep**

Intro to the principles and practice of surgical pharmacology and anesthesia related to the surgical patient. Learn about minimally invasive surgical instrumentation, equipment, and supplies. Prereqs: SURG 111, 113, 115.

**SURG 123 (8) C**  
**Surgical Theory II**

Examines microbiology, pharmacology, and anesthesiology relating to the surgical patient. Includes additional peri-operative care techniques and surgical procedures, pathophysiology, and the technologist's role in surgery. Covers general, orthopedic, gynecological, genitourinary-reproductive, and ophthalmic specialties. Prereq: Successful completion of SURG 113 or instructor's permission. Coreq: SURG 121 and SURG 125.

**SURG 125 (4) C**  
**Clinical Practice I**

Provides clinical practice, with focus on development of entry-level skills. Prereq: Permission.

**SURG 133 (8) C**  
**Surgical Theory III**

Intro to circulating duties and job applicant skills. Covers advanced surgical specialties, such as ear, nose, and throat; vascular; cardiovascular; thoracic, neurological; plastic/reconstructive; and pediatric procedures. Prereq: Permission.

**SURG 135 (10) C**  
**Clinical Practice II**

Provides advanced clinical practice to develop entry-level skills. Prereq: Permission.

**Sustainability****SUST 101 (5) N**  
**Intro to Sustainability**

Intro to the concept and principles of sustainability, including science, technology, economic, political, and social factors. Prereq: Recommend placement into ENGL& 101.

**SUST 111 (5) N**  
**Sustainability Healthcare**

Survey of sustainability in healthcare, relevant to environmental services, waste management, hospital facilities, and dietary services. Open to all. Certificate (5-credit) issued on completion. Prereq: Permission.

**Sustainable Building Science Technology Bachelor of Applied Science**

*Students must be accepted into the program in order to take these courses.*

**SBST 301 (3) S**  
**Building Science**

Overview of the principles of Building Science and how it is applied to the design, operation, and maintenance of buildings and their systems. Covers the interaction of those systems and the careers that use and are impacted by these principles and their applications.

**SBST 302 (2) S**  
**Building Components and Systems**

Overview of building components, space conditioning and lighting systems, their interactions, and the building science issues surrounding and impacting them.

**SBST 314 (2) S**  
**Professional Portfolio**

Document prior work experience by developing an E-portfolio to receive Workforce Experience Practicum credit.

**SBST 315 (10) S**  
**Work Experience Practicum**

Credits based on the successful completion of the Professional Portfolio course SBST 314. Students must have demonstrated 2-5 years of relevant work experience in their area of interest.

**SBST 321 (2) S**  
**Building Codes in Washington State**

Overview of building codes and requirements.

**SBST 322 (2) S**  
**Energy Analysis/Auditing**

Covers energy auditing and analysis skills for commercial buildings.

**SBST 325 (1-10) S**  
**Sustainable Building Science Technology Internship**

Observe, reflect, and practice sustainable building science technology techniques in a technical, post-secondary environment. Find a building science placement in the field of interest and work with a site supervisor to develop and deliver relevant curriculum. The site supervisor and college faculty advisor will evaluate the internship.

**SBST 331 (2) S**  
**Financing Upgrades**

Overview of energy economics.

**SBST 332 (3) S**  
**Building Codes in Washington**

Overview of building energy codes in Washington State.

**SBST 333 (4) S**  
**Building Controls**

Overview of building components.

**SBST 401 (2) S**  
**Utility Rates**

Overview of utility rate structure.

**SBST 402 (3) S**  
**Lighting**

Overview of building lighting systems.

**SBST 421 (3) S**  
**Energy Policy**

Overview of energy policy.

**SBST 422 (4) S**  
**Facility Management**

**Overview of facilities management.**

**SBST 431 (4) S**  
**Professional Communication**

Overview of professional communication in the building science industry

**SBST 432 (3) S**  
**Fiscal Management**

Overview of fiscal management for facility managers.

**SBST 489 (4) S**  
**Sustainable Building Science Technology Capstone**

Develop a project based on previous classes and internship experiences.

**Trades**

*See South's Georgetown Campus, Apprenticeship & Education Center programs, page172.*

**Undergraduate Research****UGR 214 (1-5) C,N,S**  
**Intro to Scientific Research**

Preparation for successful completion of an independent research project. Includes the application of scientific method, ethics, research methods, proposal writing, and presentation techniques.

**UGR 294 (1-5) C,N,S**  
**Independent Research**

Work collaboratively with peers and faculty. Design, complete, and publicly present an original research project. Prereq: Completion of UGR 214 or instructor permission.

**UGR 295 (1-5) N**  
**UGR – Psychology**

Work collaboratively with peers and faculty to design, complete, and publicly present an original research project in Psychology. Prereq: PSYC 209.

**Video Communications****COM 197 (1-5) C**  
**Work Experience: Film VI**

Earn work experience credit in the video field. Prereq: Permission.

**COM 200 (4) C**  
**Small Group Productions**

Individuals or production teams pursue individual and small-scale projects. Covers topics such as personal video, oral history recording, video art, ethnographic video, and video installation. Coreq: ENGL 155.

**COM 214 (3) C**  
**History of Film & Video**

Examines the development of film as art and entertainment: early beginnings as novelty and sideshow, refinement as an art form, role in mass culture. Emphasizes the narrative film from the U.S. and abroad. Screenings show works that are significant because of their place in history, aesthetic worth, or stylistic interest.

**COM 215 (3) C**  
**Media Law and Ethics**

Intro to the basic concepts of law applicable to the film, video, on-line industries, and production situations. Covers the American legal system, contracts, licenses, regulatory codes, principles of intellectual property laws, and the First Amendment.

**COM 225 (5) C**  
**Advanced TV Production & Appl. Com**

Expand and refine production skills. Assume roles for large-scale 16mm film and HD video project produced in as sophisticated and professional manner.

**COM 230 (3) C**  
**Technical Operations**

Intro to basic concepts and techniques of multi-camera studio production. Produce and direct “live-to-tape” studio productions. Equipment covered includes studio cameras, teleprompter, switcher, audio board, intercom systems, VTRs, and studio lighting dimmers. Prereq: Second-year standing.

**COM 235 (3) C**  
**Production Management**

Overview of the duties and responsibilities of a production-manager: script, location, union requirements, production board, contracts and negotiations, and fiscal management. Rotate in the role of supervisor of a production crew for television and stage productions. Explore interpersonal interactions.

**COM 236 (3) C**  
**Audio Production**

Explores basic sound theory, audio production, and post-production skills used in film and video. Learn to capture and manipulate sound. Covers selection and handling of microphones, Time Code, Foley and sound effects, and the use of digital field recorders and mixers.

**COM 240 (3) C**  
**Theatre/Video Production, Operations**

Refine post-production skills and complete a portfolio project that meets a high technical standard. Includes video compression, video on the web, motion graphics, audio sweetening, and working with graphic designers. Prereq: Second-year standing.

**COM 250 (2) C**  
**Portfolio Prep Art in Residence**

Clarify career intentions and act upon them. Research job markets and trends; develop contact lists, a professional portfolio, a résumé, cover letters, a portfolio reel, and a personal website. Prereq: 2.0 or better in all previous 200-level courses or permission from division dean.

**COM 260 (3) C**  
**Directing**

Covers basic principles and practices of directing for film and video. Explore script analysis, visualization and storyboarding, staging and blocking, working with other members of the production team, communicating with actors, and preparation for editing.

**COM 270 (1-5) C**  
**In-House Productions**

A comprehensive exploration of the tools and techniques of cinematography. Learn the care and handling of motion picture cameras, lenses and accessories, film stocks, lighting and grip gear, exposure meters, and lab processes.

**COM 298 (1-5) C**  
**Special Topics**

Seminar on selected topics or activities in video communications. Prereq: Permission.

**COM 299 (1-5) C**  
**Independent Study Video Communications**

This is an independent study course of selected topic(s) in video communications. A research project of mutual desirability is assigned by the appropriate supervising faculty. Prereq: Permission of instructor.

**Vietnamese**

*See Languages & Literature, page 315.*

**Watch Technology****HIN 111 (6) N**  
**Intro to Watch Technology**

Survey of the history of time measurement and the watch and clock trade. Learn safe shop practices, including lab hazard, accident prevention, and first aid. Intro to trade terminology associated with tools, equipment, technical drawing, measuring devices, and applications appropriate to the trade and physical properties of materials. Coreqs: HIN 112 and 113.

**HIN 112 (6) N**  
**Watch Technology I: Tools, Equipment**

Learn to use and maintain in a lab setting, including jeweler's saw, tweezers, screw drivers, files, and the watchmaker's lathe. Learn the fundamentals of hardening, tempering, and annealing steel; measuring techniques; and applying the metric system in the use of instruments and gauges. Make technical drawings and manufacture tools and parts using drawings. Coreq: HIN 111 and 113

**HIN 113 (10) N****Watch Tech I: Practicum**

10 credit practicum. Apply knowledge from HIN 111 and 112. In lab, practice making tools and develop basic skills in the manufacture and repair of parts for time pieces. Identify and apply tools and equipment using safety precautions in a watchmaker's shop. Practice measuring techniques and apply problem-solving skills to manufacturing. Coreqs: HIN 111 and 112.

**HIN 121 (6) N****Watch Tech II Professional Knowledge**

Learn or review the math necessary to calculate formulas used in manufacturing and watch repair. Use formulas to find the length of mainsprings, calculate running time and beats per hour. Apply various polishing materials and techniques to master the manufacture of small parts.

**HIN 122 (6) N****Watch Tech II: Watchmakers Lathe**

Intro to use, care, and maintenance of specialty lathes using the watchmakers' turns, the Jacot tool, and pivot polishing machine.

**HIN 123 (10) N****Watch Tech II: Practicum**

Apply knowledge from HIN 121 and HIN 122. Practice manufacturing watch stems and pivoting. Identify and apply appropriate tools, equipment, and safety precautions in a horological repair shop.

**HIN 131 (6) N****Watch Tech III: Winding & Setting**

Learn to correct common errors in the mainspring barrel, the barrel bridge, and mainplate. Intro to common types of setting mechanisms. Practice correct disassembly, assessment and adjustment, re-assembly, and lubrication procedures. Learn mathematical formulas for determining correct size of mainsprings. Prereqs: HIN 121, 122, and 123. Coreqs: HIN 132 and 133.

**HIN 132 (6) N****Watch Tech III: Watch Gear Training**

Intro to the mathematics involved in working with the gear train and tooth form, module, pitch, and distance between centers, including calculations to determine running time and vibrations per hour for mechanical watches and ratios. Learn to dismantle, assemble, maintain, and repair the gear train of a watch. Prereqs: HIN 121, 122, and 123. Coreqs: HIN 131 and 133.

**HIN 133 (10) N****Watch Tech III: Practicum**

10-credit practicum. Apply knowledge from HIN 131 and 132. In lab, practice jewel setting and adjusting. Develop skills to prepare for and complete the third WOSTEP intermediate exam (winding, setting, gear train). Expand skills to identify and apply appropriate tools and equipment safely in a horological repair shop. Prereqs: HIN 121, 122, and 123. Coreqs: HIN 131 and 132.

**HIN 141 (4) N****Watch Tech IV: Escapements**

Intro to the role of escapement in the watch. Explore history and development of different escapements and their influence on time-keeping. Prereqs: HIN 131, 132, and 133. Coreqs: HIN 142 and 143.

**HIN 142 (4) N****Watch Tech IV: External Parts**

Learn about different case styles and the parts that complete the case, including crystals, crowns, push buttons, dials, hands, and gaskets. Prereqs: HIN 131, 132, and 133. Coreqs: HIN 141 and 143.

**HIN 143 (8) N****Watch Tech IV: Practicum**

8-credit practicum. Apply knowledge from HIN 141 and 142. Prereqs: HIN 131, 132, and 133. Coreqs: HIN 141 and 142.

**HIN 197 (10) N****Special Topics: Horology**

Optional study of selected topics in Watch and Clock Repair (Horology) as considered appropriate by the instructor and/or Watch and Clock faculty. Course content follows WOSTEP (Watchmakers of Switzerland Training and Educational Program) curriculum. Prereq: Instructor permission.

**HIN 211 (6) N****Watch Tech V: Precision T**

Learn concepts of precision timing, with emphasis on the eight influences of isochronisms (friction, external influence, regulating pins, escapement, magnetism, temperature, poising of balance wheel, poising of hair-spring). Students apply the theoretical concepts of precision timing to practice watches: analyzing errors and making corrections to improve the timekeeping of the watches. Prereq: Permission, HIN 141, 142, and 143 with 2.0. Coreq: HIN 212 and 214.

**HIN 212 (6) N****Watch Tech V: Electronic**

Learn fundamentals of electronics to understand how quartz watches work: tension, current, capacity, power, consumption, electric field, magnetic field, functioning of stepping motors, energy source, and functioning of the transistors in switching. Intro to equipment designed specifically for testing quartz watches and to analyze the various components of watches. Prereq: Permission, HIN 141, 142, and 143 with 2.0. Coreq: HIN 211 and 213.

**HIN 213 (10) N****Watch Tech V: Practicum**

Intro to repair of pocket watches and/or wristwatches, the service, repair, and replacement of external parts of watches. Practice includes work on precision timing, quartz watches, short jobs (battery, crystal, crown, and stem replacement) and customer repairs. Prereq: Instructor permission, HIN 141, 142, and 143 with 2.0. Coreq: HIN 211 and 212.

**HIN 221 (6) N****Watch Tech VI: Precision Timing 2**

Continue study of theory and practical application of the principles of precision timing. Prereq: HIN 211, 212, and 213. Coreq: HIN 222 and 223.

**HIN 222 (6) N****Watch Tech VI: Auto Watches**

Intro to the various self-winding (automatic) mechanisms for watches. Practice testing, adjusting, disassembly, and assembly of automatic mechanisms. Study history and development of these mechanisms. Prereq: HIN 211, 212, and 213. Coreq: HIN 221 and 223.

**HIN 223 (10) N****Watch Tech VI: Practicum**

Apply knowledge from HIN 221 and 222. Practice repairing automatic watches and continue working on precision timing. Further develop skills with appropriate tools, equipment, and safety precautions in a horological repair shop. Prereq: HIN 211, 212, and 213. Coreq: HIN 221 and 222.

**HIN 231 (6) N****Watch Tech VII: Advanced Precision Timing**

Refine and synthesize the art of precision timing. Each unit of the watch must be clean and well-adjusted. Check each unit systematically so that repairs are made in a timely fashion. Prereq: HIN 221, 222, and 223. Coreq: HIN 232 and 233.

**HIN 232 (6) N****Watch Tech VII: Chronographs**

Learn to repair the main types of chronographs – those with column wheels and those with cams. Covers the function and components of chronographs, checking the general condition and correct fitting of components, understanding and correct application of lubrication, identifying errors, and carrying out required corrections. Prereq: HIN 221, 222, and 223. Coreq: HIN 231 and 233.

**HIN 233 (10) N****Watch Tech VII: Practicum**

10-credit practicum. Apply knowledge from HIN 231 and 232. Practice repairing chronograph watches and continue working on precision timing. Further develop skills of identification and use of appropriate tools and equipment. Exercise appropriate safety precautions. Prereqs: HIN 221, 222, and 223. Coreqs: HIN 231 and 232.

**HIN 241 (4) N****Watch Tech VIII: After Sales & Service**

Learn the range of skills necessary to manage a watch repair shop. Prereqs: HIN 231, 232, and 233. Coreqs: HIN 242 and 243.

**HIN 242 (4) N****Watch Tech VIII: Review Courses**

Review highlights of the two-year Watch Technology Program in preparation for final exams. Prereq: HIN 231, 232, and 233. Coreq: HIN 241 and 243.

**HIN 243 (8) N****Watch Tech VIII: Practicum**

8-credit practicum. Apply knowledge from HIN 241 and 242. In lab, practice repairing all types of watches and review the theory of watchmaking. Prereqs: HIN 231, 232, and 233. Coreqs: HIN 241 and 242.

**HIN 298 (1-10) N****Special Topics: Watch & Clock**

Study of selected topics in Watch and Clock repair as considered appropriate by the instructor. Content, format, and project varies depending on topics.

**HIN 299 (5) N****Independent Study: Watch & Clock**

An independent study of selected topics in Watch and Clock repair (Horology) as considered appropriate by the instructor.

**Web Development**

*See Computing Technology, Computer Science, and Information Technology.*

**Welding Fabrication Technology****WFT 100 (5) S****Welding Theory**

Exploration of the applications and criteria for selecting the most widely used welding and weld-related metal joining processes, including gas metal arc welding, flux-cored arc welding, shielded metal arc welding, gas tungsten arc welding, submerged metal arc, oxyacetylene, brazing, soldering and cutting, plasma arc cutting, and resistance welding. Covers types of welds and weld joints.

**WFT 105 (5) S****Print Reading Welding Symbols**

Learn to read and interpret industrial prints for both mechanical and structural welded fabrications. Includes interpreting various views and types of prints and welding symbols and their application.

**WFT 111 (5) S****Materials and Testing**

Covers theory and application of metallurgical principles applied to weld design and heat affected zone (HAZ), heat treating and distortion (pre-post) and heat effects on crystalline structure of Ferrous and non-ferrous metals. Includes methods of destructive and nondestructive testing. Prereq: WFT 100.

**WFT 120 (6) S****Intro Welding Oxy Acetylene**

Practice safe and efficient use of oxyacetylene flame for cutting and joining applications. Perform sound welds using the Shielded Metal Arc Welding (SMAW) process.

**WFT 121 (6) S****Shielded Metal Arc Welding**

Learn advance configurations and position for welding with the Shielded Metal Arc Welding process, including vertical and overhead. Prepare for the WABO certification testing procedure.

**WFT 124 (6) S****Gas Metal Arc Welding**

Lab practice and competencies with equipment, multiple positions, and applications of GMAW uses. Combines weld theory, operation of OXY-Acetylene and SMAW processes, using mild steel, low alloy steel, aluminum, and stainless steel. Prereq: WFT 100, 120, and 121.

**WFT 125 (6) S****Flux Core Arc Welding**

Lab practice and competencies with equipment, multiple positions, and applications of FCAW uses (Inner shield/Dual Shield). Combines weld theory, operation of OXY-Acetylene, and SMAW processes, using mild steel, low alloy and stainless steel. Prereq: WFT 100, 120, and 121.

**WFT 127 (6) S****Gas Tungsten Arc Welding**

Learn equipment, theory of operation, and applications of the Gas Tungsten Arc Welding (GTAW) process, also called TIG and Heliarc, that is used in pressure piping systems, aerospace products, and with heat-sensitive metals. Prereq: Experience with OAW (gas welding) and at least one arc welding process or permission.

**WFT 128 (6) S****Fab Carbon Arc Cutting**

Learn the practical transfer of blueprint information onto metal using a variety of techniques. Covers applications of geometric shape constructions and divisions in the shop environment. Demonstrate proficiencies with Carbon Arc Cutting, Plasma Arc Cutting, and manual OXY Fuel Cutting. Prereqs: WFT 100, 105, 120, 121, 124, and 125.

**WFT 144 (6) S****Shipyard Intensive Welding**

This course identifies necessary skills and attributes unique to welding in the shipyard environment. Specific processes, safety procedures, understanding structural strength, weld sequences, and restricted welding conditions will be the primary focus. Using multiple practice opportunities, students are prepared to obtain welding certifications recognized by NAVSEA, AWS, and ABS. Prereq: WFT 125 or instructor permission.

**WFT 197 (3) S****Welding Fabrication Technology Internship**

Provides practical work experience and employment contacts by integrating academic studies with actual on-the-job training. Orientation to Internships required prior to registration. Prereq: Permission.

**WFT 220 (8) S****Pipe Shielded Metal Arc (SMAW)**

Learn more advanced configurations and positions for welding with the E 7018 and E 6010 Shielded Metal Arc Welding process on pipe, including vertical and overhead. Cut and bevel pipe with oxy fuel and hand tools. Prepare for the WABO pipe certification testing procedure.

**WFT 227 (7) S****Advanced Fabrication I**

Covers knowledge of all shop equipment and theory of operation and applications of the SMAW, GMAW, FCAW, and GTAW processes through project-oriented exercises. Design and create pre-approved individual project.

**WFT 228 (8) S****Pipe Gas Tungsten Arc Welding (GTAW)**

Learn more advanced configurations and position for welding with the Gas Tungsten Arc Welding (GTAW) on pipe including vertical and overhead. Cut and bevel pipe with oxy fuel and hand tools. Prepare for AWS pipe certification testing procedure.

**WFT 238 (7) S****Advanced Fabrication II**

Improve skills in all major areas including design and development, estimating, layout, cutting (machine torch and Plasma), forming, fit up, tack welding, and product assessment. Fabricate an approved individual design project.

**WFT 240 (5) S****Visual Welding Inspection**

This course is designed to prepare students for the Certified Welding Inspector (CWI) examination offered by the American Welding Society (AWS). Course focuses on welding processes, welding procedures, code specifications, and standards; covers topics including materials and their limitations, weld testing, and records keeping.

**WFT 241 (6) S****WABO Test Prep SMAW Plate**

Students practice welding technique in preparation for the Washington Association of Building Officials (WABO) welder certification test, using the Shielded Metal Arc Welding (SMAW) process on steel plate. Students will assemble and weld test coupons, then perform destructive testing on test specimens. Students will evaluate weld quality using WABO standards. Students will follow Weld Procedure Specifications (WPS) and complete Welder Performance Qualification Reports (WPQR). Prereq: WFT 121.

**WFT 242 (6) S****WABO Test Prep GMAW Plate**

Students practice welding technique in preparation for the Washington Association of Building Officials (WABO) welder certification test, using the Gas Metal Arc Welding (GMAW) process on steel plate. Students will assemble and weld test coupons, then perform destructive testing on test specimens. Students will evaluate weld quality using WABO standards. Students will follow Weld Procedure Specifications (WPS) and complete Weld Performance Qualification Reports (WPQR). Prereq: WFT 124.

**WFT 243 (6) S****WABO Test Prep FCAW Plate**

Students practice welding technique in preparation for the Washington Association of Building Officials (WABO) welder certification test, using the Flux Core Arc Welding (FCAW) process on steel plate. Students will assemble and weld test coupons, then perform destructive testing on test specimens. Students will evaluate weld quality using WABO standards. Students will follow Weld Procedure Specifications (WPS) and complete Welder Performance Qualification Reports (WPQR). Prereq: WFT 125.

**WFT 244 (6) S****WABO Test Prep GTAW Plate**

Students practice welding technique in preparation for the Washington Association of Building Officials (WABO) welder certification test, using the Gas Tungsten Arc Welding (GTAW) process on steel plate. Students will assemble and weld test coupons, then perform destructive testing on test specimens. Students will evaluate weld quality using WABO standards. Students will follow Weld Procedure Specifications (WPS) and complete Welder Performance Qualification Reports (WPQR). Prereq: WFT 127.

**WFT 245 (6) S****WABO Test Prep SMAW Pipe**

Students practice welding technique in preparation for the Washington Association of Building Officials (WABO) welder certification test, using the Shielded Metal Arc Welding (SMAW) process on steel pipe. Students will assemble and weld test coupons, then perform destructive testing on test specimens. Students will evaluate weld quality using WABO standards. Students will follow Weld Procedure Specifications (WPS) and complete Welder Performance Qualification Reports (WPQR). Coreq: WFT 220.

**WFT 246 (6) S****WABO Test Prep GTAW Pipe**

Students practice welding technique in preparation for the Washington Association of Building Officials (WABO) welder certification test, using the Gas Tungsten Arc Welding (GTAW) process on steel pipe. Students will assemble and weld test coupons, then perform destructive testing on test specimens. Students will evaluate weld quality using WABO standards. Students will follow Weld Procedure Specifications (WPS) and complete Welder Performance Qualification Reports (WPQR). Coreq: WFT 228.

**WFT 297 (1-12) S****Special Topics Weld Fabrication**

Special topics for an individual or group in welding fabrication field. Prereq: Permission.

**Wine Technology**

*Students must be 18 to participate in wine-tasting and wine-making.*

**WIN 101 (3) S****Introduction to Enology**

An introduction to the science of winemaking, history and geographical distribution; grape varieties and wine types; influence of climate and soil; wine fermentation, handling, storage, and bottling methods; wine disorders; winery sanitation; legal compliance. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 102 (3) S****Enology Laboratory Analysis**

Intro to vineyard and winery laboratory practices, including basic chemistry principles, laboratory techniques, and commonly used analysis methods for musts and wines. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 101, WIN 112, WIN 121, WIN 123, WIN 131, WIN 133, and permission of instructor. Coreq: WIN 103 and WIN 107.

**WIN 103 (4) S****Elements of Wine Production**

Introduction to the elementary production of wines, including considerations that take place during the harvesting of grapes, transportation, stemming, and crush. May include field trip if season permits. Orientated for the beginning student. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 101, WIN 112, WIN 121, WIN 123, WIN 131, WIN 133, and permission of instructor. Coreq: WIN 102 and WIN 107.

**WIN 104 (4) S**  
**Elements of Wine Production II**

Intermediate course in winemaking that will emphasize the theories and practices of various fermentation process, theories of racking, topping, and preservation methods. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 102, WIN 103, WIN 107. Coreq: WIN 108.

**WIN 105 (4) S**  
**Elements of Wine Production III**

Advanced course in winemaking. Emphasizes the final stages of wine production, including the philosophy of usage and maintenance of barrels, elements of mixing wine varietals, and the final stages of finishing wine production. Students must be 18 years of age to participate in wine tasting. Wine Program lab fees apply. Prereq: WIN 104 and WIN 108. Coreq: WIN 109.

**WIN 107 (1) S**  
**Winery Production I**

Practical application of theories and principles being concurrently studied and discussed in WIN 103, Elements of Wine Production. This laboratory will involve hands-on practicum. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 101, WIN 112, WIN 121, WIN 123, WIN 131, WIN 133, and permission of instructor. Coreq: WIN 102 and WIN 103.

**WIN 108 (1) S**  
**Winery Production II**

Intermediate studies in winemaking. Students will apply theories and principles being concurrently studied and discussed in Elements of Wine Production II. This laboratory will involve hands-on practicum. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereqs: WIN 102, 103, 107. Coreq: WIN 104.

**WIN 109 (1) S**  
**Winery Production III**

Advanced studies in winemaking. Practical application of the theories and principles of WIN 105. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereqs: WIN 104 and WIN 108. Coreq: WIN 105.

**WIN 110 (3) S**  
**Intro to Wine Science**

An introduction to scientific aspects of wine composition and production for the student with a limited background in chemistry and microbiology. Prereq: WIN 101, 123, 133, MATH 098, CHEM 139.

**WIN 112 (5) S**  
**Wine Science**

An introduction to scientific aspects of wine composition and production for the student with a limited background in chemistry and microbiology. The course prepares students to understand scientific material presented in more advanced enology courses. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereqs: WIN 101, 123, and 133, or instructor's permission.

**WIN 121 (3) S**  
**Intro to Viticulture**

Intro to the theory of grape growing, including botany, anatomy, history, distribution, propagation, varieties, wine type, climate, production practices, and common diseases and pests. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 122 (3) S**  
**Wine Chemistry and Microbiology**

Covers wine chemistry and microbiology, including wine acidity, sulfur dioxide, protein and phenolic equilibria, and other concerns. Learn to make informed decisions on style, crush options, cellar practices, fining, stabilization, and quality assurance. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Recommended for success: WIN 112 and WIN 121 or permission from instructor.

**WIN 123 (3) S**  
**Sensory Evaluation**

An introduction to wine sensory evaluation methods including statistical analysis of trials, philosophy of wine styles and the common evaluation methods of representative wines used in sensory testing. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 131 (3) S**  
**Intro to Washington Wine**

Intro to wines produced in Washington, including history, viticulture practices, and winemaking styles. Includes sensory evaluation of representative Washington wines. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 132 (3) S**  
**Wine History: Ancient Times to the Enlightenment**

A survey of wine and its role in history, religion, art, culture, and society from pre-history to the Age of Enlightenment. Includes sensory evaluation of representative wines. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 133 (5) S**  
**Introduction to Wines of World**

Intro to the world's wine-producing regions, including history, viticulture practices, and winemaking styles. Includes sensory evaluation of representative wines. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 134 (3) S**  
**Wine History: The New World and Modern Times**

A survey of wine and its role in history, religion, art, culture, and society in the new world and the modern era. Includes sensory evaluation of representative wines. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 141 (3) S**  
**Wine Marketing and Sales**

Intro to wine marketing and sales methods, basic approaches to packaging, advertising, promotion, retail, and wholesale selling of wine. Prereq: Intro to Business, Intro to Marketing or permission.

**WIN 142 (3) S**  
**Wine Business – Winery Operations**

Overview of winery operations, with emphasis on inventory, pricing, forecasting, sales methods, allocating, and distribution of wine from the manufacturer. The course covers compliance for Washington State. Includes equipment, insurance, bonding, production, general management, and space needs of a winery. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting.

**WIN 143 (3) S**  
**Wine Business – Distribution Network and Suppliers**

Further examination of Sales and Distribution. Reviews the roles of brokers and distributors. Topics will include the costs of distribution, including margins, mark ups, freight, and taxes. Covers decisions related to import and export of wine. Regulatory agencies and legal requirements. Students must be 18 years of age to participate in wine tasting. Recommended that WIN 141 and 142 be taken in advance of this class.

**WIN 145 (3) S**  
**Wine Business – Entrepreneurship and Innovation**

Systematic look at components of successful wine-related businesses, with emphasis on the decisions faced by entrepreneurs. Concepts of financial management, profitability, break-even analysis, capital budgeting, and cash flow analysis. Students will be exposed to key aspects of the business, including creating a business plan, regulatory climate for making and selling wine, and brand promotion. Recommended for success: WIN 141 and WIN 142.

**WIN 151 (3) S**  
**Introduction to Food and Wine Pairing**

Learn the basic elements of the character and key components of wines. Includes the four primary taste sensations present in everyday food (salty, sweet, bitter, and savory) and how these affect the taste of wine. Material fees will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 101.

**WIN 152 (3) S**  
**Advanced Food and Wine Pairing**

This course will evaluate, discuss, and investigate classical and new cuisines and how they can be paired with wines throughout the world. Food preparation demonstrations and various methods of preparation will be covered as it relates to wines. The course will focus on classic cuisines, new cuisines, and regional preparations and wines paired with them. Material fees will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 151.

**WIN 153 (4) S**  
**Food Wine Pairing Varieties I**

Focuses on Cabernet Sauvignon, Merlot, Pinot Noir, Chardonnay, and Sauvignon Blanc. Prereq: WIN 101, 151, 152 (or concurrent enrollment) or permission.

**WIN 154 (4) S**  
**Food Wine Pairing Varieties II**

Focuses on Zinfandel, Rhone style Syrah, Viognier, Pinot Grigio, and others. Prereq: WIN 101, 151, 152 (or concurrent enrollment) or permission.

**WIN 155 (4) S**  
**Food Wine Pairing Varieties III**

Focuses on Italian reds and whites, Rieslings, and/or other specific varietals. Prereq: WIN 153 or 154 or permission.

**WIN 156 (2) S**  
**Food Wine Pairing Fortified**

Focuses on Sherry, Port, Madeira, Marsala, and others. Prereq: WIN 153 or 154 or permission.

**WIN 157 (2) S**  
**Food Wine Pairing Dessert**

Focuses on dessert wines: sweet wines, sparkling wines, red varietals, and others. Prereq: WIN 153 or 154 or permission.

**WIN 160 (3) S**  
**Sommelier Service and Beverage Management**

This class will focus on product knowledge, professional standards in service, and management of alcoholic beverages in retail and foodservice industry. The student will gain practical knowledge of table service, regulations, and compliance, conducting tastings, cellar management, and pricing, cost controls, and development of wine lists. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 133 or concurrent enrollment or instructor permission.

**WIN 170 (3) S**  
**Introduction to Beer with Food Pairing**

An introduction to beer sensory evaluation, service, and food pairing methods. The course will cover beer history, including Purity Laws, the brewing process, ingredients, beer styles, brewery operation and quality control, beer categories and styles. The student will study the business of beer, including the purchasing, storage, and handling of beer, beer manufacture, and distribution. Materials fee will be assessed. Students must be 18 years of age to participate in tasting.

**WIN 197 (0-5) S**  
**Internship in Wine Technology**

Students apply academic learning and skills in wine making, marketing, distribution, and industries related to their field study. Course credit can be earned through current employment or the development of opportunity or leads found in conjunction with the Work-Source Office. Student must complete hours and submit a Training Agreement, Learning Outcomes, and a Self-Evaluation in order to pass. Prereq: Approval from a faculty mentor (instructor) and embedded career specialist.

**WIN 224 (3) S**  
**Advanced Sensory Evaluation**

A continuation of WIN 123, Sensory Evaluation, with more focus on blind tastings, anatomy of the human sensory preceptors, and a strong focus on classical style comparisons. Group work, group tastings, varietal expressions, and production methods which bring about aromas and characteristic will be explored. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereqs: WIN 101 and WIN 123.

**WIN 233 (3) S**  
**Advance Wines of the World French Scholar**

In depth study of France's wine producing regions, including grape varieties, origin of cultivars, geological exploration, vine cultivation and viticulture, history of the regions winemaking, food specific to each region, and regulations for wine categories. Sensory evaluation of representative wines assessed in each class. French Wine Society certification available. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereqs: WIN 133.

**WIN 234 (3) S**  
**Adv. Wines of the World: Italian Wine Scholar**

In depth study of Italy's wine producing regions, including grape varieties, origin of cultivars, geological exploration, vine cultivation and viticulture, history of the regions winemaking, regional foods, and regulations for wine categories. Sensory evaluation of representative wines assessed in each class. Wine Scholar Guild's Italian Wine Scholar certification available. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereqs: WIN 133.

**WIN 234 (3) S**  
**Adv. Wines of the World: Italian Wine Scholar**

In depth study of Italy's wine producing regions, including grape varieties, origin of cultivars, geological exploration, vine cultivation and viticulture, history of the regions winemaking, regional foods, and regulations for wine categories. Sensory evaluation of representative wines assessed in each class. Wine Scholar Guild's Italian Wine Scholar certification available. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereqs: WIN 133.

**WIN 235 (3) S**  
**Advanced Wines of the World: New World**

In depth exploration of the New World wine producing regions, including identifying key differences in production, taste, cost, and other factors making each wine region unique. Explore the influence of the increasingly important role of varieties since the 20th century. Sensory evaluation of representative wines assessed in each class. Materials fee will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 133.

**WIN 253 (3) S**  
**Advanced Food and Wine Pairing: Old World**

Advanced course designed to provide an appreciation of the history and culture of food and wine traditions, with a focus on Old World Wine – including France, Italy, Greece, Turkey, Austria, and Germany. Focus on major grape varieties, appellations, laws, geography, climate, and soils that define the terroir of each grape growing region. Material fees will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 151 or concurrent enrollment.

**WIN 254 (3) S**  
**Advanced Food and Wine Pairing: New World**

Appreciation of the history and culture of food and wine traditions, with a focus on New World Wine – including Spain, Argentina, Chile, Australia, New Zealand, South Africa, and the United States. Focus on the major grape varieties, appellations, and terroir of each grape growing region. Course will explore the gastronomic identity of each region. Material fees will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 151 or concurrent enrollment.

**WIN 257 (3) S**  
**Advanced Food and Wine Pairing Desserts**

A focused study of the cohesive pairing in bringing desserts and wine together. Course covers the various styles and production of sweet, fortified, and dessert wine and the history and development of desserts, pastry, and confection. Included in this class will be the production and plating, pairing, and presentation of wine and desserts as partners. Material fees will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 151 or concurrent enrollment.

**WIN 258 (3) S**  
**Advanced Food and Wine Pairing Cheeses**

Introduces the philosophies and techniques involved in bringing cheese and wine together in a cohesive pairing. Focus on the eight styles of cheese, cheese production, storage, and selection. Material fees will be assessed. Students must be 18 years of age to participate in wine tasting. Prereq: WIN 151 or concurrent enrollment or instructor permission.

**Women Studies**

*See Gender & Women Studies, page 289.*

**Wood Construction**

**WCO 110 (18) C**  
**Intro to Professional Wood Construction**

Intro to wood construction skills and safety, including safe operation of basic hand and power tools, wood construction terminology, and materials.

**WCO 120 (1) C**  
**Const. Marine First Aid**

11-hour course to certify students in First Aid and CPR as required by Washington state Department of Labor and Industries WAC 296-24.

**WCO 130 (18) C**  
**Marine Carpentry**

Covers employable skills in the boatbuilding trade. Includes instruction in fiberglass, wood construction, and repair. Prereq: WCO 110. Q-1: Lofting, layout, patterns, design, basic joinery, bevells, bandsaws, and safety. Q-2: Fiberglass lay-up and repair, personal and safe shop practices with Fiberglass. Q-3: Fiberglass fitting-out and repair, spray gun, machine safety and maintenance. Q-4: Wood boat construction, estimating, bidding, safety of equipment, and compounds. Q-5: Wood boat construction, fitting-out, materials, interior and exterior joinery.

**WCO 131 (18) C**  
**Lofting and Layout**

Covers the responsibilities of a boatbuilder, beginning with lofting and layout. Interpret designer's drawing and reproduce it full size on a loft surface from which construction patterns and templates are lifted. Includes construction of a Pi scale deck, half-models, and brass bevells. Participate in new boat construction and boat repair as available. Prereqs: WCO 110, 120.

**WCO 132 (18) C**  
**Intro Composites Marine**

Intro to fiberglass boatbuilding and marine cabinetry construction. Work in teams to lay up, by hand, a complete fiberglass hull, ready to receive wood trim, then begin the marine cabinet project. Uses industry safety and production standards. Prereqs: WCO 110, 120, 131.

**WCO 133 (18) C**  
**Advanced Composites**

Explores more complex fiberglass boatbuilding and repair problems, including repair of damaged fiberglass structures, plug and mold building, and advanced composites, including resin infusion. Apply wood trim to the fiberglass boat constructed in the previous quarter, and complete the marine cabinet. Emphasizes safe and productive use of machinery and supplies. Prereqs: WCO 110, 120, 131, 132.

**WCO 134 (18) C**  
**Basic Wooden Boatbuilding**

Expands skills and concepts. Emphasis on wood boat construction in contemporary and traditional techniques. Work on a wooden boat already under construction, with new boats being started periodically. Covers hull structure, both chine and round bilge. Prereqs: WCO 110, 120, 131, 132, 133.

**WCO 135 (18) C****Wooden Boat Joinery Repair**

Focuses on wood boat construction; intro to wood boat repair. Covers different types of woods used in boat construction and interior fitting out of hulls. Emphasizes the complexity of job scoping and spar building in wooden boat repair. Prereqs: WCO 110, 120, 131, 132, 133, 134.

**WCO 136 (18) C****Selected Topics**

Boatbuilding Optional. Opportunity to re-visit a particular project or skill area in order to develop greater command of the subject matter or to complete an unfinished project.

**WCO 137 (18) C****Special Project**

Opportunity to build their own wood or fiberglass boat or to undertake a more comprehensive boat restoration. Emphasis on performance in a professional manner in safety and project execution.

**WCO 140 (18) C****Carpentry**

Four quarters of work dealing with residential construction and remodeling, including technical knowledge and hands-on experience. Prereq: WCO 110. Q-1: Concrete forms and footings, floor systems, and job safety. Q-2: General Framing construction, roof framing, staging, working at heights. Q-3: Finish work, setting windows and doors, machine safety. Q-4: Selected class projects.

**WCO 141 (18) C****Residential Remodel Preserve Carpentry**

Covers specific techniques in residential remodeling, including bathrooms and kitchens, stairs, scaffolding design and construction, sheetrock demolition, installation and repair, and siding application. Prereq: WCO 110.

**WCO 142 (4) C****Intro Carpentry Blueprint**

Intro to becoming a professional carpenter. Focuses on career pathways, craftsmanship, vocabulary, blueprint reading, and jobsite and tool safety. Covers materials, products, tools, and best practices for constructing sustainable residential and light commercial construction. Emphasizes developing a strong work ethic, communication skills, and collaboration strategies. Prereq: WCO 110 and proof of First Aid/CPR/AED training.

**WCO 143 (5) C****Building Site System**

Develops skills in site selection, building layout, surveying, and moisture management. Covers appropriate selection of materials, products, tools, and best practices for sustainable residential and light commercial construction. Prereq: WCO 110 and proof of First Aid/CPR/AED training.

**WCO 144 (9) C****Foundation System**

Develops skills in building foundations, including form construction, concrete and cement placement, reinforcement, and finishing. Covers appropriate selection of materials, products, tools, and best practices for sustainable residential and light commercial construction. Prereq: WCO 110 and proof of First Aid/CPR/AED training.

**WCO 145 (9) C****Framing Systems**

Develops skills in structural framing systems, including building physics, framing layout, alternative and traditional framing techniques, and energy efficiency strategies. Covers appropriate selection of materials, products, tools, and best practices for sustainable residential and light commercial construction. Prereq: WCO 110 and 120.

**WCO 146 (5) C****Roof System**

Develops skills in roof systems, including framing styles, roofing techniques, flashing, ventilation, roofing materials, and installation strategies and techniques. Covers appropriate selection of materials, products, tools, and best practices for sustainable residential and light commercial construction. Prereq: WCO 110 and proof of First Aid/CPR/AED training.

**WCO 147 (4) C****Stair System**

Develops skills in stair systems, including interior and exterior framing styles, layout techniques, and design strategies and techniques. Covers appropriate selection of materials, products, tools, and best practices for constructing durable stairways in residential and light commercial buildings. Prereq: WCO 110 and proof of First Aid/CPR/AED training.

**WCO 148 (9) C****Exterior Finishes**

Develops skills in building exterior systems, including building enclosure design, siding installation techniques, installing insulation, window types and installation, flashing techniques and strategies, and trim design and installation techniques. Covers appropriate selection of materials, products, tools, and best practices for sustainable residential and light commercial construction. Prereq: WCO 110 and proof of First Aid/CPR/AED training.

**WCO 149 (9) C****Interior Finishes**

Develops skills in building interior systems, including drywall installation and finishing, door and trim installation, finish carpentry techniques and strategies. Covers appropriate selection of materials, products, tools, and best practices for sustainable residential and light commercial construction. Prereq: WCO 110 and proof of First Aid/CPR/AED training.

**WCO 150 (18) C****Cabinetmaking/Millworking**

Covers cabinetmaking and millworking, including technical instruction and shop experience. Includes precision work and production of fine furnishings. Prereq: WCO 110. Q-1: Preliminary cabinetmaking skills: planning, basic layout and shop safety. Q-2: Adv. Layout, traditional and contemporary joinery, residential and commercial cabinetry. Q-3: Custom furniture design, construction, joinery, veneering, jigs, finishing. Q-4: Personal projects.

**WCO 151 (18) C****Intro Cabinetmaking Fundamentals**

Learn to work safely and efficiently with hand, portable, and stationary tools to produce jigs and fixtures to increase productivity. Covers basic principles of joining and assembling, blueprint reading, layout procedures, developing a cut list, milling procedures, and fabrication techniques to successfully produce required projects. Use working drawings, layout on a story stick or on a CAD program to construct a router table.

**WCO 153 (18) C****Basic Cabinetmaking Fundamentals**

Build a series of jigs and fixtures to produce basic traditional joinery. Use working drawings to produce a frameless cabinet based on the 32mm system of cabinet construction and a face frame cabinet for personal hand tool storage. Includes workplace standards for self-confidence, interpersonal communication and safe use of equipment and tools, and individual skills development.

**WCO 155 (18) C****Advanced Cabinetmaking Arch Furniture**

Design, layout, and construct three pieces of furniture using advanced joinery techniques, applications of veneers, and previously learned construction techniques. Emphasizes mortise and tenon joinery, tapered legs, and application of basic veneering techniques. Within certain criteria, choose own dimensions, materials, and detailing.

**WCO 157 (18) C****Independent Capstone Project**

Propose a culminating project of interior furnishings (casework, furniture, and millwork) of a custom or limited production fabrication. Devise a coherent engineering approach to the concept and manage all project tasks. Emphasizes individual time management, problem solving, creativity, and professional growth. Expand fabrication skills. All projects must be faculty approved.

**WCO 160 (3) C****Architectural Blueprint Reading**

Focuses on how to read and apply information gained from blueprints for cost-estimating and developing cutting lists.

**WCO 164 (2) C****Roofing & Stairbuilding**

Develop and upgrade efficiency in stair- and roof-building with new techniques and skills.

**WCO 166 (3) C****Furniture Design & Construction**

A class to include a survey of furniture design trends in both traditional and modern furniture. The design process is outlined, giving students an opportunity to explore and refine their own design ideas. Students will design a table and with instructor approval begin construction of their own design. Prereq: Completion of core, cabinet I and II, or permission of instructor.

**WCO 167 (4) C****Fine Furniture I**

Intensive course designed for persons with solid cabinetmaking fundamentals who would like to learn techniques suited to making fine furniture in the northern European tradition. The areas to be covered are outlined for each quarter. Wooden handplanes will be constructed for both flat and curved work during the course. Each participant will design and build one small project. Emphasis on handwork.

**WCO 170 (3) C****Boat Lofting**

Fundamental course in the development of lofting and fairbody. Covers the relationship of buttocklines, waterlines, sections, and diagonals, and how to interpret the lines and offsets for fairbody development.

**WCO 180 (1) C****Use & Appl. Hand Router**

Intro to the types and uses of the hand router. Includes basic operations, selection of router bits, and an intro to jigs and templates.

**WCO 181 (2) C****Advanced Router Technique**

A lecture/demo class with a hands on opportunity for students to construct specialty jigs and templates for the hand router. This class will explore and explain the many uses and applications that the student might be aware of. Prereq: Use and application of the hand router or by permission of the instructor.

**WCO 197 (1-8) C****Work Experience: Wood Construction**

Integrates educational studies with supervised work/internship experience. Provides individualized opportunities to apply wood construction knowledge and skills in the workplace. Includes developing work experience learning outcomes and monitoring achievement through self-evaluation and faculty and supervisor evaluations. Prereq: Permission.

**WCO 299 (1-18) C****Special Project/Boatbuilding**

Special Projects in Boatbuilding

**World Languages**

*See Languages & Literature, page 315.*