

DICTIONARY OF TERMS

166

ACADEMIC LOAD

Credit hours taken in one quarter.

ACADEMIC YEAR

Fall, winter, and spring quarters. Summer quarter is not included in the academic year.

ADVISOR

One who helps students decide long-range educational goals and a way to achieve them.

ALLIED SUPPORT COURSES

Courses that provide skills necessary for solutions of problems in technical specialty programs; courses required to complete a specific program.

AUDITING A COURSE

Taking a class without receiving a grade or credit. Audited courses cost the same as credit courses.

BACHELOR'S DEGREE

Also called the "baccalaureate" degree, is the academic title granted by four-year institutions upon successful completion of an undergraduate program of study which can include approved, college-transfer community college courses.

BASIC EDUCATION CLASSES

Free classes for adults who wish to improve their reading, writing, spelling, and arithmetic skills.

CERTIFICATE PROGRAM

Prepares students for employment with the completion of short-term, intensive technical training in a specific area. Credits are generally applicable toward the Associate of Applied Science degree.

CLOCK HOURS

Programs based on clock hours require that students complete all hours in the course in order to receive a Certificate of Completion. Hours are determined by the actual hours the student is in the classroom, at the externship site, or approved make-up hours with the instructor.

COLLEGE TRANSFER

A program or course which meets the guidelines of a four-year institution and which can be credited toward completion of a bachelor's degree. College transfer courses are numbered 100 or higher.

COORDINATED STUDIES

A program which integrates the study of several disciplines around specific themes.

CORE COURSES

Technical specialty courses required to complete a particular program.

COUNSELOR

A person trained to help students solve problems, become more knowledgeable about themselves, set goals, and make decisions relative to personal, social, educational, and employment concerns.

COURSE WAIVER

Option to bypass a required course on the basis of a high placement test score, possession of the skills taught in the course, a passing score on a challenge test, or other reasons. Individual division policies vary relative to the granting of credit for "waived" courses.

CREDIT BY EXAMINATION

Students may earn credits, even though they are not formally enrolled in a class, by successfully taking an examination on the subject matter of the course (see page 10).

CREDIT/CREDIT HOUR

The words "credit" and "hour" are often used interchangeably. For most courses the number of credits offered equals the number of hours spent in class per week. (Example - A 5-credit course requires five hours in class each week.)

ELECTIVES

Courses that count toward a grade but are not needed to meet any other graduation requirements.

ENGLISH AS A SECOND LANGUAGE

Free noncredit classes through the intermediate level for vocational programs, credit college preparation classes and Intensive English Programs for International students.

FEE

An extra charge, in addition to tuition, required for certain courses to cover lab supplies, equipment, computer use, etc.

GRADE-POINT AVERAGE (GPA)

A numerical grading system determined by dividing total points earned for a course grade by total credit hours attempted.

GENERAL EDUCATION DEVELOPMENT TEST (GED)

A test to measure one's academic skills at a completed high school level. A GED can be used in place of a high school diploma for admission to Seattle Community Colleges.

HUMANITIES

Courses in art, dance, drama, English, foreign language, humanities, literature, music, philosophy, and speech.

LIBERAL STUDIES

General education courses in the humanities, mathematics, natural sciences, and social sciences.

MAJOR

A chosen academic field to study. Examples: nursing, education, history, mathematics, engineering.

NATURAL SCIENCES

Courses in anatomy, astronomy, biology, chemistry, computer science, environmental science, general science, geology, health, oceanography, physics, physiology, engineering, and meteorology.

PREREQUISITE

A requirement which must first be met before taking a particular course.

RELATED INSTRUCTION

General education and/or allied support courses required to complete a specific program.

RESIDENCE CREDIT

Academic work completed while students are officially admitted and registered at the Seattle Community Colleges.

SEQUENCE

Two or more closely related courses that must be taken in order.

SOCIAL SCIENCE

Courses in anthropology, economics, environmental sciences, geography, history, international studies, philosophy, political science, psychology, social science, and sociology.

TECHNICAL SPECIALTY COURSES

An integrated sequence of class and laboratory work that provide necessary training for students to enter employment in technical fields.

TRANSCRIPT

Official copy of a student's academic record showing courses completed, grades, and credits earned.

TRANSCRIPT EVALUATION

Determines how courses previously taken at one college may apply to a chosen program at another.

TRANSFERABILITY

See "college transfer course" definition. Students are responsible for finding out which courses are transferable, and should consult with the advising office.

COURSE INDEX

COURSE TO PREFIX

Abroad/Study Abroad	ABD	<i>Digital Computer Electronics Technology – Electronics Technology</i>	EET	Industrial First Aid	IFS
Accounting	ACC	Diesel Technology	HDM	Industrial Machining Technology	IMT
Adult Basic Education	ABE, HSC	Drafting	EDR, MTC, TDR	<i>Industrial Power & Control Technology – Electronics</i>	EPT
Allied Health	AHE	Drama	DRA	<i>Industrial Power & Control Technology: Evening Program – Electronics</i>	EEL
American Ethnic Studies	AME	<i>Desktop Publishing – Graphic Imaging</i>	DTP	Industrial Manufacturing Technology	INT
<i>American Sign Language – Languages & Literature</i>	ASL	Early Childhood Education	CCE	Integrated Media Communications	IMC
Anatomy & Physiology	ANP	Economics	ECO	International Studies	ISC, ISP
Anthropology	ANT	Education	EDU	<i>Intercultural Studies – International Studies</i>	ISC
Apparel Design & Services	ADS	Electronics	EEL, EPT	Interpreter Training	ITP
Art	ART	<i>Electronics Communication Technology – Electronics Technology</i>	EET	<i>Japanese – Languages & Literature</i>	JPN
Astronomy	AST	Emergency Medical Technician	AHE	Journalism	JRN
Auto Body Collision Repair	ABR	Engineering	CET, EGR, MET	Landscape/Horticulture	LHO
Automotive Technology	AUT, MVM	<i>English – Languages & Literature</i>	ENG, LIT	Library Research	LIB
Aviation Maintenance Technology	AMT	<i>English as a Second Language – Languages & Literature</i>	ESL	<i>Linguistics – Languages & Literature</i>	LAN
<i>Avocational Explorations for Seniors – Senior Adult Education</i>	SEN	<i>English for Non-native Speakers – Languages & Literature</i>	ESL	<i>LPN/RN Transition - Nursing</i>	NUR
Biology	BIO	Environmental Sciences	ENV	Marine Technology	MGO, MTS
<i>Biomedical Equipment Technology – Electronics Technology</i>	EET	<i>Food Prod./Mgmt. – Hospitality/ Food Prod./Culinary Arts</i>	FSD	Marketing	MKT
Botany	BOT	<i>French – Languages & Literature</i>	FRE	<i>Material Science – Science</i>	MSC
Building Services Technology	BSP	General Education Development	GED	Mathematics	MAT
Business	BUS	Geography	GEG	<i>Mechanical Engineering Technology – Engineering</i>	MET
<i>CAD for Industrial Applications – Drafting</i>	EDR	Geology	GEL	Medical Assisting	AHE
Chemistry	CHE	<i>German – Languages & Literature</i>	GER	<i>Medical Vocabulary Intro – Pharmacy</i>	AHI
Child & Family Studies	CFS	Graphic Design & Illustration	DES	Meteorology	MEY
<i>Chinese – Languages & Literature</i>	CHI	Graphic Imaging & Printing Technology	DTP, GPT	Multimedia Technology	MMT
<i>Civil Engineering Technology – Engineering</i>	CET	Habilitation Specialist	RFW	Music	MUS
Communication	CMN, SPE	Health	HEA	Network Technologies	NET
<i>Computer Applications – Computing Technology</i>	CTN, ICT, ITC	Heating, A/C & Refrigeration Design (HVAC)	ECT	Nursing/Nursing Asst.	NUR
Computer Information Systems	CIS, MIC	<i>Hebrew – Languages & Literature</i>	HEB	Nutrition	NTR
Computer Science	CSC	<i>High School Completion – Adult Basic Education</i>	HSC	Occupational Teacher/Trainer Education	OTE
Computing Technology	CTN, ICT, ITC	History	HIS	Oceanography	OCE
<i>Construction & Design Drafting w/ CAD – Drafting</i>	MTC, TDR	<i>Hospitality/Food Mgmt. – Hospitality/ Food Prod./Culinary Arts</i>	CUL, HFS, HOS	Ophthalmic Technology/Opticianry	OPH
Cooperative Education/Work Experience	CWE	Human Development Studies	HDC		
Corrections	COR	Humanities	HUM		
Cosmetology	COS				
<i>Culinary Arts – Hospitality/ Food Prod./Culinary Arts</i>	BAK, CUL				

Parent Education	FAM
<i>Pastry & Specialty Baking</i> – Hospitality/ Food Prod./Culinary Arts	FSD, HOS
Pharmacy Technician	AHI, PHA
Philosophy	PHI
Photography/ Commercial Photography	PHO
Physical Education	PEC
Physics	PHY
Political Science	POL
Psychology	PSY
Quality Assurance	QCT
Real Estate	RES
Religion	REL
Respiratory Care	RCP
<i>Russian</i> – Languages & Literature	RUS
Science	MSC, SCI
Senior Adult Education	FAM, SEN
Social & Human Services	SHS
Social Sciences	SSC
Sociology	SOC
<i>Spanish</i> – Languages & Literature	SPA
<i>Specialty Desserts & Breads</i> – Hospital- ity/ Food Prod./Culinary Arts	BAK, HOS
<i>Speech</i> – Communication	COM, SPE
Supervision & Management	SMG
Surgical Technology	STT
<i>Survey of Hearing Impairment</i> – Biology	SPS
<i>Tagalog</i> – Languages & Literature	TAG
Technical Communications	TEC
<i>Technical Drafting & Design</i> – Drafting	TDR
Telecommunications	TSM
Truck Driving (Commercial)	CTD
Video Communications	COM
<i>Vietnamese</i> - Languages & Literature	VTN
Watch & Clock Technology	HIN
Web Development	WEB
Welding Fabrication Technology	WFT
Wireless Communications Technology	WCT
Women Studies	WMN
Wood Construction	WCO
<i>Zoology</i> – Anatomy & Physiology	ANP

PREFIX TO COURSE

ABD	Abroad/Study Abroad
ABE	Adult Basic Education
ABR	Auto Body Collision Repair
ACC	Accounting
ADS	Apparel Design & Services
AHE	Allied Health/Emergency Medical Technician/ Medical Assisting
AHI	<i>Medical Vocabulary Intro</i> – Pharmacy
AME	American Ethnic Studies
AMT	Aviation Maintenance Technology
ANP	Anatomy & Physiology
ANT	Anthropology
ART	Art
ASL	<i>American Sign Language</i> – Languages & Literature
AST	Astronomy
AUT	Automotive Technology
BAK	<i>Specialty Desserts & Breads</i> – Hospitality/Food Prod./Culinary Arts
BIO	Biology
BOT	Botany
BSP	Building Services Technology
BUS	Business
CCE	Early Childhood Education
CET	<i>Civil Engineering Technology</i> – Engineering
CFS	Child & Family Studies
CHE	Chemistry
CHI	<i>Chinese</i> – Languages & Literature
CIS	Computer Information Systems
CMN	Communication
COM	Video Communications
COR	Corrections
COS	Cosmetology
CSC	Computer Science
CTD	Truck Driving (Commercial)
CTN	Computing Technology
CUL	<i>Culinary Arts</i> – Hospitality/ Food Prod./Culinary Arts
CWE	Cooperative Education/ Work Experience
DES	Graphic Design & Illustration
DRA	Drama
DTP	<i>Desktop Publishing</i> – Graphic Imaging/Graphic Imaging & Printing Technology

ECO	Economics
ECT	Heating, A/C & Refrigeration Design/HVAC
EDR	<i>CAD for Industrial Applications</i> – Drafting
EDU	Education
EEL	<i>Industrial Power Technology: Evening Program</i> – Electronics
EET	Electronics Technology
EGR	Engineering
ENG	<i>English</i> – Languages & Literature
ENV	Environmental Sciences
EPT	<i>Industrial Power & Control Technology</i> – Electronics
ESL	<i>English as a Second Language/ English for Non-native Speakers</i> – Languages & Literature
FAM	Parent Education/Senior Adult Education
FRE	<i>French</i> – Languages & Literature
FSD	<i>Food Prod./Mgmt.</i> – Hospitality/ Food Prod./Culinary Arts
GED	General Education Development
GEG	Geography
GEL	Geology
GER	<i>German</i> – Languages & Literature
GPT	Graphic Imaging & Printing Technology
HDC	Human Development Studies
HDM	Diesel Technology
HEA	Health
HEB	<i>Hebrew</i> – Languages & Literature
HFS	<i>Hospitality /Food Prod. / Culinary Arts</i>
HIS	History
HOS	<i>Hospitality/Food Prod./Culinary Arts</i>
HSC	<i>High School Completion</i> – Adult Basic Education
HUM	Humanities
ICT	Computing Technology
IMC	Integrated Media Communications
IMT	Industrial Machining Technology
INT	Industrial Manufacturing Technology
ISC	<i>Intercultural Studies</i> – International Studies
ISP	International Studies
ITP	Interpreter Training

See updated course information at:
www.seattlecolleges.com

- JPN** *Japanese* – Languages & Literature
JRN Journalism
LAN *Linguistics* – Languages & Literature
LHO Landscape /Horticulture
LIB Library Research
LIT *English* – Languages & Literature
MAT Mathematics
MET *Mechanical Engineering Technology* – Engineering
MEY Meteorology
MGO Marine Technology
MIC Computer Information Systems
MKT Marketing
MMT Multimedia Technology
MSC *Material Science* – Science
MTC Drafting
MTS Marine Technology
MUS Music
MVM Automotive Technology
NET Network Technologies
NTR Nutrition
NUR Nursing
OCE Oceanography
OPH Ophthalmic Technician/Opticianry
OTE Occupational Teacher/Trainer Education
PEC Physical Education
PHA Pharmacy Technician
PHI Philosophy
PHO Photography /Commercial Photography
PHY Physics
POL Political Science
PSY Psychology
QCT Quality Assurance
RCP Respiratory Care
REL Religion
RES Real Estate
RFW Habilitation Specialist
RUS *Russian* – Languages & Literature
SCI Science
SEN *Avocational Explorations for Seniors* – Senior Adult Education
SHS Social & Human Services
SMG Supervision & Management
SOC Sociology
SPA *Spanish* – Languages & Literature
SPS *Survey of Hearing Impairment* – Biology, Communication
SPE *Speech* – Communication
SSC Social Sciences
STT Surgical Technology
TAG *Tagalog* – Languages & Literature
TDR *Technical Drafting & Design* – Drafting
TEC Technical Communications
TSM Telecommunications
VTN *Vietnamese* - Languages & Literature
WEB Web Development
WCO Wood Construction
WCT Wireless Communications Technology
WFT Welding Fabrication Technology
WMN Women Studies

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			
In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).			

COURSE DESCRIPTIONS

ABROAD/STUDY ABROAD

ABD 150 (5-24) C Study Abroad

Students studying abroad through approved Seattle Community College District programs register for ABD 150, similar to the 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 Community 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 ACC 210, 220 and 230 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 Community College should see their advisor for prerequisites.

ACC 101 (5) C Acctg. Principles/Bookkeeping I

Fundamental accounting procedures. Covers the complete accounting cycle for business enterprises with practical application.

ACC 102 (5) C Acctg. Principles/Bookkeeping II

A continuation of basic financial accounting concepts, principles and procedures with emphasis on specific applications of concepts introduced in ACC 101. Prereq: ACC 101 or permission.

ACC 103 (5) C Acctg. Principles/Bookkeeping III

Continuation of ACC 102. Prereq: ACC 102 or permission.

ACC 108 (4) C Microcomputer Acctg.

General ledger accounting on a microcomputer system. Entering and verifying transactions, the trial balance, financial statements and management control of receivables/payables. Purpose of general ledger software and electronic spreadsheets.

ACC 110 (5) N,S Intro to Acctg./Bookkeeping I

Development of the accounting cycle for the sole proprietor, covering service and merchandising, types of businesses, special journals and payroll. Must be taken concurrently with ACC 111 (S).

ACC 111 (3) S Intro to Acctg. Computer Applications I

Accompanies ACC 110 and provides opportunity to complete applications using both manual and computerized systems. Prereq: ASSET: W&R = 43, NS=43; SLEP: Combined=61, NS=10, and concurrent enrollment in ACC 110.

ACC 120 (5) S Intro to Acctg./Bookkeeping II

Specialized accounting procedures for merchandising businesses and partnerships. Introduces accounting for corporations and manufacturing businesses. Prereq: Completion of ACC 110 with 2.0 or higher; must be taken concurrently with ACC 121.

ACC 121 (3) S Intro to Acctg. Computer Applications II

Accompanies ACC 120 and provides opportunity to complete applications using manual and computer systems. Prereq: Completion of ACC 110/111 with 2.0 or higher and concurrent enrollment in ACC 120.

ACC 131 (5) N Small Business Recordkeeping - 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 myriad reports.

ACC 197 (2-5) N Work Experience - Acctg.

Students earn work experience credit in the accounting field. Prereq: Permission.

ACC 210 (5) N,C,S Financial Acctg. Fundamentals I

Basic accounting concepts, principles and procedures for recording business transactions and developing financial accounting reports. Recommended: ACC 110 or sophomore standing (N,S).

ACC 214 (5) N,S Acctg. Systems

Computer applications of basic accounting concepts, principles, and procedures. Lotus 1-2-3 or Excel applications. Prereq: ACC 110 or ACC 210 (N); ACC 110/120 or ACC 210; with a 2.0 or higher (S).

ACC 220 (5) N,C,S Financial Acctg. Fundamentals II

Application of basic accounting concepts, principles and procedures to more complex business situations in a corporate setting. Prereq: ACC 210 or permission (S).

ACC 230 (5) N,C,S Fundamentals of Managerial Acctg.

Analysis of accounting data as part of the managerial process of planning, decision-making and control. Concentrates on analysis cost and economic decision-making in the manufacturing environment. Prereq: ACC 103, 120, or 220; or permission (N,C). ACC 120 or 220; or permission (S).

ACC 251 (5) N,C Intermediate Acctg. I

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

ACC 252 (5) N,C Intermediate Acctg. II

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

ACC 253 (5) N,C Intermediate Acctg. III

Completion of accounting theory from the corporate viewpoint: cash flow, revenue recognition, etc. Prereq: ACC 102 or permission (C); ACC 220 or ACC 251 or ACC 252 or instructor permission (N).

ACC 255 (5) N,C Federal Income Tax I

Intro to individual tax laws (as opposed to business tax laws). Includes preparation of many common forms. Prereq: ACC 210 or permission (N); ACC 102 or ACC 210 or permission (C).

ACC 256 (5) N Federal Income Tax II

Theory of taxation and application to the preparation of partnership and corporate tax reports and tax returns. Prereq: ACC 220 and ACC 255 or permission.

ACC 257 (5) N,C,S Business Tax Acctg.

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: ACC 120 or ACC 220 or permission.

ACC 260 (5) N Peachtree Acctg. Windows

A hands-on approach to learning Peachtree Accounting Software, widely used by service and merchandising businesses and accountants. Students will utilize various modules to prepare internal and external reports. Prereq: ACC 110, ACC 210 or permission.

ACC 262 (5) N MAS-90 Acctg.

A hands-on approach to learning MAS-90 Accounting software, widely used by service and merchandising businesses and accountants. Students will use various modules to prepare internal and external reports. Prereq: ACC 260 and ACC 110, ACC 210 or permission.

ACC 265 (5) C Governmental Acctg.

Covers basic accounting principles and practices as applied to governmental and nonprofit entities; emphasizes use of funds in planning, budgeting and controlling operations of such agencies. Prereq: ACC 103 or ACC 220 or permission.

ACC 270 (5) N,C
Cost Acctg.

Theory of cost accounting; cost systems; sources of cost data and their accumulation, allocation and analysis; and managerial control through cost data. Prereq: ACC 103 or ACC 230 or permission (C); ACC 230 or permission (N).

ACC 290 (2-5) N
Independent Study in Acctg.

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

ACC 298 (1-5) C
Special Topics - Acctg.

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

ACC 299 (1-5) C
Independent Study - Acctg.

Independent study of selected accounting topics. Prereq: Permission.

ADULT BASIC EDUCATION**ABE 010 (1-15) N,C**
Adult Basic Education - 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 (1-15) C
Adult Basic Education - Level 1 Comm 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 (1-15) C
Computer Assisted ABE - Level 1

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 020 (1-15) N,C
Adult Basic Education - Level 2

Reading, writing and math skills. Review and application of language skills, correct usage, and spelling. Math includes computation and application problems with addition, subtraction, multiplication and division. Prereq: Placement test.

ABE 021 (1-15) N,C
Adult Basic Education - Level 2 Math

Reading, writing, comparing, addition, subtraction, and multiplication and division of whole numbers.

ABE 022 (1-15) C
Adult Basic Education - Level 2-A Comm Skills

Learn to participate in groups, recognize learning styles, recall and restate information. Covers reading and using simple, familiar materials (i.e., menus, signs, work schedules). Learn to write with limited proficiency (i.e., complete personal information on forms, copy text and write in simple sentences).

ABE 024 (1-15) C
Computer Assisted ABE - Level 2

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 028 (1-15) C
Computer Assisted ABE - Level 2

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 030 (1-15) N,C,S
Adult Basic Education - Level 3

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

ABE 031 (1-15) N,C,S
Adult Basic Education - Level 3 Math

Review of whole numbers, fractions, introduction to percents; introduction to algebra and geometry. Seventh and eighth grade reading level. Prereq: ABE 021 or placement test (N,C).

ABE 032 (1-15) C,S
Adult Basic Education - Level 3 Comm Skills

Covers reading, writing and communication skills for review of basic grammar, punctuation and spelling. Concentration on reading comprehension, main idea, vocabulary development, making inferences. Covers single paragraph writing. Prereq: ABE 031 or permission (C).

ABE 034 (1-15) C,S
Computer-Assisted ABE - Level 3

Improve basic skills while using personal computers with specialized software designed to teach reading, writing, and math skills. Work in teams and groups by communicating effectively through listening, speaking, writing, and peer monitoring. Identify learning and work styles and use that information to make work, learning, and social interactions more effective. Read, comprehend, evaluate and apply information from written materials (i.e., intermediate textbooks, fiction, policies and procedures manuals, purchase agreements). Write resumes, reports, and formal letters that use connected paragraphs and appropriate formats, then proofread and correct them for grammar and spelling, as well as compute percentages, ratios, proportions, simple formulas and measurements, and interpret graphs and charts to solve problems.

ABE 036 (1-15) C
Adult Basic Education - Level 3

Prepares students for entry into college developmental education classes in writing and math. Focuses on reading comprehension, making inferences, recognizing fact and opinion, vocabulary development, basic sentence patterns, paragraphs, punctuation, capitalization, and correct word usage. Math includes review of fractions, decimals and percents; introduction to algebra and geometry. Assistance in preparing for the college placement test is provided. Prereq: ABE 030 or placement test.

ABE 040 (1-15) N,C,S
Adult Basic Education - Level 4

Focuses 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 placement test (N,C).

ABE 041 (1-15) N,C,S
Adult Basic Education - Level 4 Math

Review of ratio and proportion, percents, measurement. Prereq: ESL 021 or permission (N,C).

ABE 042 (1-15) C,S
Adult Basic Education - Level 4 Comm Skills

See ABE 040.

ABE 044 (1-15) C,S
Computer-Assisted ABE - Level 4

Improve basic skills while using personal computers with specialized software designed to teach reading, writing, and math 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 actual college placement test.

ABE 060 (1-15) C,S
Adult Secondary Education
ASSET/COMPASS Prep

Designed to prepare learners to successfully pass the Asset/Compass exams they need to enter a college program.

ABE 061 (1-15) C
Adult Secondary Education Math Level 6

Designed to prepare learners to successfully pass the math portion of the Asset/Compass exams.

ABE 062 (1-15) C
Adult Secondary Education
Comm Level 6

Designed to prepare learners to improve their general reading, writing, and test taking skills with special emphasis on reading for the Asset/Compass exams.

ABE 064 (1-15) C
Computer-Assisted ABE - Level 6

Improve basic skills while using personal computers with specialized software designed to teach reading, writing, and math skills. Students will be prepared to take the Asset Test and receive scores high enough to enter developmental education courses in English and math. Instructional activities will improve their general reading, writing, math, and test taking skills. Take practice tests and work with instructor until ready to take the actual test.

ABE 070 (1-3) N,C,S
Educational Interview for ABE/GED Students

Designed to help ABE/GED students at all competency levels identify their current abilities, characteristics, styles and readiness to learn and introduces them to campus resources.

HSC 091 (5) C
EDP Skill Enhancement I

Assessment portion of the American Council on Education's External Diploma Program (EDP). Measures reading, writing, and math skills. Students work individually with an instructor to identify skills needed for successful completion of the diploma program and are given a learning recommendation. After a learning period, students demonstrate mastery of skills in a re-test.

HSC 092 (5) C
EDP Skill Enhancement II

Project portion of the American Council on Education's External Diploma Program (EDP). Working with an instructor, students complete five projects that demonstrate skills in 65 generalized competencies, includes 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.

ALLIED HEALTH

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 124 (4) S
Software Applications for Health Care

Gain hands-on use of Patient Accounting Software. Features include standard HCFA health insurance claims forms, diagnoses codes, patient ledgers, statements, patient appointment book, and specialized reporting. Must be taken concurrently with Medical Coding and Insurance Processing (AHE 130).

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 130 (5) C
Medical Coding and Insurance Processing

Introduces diagnosis and procedural coding. Covers basic ICD-9 (International Classification of Diseases) and the CPT (Current Procedural Terminology) coding systems. These coding systems are recognized by 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. Must be taken concurrently with Software Applications for Health Care (AHE 124).

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 150 (1) 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 165 (3) N,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

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.

AHE 168 (5) C
Medical Terminology (correspondence)

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.

AHE 175 (3) N
Intro to Pathology for Medical Assistants

Introduces common diseases and medical conditions for each body system, including signs and symptoms related to laboratory tests and treatments. Focuses on the role of the medical assistant in assisting the physician with patient care, and in triage situations.

AHE 190 (8) N
Emergency Medical Technician

Provides training in pre-hospital emergency care. Follows Department of Transportation EMT Basic Curriculum, State of Washington law, and King County EMS guidelines.

AHE 191 (2-5) N
Emergency Medical Technician
Continuing Education

Provides appropriate continuing education for EMTs to meet the State of Washington's requirements for recertification and upgrading.

AHE 197/198/199 (2-5) C
Work Experience - Allied Health

Allows students to earn work experience credit in Allied Health field. Prereq: Permission.

AHE 201 (2) N
Medical Transcription

Orientation and instruction of medical transcription, including practice in preparing physician's reports.

AHE 205 (3-4) N
Medical Insurance Online Distance Learning

Offers detailed instruction in outpatient medical reimbursement from federal, state and private payers including traditional and managed care systems. Emphasizes all aspects of insurance claim processing from patient registration to reconciliation of payment. Focuses on optimal customer relations and reimbursement strategies.

AHE 210 (4) N
Medical Office Practice

Covers administrative medical office procedures and responsibilities of the medical assistant.

AHE 211 (7) N
Administrative Procedures/Insurance Billing & Coding

Practice in principles and competencies, both manual and computerized, in single-entry bookkeeping, medical insurance billing and coding, and accounts receivable. Develops skills for seeking employment in medical assisting.

AHE 242 (2) N
Basic Blood Collection Techniques

Theory and laboratory practice in supervised blood collection to meet requirements for job entry as a phlebotomist (blood drawer).

AHE 250 (4) N
Examining Room Procedures I

Covers routine clinical, diagnostic and therapeutic procedures used by a physician in outpatient settings. Includes theory, demonstration and practice.

AHE 251 (5) N
Examining Room Procedures/Pharmacology

Continuation of AHE 250. Covers additional procedures, including medication administration, minor surgery assisting and first-aid/CPR. Includes theory, documentation, and practice.

AHE 296 (2) N,C
Clinical Seminar

Seminar format to share and compare clinical experiences. Hold evaluative critiques, and obtain additional instructional support in special areas of medical assisting.

AHE 299 (1-3) C
Allied Health Seminar

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

AMERICAN ETHNIC STUDIES

AME 150 (5) N,S
America's Ethnic History

Intro to the 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. Fulfills the multicultural requirement.

AME 151 (5) N,S
Societies & Cultures of the 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. Fulfills the multicultural requirement.

AME 200 (5) N
Leadership & Social Change

Examines issues raised by civil rights struggles in the United States. Students will consider: 1) the forces shaping social change; 2) the roll of the individual, or "change agent"; and 3) the personal skills required of change agents. Incorporates community service as a central teaching technique.

ANATOMY & PHYSIOLOGY

ANP 128 (5) N,C,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.

ANP 213 (5) N,C,S
Anatomy & Physiology I

Fundamental principles presented in lecture and multimedia lab exercises. Designed to establish a basis for advanced study of anatomy and physiology and clinically related subjects in the paramedical fields. Prereq: CHE 101.

ANP 214 (5) N,C,S
Anatomy & Physiology II

Continuation of ANP 213. Prereq: ANP 213.

ANP 298 (1-5) N,C,S
Special Topics

Zoological science seminar or activity.

ANTHROPOLOGY

ANT 100 (5) N,C,S
Survey of Anthropology

Survey of the physical and cultural development of human beings. Includes evolution, archaeology, social structure, material culture, human ecology and communications.

ANT 102 (5) N,C,S
Intro to American Culture

Focus on implications and consequences of America's cultural uniqueness. Provides an insightful look at ourselves from anthropological and sociological perspectives. Field trips. May be taken for sociology credit as SOC 102.

ANT 105 (5) C
Northwest Archaeology

Focus on the ancient Native American culture of the Pacific Northwest as interpreted from archaeologically excavated materials.

ANT 107 (5) N
Indians of the Pacific Northwest

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.

ANT 110 (5) N,C
North American Indians

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

ANT 113 (5) N,C
Africa

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

ANT 130 (3-5) N,C,S
World Cultures

Exploration of ethnic traditions of the world, the concepts of worldview and the way people think in various cultures, using an ecological approach. Employs cultural relativism to examine traditional religious practices and educational systems in a comparative framework.

ANT 135 (3-5) C
Cultural Ecology

The development of human societies with special emphasis on relationships between environments and respective cultures throughout the world. Focus on conflicts between traditional cultures and pressures of modernization.

ANT 154 (5) C,S
Primitive Art & the Tribal Eye

Art in tribal societies is functional and enhances that which is considered important in the worldview of tribal peoples. A sampling of world tribal societies and arts in cultural contexts.

ANT 180 (5) N
Human Variations

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

How to Read Course Descriptions

COURSE		WHERE COURSE IS OFFERED
PREFIX	NUMBER	
ACC	251	(5) N,C
Intermediate Acctg. I		
In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).		

ANT 200 (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.

ANT 201 (5) N,C,S
Physical 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. Meets natural science requirement. Emphasis on developing a working vocabulary of anthropological terms.

ANT 202 (5) N,C,S
Cultural Anthropology

Intro to human culture, including social organization, economics, political systems, religion, technology, values, art and language. Cultural perspective focusing on contemporary literate and pre-literate societies.

ANT 205 (5) N,C,S
Principles of Archaeology

Intro to archaeology and the interpretation of archaeological remains.

ANT 210 (5) S
Peoples of Mainland Southeast Asia

History and contemporary issues of the nations of Burma, Cambodia, Laos, Thailand and Vietnam, and the tribal people who live in their midst.

ANT 215 (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. Detailed discussion of the biocultural stages of evolution to modern hominid. Includes lectures and field sessions in East Africa, Kenya.

ANT 216 (3) N
Methods of East African Archaeological Research

Introduces paleo-anthropological research in East Africa in "digging up" hominid evolutionary past. Approach and analyses of archeological remains. Observation of the terrain and type of environment occupied by early hominid. Discussion of the patterns of tool manufacture and use. Lectures and field participation at actual archeological sites in Kenya, East Africa (Koobi, Fora, Lake Turkana).

ANT 255 (5) N,C,S
Cultures of the Middle East

Multidisciplinary introduction to Middle Eastern cultures including ecological, 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.

ANT 261, 262 (1-5) N,C
Foreign Study & Travel

Study of other cultures and nations through travel in selected countries, formal on-site study, and pre- and post-travel classroom work.

ANT 270 (12) C
Field Course in Archaeology

Basic methods and techniques of archaeology.

ANT 272 (5) C,S
Prehistoric Cultures of North America

Evolution of Native American cultures in North America up to the time of European contact.

ANT 298 (1-5) N,C,S
Special Topics in Anthropology

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

ANT 299 (3-5) N,C,S
Special Problems in Anthropology

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

APPAREL DESIGN & SERVICES**ADS 096 (2) C**
Intro to Apparel Design Construction Level 1

For the novice who has little or no sewing experience and is considering entry into the Apparel Design Program. Through construction of a simple garment, students are introduced to sewing terms, understanding and working with patterns, layout and cutting techniques, industrial sewing machine operation and much more.

ADS 098 (2) C
Intro to Apparel Design Construction Level 2

Geared to the intermediate beginner or those wishing to update their sewing skills. Use industrial sewing and pressing equipment to complete more complex sewing technique samples than offered in ADS 096 and a sample garment. Introduces working with production patterns and understanding construction sequencing for commercial production. Prereq: ADS 096 or prior sewing experience, understanding of patterns, grainline and layout is required to enter the course.

ADS 100 (2) C
Intro to Apparel Design Construction Level 3

Designed for the advanced beginner or those wishing to update their sewing skills prior to entry into the Apparel Design program. Work on industrial sewing and buttonhole and pressing equipment to sew a more complicated garment in fashion fabric. Prereq: Completion of ADS 098 and/or intermediate beginning sewing skills to include sewing machine handling skills, prior exposure to sewing a variety of garments, understanding of construction terminology and pattern use. Prior experience laying out and cutting garments.

ADS 101 (4) C
Construction Techniques for Professional Applications

Professional garment construction skills are presented, emphasizing accuracy, production of quality garments and samples, and operation of industrial lockstitch and buttonhole techniques.

ADS 102 (4) C
Intermediate Construction for Professional Applications

Students acquire intermediate construction skills and continue to develop techniques while learning on the industrial lockstitch, buttonhole and serger machines. Emphasis on accuracy and speed.

ADS 103 (4) C
Mass Market Production Techniques

Application of skills learned in ADS 101 and 102. Several garments will be made incorporating industrial techniques. Focus on speed building and maintaining accuracy.

ADS 111 (4) C
Design Through Flat Patternmaking I

Development of different styles of garments, including sleeve and collar variations, using flat pattern method. Patterns are created by adding design lines, gathers, pleating and pockets.

ADS 112 (4) C
Pattern Development Through Draping

Intro to pattern development using draping and the flat pattern method. Covers techniques for draping fabric to create patterns and basic flat pattern manipulations.

ADS 113 (4) C
Design Through Flat Patternmaking II

Continuation of ADS 111 and 112. Students utilize existing pattern blocks to draft new garment designs.

ADS 122 (2) C
Professional Alterations & Fitting I

Introduces professional garment alteration techniques and methods for evaluating fit and achieving well fitting garments. Covers business management practices, including recordkeeping and client relations.

ADS 139 (2) C
Intro to Apparel Manufacturing

Covers all aspects of production including materials acquisition, production scheduling, product costing, machine processes, and calculating break-even points.

ADS 141 (2) C
Textile Technology & Design I

Introduces basic fiber and fabric information as it applies to the apparel industry. Students research fibers, fabric characteristics and the history of textiles.

ADS 142 (2) C
Textile Technology & Design II

Introduces basic color theory, dye and print technology as it applies to the apparel industry.

ADS 197 (1-5) C
Work Experience - Apparel Design & Services

Students earn work experience credit in apparel design. Prereq: Permission.

ADS 205 (4) C
Contemporary Tailoring

Overview of contemporary and traditional tailoring methods. Emphasis on accurate cutting, marking, assembling in units and precise sewing.

ADS 207 (4) C
Active Sportswear Construction

Taken concurrently with ADS 228. Construction techniques used in the garment industry will be emphasized as students produce more complex and advanced garments made from patterns developed in ADS 228.

ADS 215 (4) C
Intro to Pattern Grading for the Garment Industry

Students use grid and shift methods to grade patterns up to large sizes and down to small sizes according to certain specifications and measurements.

ADS 221 (2) C
Professional Alterations & Fitting II

Builds on the basic skills acquired in ADS 122 using methods for altering more complex garments.

ADS 226 (4) C
Intermediate Pattern Grading

Application of knowledge and skills acquired in ADS 215 to more complex and difficult patterns. Introduces computerized pattern grading.

ADS 227 (4) C
Pattern Design for Ready to Wear

Introduces skills in designing patterns and garments from line drawings. Emphasis on producing patterns with speed, accuracy and to apparel industry standards.

ADS 228 (4) C
Pattern Design for Active Sportswear

Taken concurrently with ADS 207. Advance skills in pattern design using samples and sketches according to apparel industry standards. Emphasis on patternmaking for active sportswear and outerwear.

ADS 229 (2) C
Design A Line

Advanced design course exploring different elements of designing a line of clothing to industry standards. Introduces illustration and drawing techniques and concentrates on the development of boards for line presentations. Students design a line for production in ADS 250.

ADS 230 (2) C
Portfolio & Résumé Development

Students produce a professional portfolio and résumé and are introduced to job search skills and interviewing strategies.

ADS 240 (3) C
Computerized Pattern Grading

Principles learned in ADS 215 and 226 are applied as students use the Microdynamic Pattern Grading System to grade patterns using computer-aided design technology.

ADS 243 (2) C
Textile Technology & Design III

Integrates skills learned in ADS 141/142 and applies them to the development of surface designs for fabrics and garment silhouettes. Focus on design methodology, textile technology and apparel industry practices.

ADS 250 (6) C
Final Line Design & Development

Using the line of clothing designed in ADS 229, students produce garments, patterns and specification packages according to industry standards. Includes presentation and display of final line at a portfolio show the last week of the quarter.

ADS 298 (1-5) C
Special Topics - Apparel Design & Services

Seminar on selected topics and/or activities in apparel design. For students who wish to upgrade their skill in an area related to but not offered as part of the regular ADS curriculum. Prereq: Permission.

ART**ART 100 (5) N,C,S**
Intro to Art

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

ART 101 (4) N,C,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 (4) N,C,S
Design

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

ART 103 (4) C,S
Design

Tutorial in individual problems in design. Prereq: Permission.

ART 104 (3) C
Modern American Art

Focus on 19th and 20th century American art in context of European tradition, as well as that of non-Western cultures. A chronological survey of artworks, movements and artists; emphasis on the nature and significance of American art.

ART 105 (5) C,S
Survey of Modern Art

Understanding today's cultural environment and viewpoint by using art and architecture to analyze cultural philosophies of the past that affect today's aesthetic values.

ART 111 (4) N,C,S
Drawing

Study of line, value, space, perspective, and composition through the use of charcoal, pencil, pen and brush.

ART 112 (4) N,C,S
Drawing

Drawing from the human figure in black and white media. Focus on composition. Emphasis on proportion and shading in short sketches as well as long poses. Prereq: ART 111 or permission.

ART 113 (4) N,C,S
Drawing

Continuation of ART 112. Drawing from human figures in black, white and color media. Emphasis on composition. Prereq: ART 112 or permission.

ART 121 (4) N,C,S
Intro to Printmaking

Study and application of basic relief print media. Covers linocuts, woodcuts, multicolor prints, and experimental monoprints. Introduces relief and intaglio techniques, with emphasis on small editions. Includes lectures, demonstrations, field trips and publication of a limited edition book. Recommended: Some drawing background.

ART 122 (4) N,C
Intro to Printmaking

Hands-on experience and instruction in various aspects of printmaking, with an emphasis on intaglio printmaking processes. Introduces drypoint, engraving, and etching with hard and soft grounds. Students will become familiar with water and acid etching and the use of photosensitive emulsions on metal plates. Includes lectures, demonstrations, field trips and collaborative projects. Recommended: Some drawing background.

ART 123 (4) N,C
The Painterly Print: Monotype & Monoprint

Instruction and development of the 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. Includes lectures, hands-on demonstrations, critiques, field trips and the production of three series (8-12 unique prints in each series). Recommended: Some drawing background.

- ART 163 (3) S**
Intro to Still Photography
 Covers basic photographic techniques using 35mm photographic equipment. Includes camera, exposure, lighting, composition, and black and white darkroom work, and digital imaging.
- ART 170 (3-5) C,S**
Photography as an Art
 Traces the history and distinctive properties of photography. Includes camera, exposure, lighting, composition, black and white darkroom work, and digital imaging.
- ART 201 (4) N,C,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 (4) N,C,S**
Painting
 Further development of color and composition. Individual instruction. Prereq: ART 201 or permission.
- ART 203 (4) N,C,S**
Painting
 Further studies in color, composition and subject matter. Individual instruction. Prereq: ART 202 or permission.
- ART 205 (4) N,C,S**
Water Soluble Media
 Intro to the soluble art medium. Covers basic wash techniques, color mixture, value contrast, composition and wet into wet. Recommended: Some drawing background.
- ART 206 (4) N,C,S**
Water Soluble Media
 Continuation of ART 205, based on a series of watercolor problems utilizing skills learned in the previous quarter. Further work with composition. Prereq: ART 205 or permission.
- ART 207 (4) N,C,S**
Water Soluble Media
 Individual watercolor projects in series. Prereq: ART 206 or permission.
- ART 210 (4) N,S**
Computer Art
 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 (4) N,C,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 (4) N,C,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 (4) N,C**
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 (4) N,C,S**
Advanced Computer Art
 Continuation of ART 210. Advanced projects and introduction of advanced programs. Prereq: ART 210.
- ART 215 (4) N,C,S**
Advanced Computer Art II
 Continuation of ART 214. Advanced projects and introduction to advanced programs. Prereq: ART 214.
- ART 221 (4) N,S**
Ceramic Art
 Beginning class in basic pottery design and construction. Emphasis on hand building (coils, slabs, etc.), basic glazing, loading and firing electric kilns, and throwing pots on the potter's wheel.
- ART 222 (4) N,S**
Ceramic Art
 Development of throwing skills. Understanding of basic glaze composition and kiln operation. Continued studies in techniques of surface decoration. Prereq: ART 221 or permission.
- ART 223 (4) N,S**
Ceramic Art
 Continuation of ART 222. Advanced work on the wheel. Emphasis placed on combining methods of construction. Students learn basic glaze skills. Prereq: ART 222 or permission.
- ART 251 (5) N,C,S**
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, S).
- ART 252 (5) N,C,S**
Art History
 Continuation of ART 251 with emphasis on the Medieval period through the Renaissance focusing on European and Middle Eastern art.
- ART 253 (5) N,C,S**
Art History
 Continuation of ART 252 with emphasis on the 17th century Baroque through 20th century Western/Modern Art.
- ART 254 (3-5) N,C,S**
Survey of the Art of the Pacific Northwest
 Focus on visual arts of the Pacific Northwest, from early coastal tribal art to the present day. Covers architecture, sculpture, painting, and analysis of contemporary art in public places.
- ART 255 (5) N,C,S**
History of the Art of Asia
 Study of the paintings, drawings, sculpture, architecture and crafts of India, China, Japan, and other countries of Southeast Asia. Study of influences brought about through invasion, assimilation, and transformation of Hinduism, Buddhism, Taoism, and Confucianism as reflected in the arts, history and culture. Slide and lecture format.
- ART 281 (4) N**
Jewelry Design
 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 (4) N**
Jewelry Design
 Theory and practice of jewelry casting emphasizing the lost-wax-centrifugal method. Design for casting, wax-working, casting principles, rubber mold making and wax injecting. Repousse, die-forming, raising, stretching, and other forming techniques. Prereq: ART 281.
- ART 283 (4) N**
Topics in Jewelry Design & Construction
 Enameling, intermediate stone-setting, surface enrichment techniques, shop business practices, tool-making, and jewelry repair. Small sample pieces using techniques discussed are required. Emphasis on use of techniques to produce a significant project, with instructor approval. Prereq: ART 282.
- ART 290 (5) N**
The Art Business
 Fundamentals of the business aspects of art, including designing and packaging the portfolio for AFA/CFA degrees, photographic artwork, building a résumé, marketing, copyrights, contracts and other essential business practices. Recommended: At least two college-level art courses.
- ART 291 (2) N,C**
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,S**
Special Problems in Film Media
 Advanced film production involves scripting, budgeting and scheduling. Emphasis on information film production. Interior lighting, including studio lighting, for color and sync-sound recording. Editing techniques discussed.

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

Individual or seminar instruction. May be repeated to earn a maximum of nine credits. Prereq: 2nd year art major, level of ability and permission.

ASTRONOMY**AST 100 (5) N,C,S**
Astronomy

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

AST 201 (5) N,C,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. Discussions on extraterrestrial intelligent life and the ultimate fate of the cosmos. Recommended: AST 100 or some science background.

AST 298 (1-5) C
Special Topics

Seminar on selected topics and/or activities in astronomy. Prereq: Variable, dependent on topic.

AST 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 091 (0) S
Safety & Environmental

Students learn EPA, state and local environmental laws and regulations and identify personal health and safety hazards according to OSHA and "right-to-know" laws. Select, inspect, and use approved personal safety equipment and apply knowledge of low VOC regulations. Prereq: Permission.

ABR 092 (0) S
Detailing

Instruction in removal of overspray and performing final finishing, cleaning interior and exterior of vehicle, and application of decals and pinstripes. Prereq: Permission.

ABR 093 (0) S
Preparing for Painting

Students learn to prepare the painting environment, the paint mixing area and air supply equipment. Set up, test and adjust spray guns. Prereq: Permission.

ABR 111 (4) S
Intro to Automotive Collision Technology

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 of general purpose hand tools and power tools used in a body shop.

ABR 112 (3) S
Safety & Environmental Practices

Covers various environmental regulations and other items regulated 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 & 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. Students will have an understanding of welding wires, shielding gases, tuning the welder and be able to visually inspect and destructively test the weld.

ABR 121 (4) S
Panel Replacement & 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

Instructs the student in proper use and selection of tools, removing and installing interior door trim panels, removing and installing door locks and handles, how to properly remove and install deck lid lock cylinders, install pinstripes, decals, and remove and install exterior trim. 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
Understanding Automotive Finishes

Learn how to 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
Preparing the Surface for Refinishing

Learn how to 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
Preparing the Equipment, Paint & Refinishing Materials

How to set up 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 set-up. 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

Learn how to properly clean the exterior and interior of the vehicle, remove overspray, decals and pinstripes. Prereq: ABR 111, 112 and 113 or permission.

ABR 161 (5) S
Damage Analysis

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

ABR 162 (3) S
Door Skin & Intrusion Beam Replacement

Learn to properly align door frames; understand the principles and techniques for removing and replacing a welded door skin; learn door intrusion beam removal, surface preparation and installation techniques. Prereq: ABR 111, 112 and 113 or permission.

ABR 163 (5) S
Quarter Panel Replacement

Learn to 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

Instructs students in proper mounting and anchoring of the vehicle, various types of pulling equipment. Provides knowledge of 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

Instructs students to 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
Restoring Corrosion Protection

Covers safely working with chemicals, corrosion and its affect on vehicles and restoring corrosion protection to collision damaged areas. Students will 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

Teaches students to diagnose and repair electrical and mechanical systems problems.

ABR 183 (3) S
Mechanical Systems

Focuses on the repairing of a vehicle involved in a collision, often involving removing mechanical parts, which include suspension, steering, drivetrain and engine parts. Services of mechanical parts may be necessary. Some areas require collision repair technicians to be certified to perform mechanical repairs.

ABR 190 (11) S
Industrial Painting

Intro to metal and vehicle painting. Identify and solve surface defects and other application problems, prepare surfaces, blend coatings and finishes and apply color.

ABR 191 (4) S
Applying the Finish

Prepare a surface for topcoat, apply primer-scaler, 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

Teaches students to 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, Causes & Cures

Covers identifying paint film defects, causes and corrective methods, surface defects and corrective methods of repair. Prereq: ABR 131.

ABR 197 (1-5) S
Internship I

Provides an instructional link between classroom experience and actual on the job experience to help bridge the gap between work and learning; reinforce and document student learning experiences on-the-job; and provide opportunities for faculty and student interaction throughout the student's work experience.

ABR 297 (1-5) S
Internship II

(See ABR 197.)

ABR 299 (1-12) S
Special Topics in Automotive Collision Repair

A special topics course for an individual or group in Automotive Collision Repair.

AUTOMOTIVE TECHNOLOGY**MVM 100 (3) S**
Intro to Automotive

Covers basics of hand tools, power tools, automotive safety, fastener, gaskets, seals, measuring instruments, engine fundamentals, repair orders, drive trains, suspension, steering, automotive brakes and some of the specialized tools used in the automotive industry.

MVM 298 (Variable) S
Special Topics in Motor Vehicle Maintenance

A special topics course on an individual or group study basis on a topic or topics in the field of motor vehicle maintenance.

AUT 100 (4) S
Basic Electrical Systems

Covers safety in the shop, basics of electricity from electron theory to Ohm's law. Also covers use of multimeters on the three types of circuits. Prereq: MVM 100 or equivalent.

AUT 102 (4) S
Advanced Electrical Systems

Covers understanding and using schematics. Battery, starting and charging system operation and testing are also included. Prereq: AUT 100 or equivalent and MVM 100 or permission.

AUT 104 (4) S
Automotive Electronics

Covers electrical accessories on the vehicle including but not limited to lighting, power windows, door locks, seats, windshield wipers and defogger. Prereq: MVM 100 or equivalent, AUT 100 and AUT 102 or permission.

AUT 106 (4) S
Basic Power Accessories

Covers basic computer operation and its applications on the vehicle, using scan tools to diagnose electronically controlled components and accessories. Prereq: MVM 100 or equivalent, AUT 100, AUT 102 and AUT 104 or permission.

AUT 110 (3) S
Clutches, Drivelines & Half Shafts

Covers basic principles involving clutches, drivelines and half shafts, including the function and construction of each component and their diagnosis and service procedures. Covers instruction in safety, environmental awareness, human relations and leadership. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 112 (4) S
Manual Transaxles

Covers the basic principles involving manual transaxles, including the function and construction of each component and their diagnosis and service procedures. Covers instruction in safety, environmental awareness, human relations and leadership. Prereq: MVM 100, AUT 110, basic math skills, 9th grade or higher reading level or permission.

AUT 114 (4) S
Manual Transmissions, Transfer Cases & Drive Axles

Covers basic principles involving manual transmissions, transfer cases and drive axles, including the function and construction of each component and their diagnosis and service procedures. Covers instruction in safety, environmental awareness, human relations and leadership. Prereq: MVM 100, AUT 110, basic math skills, 9th grade or higher reading level or permission.

AUT 116 (4) S
Air Conditioning & Heating

Covers basic principles involved in air conditioning systems. Covers function and construction of each component, as well as their diagnosis and service procedure. Includes instruction in safety, environmental awareness, human relations and leadership. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 118 (8) S
Automatic Transmission Diagnosis & Service

Covers band adjustment; T.V. linkage; shift linkage; neutral safety switches; flush coolers and cooler lines; repairing external transmission leaks; draining oil, replacing filters and fill transmission; removing, cleaning and replacing valve body; road test to test transmission for problems. Covers instruction in safety, environmental awareness, human relations and leadership. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 120 (8) S
Advanced Automatic Transmission Service

Covers removal and replacement of automatic transmissions and replacing bands, clutches, bushings, seals, etc., to make the transmission serviceable. Covers instruction in safety, environmental awareness, human relations and leadership. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 122 (4) S
Steering & Suspension

Covers chassis design, materials, fasteners and safety; wheel bearings and service; steering and suspension system components and how they work as well as their diagnosis and service. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 124 (4) S
Tires & Wheel Alignment

Covers chassis design, materials, fasteners and safety; tire and wheel service; inspection and diagnosis of suspension and steering components; and wheel alignment diagnosis and service. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 126 (3) S
Basic Brake Systems

Introduction to automotive brake systems. Covers operation, diagnosis and service of master cylinders, wheel cylinders, hydraulic valves, brake hoses and lines, drum brakes, and parking brake components. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 127 (4) S
Advanced Brake Systems

Covers operation, diagnosis and service of disc brakes, power brakes and ABS brake components. Prereq: MVM 100, basic math skills, 9th grade or higher reading level or permission.

AUT 128 (4) S
Basic Auto Engines, Gas & Diesel

Covers basic operation of automotive gas and diesel engines, diagnosing their condition by disassembling various types of current model engines. Includes instruction in safety, environmental awareness, human relations and leadership are taught as an integral part of this unit. Prereq: MVM 100.

AUT 130 (4) S
Auto Engines in Cars

Practice removing and installing automotive engines, practicing with both front and rear wheel drive vehicles. Includes transferring necessary parts, developing procedure guides, estimating labor time, ordering parts to complete the job and instruction in safety. Prereq: MVM 100 and AUT 128 or permission.

AUT 132 (4) S
Auto Engines, Remove & Replace

Prepares students for the automotive technician field. Exposure to safely removing and replacing engines and components aimed at newer vehicles, includes an emphasis on front wheel drive design, preparation, and customer expectations in labor and time management. Prereq: MVM 100, AUT 128, AUT 130 or permission.

AUT 134 (4) S
Drivability & Troubleshooting

Prepares students for the automotive technician field, specifically the drivability and troubleshooting of a specific problem within basic engine fundamentals. Projects and problems will be assigned to groups, followed by constructive criticism. Includes instruction in safety, environmental awareness, human relations and leadership. Prereq: MVM 100.

AUT 136 (4) S
Minor Tune-Up Procedures

Covers shop safety, basic mechanical engines, Ohm's law, physics laws that apply to the automobile, battery starting and charging systems as they apply to engine runability. Includes using and maintaining emission related equipment in the shop. Prereq: MVM 100, AUT 100, AUT 102, AUT 104 and AUT 106 or equivalent, or permission.

AUT 138 (4) S
Fuel System Servicing

Covers gasoline fuel systems, including both mechanical and electric fuel pumps, carburetors, throttle body, and port fuel injection systems. Prereq: MVM 100, AUT 100, AUT 102, AUT 104, AUT 106 and AUT 136 or equivalent, or permission.

AUT 140 (4) S
Engine Computer Inputs & Outputs

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, AUT 102, AUT 104, AUT 106, AUT 136 and AUT 138 or equivalent, or permission.

AUT 142 (4) S
Emission Controls & Diagnostic 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. Prereq: MVM 100, AUT 100, AUT 102, AUT 104, AUT 106, AUT 136, AUT 138 and AUT 140 or equivalent, or permission.

AUT 146 (5) S
Tune-up/Drivability

Covers basic tune-up of the ignition, carburetor systems and engine mechanical systems. Includes use of ignition, exhaust and computer system analyzers. Prereq: Basic mechanical skills.

AUT 164 (5) S
Automatic Transmission (Basic)

Covers principles of power transmission, torque development and the hydraulics involved in automatic transmissions. Includes construction, function and service of all components.

AUT 166 (3) S
Intro to Automotive Technology

Introduces the automotive industry including safety, nomenclature of components and parts, tools and equipment, repair manuals, fasteners and how each relates to the automotive industry. Prereq: Permission.

AUT 167 (3) S
General Service

Contents include lube and oil, belts and hoses, cooling systems, batteries, minor electrical repairs and vehicle inspections. Prereq: AUT 166 or permission.

AUT 168 (3) S
Tires & Wheels

Contents include inspecting, diagnosing, removing, installing, checking runout, dismounting, mounting, repairing and balancing tires and wheels. Prereq: AUT 166 or permission.

AUT 169 (3) S
Steering & Suspension

Covers the inspection, diagnosis, removal and installation of wheel bearings, shocks, struts, springs and steering linkage. Also introduces wheel alignment. Prereq: AUT 166 or permission.

AUT 170 (3) S
Brake System Basic

Covers the inspection, diagnosis, removal and installation of hydraulic brake systems. Prereq: AUT 166 or permission.

AUT 171 (3) S
Brake System Advanced

Covers inspection, diagnosis, removal and installation of various disc brake systems. Prereq: AUT 166 or permission.

AUT 172 (5) S
Auto Air Conditioning (Basic)

Covers construction, function and service of air conditioning units as they apply to the automobile, including classroom and laboratory practices.

AUT 299 (2-18) S
Special Topics

A special topics course on an individual or group study basis on a topic or topics in the automotive field. Prereq: Permission.

AVIATION MAINTENANCE TECHNOLOGY

AFT 101 (5) S Private Pilot Ground School

Provides comprehensive instruction in the principles of flight, and aircraft operation. Introduces aerodynamic principles of flight and the resulting effect on their operation. Includes safety of flight and orientation to airports. Learn how to obtain weather reports and interpret reports, forecasts, and charts.

AFT 110 (6) S Private Pilot Flight Instruction

Provides the training necessary to obtain the FAA Private Pilot Certificate allowing the transport of persons or property in aircraft without compensation or hire. Instruction in trainer type aircraft on the basic elements of flight, maintaining the attitudes and ground tracks, takeoffs and landings, solo flight, and maximum performance maneuvers. Includes cross-country flight with navigation and use of radio aids in preparation for the oral flight test for the Private Pilot certificate. Encompasses precise airplane altitude control by instrument reference and radio navigation.

AFT 130 (5) S Instrument Ground School

Covers the principles of instrument flight, including aircraft control, flight instruments and instrument navigation using VOR, DME, and ADF. Fundamentals of the air traffic control system use of charts, and regulations pertaining to instrument flight. Meteorological considerations applicable to instrument flight conditions will be detailed. Includes IFR flight planning, departure, in-route, arrival and emergency procedures.

AFT 210 (6) S Instrument Flight Instruction

Covers flight and ground trainer (simulator) training to qualify for the addition of an Instrument Airplane rating to a Private Commercial Pilot certificate. Continues instruction in precise airplane altitude and flight management solely by reference to instruments, in-route navigation and Air Traffic Control procedures and regulations, instrument approach and missed approach procedures, holding patterns, and IFR cross-country flight.

AFT 230 (5) S Commercial Pilot Ground School

Reviews airplane performance, VFR cross-country planning and navigation at the Commercial pilot level. Covers FARs, including Part 135, applicable to commercial pilot operations. Learn the operation of advanced systems appropriate to complex airplanes and how to execute the advanced flight maneuvers required for Commercial Pilot certification.

AMT 111 (17) S Basic Science for Aviation

Provides a firm foundation for maintenance on both small and large aircraft. Covers aircraft terminology, nomenclature, practical mathematics, basic physics, aircraft drawing and interpretation of diagrams as they pertain to everyday shop problems. Topics include specifications and properties of modern aircraft materials, fabrication and their use, hardware, fitting, corrosion control, cleaning, proper use of tools, precision instruments required for maintenance and overhaul practices. Nondestructive inspection, aircraft systems, components, ground handling and servicing procedures of aircraft, Federal Aviation Regulations, maintenance records, publication, weigh and balance control and other basic information are also covered. Prereq: High School Completion/GED or equivalent.

AMT 112 (17) S Basic Electricity for Aviation

Introduces basic concepts of electricity and magnetism, along with the circuit properties of resistance, inductance and capacitance. Methods of power generation for alternating and direct current systems and power utilization are studied. Theory is taught by use of texts, lectures, audiovisual methods and classroom demonstrations. Emphasis on principles and practical application, keeping mathematics to a minimum. Practical application is taught in the shop or laboratory where students repair and adjust generators, alternators, motors and control units, learn how to read schematics, fabricate and install complete circuits, and troubleshoot and repair malfunctioning systems and components. Prereq: AMT 111 or permission.

AMT 113 (17) S Airframe Structure & Repair

Experience working with five types of aircraft structure materials: wood, fabric, composite/fiberglass, plastic and metal. Student projects in each of these areas, in combination with classroom lectures, will provide realistic exposure to approved airframe structural repair practices. Assigned project areas include inspecting aircraft structure materials; installing common fasteners in composite and metal structures; forming, heat treating and fabricating metal structures; and introduction to brazing, gas and arc welding of steel magnesium and titanium. Prereq: AMT 112 or permission.

AMT 133 (17) S Powerplant Theory & Maintenance

Covers three areas: 1) In-depth study of theory, operation and maintenance of the internal combustion reciprocating engine, which includes dismantling, inspection, repair or replacement of parts and partial reassembly of an aircraft powerplant; 2) Theory, operation and overhaul of gas turbine engines. Introduction to current maintenance practices and inspection of the compressor section, burner section and turbine section; and 3) Inspection, repair and servicing of aircraft internal combustion cooling, exhaust and induction systems used on reciprocating and gas turbine engines. Prereq: AMT 111 and 112 or permission.

AMT 214 (17) S Airframe Systems

Introduces five basic airframe systems; hydraulic-pneumatic power, landing gear, ice and rain control, cabin environmental control, and fuel systems and management. Assigned projects in these areas on mock-ups or assigned aircraft will familiarize students with each system and its components. Prereq: AMT 113 or permission.

AMT 215 (17) S Advanced Airframe

Refines basic skills and concepts learned in earlier airframe courses in addition to performing rigging and assembly, testing, evaluation of aircraft instrument systems, advanced electrical systems, communication and navigation systems, and aircraft inspections for conformity and airworthiness in accordance with approved procedures. Students analyze and review prior airframe course material in preparation for the FAA Airframe exam. Prereq: AMT 113 and 214 or permission.

AMT 234 (17) S Powerplant Systems & Components

Covers six areas: 1) Engine fuel system and fuel metering system, carburetion and fuel injection; 2) Ignition system for both reciprocating engines and turbine engines; 3) Turbine engine electrical starting systems; 4) Powerplant lubrication systems; 5) Electrical and mechanical indicating systems; and 6) Powerplant ice and rain control systems. Prereq: AMT 133 or permission.

AMT 235 (17) S Advanced Powerplant

Provides sound knowledge of aircraft propellers used with both small and large piston or turboprop engines. Includes engine fire detection and extinguishing, engine electrical systems and turbine engine pneumatic starting systems. Reciprocating and turbine engine test run and run-in and troubleshooting are covered in depth, along with powerplant inspection methods and techniques. This is the final phase of powerplant technology. Reviews are given in carburetion, ignition, basic powerplants, lubrication, propellers, electrical systems and weight/balance control. Emphasis is placed on FAA regulations, airworthiness concepts, safety, personal and technical ethics. Prereq: AMT 234 or 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 for Aviation Professionals

Basic aircraft maintenance on a variety of aircraft systems and components depending on arrangements of the contract.

BIOLOGY

BIO 100 (5) N,C,S
Biological Principles

Introduction 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 biotechnology and non-science majors.

BIO 101 (5) N,C,S
General Biology I

Basic biological concepts with emphasis on general cell processes, plant and animal diversity, morphology, limited reproduction, phylogeny of the living organisms, and exploration of molecular genetics. Lab included.

BIO 102 (5) N,C,S
General Biology II

Continuation of BIO 101. Emphasis on common plant and animal activities, energy pathways via respiration and photosynthesis, and metabolic activities. Other physiological differences between animals and plants stressed. Lab included. Prereq: BIO 101.

BIO 103 (3) C
Nutrition for Food Service Professionals

Identification of the 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.

BIO 106 (5) C
Biotechnology & Society

Intro for non-science majors to biotechnology and its impact on society. Topics include cloning, DNA, antibodies, gene therapy, plant biotechnology, the human genome project, DNA fingerprinting, genetic testing, diverse products made through biotechnology, and the ethical, legal and social implications of this technology.

BIO 111 (5) S
Introductory Biology

Concepts of animal biology, emphasizing animal classification, evolution, histology, embryology and examination of animal systems. Lab included.

BIO 112 (5) S
Introductory Biology

Plant biology, with emphasis on plant classification, evolution, histology, embryology, and plant organs. Includes biology of populations, evolution theory, variability, natural selection, speciation, adaptation, biosphere, ecosystems and population dynamics of communities. Lab included.

BIO 120 (5) N,C,S
Marine Biology

Emphasis on natural history, ecology, distribution, habitat, adaptation, interrelationships of local species. Field trips and lab included. Prereq: High school biology or permission.

BIO 125 (5) N
Biology of the Pacific Northwest

Allows students to discover fundamental principles of biology and ecology through readings, experiments and field trips. This online course fulfills the lab science requirement.

BIO 135 (5) N,S
Survey of Human Diseases

An opportunity to explore the development of health through the understanding of disease processes. Emphasis on "lifestyle diseases": cardiovascular diseases, cancer, AIDS, sexually transmitted diseases, etc. Exploration of cause, prevention and treatment.

BIO 160 (5) N,C,S
American Foodways

Explore the evolution of the North American diet and eating rituals through a 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.

BIO 161 (5) N,C
Human Genetics

Intro to genetics, emphasizing the impact of genetics on individuals, society and the environment. Learn about fundamental genetic principles, including Mendelian inheritance, sex determination, multifactorial traits and behavioral genetics, gene structure and function, mutations and chromosome abnormalities, population genetics and evolution, the human genome and genetic technologies. Discusses current applications of genetics, including cloning, genetic testing, genetically modified plants and animals, gene therapy, forensics and biotechnology. Includes hands-on genetics experiments and data analysis in the laboratory. BIO 161 fulfills the lab science requirement for an A.A. degree and transfers to the UW as Genet 351 (Human Genetics)

BIO 195 (1) C
Biotechnology Seminar I

For students interested in biotechnology careers. Overview of history, scope, and opportunities in biotechnology. Prereq: Concurrent enrollment in Biotechnology program.

BIO 196 (1) C
Biotechnology Seminar II

Examination of FDA regulations, patenting, trademarks and copyright law. Training in radiation safety, and exploration into issues surrounding animal handling. Prereq: Concurrent enrollment in Biotechnology program.

BIO 197 (2-5) C
Cooperative Work Experience

For biotechnology majors. Internship in laboratory work at a biotechnology company or research lab. Prereq: BIO 280, CHE 103, or permission.

BIO 198 (1-5) N,C
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.

BIO 201/202/203 (5 ea) N,C,S
College Biology

A three-quarter sequence that introduces biology in preparation for advanced study in areas of biological science such as medicine, dentistry, cell biology, microbiology, or veterinary medicine. BIO 201 focuses on cellular biology, BIO 202 focuses on the biological diversity in animals, and BIO 203 focuses on evolution, ecology and biological principles of monera, fungi, protista, and plants. Lab included.

BIO 201 (5) N,C,S

Initial course in the Biology 200 series. Emphasis on cellular biology, including cell structure, organization, metabolism, energetics, and the gene, including molecular, chromosomal, Mendelian and microbial genetics. Prereq: One quarter of college chemistry or permission.

BIO 202 (5) N,C,S

Continuation of the three-quarter series. Emphasis on the biological diversity of animals, general principles of animal physiology, growth and development. Prereq: BIO 201.

BIO 203 (5) N,C,S

Final quarter in series. Emphasis on evolution, ecology, and biological principles of monera, fungi, protista and plants, including their physiology, anatomy, growth process and diversity. Prereq: BIO 201 and 202.

BIO 280 (5) N,C,S
Microbiology

History and methods of microbiology: microbial classification, metabolism, culture requirements, molecular genetics, antimicrobial methods, immunology, epidemiology, and pathogenesis. Lab included. Prereq: Two college-level biology or chemistry lab courses, or permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C

Intermediate Acctg. I

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

BIO 281 (5) N
Advanced Microbiology

Further exploration of topics covered in BIO 280, with particular emphasis on the pathogenesis of disease, applications of molecular biology, and environmental microbiology. Prereq: BIO 280 or equivalent.

BIO 282 (2) C
Media & Solution Preparation

For biotechnology and biology majors. Preparation of rich, defined, differential, and selective media, and a variety of chemical solutions with an emphasis on sterilization, aseptic technique and quality control. Lab included. Prereq: BIO 280 and two quarters of chemistry.

BIO 285 (6) C
Biotechnology I

Covers lab experience with gene cloning, PCR, restriction mapping, DNA hybridization, and other techniques involving recombinant DNA. Prereq: Concurrent enrollment in BIO 282 and Biotechnology program.

BIO 286 (6) C
Biotechnology II

Techniques covered include: DNA sequence, bioinformatics, protein analysis, protein purification, PCR, enzyme assays, ion-exchange chromatography, gel filtration chromatography, and production of specific proteins. Prereq: BIO 285.

BIO 287 (6) C
Biotechnology III

Emphasis on immunochemistry and tissue culture. Techniques covered include: antibody purification, affinity chromatography, SDS-PAGE, Western blots, ELISAs, cell quantitation and growth of animal cells. Lab included. Prereq: BIO 286.

BIO 290 (5) C
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. Bio 290 transfers to the UW as Genet 371. Prereq: 10 credits of biology.

BIO 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: BIO 280.

BIO 298 (1-5) N,C,S
Special Topics

Seminar on selected topics or activities in the biological sciences. Prereq: Variable, dependent on topic.

BIO 299 (1-5) N,C,S
Independent Study

Independent study of approved topics in the biological sciences. Prereq: Permission.

SPS 201 (5) C
Survey of Hearing Impairment

Basic anatomy and physiology of hearing mechanisms. Covers causes and types of treatment for hearing loss, both past and present. Also includes assistive technical devices, an introduction to the measurement of hearing and a survey of the role of genetic hearing loss in regard to deafness. Four hours of lecture and two hours of lab. This course transfers as part of the A.A. degree in Natural Science/Human Biology.

BOTANY**BOT 110 (5) N,C**
Plants & People

Practical application to areas relevant to students' everyday lives. Covers economic plants (grains, legumes, fruits), food values, plant parts, poisonous plants of urban areas, textiles and wood. Lab included.

BOT 112 (5) N,C,S
The Plant Kingdom

Introductory course covering anatomy and morphology of seed plants, survey of the plant kingdom (bacteria through angiosperms), life histories, unique characteristics, and survey of basic plant processes. Lab included.

BOT 113 (5) N,C,S
Plant Classification

Introduction to plant classification, field collection techniques, herbarium techniques and identification of plants through the use of technical keys. Emphasis on the plants of Washington and vascular plants. Lab included.

BOT 299 (1-5) N
Independent Study**BUSINESS**

NOTE: Non-native or ESL students at North Seattle Community College should see an advisor or counselor for prerequisites.

BUS 090 (2-5) C,S
Foundation in Business Prep

Offered as a two quarter course listed as BUS 090a and 090b. Lecture/lab to develop competencies employable in office administration and computation. Includes: keyboarding, introduction to computers (Windows, Word), and introduction to business communications. Prereq: ASSET test scores indicating basic English, reading/writing and math skills or permission.

BUS 091 (2-17) N,C,S
Foundation in Business Prep II

Two quarter course listed as BUS 091a and 091b. Continuation of BUS 090. Lecture/lab to develop competencies employable in office administration and computation. Includes: keyboarding, computer software (Excel and Access), and intermediate/advanced business communications.

BUS 100 (3-5) C
Fundamentals of Supervision

Basic course in first-line supervision, covering total responsibilities of a supervisor. Includes the function of management, human relations and motivation, effective communications, systems concepts and problem solving.

BUS 101 (5) N,C,S
Intro 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) C
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 103 (3) C
Personnel Management

Organizational structure of the modern business office, management duties, financial and legal responsibilities, supervision and preparation and handling of correspondence and reports.

BUS 104 (3) C,S
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.

- BUS 105 (4) N**
Keyboarding
 Beginning keyboarding taught on the computer. Intended for students with no keyboarding experience. Emphasizes touch keyboarding with speed and accuracy on alphabetic and number keys. Introduces basic word processing concepts and letter and memo formatting.
- BUS 106 (3) N,C,S**
Keyboarding/Skillbuilding
 Development of speed and accuracy of letter, symbol, and number keys through drills and timings. Prereq: BUS 104 or keyboarding of 25 wpm. May be taken for S/NC grade and may be repeated for credit.
- BUS 110 (5) S**
Business Mathematics
 Mathematical processes and techniques currently used in fields of business and finance. Review basic business math skills with emphasis on percentages, simple/compound interest, discounts, arithmetic of payroll, taxes, bank statements, reconciliation, trade and cash discounts, establishing retail prices, 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,C,S**
Multicultural Issues in the American Workplace
 Intro to legal, racial and cultural aspects of the American multicultural 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) N,C,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**
Introduction to Marketing
 Marketing is dynamic, highly-visible, and often very controversial. Marketers must demonstrate value, quality, and service exceeding customer demands while maintaining channel relationships and meeting company goals and objectives. Marketing methods vary, but the need for marketing remains constant in the face of changing business practices. Marketing is essential to survival in today's customer-driven business. Prereq: Eligible for English 101 through English placement test or completion of English 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. May be taken for S/NC grade or audit.
- BUS 116 (5) N,C,S**
Business Math/Spreadsheets
 Utilize business math applications to work with checking accounts, percentages, invoices, discounts, payroll, insurance and other business applications. Use Excel software to create spreadsheets. Prereq: No math test required (N); Passing score on business math placement test (C).
- BUS 120 (5) S**
Business Communications/ Writing Improvement II
 Develops business and accounting students' specific occupational-technical vocabulary usage and pronunciation. A prereq for BUS 121. Minimum score on ASSET test (reading 36, writing 39) or SLEP test (50) required for enrollment.
- BUS 121 (5) S**
English Communications/ College Preparatory Writing III
 English grammar and terminology related to business English rules; emphasizes punctuation, rules in business communications, word usage and spelling. Prereq: Satisfactory English placement test score or completion of or concurrent enrollment in ENG 093/094 (N); Passing score on ASSET test (S).
- BUS 124 (3) N**
Excel for Business
 Covers all fundamental techniques for creating, worksheets, charts, databases and macros.
- BUS 125 (3) 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.
- BUS 131 (5) N,C,S**
Integrated Communications I
 Integrates the review and refinement of basic English grammar, punctuation and word usage skills with the composition of effective basic business letters and memos. Introduces 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, or BUS 121 with 2.0 or higher (S).
- BUS 132 (5) N,C,S**
Integrated Communications II
 Continues to develop communication skills integrating business English grammar, punctuation, and word usage skills with composition of effective, complex business letters and memos. Develop skills in conducting research, business report writing, and documenting tasks. Discussion and practice of oral presentation techniques, handling of questions, problem-solving, and conflict-resolution techniques. Meeting preparation tasks will be completed. Prereq: BUS 131 with 2.0 or higher.
- BUS 140 (5) N,C,S**
Customer Relations
 Develops skills to identify and resolve customer complaints, handle difficult customers, utilize effective verbal and nonverbal communication methods, learn appropriate professional use of various electronic media, and learn to contribute to the service culture of an organization. Examines future trends and changes in work environments. Develops leadership skills and personal initiative.
- BUS 141 (5) N**
The Legal Secretary - An Intro
 Survey course includes ethics, skills and qualifications, forms, documents, terminology, fundamentals of the judicial system and various types of litigation. Prereq: Accurate 25 wpm typing.
- BUS 143 (4) N**
Legal Typing
 Develop skills in formatting legal documents, forms, and correspondence used in Washington state. Areas include litigation, partnerships and corporations, real estate and probate. Review common legal terminology. Prereq: BUS 131, 141, and 170 or concurrent enrollment.
- BUS 145 (4) N**
Legal Machine Transcription
 Covers transcribing legal correspondence, papers, court documents and forms from tape cassettes. Build knowledge of legal vocabulary, procedures, formatting and punctuation used in Washington state. Prereq: BUS 142, BUS 143, and BUS 179.
- BUS 154 (5) N**
Exploring Entrepreneurship
 Overview of the entrepreneurial process to develop a business plan using student's own business idea. Covers 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 155 (2) N**
Independent Study - Developing a Feasibility Plan
 With the aid of a faculty mentor, the student develops a feasibility plan which will be the basis of the student's business plan.

BUS 156 (5) N
Intro to e-Business/Commerce

Introduces and examines the important content areas in the electronic commerce field. Includes an overview of the principles of electronic commerce from the business perspective, a history of the origin and growth of e-commerce, a comparison of differences and similarities between e-commerce and traditional commerce, a study of the relationship of e-commerce to the Internet, electronic money, electronic contracts and legal issues, e-commerce examples, electronic stock trading; electronic catalogs, accounting, auditing and taxation issues, international aspects and e-marketing. Prereq: ENG 101 eligibility or completion of ENG 097/098.

BUS 157 (5) N
Managing Change in e-Business

Examines the role of the manager in today's e-business (or e-business division of a traditional organization) and the challenges of managing change within the organization. Topics include management; organizational structure and development; project management, product management; evolution of technology and system structures; human resource planning and recruiting; financial requirements of an e-business; changing consumer, legal and business needs; and surviving in a competitive business environment.

BUS 158 (5) N
e-Research and Consumer Behavior

Reviews consumer research methodology and behavior analysis. Emphasis on research methods, data gathering, data analysis, monitoring consumer Web behavior, analysis of Web statistics, researching consumer preferences; assessing markets, consumer privacy issues, competitive intelligence gathering and research report writing.

BUS 159 (3) N
e-Business Case Seminar 1

Uses a case study format to explore current issues and challenges in e-business. Focuses on key aspects of e-business from a supervisory perspective, including marketing, business planning, staffing, customer service, systems management and revenue models.

BUS 160 (5) N
e-Business Solutions

Examines the systems and methodology required to successfully operate an e-business. Covers e-payments systems, CRM systems, customer assistance (help) systems; B2B exchanges, procurement systems and operations, development of online catalogs and shopping carts and procedures for software selection and implementation. Prereq: BUS 156. Eligibility for ENG 101. Computer fee.

BUS 162 (5) N
e-Architecture & Technologies

Reviews the basic technology architecture required to deliver e-business applications via the Internet. Viewed from a supervisory perspective, students will study product choices, development processes and the operational aspects of e-business platforms, e-commerce enabling software, data managements systems, advertising servers and Web security. Examines effective project management and the software development life cycle. Prereq: BUS 156, CIS 111. Eligibility for ENG 101. Computer fee.

BUS 163 (5) N
e-Marketing

Examines the various aspects of effective marketing for an e-business. Topics include development of a marketing plan; pricing policies, product and distribution decisions; operation of sales and customer service functions; and marketing communication techniques and tools. Prereq: BUS 156. Eligibility for ENG101 through English placement test or ENG 097/098. Computer fee.

BUS 169 (5) N,S
Using Computers in Business I

Hands-on course focusing on representative business software for word processing, database, spreadsheet applications, graphic presentations and uses in business. Includes the basics of the disk operation system (DOS), Windows contemporary computer terminology, and legal and safety considerations. Prereq: BUS 104 or CTN 100 and keyboard skills.

BUS 170 (4) N,C,S
Information Technology I

Introduces Word, Excel and computer concepts. Create, edit and insert graphics in business documents including correspondence, resumes, research papers, and tables. Includes spreadsheet creation, embedded charts using formulas and formats, What If Analysis, and integration features. Covers Web interactivity features of both Word and Excel. Prereq: BUS 104 or ability to keyboard 25 wpm (C).

BUS 171 (4) N,C,S
Information Technology II

Covers intermediate to advanced functions of Excel and Word. Introduces PowerPoint. Covers Excel functions, amortization schedules, hyperlinks, and creating templates with multiple worksheets and workbooks. Word features include generating form letters, mailing labels, and documents with tables and integration using OLE and Word Art. Prereq: BUS 170 and ability to keyboard 35 wpm, or concurrent enrollment in BUS 106 (C).

BUS 172 (4) N,C,S
Information Technology III

Utilizes technology to integrate text, data, and charts in the completion of business related projects. Covers advanced Word, PowerPoint and Excel functions, while also gaining additional skill in working with e-mail and Internet. Prereq: BUS 171 and ability to keyboard 45 wpm or concurrent enrollment in BUS 106 (N,C); BUS 170 (S).

BUS 175 (5) N,C,S
Applied Business Statistics – A Decision Making Process

Introduces concepts and techniques used extensively in public and private sector decision-making. Covers statistical techniques used in functional areas including 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 MAT 098 (S).

BUS 178 (5) C
Introduction to Web Design with HTML

Focuses on Web site design and the concepts and processes necessary to develop a Web site through the use of Hypertext Markup Language (HTML). Prereq: BUS 104 or ability to keyboard 25 wpm, and one of the following: BUS 170, MIC 101, or MIC 150.

BUS 179 (5) S
Word Processing on IBM Computer

Hands-on course to introduce basic word processing techniques using Word 6 for Windows. Students create, format, edit and print documents. Prereq: ASSET W&R=40 or higher, SLEP combined=55 or higher, BUS 121 with 2.0 or higher.

BUS 180 (5) N,S
Advanced Microsoft Office

Hands-on learning environment introduces advanced functions. Includes advanced merge, macros, use of fonts and print features, tables, text columns, reports using styles, headers, footers, footnotes and endnotes, table of contents, etc. Lab time outside of class is required to complete assignments. Prereq: BUS 179, working knowledge of WordPerfect or permission.

BUS 181 (5) N,C,S
Intro to Desktop Publishing

Creation of documents using desktop publishing software on the PC. Combines text-processing and graphics to create brochures, newsletters and other business materials using a popular software. Prereq: 25 wpm and working knowledge of Word (C).

BUS 182 (5) N,C,S
Information & Database Management

A study of the basic alphabetic, numeric, subject, and geographic filing principles necessary to manage filing systems. Includes hands-on computer practice using a database software simulation. Introduces Microsoft's Access database features. Prereq: BUS 104 or equivalent.

BUS 185 (5) C
Small Business Management

Qualifications needed by the small business manager and entrepreneur; planning, organizing and marketing activities; forecasting methods and sources of financial resources; tools for decision-making. Prereq: BUS 101 or permission.

BUS 197 (2-15) N,C,S
Work Experience - Business

Allows students to earn work experience in the business field. Prereq: Permission.

BUS 200 (5) N,C,S
Intro to Law

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. This course transfers to the University of Washington.

BUS 201 (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 the management function of planning, organizing, directing, evaluating, and skill development in effective communication, motivation, problem solving, managing conflict and selecting employees. Prereq: BUS 101.

BUS 204 (5) N
Office Procedures

Introduces organization, planning and setting priorities. Covers mail handling, travel arrangements, composing and typing correspondence, etc. Emphasis on leadership development. Prereq: BUS 131 and 179.

BUS 210 (5) N,C,S
Business & Economic Statistics

Statistical methods and their application to business and economic data. Prereq: MAT 098 or 116.

BUS 215 (5) N,C
Intro to International 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. May be taken for economics credit as ECO 215. Recommended: BUS 101 or prior business experience.

BUS 216 (5) N,C,S
Professional Development

Self-improvement course designed to develop positive mental attitudes and examine useful techniques for personal and professional success. Emphasizes various aspects of career development.

BUS 230 (5) N,S
Business Communications

Develops effective business writing skills through preparation of letters, reports, memoranda and employment documents. Emphasizes intercultural aspects of communication. When offered at North, identified as writing component course for transfer to the University of Washington. Prereq: BUS 131. Recommended: BUS 104.

BUS 235 (5) S
Oral Communications in Business

Covers listening, speaking, nonverbal communication, effective business meetings and parliamentary procedures, and telephone and interviewer/interviewee techniques. Prereq: BUS 131 or ENG 101 with 2.0 or higher (S).

BUS 236 (5) N
Interpersonal Communications for the Workplace

Learn to recognize various communication styles and effective ways to adapt communication to meet the needs of co-workers, bosses and customers. Learn techniques for making formal presentations and dealing with negative situations and difficult individuals. Improve individual communication through presentation, listening, interpretation of non-verbal messages, informal speaking, interview and group interaction skills. Course encompasses the American Electronics Association guidelines for the skills most valued by technology employers.

BUS 240 (5) C,N
Internet Law

Explores legal issues and topics directly related to the World Wide Web: copyright, trademark, and servicemark rights; privacy; contractual issues surrounding work-product, Web site development and licensing agreements; employment issues including discrimination and monitoring of employee e-mail; censorship; domain name registration; defamation or CyberSlander; misuse of the Internet and year 2000 liability issues. Provides an overview of the basics of constitutional law, contracts, torts, regulatory, criminal law and personal law as needed for foundation.

BUS 245 (5) C
Global Marketing

Global methods of marketing including segmentation concepts, distribution channel strategy, global logistics and product design strategies as applied to various cultures. Web assignments are designed to allow exploration of global issues and topics related to certain key countries and regions.

BUS 250 (5) N,S
Business Law

Nature, development and operation of principles of business law relating to contracts, commercial paper, corporations, agency, partnerships and sales. (Transfers to most four-year colleges/universities. Does not transfer to the University of Washington.)

BUS 260 (5) C
Applied Business Economics

Emphasis on small business formation, planning, and financial management. Analysis of economic factors affecting decisions made by small business owners. Prereq: ENG 101, 102 and MAT 098 or permission.

BUS 269 (5) N
Using Computers in Business II

Build additional skill in using Word, Excel, Access, and PowerPoint applications programs. Learn merge, working with text and graphics, table enhancements, shortcuts, and working with forms, multiple, and long documents. Learn additional formulas and functions in Excel and gain skills in chart generation. Work with Excel's data features. Use Access to design customized tables and establish relationships between tables. Gain additional skills in using editing techniques, queries, forms, and reports. Use Access table to merge to a Word project. Learn finer points of PowerPoint Presentation graphics such as using master slides, customizing and animation. Gain experience in conducting an Internet search. Prereq: BUS 169 or permission.

BUS 270 (5) N
Using Computers in Business III

Develop project management skills using advanced MS Office features. Use advanced word processing, spreadsheet, and database functions to generate a variety of business documents. Focus on mastery of report generation, mail merge, desktop publishing, importing data and graphics, macros, forms preparation, newsletters and file management. Build skills in using internet and e-mail. Prereq: BUS 269 or permission. Computer fee.

BUS 275 (5) N
Business Finance & Economics

Covers bank credit, commercial credit, issuance of stocks and bonds, retained earnings financing and operation of stock markets through projects relating to on-the-job experiences. Prereq: ACC 210 and BUS 101.

BUS 298 (1-5) S,C
Special Topics - Business

Prereq: Permission.

BUS 299 (1-5) C, N
Special Topics - Business

Individual or group study projects on topics in the field of business. Prereq: Permission.

CHEMISTRY**CHE 100 (5) N,C,S**
Chemistry & Society

Stresses a humanistic approach to chemistry and de-emphasizes mathematical problem-solving. Chemical principles, facts, and theories are revealed through practical applications, computer graphic illustrations, and experiments. Includes lab.

CHE 101 (5) N,C,S
Chemistry

Fundamental inorganic and introduction to organic chemistry. Of particular interest to health science students. Lab included. Prereq: One year of high school algebra or MAT 085.

CHE 102 (5) N,C,S
Chemistry

Continuation of organic chemistry and introduction to biochemistry. Lab included. Prereq: CHE 101.

CHE 103 (5) N,C,S
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: CHE 102.

CHE 105 (5) N,S
Intro to Food Science

Studies the biological and chemical consequences of food preparation. Lectures and laboratory experiments will explore questions such as: why cut potatoes turn brown, why starch thickens sauces and why bread rises.

CHE 111 (5) S
Applied Biology & Chemistry I

Examines the treatment of biology and chemistry as a unified science. Covers the sources, uses, and problems relating to natural resources and the properties, uses, quality, and cycles of water and air and other gases. Prereq: MAT 085 (S).

CHE 112 (5) S
Applied Biology & Chemistry II

Biology and chemistry are treated as a unified science. Genetics, reproduction, and evolution as components of the continuity of life; food sources and effects of diet relating to nutrition; and transmission, prevention, and treatment of disease and wellness in plants and animals. Prereq: Basic algebra, MAT 085.

CHE 139 (5) N,C,S
Intro to General Chemistry

Lecture. Topics include chemical mathematics; basic atomic structure; chemical bonding; chemical equation balancing and mole concept; and chemical stoichiometry. Prereq: MAT 098.

CHE 140/150/160 (6) N,C,S
General Chemistry

A three-quarter sequence introducing basic concepts of chemistry. Covers structure and bonding chemical reactivity: physical measurement, chemical basics, structure of matter, gas laws, intermolecular forces, solutions, chemical kinetics, equilibrium, acid/base, thermodynamics, redox, electrochemistry and selected topics. Satisfies the general chemistry requirement for science majors and for various pre-professional programs, such as pre-medical, pre-dental, pre-engineering, etc. Several pre-engineering and other programs require only CHE 140 and 150.

CHE 140 Prereq: CHE 139 or placement and Mat 122. Passing score on placement exam may substitute for CHE 139. CHE 150 Prereq: CHE 140. CHE 160 Prereq: CHE 150.

CHE 191/192 (5) N
General Chemistry (two-quarter sequence)

CHE 191 and 192 are equivalent to CHE 140, 150, and 160. Explores the principles of chemistry; structure of matter, atomic and molecular theory, the elements, periodicity, quantitative relationships, nuclear chemistry, aqueous solutions, oxidation and reductions. CHE 191 Prereq: CHE 139 or passing score on chemistry placement exam and MAT 122. CHE 192 Prereq: CHE 150 or CHE 191.

CHE 211 (5) C
Quantitative Analysis for Biotechnology

Theories, principles, and methods of gravimetric, volumetric and instrumental analysis. Lab included. Prereq: CHE 103.

CHE 223 (4) N,C
Organic Chemistry - Short Course

Theoretical basis for modern organic chemistry. Special emphasis on structure, stereochemistry, synthesis, reactions and properties. Prereq: CHE 160.

CHE 224 (4) N,C
Organic Chemistry - Short Course

Continuation of CHE 223. Prereq: CHE 223.

CHE 231 (4) N,C
Organic Chemistry

Structure, nomenclature, reactions and synthesis of the main types of organic compounds. Prereq: CHE 160.

CHE 235 (4) N,C
Organic Chemistry

Further discussion of physical properties and transformations of organic molecules, especially aromatic and carbonyl compounds. Prereq: CHE 231.

CHE 236 (4) N,C
Organic Chemistry

Polyfunctional compounds and natural products, lipids, carbohydrates, amino acids, proteins and nucleic acids. Prereq: CHE 235.

CHE 238 (3) N,C
Organic Chemistry Lab

Preparation of representative compounds. Prereq: CHE 231 or concurrent enrollment.

CHE 239 (3) N,C
Organic Chemistry Lab

Preparations and qualitative organic analysis. Prereq: CHE 235 or concurrent enrollment, and CHE 238.

CHE 298 (1-5) N,C,S
Special Topics

A seminar of selected topics and/or activity in the chemical sciences. Prereq: Variable, dependent on topic.

CHE 299 (1-5) N,C,S
Independent Study

Independent study of approved topics in the chemical sciences. Prereq: CHE 160 and permission.

CHILD & FAMILY STUDIES

CFS 090 (2) C
S.T.A.R.S. Seminar

Serves as a seminar for topics oriented around child and family studies. Covers literacy development skills incorporated through course content and stages of children birth through age twelve, including strategies for holistic development. Literacy development skills incorporated through course content.

CFS 110 (3) C
Planning Age Appropriate Activities & Environments for Young Children

Intro to working with children and their families to design safe, healthy, inviting, culturally relevant and anti-bias learning environments for children and family members. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 120 (3) C
Supporting Young Children's Physical & Intellectual Development

Examines physical, cognitive, creative and linguistic developmental needs and stages of children birth through twelve, and methods and strategies for planning for holistic development. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 130 (3) C
Guiding & Supporting Young Children's Social & Emotional Development

Covers the social, emotional, self-esteem and cultural identity developmental needs and stages of children birth through twelve, and methods and strategies for planning for holistic development. Guidance and managing difficult behavior also addressed. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 145 (3) C
Activities that Foster Development During the School Age Years

Examines physical, social, emotional, cognitive, and moral development of school-age children (ages 5-14) within social and cultural contexts including the family, peer group, and community. Covers individual differences, typical issues, and areas of concern. Includes roles of practitioners serving school-age children and the history and philosophies of various program models. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 155 (3) C
Development During the Adolescent Years

Examines early, middle and late adolescent (ages 12-21) development within social and cultural contexts including family, peer group, and community. Explores issues youth face, youth culture and values, cultural responses to coming of age, and rites of passage. Includes roles of practitioners serving youth and the history and philosophy of various program models. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 180 (2) C
Guiding Behavior & Social Development During the School Age & Adolescent Years

Examines theories of social-emotional development (ages 5-18), learning styles and application to diverse guidance strategies. Explores self-esteem, sense of group belonging, cultural identity and understanding of diverse familial patterns. Examines both typical development and challenges and issues youth face which may affect their development and behaviors. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 208 (2) C
Planning Activities & Spaces for School Age & Youth Programs

A theoretical framework and practical examination of successful, diverse culturally relevant and anti-bias environments. Includes facility design, appropriate materials, family involvement, programming and activities. Applicable to recreation, tutoring, health, educational, social services, cultural arts and before/after school environments. Incorporates at least three on-site visits to programs. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 215 (2) C
Science & Technology in School-Age & Youth Programs

Overview of strategies for incorporating science and math curriculums and multimedia technology into school-age and youth programs. Emphasis on promoting youth cognitive development and future career opportunities, family involvement, and overcoming traditional biases, which have been barriers for girls and people of color in science, math and technology learning. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 223 (2) C
Physical Development in School-Age & Youth Programs

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: Eligibility for ENG 101 and MAT 085.

CFS 225 (3) C
Assessment/Programming

Covers the process of assessing the needs of a particular child, family, agency, or community, then developing programming that addresses these needs. The use of Portfolio Assessment is presented. Students will gain understanding of how the needs identified relate to a larger societal context. Participatory Action Research will be discussed as a model (AACCTF) for assessing needs, as well as culturally relevant assessing and programming. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 228 (3) C
Childhood/Adolescent Sexuality & Education

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 and their school-age children and youth. Explores issues of sexual identity such as gender roles, heterosexuality and homosexuality, sexual stereotypes and the impact of the media. Examines responses to teen pregnancy and sexual abuse. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 245 (3) C
Building Partnerships with Diverse Families

Focuses on strategies, conceptual frameworks and culturally relevant approaches to parent education and parenting support. Explores methods of building partnerships with parents. Emphasis on cultural relevancy and anti-bias strategies for parents and issues facing urban families. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 252 (3) C
Violence Prevention & Community Development w/Children, Youth & Families

Examines the nature of violence in our community, including exploration of institutionalized violence, media violence, domestic violence, and gangs. Covers impact of prevention programs, strategies and curriculums, and methods for community building and empowerment. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 263 (3) C
Working with 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.

CFS 270 (3) C
Child & Family Health

Topics include: impacts of environmental stresses and toxins, access to health care, preventative health, safety issues in childhood, violence in society, childcare issues, nutrition, impact of bias and other issues impacting families. Focus on ways families, agencies and communities can work together to resolve these issues. Meets Washington state requirements for HIV/AIDS training, CPR/First Aid and Children's Health and Immunization recordkeeping. Prereq: Eligibility for ENG 101 & MAT 084.

CFS 280 (3) C
Methods for Cultural Relevancy & Anti-Bias - Strategies for Children & Families

Specific strategies for working with both European American families and families of color, and the impact of racial, cultural, homophobic, gender, age and economic class bias on children and families. Covers teaching children to resist bias and understand and deal with rejection. Prereq: HUM 105 and eligibility for ENG 101 and MAT 084.

CFS 284 (2) C
Literacy Development for Children & their Families

Covers practical strategies for literacy development, early literacy development, continued literacy and adult literacy development. Discussion on models of family literacy and literacy development for children who are non-native English speakers. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 290 (1-4) C
Budget & 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: Eligibility for ENG 101 and MAT 084.

CFS 296 (1-4) C
Personnel & Supervision

Examines staff development, evaluations and training; developing cohesive teams, communication, conflict management and group dynamics. Study of recruitment, hiring and retention, developing personnel systems and procedures, performance contracts, motivation of staff and wages and benefits. Prereq: Eligibility for ENG 101 and MAT 084.

CFS 299 (1-5) C
Seminars

Seminar topics are generated from the interest or identified needs in the community, as well as the Education & Child & Family Studies fields. Using a Participatory Action Research model, the course brings together interested professionals and students to address a particular issue, reviewing information, possibly gathering information and generating recommendations. Prereq: Eligibility for ENG 101 and MAT 084.

COMMUNICATION

NOTE: The following Communication courses are being phased in across the district. Please refer to the latest quarterly schedule for current availability of specific courses and prerequisites on each campus. The Communication program and CMN courses supersede the previously offered Speech curriculum and SPE courses. Successful completion of the CMN courses below now fulfills the A.A. degree and Transfer Credit Communication requirements.

CMN 105 (5) N,C,S
Perspectives on Communication [formerly CMN 100]

Study of 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 ENG 101.

CMN 115 (5) N,C,S
Overcoming Communication Anxiety [formerly CMN/SPE 115]

Designed for individuals who have apprehension or nervousness about giving presentations and working with others. Participants apply emerging social and scientific research on self-esteem, assertiveness, cross-cultural awareness, etc., their own communication perceptions, expectations and proficiencies. Recommended for domestic as well as immigrant and international students. Prereq: Placement into ENG 095/096 or above; or permission.

CMN 125 (5) N,C,S
Interpersonal Communication

Study principles and processes of human communication, including observations and applications, personal and cultural contexts, nonverbal and verbal interactions, multiple intelligence and perception and models and definitions. Prereq: Placement into ENG 101.

CMN 135 (3-5) N,C,S
Effective Presentations [formerly CMN/SPE 120]

Covers the process of getting started with confidence; topic selection and research; preparation and delivery of informative, persuasive, special occasion, and other forms of presentations. Prereq: Placement into ENG 101.

CMN 145 (5) N,C,S
Gender and Family Communication

Covers theoretical and practical perspectives on the complex, lifelong relationships among and between females and males. Addresses similarities and differences in gender and culturally based communication and behavior in a variety of contexts and situations, particularly within the first primary group, the family. Prereq: Placement into ENG 101.

CMN 155 (5) N,C,S
Argumentation & Public Debate [formerly CMN/SPE 220]

Covers concepts and strategies of rhetorical persuasion, integrated with procedures and practice in generating, presenting, and arguing ideas and issues within a public forum. Assignments emphasize 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 ENG 101.

CMN 165 (3-5) N,C,S
Small Group Communication [formerly CMN/SPE 150]

Experience and analyze communication within groups, emphasizing the value of interdependent thought and effort, active listening and empathizing, cooperative roles and tasks, power and conflict management and collaborative decision-making and problem solving. Prereq: Placement into ENG 101.

CMN 175 (5) N,C,S
Oral Interpretation [formerly CMN/SPE 140]

Presents interpretation as an artistic process of studying literature and other texts through individual and group performance, and sharing that study with an audience. Participate in a process of analysis and performance of various texts in their aesthetic, intellectual and emotional entirety. Prereq: Placement into ENG 101.

CMN 185 (3-5) N,C,S
Organizational Communication [formerly CMN/SPE 225]

Identification, practice and evaluation of communication styles and skills to achieve individual and organizational goals within corporate and non-profit cultures and settings. Studies, exercises, and preparation and presentation of practical, professionally oriented works. Prereq: Placement into ENG 101.

CMN 205 (5) N,C,S
Multicultural Communication [formerly CMN/SPE 210]

Open-ended study of the concepts of culture and the opportunities and challenges of multicultural communication within 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: ENG 101.

CMN 215 (3-5) N,C,S
International Communication & Relations

Psychological and social dynamics of human interaction at the international level. Includes a variety of philosophies and projects on local values and global issues, with attention to interpersonal ethics, political viewpoints, economic policies and communication systems. Prereq: ENG 101.

CMN 245 (5) N,C,S
Media Communication & 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: ENG 101.

CMN 255 (3-5) N,C,S
Writing for Organizations & the Media

Covers the 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. Research, writing, and rewriting culminate in the creation of individual writing portfolios. Prereq: ENG 101.

CMN 275 (3-5) N,C,S
Online Communication

Survey of communication issues and applications emerging from the ongoing development and utilization of digitized media. Individual and group coursework and online activities focus on functioning effectively within the frontier environment of cyberspace. Assignments center on writing and preparing material for digital formats. Prereq: ENG 101, ENG 102; or permission; access to the Internet; and basic e-mail and word processing skills.

CMN 285 (5) N,C,S
Current Topics in Communication

Timely, multidisciplinary approaches to interpersonal, group, organizational, intercultural and media communication. Colloquium, seminar, and workshop-formatted sessions feature scholars and practitioners facilitating individual and group studies and works. Prereq: ENG 101, ENG 102; or permission.

CMN 295 (1-5) N,C,S
Studies and Works in Communication

Analytical study or creative work in Communication. Prereq: ENG 101, ENG 102, an approved learning contract/proposal and permission.

COMPUTER INFORMATION SYSTEMS

NOTE: North: Eligibility for ENG 093/094 is recommended. Central: Eligibility for English 101 is recommended.

Most CIS courses require a computer lab fee. Contact the division office for specific fee information.

CIS 101 (5) N
Microcomputer Applications

A hands-on course, in which students learn how to use word processing, spreadsheet and database applications. General operating systems activities such as deleting files, renaming files and creating and navigating directory structures will also be covered. This course is offered in Microsoft Windows.

CIS 102 (3) C
Information Systems Concepts

Provides a broad introduction to computers and information systems. Includes coverage of hardware, software, data organization, data communications and systems development. Also covers the evolving role of computers in society.

CIS 106 (5) N
Intro to Programming

Introduces structural programming using the BASIC language. Covers language syntax, table processing, and interactive programming. Prepares students for entry to CIS degree and certificate programs. Recommended: Eligibility for ENG 101.

CIS 111 (5) N
Intro to the Internet & World Wide Web

Provides a hands-on introduction to the Internet and the World Wide Web. Covers Web navigation, finding and evaluating information, and Web page creation and publication using HTML. Includes understanding basic security for electronic commerce and online activity. Emphasis on the following features: e-mail listservers, newsgroups, ftp, telnet and online conferencing.

CIS 112 (2) C
Intro to Web Development

Provides an overview of a Web developer's role in Web site development, Web software development, Web server administration, and Web database implementation and maintenance. Includes investigation of tasks associated with each specialization and interaction with professional Web developers.

CIS 115 (5) N
Problem-Solving & Structured Programming Using C++

Introduces students to problem-solving and structured programming techniques using the C++ programming language. Prereq: CIS 101, CIS 106 (3.0 or higher) and CIS 111.

CIS 120 (3) N
Using Structured Query Language (SQL)

Provides instruction in techniques for creating, modifying, deleting, and querying databases using SQL. Focuses on designing and understanding the SQL queries used in Microsoft SQL Server. Techniques are compatible with other relational database management systems (MySQL, Oracle, Access). Includes hands-on work, lectures and instructor demonstrations. Recommended: Work or class experience using a database management system.

CIS 134 (5) C
Operating Systems

Introduces concepts of processes, pile structures, multi-programming, time sharing, resources allocation, memory management and language translators. Students also explore DOS, UNIX and Windows concepts in depth. Prereq: Computer experience, MIC 101.

CIS 136 (5) N,C
UNIX Operating System

Introduces the UNIX operating system. Includes the UNIX file system, vi editor, UNIX shells and shell programming and Man Pages. Hands-on assignments in HP-UX (HP UNIX Operating System) implemented on HP Apollo 9000 System. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111 and CIS 115 (may be taken concurrently), or permission (N); MIC 101 or equivalent (C).

CIS 137 (5) N
Intro To Data Communications

Terminology, hardware, software, wireless communications, Ethernet and TCP/IP. Includes both wide-area and local-area networks. Prereq: CIS 115 (or may be taken concurrently).

CIS/NET 138 (5) N,C
UNIX for Network Administration

Intermediate course covering 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: CIS 136.

CIS 150 (5) N
Software Testing I

Intro to major types of software errors, types of testing performed during various stages of the software development cycle, reporting and tracking software errors, tools used by testers and planning of testing activities. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111 and CIS 115 (CIS 115 may be taken concurrently).

CIS 162 (5) N,C
Intro to Object-Oriented Programming: Java

Fundamentals of the Java programming language. Write stand-alone applications as well as Java applets able to run over the World Wide Web. Prereq: CIS 115 (N); ITC or CSC 110 (C).

CIS 168 (5) N
Graphics for the Web

Uses computer graphics applications to create and optimize images for the Web, develop composites for Web sites and implement complex Web layouts. Introduces Web graphic file formats, compression, typography and Web-safe colors. Covers basic elements and principles of design, use several industry standard graphics applications, emphasizing basic to intermediate level tools and techniques. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111.

CIS 172 (5) N,C
Visual Basic I

Intro to object-oriented, event-driven programming using Visual Basic (VB) in the Windows 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. Prereq: CIS 115 or permission (N); ITC 110 or MIC 110 (C).

CIS 197 (3-5) N,C
Work Experience

Provides an opportunity to practice communication and research skills and utilize knowledge base to support users on campus. Interact with users via telephone and utilize help-desk software. Some internal training prior to placement at the help-desk. Prereq: CIS 101 and NET 129 or permission (C).

CIS 211 (5) N,C
HTML & JavaScript for Web Site Design

Focuses on the use of Hypertext Markup Language (HTML) for creating Web sites. Develop HTML skills by building pages incorporating text, images, tables, frames, forms, Meta tags, and Cascading Style Sheets. Learn to develop Web sites, applying the principles of good design (navigation, information, layout and user interface) and producing optimized content for the Web. Add interactivity by integrating JavaScript into their Web sites. Students will be introduced to some of the software tools available for Web site production and management. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111 and CIS 168. CIS 168 may be taken concurrently (N); WEB 120 (C).

CIS 212 (5) N
Web Scripting

Basic concepts, standards and technologies of Web programming. Discusses usage of server-side and client-side scripting for Web development. Topics include JavaScript, VBScript, Jscript, DHTML, PHP and Perl, with emphasis on two scripting technologies. Prereq: CIS 115 and CIS 211.

CIS 213 (5) N
Advanced Web Development

Development and analysis techniques appropriate for Web professionals. Includes working with clients, end-user, and information processing professionals; establishing user specifications; and developing a comprehensive Web site. Covers Web database access, usability, security, and site administration and maintenance. Students complete a portfolio project in Web development and discuss job seeking approaches. Prereq: CIS 138, CIS 162, CIS 211 (maybe taken concurrently), CIS 212.

CIS 217 (5) N
Web Services Using XML

Learn techniques for developing Web based distributed applications using standard languages and protocols, such as XML, SOAP, WISDL, WAP and WML. Emphasizes learning techniques for manipulating database and XML data in order to develop and use Web services, which are data centric. Prereq: CIS 212 or CIS 172.

CIS 216 (5) C
Intro to Web Programming

Intro to Web programming including an overview of different programming languages used in Web page design and maintenance. Focuses on HTML, JavaScript, and Perl. Prereq: 4th quarter standing in IT/Programming or permission.

CIS 236 (5) N
Database Management

Covers database concepts, data management techniques, database environment, record relationships and advantages and limitations of the database approach. Includes data modeling and database design. Prereq: CIS 115 (may be taken concurrently).

CIS 237 (5) N
Local Area Networks

Enhances the knowledge gained in CIS 137. LANs are covered in depth, including software, hardware and supporting equipment. Major network operating systems such as Windows NT and Novell NetWare covered utilizing hands-on exercises. Prereq: CIS 101 and CIS 137.

CIS 242 (5) N
Advanced C Programming for Business

Intro to the development of team-based C programming projects of substantial size and complexity. Create and use dynamic linked lists and binary trees and a variety of data files. Prereq: CIS 115.

CIS 244 (5) N,C
Intro to Object-Oriented Programming: C++

Intro to the C++ extensions to the C programming language and to object-oriented programming using C++ classes. Use the C++ capabilities to create object-oriented applications. Prereq: CIS 115 (N); CSC 142 or CIS 142 or permission (C).

CIS 255 (5) N,C
Systems Analysis & Design

Teaches communication skills needed in the workplace, including recognizing various communication styles, dealing with conflicts, working with a team. Develop a greater understanding of personality and communication styles. Overview of system development life cycle. Classical and structured tools/techniques for describing process flows, data flows, file designs, input and output designs, and program specifications. Discussion of data gathering and analysis. Students operate in teams. Prereq: CIS 115 (N); MIC 110 or ITC 110 (C).

CIS 260 (5) N
Audio/MIDI for the Web

Obtain working knowledge of Digital Audio and MIDI and acquire skills to produce Internet and multimedia audio. Covers loop-based arranging. Covers physical/psychoacoustic principles of sound, types of equipment, details of digital audio/MIDI and signal flow. Learn recording techniques and waveform editing/signal processing. Study Internet/Multimedia audio formats and techniques. MIDI topics include sequencing, sampling, synthesis, sound design, drum programming, arrangement and synchronization. Includes lectures on mixdown methods, legal issues and sound studio troubleshooting/maintenance. Prereq: CIS 211 (may be taken concurrently); MMT students: MMT 101, MMT 105, MMT 107. Recommended: Strong math and intermediate HTML and JavaScript skills.

CIS 261 (5) N
Streaming Web Media & Digital Video Editing

Introduces the concepts and techniques of streaming media and non-linear digital video editing, using tools such as Real Producer, Windows Media, QuickTime and/or Adobe Premier. Covers the making of projects for video, multimedia CD-ROMs, and the Internet. Intro to streaming Web media delivery options and compression techniques. The digital video component covers basic and advanced editing techniques, transitions, filters, motion and other special effects, titling and audio. Intro to Adobe AfterEffects. Prereq: CIS 168, CIS 211 and CIS 260; MMT students: MMT 101, MMT 105, MMT 107. Recommended: CIS 260.

CIS 262 (5) N
Advanced Java

Explore the latest functionality of the Java programming language. Builds upon fundamental object-oriented programming concepts to explore new Java packages. Potential topics include servlets, Java server pages, database connectivity, swing awt components, and Java 3D modeling. Prereq: CIS 162.

CIS 264 (1-3) N
Computer Information Systems Lab

Supervised information systems development lab where students can work on projects to increase competency and hands-on skill using appropriate software. May be repeated. Prereq: BUS 131. Co-Req: Enrollment in another CIS course.

CIS 269 (1) N
Web Essentials

One-day (8 hour) working session plus a lecture series featuring visiting professionals. The working session covers building and maintaining multimedia computer systems, specifically operating system settings, hardware drivers, diagnostics software and troubleshooting procedures that are essential to maintaining a production-level work environment. Visiting lecturers will provide insight into professional practices and current technological trends. Students are required to attend the working session and a minimum of three lectures. Prereq: CIS 168, CIS 211, CIS 260 (all may be taken concurrently); MMT students: CIS 101, MMT 101, MMT 105, EET 130 and CIS 260. MMT 105 and CIS 260 may be taken concurrently.

CIS 272 (5) N
Visual Basic II

Advanced, object-oriented, event-driven programming using Visual Basic. Covers debugging and error handling, picture box control, dialog boxes, multiple document interfaces and OLE. Prereq: CIS 115, CIS 172 or permission.

CIS 273 (5) N
Interactive Web Media & Animation

Introduction to the Flash development environment. Flash fuses the precision and flexibility of vector graphics, animation, MP3 audio, and interactivity to create immersing experiences that attract and engage users. Working with techniques of animation, create, import and manipulate graphics and audio. Work with various Flash elements including color, overlays, layers and library symbols. Covers basic actions, interface design, file size optimization, streaming tips and tricks, integration with HTML and incorporates Flash movies into existing sites. Prereq: CIS 168, CIS 211 and CIS 260. CIS 168 and CIS 211 may be taken concurrently. MMT students: MMT 101, MMT 105, MMT 107. Recommended: CIS 260.

CIS 274 (5) N
Flash ActionScript

Covers ActionScript, a program development language used with Flash animation that allows for richly interactive Web media. Learn to programmatically manipulate various media (graphics, animation, audio) through object-oriented ActionScript code. Create interactive movies and Web applications (games, forms, surveys, and real-time chat systems). Includes standard programming flow control mechanisms, math functions, operators and XML support. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111, CIS 261, CIS 273, CIS 285; MMT students: MMT 101, MMT 105, MMT 107, a Flash course (MMT 117, MMT 298, MMT 273, or CIS 273), a Streaming Digital Video course (MMT 205, MMT 261 or CIS 261), CIS 260. Recommended: Strong HTML and JavaScript skills.

CIS 275 (5) N
Flash with Generator

Focuses on Generator, a Web server application that dynamically combines various multimedia elements (text, graphics, video and audio) to build rich-media Web content. Using the Flash/Generator authoring extensions, students learn to create templates containing variable elements that are replaced with content provided by a data source. Automatic, data driven updates reduce development time and allow for real-time applications. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111, CIS 261, CIS 273, CIS 274 (may be taken concurrently), CIS 285. MMT students: MMT 101, MMT 105, MMT 107, a Flash course (MMT 117, MMT 298, CIS 273, or MMT 273), a Streaming Digital Video course (MMT 205, MMT 261, or CIS 261), CIS 260, CIS 274 (may be taken concurrently).

CIS 279 (5) N
3D Modeling & VRML

Introduction to three-dimensional motion graphics. Covers 3D as a communications mechanism/navigational paradigm and the various tools available. Learn to create 3D objects, map surface textures, apply lighting and animate in virtual space. Learn modeling and rendering and how to deliver 3D content. Optimize 3D models for the Web and integrate VRML with other Web technologies. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111, CIS 261, CIS 273, CIS 285; MMT students: MMT 101, MMT 105, MMT 107, a Flash course (MMT 117, MMT 298, CIS 273, or MMT 273), a Streaming Digital Video course (MMT 205, MMT 261, or CIS 261), CIS 260. Recommended: Strong HTML and JavaScript.

CIS 285 (5) N
Web Authoring & Design Studio I

Bring together skills obtained in the various media development classes. Work through a series of Web design projects that increase in complexity as the term progresses. Learn professional practices and productivity techniques. Produce graphics, audio, streaming video and interactive animations in a fast pace setting. Engage in ideation techniques (mind mapping, storyboarding, etc.) to learn concept generation. Covers Dreamweaver authoring package and design issues such as color, form and composition, typography, navigation and structure. Projects involve Rapid Prototyping/Focus Group Testing and Design Charrette techniques. Addresses client-contact, legal business and ongoing site management issues. Covers design issues (color, form, composition, typography, navigation and structure). Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111, CIS 168, CIS 211, CIS 260, CIS 261 and CIS 273.

CIS 286 (5) N
Web Authoring & Design Studio II

Second in a two-part series of studio courses that bring together skills obtained in the various media development classes. Study advanced project/team management concepts. Covers structural models, site architectures, navigational/user-interface design and their implications for server-side technologies and site maintenance. Develop Web site prototypes. Covers Dreamweaver, management of complex Web sites, customized work environment, streamlining workflow, and experimental design methodologies. Prereq: CIS 101, CIS 106 (3.0 or higher), CIS 111, CIS 274, CIS 285, an advanced Web Design elective (Art 210, CIS 275, CIS 279, CIS 290, or CIS 291). CIS 274 and Advanced Web Design electives may be taken concurrently.

CIS 290 (1-6) N,C
Independent Studies or Internship

Provides advanced students with research opportunities or work experience in computer information systems. Variable credits. Prereq: Advanced standing and permission.

CIS 291 (2) N,C
CIS Work Experience I

Portfolio preparation, informational interviewing, cover letters, resources to aid the job search, professional organization, and the hidden job market. Emphasis on résumé preparation and interview techniques. May be taken for decimal or S/NC grade. Prereq: Advanced standing in the CIS program and permission.

CIS 298 (3-5) C
Advanced Programming Project

Apply skills/knowledge gained throughout the two-year period to a major programming project. Produce work that responds to a client problem or request. Students work in teams or carry out an individual project as an intern/extern. Students select and work closely with industry mentors. Emphasis on research, accuracy, programming skills, timeliness, teamwork, quality, client/customer satisfaction and degree to which the project is workable. Prereq: Completion of first year toward A.A.S degree in Programming.

CWE 100 (2-5) N
Cooperative Education - Work Experience

On-the-job training in field of study. Prereq: Permission and Cooperative Education office.

ITC 110 (5) C
Programming Concepts & Fundamentals

Introduces basic computing concepts such as Input-Processing-Output, control structures, arrays, structured programming, and object oriented programming using Visual BASIC as an example language. Prereq: MIC 101 or equivalent.

ITC 140 (5) C
Introduction to Computer Hardware

Provides basic understanding of various hardware components. Hands-on experience in installation and configuration is included. Students learn how software interacts with and controls the computer's hardware elements. Analytical logic and troubleshooting skills are emphasized. Introduces basic networking concepts. Prereq: MIC 101 or CIS 102 or equivalent.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			
In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).			

- ITC 160 (4) C**
PowerPoint Presentations
 Learn to develop effective and professional PowerPoint presentations. Through the process of developing and refining presentations, obtain the skills necessary for the Microsoft Office User Specialist (MOUS) at the proficient level for PowerPoint. Prereq: MIC 101 or equivalent.
- ITC 161 (4) C**
Supporting Microsoft Word
 Learn to install Word and troubleshoot MS Word in a networked office environment. Learn how to help employees with tasks ranging from simple how-to questions to complex specialized requests. Prepares students for the Microsoft Office User Specialist (MOUS) exam. Prereq: MIC 101.
- ITC 200 (5) C**
User Interface Design
 Explores the boundary that exists where man meets machine. Learn the principles of design for understanding and usability, the tension between aesthetics and usability, how to present complex functionality in a simplified manner, how to create a look and feel that is understandable and usable and the importance of user feedback.
- ITC 216 (5) C**
Programming for the Web
 Provides hands-on, project driven introduction to web programming. Reviews HTML and client-side language, such as JavaScript, to validate and enhance web pages. Introduces server-side programming. Actual programming and scripting languages will remain flexible in order to best reflect current industry usages. Prereq: Web 110 and ITC 110.
- ITC 220 (5) C**
Database Development for Programmers
 Designed to provide programmers with an overview of database theory and systems. Provides hands-on experience with relational databases, simple ADO, SQL, and XML. Prereq: MIC 101 and one of the following: MIC 110, ITC 110, CSC 110 or permission.
- ITC 222 (5) C**
Structured Query Language (SQL)
 Introduces students to the use SQL to access and summarize database information, create and alter database objects, set constraints and create views. Introduces SQL embedded in programming environments such as ASP or CGI, or Net. Project driven. Learn to use SQL to create and manage databases on a relational database management system. Prereq: ITC 220 or permission.
- ITC 224 (5) C**
Database Programming
 Develop business tier modules and user interfaces for databases using Visual Basic, ADO, C# or some other language. Involves current technologies, such as COM and Active X. Prereq: ITC 220, CIS 172.
- 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 applicable offered by the Relational Database Management System. Prereq: ITC 222.
- ITC 280 (5) C**
Web Database
 Introduces students to the skills, tools, and techniques needed to create database driven Web sites. Project driven and hands-on, giving students practice in the skills they need. The languages and methods used for database access will remain flexible to account for the most current industry standards.
- MIC 101 (4) C**
Intro to Microcomputer Applications
 Microcomputer hardware and software concepts, spreadsheets, simple financial models, computerized mailing lists, word processing and control of disk storage.
- MIC 102 (1) C**
Using Computers
 Covers computer topics, as considered appropriate by the instructor and/or division, to supplement content in other courses (i.e. word processing for English, graphics for math, spreadsheets for economics, etc.). Format may vary from lecture to group problem solving in labs.
- MIC 103 (3) C**
Intro to Computers on the Macintosh
 Intro to basic personal computer hardware and software concepts as they apply to business transactions and the building trades. Prereq: Permission.
- MIC 104 (2) C**
Using Computers II
 Covers an in depth exploration of 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 individual projects to group problem solving in labs.
- MIC 105 (2) C**
Using Computers
 Intro to Windows-based computers. Covers the operating system, e-mail, word processing, spreadsheets, and Internet browsing programs.
- MIC 110 (4) C**
Program Design & Development in Visual Basic
 Intro to concepts involved in planning, developing, testing, and debugging a computer program. Introduces programming language and principles of structured programming that can be applied to any programming language.
- MIC 120 (4) C**
Database, Applications & Design with MS Access
 Develop database application and design skills through use of MS Access. Emphasizes planning, creation and revision of a database system.
- MIC 122 (4) C**
Financial Modeling Using the Microcomputer
 Covers industry standard microcomputer spreadsheet packages, such as Lotus 1-2-3 and Microsoft Excel to study and interpret financial data. Application of financial mathematics to problems, creation of spreadsheets and use of graphics to communicate findings. Prereq: Familiarity with microcomputers.
- MIC 130 (3) C**
Digital Imaging
 Introduces digital imaging and illustration software using Macintosh computers. Emphasis on creating and editing images for use in video and exporting to animation and nonlinear software packages.
- MIC 131 (3) C**
Nonlinear Editing
 Covers the use of nonlinear editing systems. Prereq: MIC 130 or equivalent.
- MIC 141 (3) C**
Computer Applications for Apparel Design I
 Provides a basic understanding of various computer applications, ranging from word processing to graphic manipulation, and their specific use in the field of apparel design. Students will complete fundamental tasks and learn basic and selected advanced skills in each program to develop apparel design-related products.
- MIC 142 (3) C**
Computer Applications for Apparel Design II
 Emphasis on intermediate and advanced computer applications for the apparel design and manufacturing industry. Students will build on the fundamentals learned in MIC 141 to develop additional skills in word processing, spreadsheet and graphic manipulation software applied to tasks in the apparel design and manufacturing industry.
- MIC 150 (4) C**
Internet & The World Wide Web
 Intro to the global information network. Provides experience using browsers, e-mail, search engines, and other Internet and Web tools. Focuses on using the tools to find valuable information and resources on the Internet, and understanding the process of creating a Web presence including basic HTML and Web page editing tools.

MIC 151 (5) C
HTML and Web Page Development

Provides students with an introduction to Hypertext Markup Language (HTML) and Web page development. Includes, but not limited to, introducing and implementing HTML tags and files; learning common Web page formats and functions; and developing and installing comprehensive Web sites. Prereq: MIC 101 or MIC 150, or equivalent

MIC 170 (5) C
Microsoft Word

Offers a complete look at Microsoft Word focusing on features for technical writing, management, editing and formatting long documents.

MIC 197 (1-5) C
**Work Experience:
Microcomputer Management**

Allows students to earn work experience credit in the computer information field. Prereq: Advanced-level standing and permission.

MIC 203 (3) C
**Intro to Computer-Aided
Drafting & Design (CADD)**

Intro to computer-aided drafting and design on the personal computer. Students will learn to use the 2-D tools in MiniCad for basic technical drawing, and produce depictions of simple plans, elevations and construction details in a CADD environment. Prereq: MIC 103 or permission.

MIC 204 (3) C
Computer-Aided Drafting & Design II (CADD)

Advanced techniques in CADD including file structures and dynamic drawing mechanism. Prereq: MIC 203 or permission.

MIC 230 (5) C
Computer Graphic Design

Covers the key elements involved in computer graphic design. Introduces two-dimensional graphic design production. Students work with the technology tools to apply graphic design elements in a Web-based environment. Prereq: Basic computer skills.

MIC 240 (2) C
Computer Graphics

Introduction to generating text and graphics using the Amiga "Video Toaster" as video editor. Recognizing and utilizing video format design principles are covered. Measurement and modification of a video signal; creation of still frames and image/graphic overlays included.

MIC 241 (3) C
2D & 3D Animation

Provides skills for creating animation. Emphasis on 2D animation. Introduces 3D animation concepts. Prereq: MIC 130.

MIC 260 (4) C
**Microsoft Office User Specialist (MOUS):
Expert Level**

Provides preparation and practice for students planning to take the Microsoft Office User Specialist Certification Expert Level test. Graded Pass/Fail. Passing grade depends on passing the certification exam. Prereq: MIC 101 or permission.

MIC 298 (3-5) C
Advanced Applications Project

Apply skills and knowledge gained throughout the two-year period to a major programming project. Produce work that will respond to a client problem or request. Students may work in teams or carry out an individual project as an intern/extern. Students select and work closely with industry mentors. Emphasis on research, accuracy, programming skills, timeliness, teamwork, quality, client/customer satisfaction, and degree to which the project is workable. Prereq: Completion of first year toward A.A.S. degree in Programming.

WEB 100 (1) C
Survey of Web Careers

Overview of different Web-related careers, focusing on the skills and data-to-day responsibilities associated with each. Primary areas covered include Web site design, Web software development, Web database development, Web server administration, Web marketing and e-commerce.

WEB 110 (4) C
Web Authoring I

The mechanics of Web page production starting with absolute basics. Covers document structure, text elements, list elements, links, tables and working with images and creating framesets. Focuses on creating HTML files "by hand" with emphasis placed on browser compatibility issues and HTML validation. Prereq: MIC 101 or computer experience.

WEB 120 (4) C
Web Authoring II

Covers more advanced elements of Web page development and production. Includes style sheets, DHTML, JavaScript, designing and coding "oof" forms, and an introduction to XHTML and XML. Students will be expected to code elements by hand and create content that is compatible with all major browsers. Prereq: WEB 110 or permission.

WEB 200 (1) C
Theory of Web Design

Overview of basic principles and practices of professional web site design. Covers site layout and organization, readability of pages, access issues for a wide audience, construction of hyperlinks and use of color, graphics and multimedia. Prereq: WEB 110 or MIC 151 and some knowledge of Photoshop.

COMPUTER SCIENCE**CSC 100 (5) S**
Beginning Computers

Covers beginning basic computer terminology; characteristics of hardware and software; capabilities, limitations, and problems associated with computers; introduction to e-mail and the Internet.

CSC 102 (1-5) N,C
Using Computers - Modules

Covers computer topics as considered appropriate by the instructor and/or division. Topics may be chosen to supplement content in another course (i.e., word processing for English, graphics for math or spreadsheets for economics). Class format may vary from lecture to group problem solving to lab. Prereq: Permission.

CSC 103 (2) N
Intro to the Computer as a Learning Tool

Use of the computer as a tool to enhance learning. Topics include word processing, spreadsheets, databases and an introduction to the Internet. Includes creation of multimedia presentations and use of subject-specific software.

CSC 110 (5) N,C,S
Intro to Computer Programming

Overview of computer program design and problem solving using Visual Basic. Topics include problem analysis, development, debugging and testing. Use of object and event-oriented programming to create program interfaces. Other topics include decision and loop structures, basic operating systems, e-mail and Internet. Qualifies as Qualitative Reasoning Course and fulfills Science, Tech, Environment/Language of Science distribution credits. Does not substitute for CIS sequence. Prereq: MAT 098 or MAT 106.

CSC 111 (5) N,C
Computers for Math & Science

Course to prepare science, mathematics and engineering students for using computers as tools in their fields of study. Topics include hardware organization, various operating systems, using the Internet, and applications appropriate for use in science and mathematics. Prereq: MAT 098.

CSC 133 (5) C
Intro to Visual Computer Program Design

Object-oriented programming concepts in the visual program design environment. Includes mastery of elementary structured programming principles and ability to code programs in a structured language.

CSC/EGR 142 (5) N,C,S
Computer Programming for Engineers

General principles of modern programming, including how to design, implement, document, test and debug computer programs. Java-based. Covers objects, messages, expressions, statements, methods, classes, conditionals, iterations, arrays and collections. Prereq: CSC 110 and MAT 122.

CSC 143 (5) N,C
Computer Programming II

Continuation of CSC 142. Covers classes and interfaces, inheritance, graphics, exceptions, stream I/O, recursion, analysis of algorithms and some dynamic structures (lists, stacks, trees). Continues the study of programming by introducing advanced Java language features and new programming topics. Learn the tools for building efficient software systems: dynamic data allocation, recursion and analysis of algorithms. Prereq: CSC 142.

CSC 180 (3) N,C
Scientific Computing & Bioinformatics

Intro to computer applications used in the field of biotechnology. Focuses on using computers for storing, manipulating, processing, graphing and analyzing scientific data. Also covers computers as research tools for obtaining scientific information. Prereq: MIC 101. Recommended: CHE 103.

CSC 190 (5) N
Assembly Language Programming

Introduction to assembly language programming, includes discussion of microcomputer architecture and memory addressing. Appropriateness of using assembly language (as opposed to higher-level languages), or of using mixed language programs is included. Other topics include assembler directives; labels and memory pointers; macros, external references, and linking of multiple object modules; and using development tools. Prereq: Programming in any higher language.

CSC 198 (1-5) N
Computer Workshop

Covers computer topics considered appropriate by the instructor and/or division. May be supplemental to another course.

CSC 298 (1-5) N,C
Special Topics

A seminar of selected topics or activities in computer science. Prereq: Variable, dependent on topic.

CSC 299 (1-5) N,C
Independent Study

An independent study of approved topics in computer science. Prereq: Permission.

COMPUTING TECHNOLOGY**CTN 101 (5) S**
Overview of Computing Hardware

A technically based course to familiarize computer users and owners with the common hardware components of computing systems. Provides knowledge to make decisions regarding hardware selection, configuration and upgrading considerations for the purposes of software optimization.

CTN 104 (5) S
Technical Applications of Spreadsheets

Introduction to electronic spreadsheets and familiarization with popular spreadsheet software (Excel). Emphasis on fundamental concepts and commands necessary to create a spreadsheet, such as entering, saving and printing data. Develops an understanding of the types of problems with spreadsheet software. Hands-on experience. Prereq: CSC 100.

CTN 120 (5) S
Databases I

Overview of database concepts and applications. Emphasis on MS-Access and its role in Microsoft Office. Includes practical hands-on experience setting up related database systems and on developing tables, queries, forms and reports. Prereq: CSC 100.

CTN 121 (5) S
Databases II

Continuation of CTN 120 with emphasis on application and development, including menus, macros and programming event procedures. Prereq: CSC 120.

CTN 131 (5) S
Intro to Computer Programming

Programming in a structured modular language with emphasis on programming design and style. Includes understanding a problem, formal definition, graphic design methodologies and program specification through pseudocoding, elementary searching and sorting algorithms. Prereq: CSC 100 or permission.

CTN 141 (5) S
Intro to Operating Systems

Introduces DOS operating systems, includes: history, overview, fundamental concepts, processing, memory model, file system, input/output, systems calls, implementation, DOS shell, and introduction to Windows, DOS utilities, PC tools for Windows and Norton Utilities. Explores UNIX, Windows NT, OS/2, Apple systems 7, VMS and others. Prereq: CSC 100 or CTN 101.

CTN 142 (5) S
Operating Systems II

Continuation of CTN 141. Studies operating system concepts including file, memory, I/O and process management methods. Includes an overview of distributed system structures and concepts. Areas of case study include Windows 95 registry and configuration files, Windows NT, UNIX, and OS/2. Provides hands-on practice using various operating systems. Prereq: CTN 141.

CTN 143 (5) S
Operating Systems III

Introduces two operating systems: (1) Windows 2000 Professional version including features, file and folder objects; architecture; installation; configuration; an introduction to Active Directory and (2) Linux including installation; features; introduction to shells; X Window System and user commands to help meet A+ certification requirements.

CTN 160 (5) S
Web Production I

Intro to web site development using HTML. Through lectures and assignments, learn HTML and the fundamentals of creating a web site; how to incorporate graphics and other elements into a site; tables, input forms and frames and how to upload their web sites using FTP and remote file management. Prereq: CTN 160 or permission..

CTN 161 (5) S
Web Production II

Continuation of studies in HTML to include complex layouts, advanced frames, forms, tables and Cascading Style Sheets. Introduces JavaScript and XHTML. Produce and design a large final project for a portfolio piece. Prereq: CTN 160 and ART 210 or permission.

CTN 162 (5) S
Web Production III

Advanced HTML course. Learn to incorporate JavaScript to enhance interactivity and functionality in web site development. Topics covered include variables, functions, objects, and events; data types and operators and debugging JavaScript. Prereq: CTN 161 and CTN 131 or permission.

CTN 163 (5) S
Dynamic Web Publishing

Learn how to create dynamic web sites with Microsoft's ASP technology. Gain a solid foundation in the 4 core technologies (VBScript, ASP, ADO, and SQL) to create dynamic web sites hosted on a Microsoft Web Server. By the end of class, each student will create a database driven web site that allows the client to update the main data of the web site through a web driven admin center. Prereq: CTN 120, CTN 160 and CTN 131 or permission..

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

CTN 164 (5) S
Multimedia on the Web

Learn how to develop animated content using Macromedia Flash. Topics include drawing tools, animation techniques, working with the timeline, basic action scripting, incorporating audio and delivery and publishing methods. Prereq: CTN 161 and CTN 168 or permission.

CTN 165 (5) S
Interface Design

Put your graphics and coding knowledge to work developing new generation web sites. Class focuses on a combination of design, usability and technology. Topics include creative brainstorming, flowcharting, storyboards, color and typography. Prereq: CTN 161 and CTN 168 or permission.

CTN 166 (5) S
Audio & Video for Multimedia & the Web

Explore technology and tools for audio and video production in multimedia and the Web. From audio and video capture, to non-linear editing and production, work in teams to integrate work to CD ROM or web sites. Covers compression tools and methods, plug-ins, and browser issues. Prereq: CTN 162 or permission.

CTN 167 (5) S
Animation on the Web

Learn to create simple, digitally animated objects and text using techniques and tools including non-moving animation, path animation, cell animation, and time-based animation. Covers compression, optimization and methods of Web publishing. Prereq: CTN 162 or permission.

CTN 168 (3) S
Graphics for the Web I

Emphasize web graphics preparation in Adobe PhotoShop and ImageReady. Includes solutions for cross browser and platform graphic development, optimizing images for faster download, Photoshop tricks and tips and techniques within the application to streamline workflow. Prereq: CTN 160 and ART 210 or permission.

CTN 169 (3) S
Graphics for the Web II

Emphasizes Web graphics preparation using Adobe Illustrator and Macromedia Flashworks. Topics covered include solutions for cross browser and platform graphic development, optimizing images for faster download, digital drawing techniques, typography and logo/icon development. Prereq: CTN 160 or permission

CTN 170 (5) S
PC Hardware I

Focus on computer primary peripherals, installation of software and hardware designs for Windows 98 recognition. Includes safety for the technician and equipment, disassembly, identification of components, general maintenance and reassembly of personal computers. Covers customer interaction techniques, systematic approaches to troubleshooting and economic guidelines regarding "repair or replacement" choices. Hands-on experience with a variety of computers and situations. Prereq: CTN 101.

CTN 171 (5) S
PC Hardware II

Focuses on video display systems, multimedia devices, alternate storage devices, printers, cable building, preventative maintenance and beginning technical support for operating systems. Presents further instruction in troubleshooting techniques, SCSI theory and devices and Plug and Play technology theory and standards. Covers more customer interaction techniques, systematic approaches to troubleshooting and economic guidelines with regards to "repair or replacement" choices. Provides hands-on experience with a wide variety of computers and situations. Prereq: CTN 170 or permission.

CTN 172 (5) S
PC Hardware III

Hands-on course supplements students' knowledge in the installation, configurations, troubleshooting, upgrade and repair of IBM and IBM compatible computers. Emphasis on professional development, customer relations, technical work experience and troubleshooting. Additional peripheral devices and troubleshooting techniques, tips and tricks are taught. Lab sessions are designed to provide actual workplace experience. Prereq: CTN 170 and 171.

CTN 175 (2) S
Web Related Careers: An Overview

Provides overview of different roles and career paths in the Web design industry. Includes Web site development, Web software development, Web server administration, Web database implementation and maintenance, Web site design and interactive writer. Prereq: CTN 160 or permission.

CTN 180 (3) S
Internet Business and Law

Geared toward the Internet entrepreneur. Learn the steps to starting your own internet business, including the legal aspects. Topics covered include, starting your own business: strategies and pitfalls, copyright and fair use on the internet, how your protect your own work and billing and finance. Prereq: CTN 160 or permission.

CTN 182 (3) S
Writing for the Web

Introduces writing and editing techniques tailored for cybervenues. Through discussion, in-class projects, and analysis of successful Web sites, newsletters and online publications, learn what it takes to write compelling, reader-friendly content. Course emphasizes teamwork and building relationships with editors, designers, producers and other professionals involved in generating content that attracts information-starved readers. Prereq: CTN 160 or permission.

CTN 184 (3) S
e-Marketing Tactics & Strategies

Marketing course with an internet focus. Topics include e-branding, adding the internet into an overall marketing strategy; developing brand, price and channel management parameters; strategic message planning through customer analysis; effective promotional ad campaigns through the use of television, radio magazines, newspapers, outdoor and online strategies and the marketing mix, demographics, target markets and market segmentation. CTN 160 or permission.

CTN 186 (3) S
Relationship Marketing

Covers deployment personalization, customer loyalty and incentive programs. Includes the development of skill in all aspects of dealing with customers: customers expectations, telephone techniques, responding to inquires and complaints and follow-up. Emphasizes the power of empathy, active listening, and honesty in communication.. Prereq: CTN 160 or permission.

CTN 188 (2) S
Web Site Tracking & Research

Explore techniques and software used to track and disseminate information from server user logs to build better web sites and increase and direct traffic. Includes the elements of questionnaires, data, sampling, evaluation and presentation of findings from traditional research. Prereq: CTN 160 or permission.

CTN 197 (1-15) S
Computing Internships

Instructional link between classroom experience and on-the-job experience. Bridges the gap between work and learning by reinforcing and documenting student learning experiences on the job.

CTN 201 (1) S
Streamlining Web Development

Introduces Web development editors to students. These tools allow students to streamline workflow as well as get hands-on experience with industry standard tools. Prereq: CTN 161 or permission.

- CTN 202 (5) S**
Web Scripting
 Covers concepts, standards, and technologies of Web programming and scripting. Discusses Common-Gateway Interface (CGI) Programming including use of Server-side Scripting for Web development. Topics also include advanced JavaScript, DHTML, and streamlining large-scale site production through scripting. Prereq: CTN 162 and CTN 231 or permission.
- CTN 204 (5) S**
Dynamic Publishing II
 Learn how to efficiently create N-Tier, dynamic Web sites with Microsoft's ASP and ActiveX technologies. Gain advanced knowledge of VBScript, ASP, ADO, and SQL. Learn how to create ActiveX Visual Basic COM objects to use in ASP. Use more advanced database structures in the final project to create more complex Web sites for clients. Prereq: CTN 163 and CTN 231 or permission.
- CTN 205 (5) S**
Multimedia for the Web II
 Bring flash animation and action scripting skills to the next level. Topics include, event/event handler logic, creating variables, setting values and flash to create animation and effects for video. Prereq: CTN 204 or permission. Recommended: CTN 265 and CTN 121.
- CTN 206 (5) S**
Dynamic Web Publishing III
 Provides a comprehensive introduction to building web applications and web services using the Microsoft .NET development platform. Technologies covered include programming in the VB.NET language, the .NET Common Language Runtime, the .NET Framework classes, ADO.NET, ASP.NET and XML. Topics include application architecture and design; the architecture of .NET; practical development issues such as debugging, deployment, security, scalability and performance. Also includes an introduction to Web Services. Prereq: CTN 204 or permission. Recommended: CTN 265 and CTN 121.
- CTN 224 (5) S**
Web Server Configuration & Management
 Hands-on course focuses on building, maintaining, and optimizing web servers. Topics include security, user management, and authentication and access tracking. Prereq: CTN 160, CTN 141, CTN 270 or permission..
- CTN 231 (5) S**
Visual Basic I
 Continuation of CSC 131 including interactive condition and error handling. Includes sequential, direct, and indexed files, string processing, searching and sorting. Covers simple data structures such as stack, queues and linked lists. Prereq: CSC 131 or permission.
- CTN 235 (5) S**
C/C++ Programming I
 Intro to programming in an object-oriented language with emphasis on program design and style. Includes understanding a problem, formal definition, basic concepts, input and output, functions and program structure, iteration X, simple and multidimensional arrays, pointers, class inheritance, abstract data types and file I/O. Prereq: CTN 131 and CTN 211 or permission.
- CTN 236 (5) S**
C/C++ Programming II – Data Structures
 An advanced course introducing an object oriented programming language, Visual Basic. Includes an introduction to the creation and manipulation of code objects, Multiple document interfaces, and programming the Windows Application Programming Interface.
- CTN 237 (5) S**
Java Programming
 Intro to the Java language and environment, Java class libraries including Abstract Windows Toolkit (AWT), debugging, exception handling, threads and synchronization. Covers syntax, semantics, creating classes and objects and developing applications. Prereq: CTN 131, and CTN 162 or permission.
- CTN 238 (5) S**
Web Object Programming
 Intro to Internet object technologies that can be implemented on the server side and client side. Emphasis on CGI, Perl, and JavaScript in creating sites. Prereq: CTN 131, CTN 162, and CTN 163 or permission.
- CTN 240 (3) S**
Web Design for E-Commerce
 Design a business plan and user interface blueprint for an e-commerce Web project. Explore business, user and implementation concerns and interactive constraints that affect e-commerce. Includes managing client expectations, creating reasonable timelines, e-commerce team members and user-centered e-commerce design. Prereq: CTN 160 or permission.
- CTN 250 (5) S**
Visual Basic II
 An advanced course introducing Visual Basic. Includes database system modeling, concepts of normalization and introduction to Structures Query Language (SQL). Prereq: CTN 231 or permission.
- CTN 260 (5) S**
Visual Basic III – Components
 Teaches a deeper understanding of objects and the variety of ways they can be created and manipulated within the Visual Basic environment. Explores object-oriented programming techniques using student-created objects.
- CTN 265 (5) S**
Visual Basic IV– Database Programming
 Intro to database programming using Visual Basic, Access and SQL Server.
- CTN 266 (5) S**
SQL Server Administration
 Continuation of CTN 265. Explores issues and techniques of programming and simple administration of SQL Server.
- CTN 267 (5) S**
Intro to XML
 Comprehensive introduction to the XML 1.0 specification and accompanying standards. Covers the basics of XML: XML syntax, DTDs and an overview of XML schemas, XSL transformations, XML namespaces, and an intro to XHTML. Prereq: CTN131 and CTN160 or permission.
- CTN 270 (5) S**
Local Area Networks I
 Introduces networking concepts, terminology, and technologies including history, OSI reference model, standards, combinations protocols, data translation techniques, data transmission processes, and network structures. Includes error handling and communication hardware. Explores popular network operation systems. Prereq: CTN 250 and CTN 141 or permission.
- CTN 272 (5) S**
Local Area Networks II
 Introduces the Novell NetWare 4.x family of network operating systems. Students will install Novell NetWare 4.1 and 4.11 on student file servers, and configure the network operating system by creating users and groups, directory structures, log-in scripts, print services, security policies and perform file server maintenance. Also learn to install and configure client operating systems (DOS/Win3.x and Win95) and connect clients to student file servers. Prereq: CTN 270.
- CTN 274 (5) S**
Local Area Networks III
 Introduces Microsoft Windows NT network operating system, network troubleshooting and working in a heterogeneous network environment. Learn to install Windows NT 4.0 on student file servers and to configure the network operating system by creating users and groups, directory structures, log-in scripts, print services, security policies and perform file server maintenance. Also install and configure client operating systems (DOS/Win3.x and Win95) and connect clients to student file servers; install and configure Novell NetWare and perform tasks in a mixed network environment of Windows NT and Novell NetWare. Prereq: CTN 272.

CTN 276 (5) S
LAN IV

Covers advanced topics in computer networking, including remotely installing operating systems, implementing network security, setting up directory services, writing administrative scripts with Perl and VBScript and configuring distributed file systems.

CTN 277 (5) S
Network Security 1

Introduces the concepts and practices used to guard company data and computer systems. Gain knowledge in selecting and deploying practical and effective solutions used to identify, assess and prevent external network threats. Covers Microsoft, Novell and Linux operating systems. Includes server security, firewall security and remote access solutions. Prereq: CTN 270.

CTN 280 (5) S
Software Quality Assurance

Covers technical aspects of software testing, verification and validation, coordinated with CTN 250, 290, 292 and 294. Students will plan and implement systems requirements tests, system design tests, unit black and white box tests, module integration tests, user acceptance tests and systems tests. Prereq: CTN 250.

CTN 282 (5) S
Cisco I

First of four-semester sequence official Cisco training program curriculum. Prepares students for Certified Cisco Associate (CCNA) certification exam. Covers networking technology, devices, addressing, media, protocols, design, regulations and standards, LAN, WAN, OSI models, cabling, cabling tools, routers, router programming, star topology, IP addressing and network management.

CTN 283 (5) S
Cisco II

This course is the official "Semester 2" curriculum of the four-semester sequence Cisco training program which prepares the student for the Certified Cisco Network Associate certification exam. The curriculum examines the OSI model in greater detail; WANs; router setup, start-up and configuration; Cisco's Internetworking Operating System; TCP/IP; and routing protocols.

CTN 284 (5) S
Cisco III

Cisco Semesters III and IV combined. Introduces and provides practical experience with switches and VLANs. Develop practical experience in skills related to configuring LANs, WANs, IPX routing and IGRP protocols and network troubleshooting. Semester IV introduces ISDN and PPP and Frame Relay. Includes a threaded case study in mid-size networks design.

CTN 290 (5) S
Structured Analysis & Design

Development of structured specification for multi-user applications using structured systems analysis and CASE (Computer Aided Software Engineering) tools. Includes statement of purpose, event list, context diagram, figure O diagrams, data flow diagrams, entity relationship diagrams, and data dictionaries as well as essential, environmental, behavioral and implementation models. Prereq: CTN 250.

CTN 292 (5) S
Structured Design

Covers LAN client server application design using structured system design methodologies, tools and techniques. Students will develop a structured database design and software architecture for a network SQL server application using CASE tools. Prereq: CTN 290.

CTN 294 (5) S
Structured Software Implementation

Covers LAN client server application implementation using implementation methodology, tools and techniques. Implementation of a network SQL server application using Visual Basic as a front end. Prereq: CTN 292.

CTN 295 (5) S
Research Methods & Customer Service

Covers methods for research necessary to solve technical problems. Finding answers to technical questions often presents unique problems. Explores many varied resources available for finding solutions to technical questions that often lie in a narrow spectrum. Includes how to efficiently prepare, accomplish, document, evaluate and present the research.

CTN 298 (1-10) S
Special Topics in Industrial Computing Technology

Special topic course in an individual or group study basis in the Computing Technology field. Prereq: Permission.

CTN 299 (1-5) S
Special Topics in Industrial Computing Technology

Accommodates individuals who wish to learn new skills or to update specific skills. Agreements or contracts will be created with the requesting party and the college. Prereq: Permission.

ICT 103 (2) S
Computer Applications

Intro to popular applications software. Hands-on experience with a word processor, spreadsheet, database manager and MS-DOS.

**COOPERATIVE EDUCATION /
 WORK EXPERIENCE
 PROGRAMS**

See "Work Experience/Cooperative Education"
 N-67; S-105; C-145

**COORDINATED STUDIES
 PROGRAMS/LEARNING
 COMMUNITIES**

Learning Communities 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 (18 credits), which is generally considered a full course-load; 10- and 13-credit Learning Communities are also offered.

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 that require 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 Community 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.

COSMETOLOGY**COS 100 (1-10) S
Cosmetology Apprenticeship Program**

Personal and professional development combined with advanced technical skills for licensed cosmetologists.

**COS 101 (1) S
Cosmetology Pivot Point Technical Training**

Advanced technical skills for licensed cosmetologists in learning Pivot Point levels 2 through 4. Also covers personal and professional development. Prereq: Permission of the Cosmetology Apprenticeship Program, 18 years of age or older, high school diploma or GED, Washington state cosmetology license, and an employee of a salon participating in the Washington State Cosmetology Apprenticeship program.

**COS 110 (5) S
Cosmetology Theory I**

A series of lecture classes to give the student a basic background of shampooing, haircutting and all types of hairstyling. Prereq: Permission.

**COS 111 (5) S
Cosmetology Theory II**

A thorough background in the theory of manicuring, artificial nails and pedicuring. Prereq: Permission.

**COS 112 (5) S
Cosmetology Theory III**

Additional hours to give students skills in the other important areas of the profession. Prereq: Permission.

**COS 113 (5) S
Cosmetology Theory IV**

A thorough background in the area of skin care and temporary hair removal. Prereq: Permission.

**COS 114 (5) S
Cosmetology Theory V**

A thorough basic understanding of the theory behind the chemical services performed in the cosmetology profession. Prereq: Permission.

**COS 115 (15) S
Cosmetology Lab I**

A practical application course to train students in the necessary skills to be proficient in the areas of haircutting and styling skills. Prereq: Permission.

**COS 116 (15) S
Cosmetology Lab II**

A continuation of COS 115 (Cosmetology Laboratory I). Prereq: Permission.

**COS 117 (15) S
Cosmetology Lab III**

A practical application course to give students the skills to be proficient in the application of chemical services to the public. Prereq: Permission.

**COS 118 (15) S
Cosmetology Lab IV**

Gives students the skills to become proficient in competently performing the services in the Esthetic field. Prereq: Permission.

**COS 119 (15) S
Cosmetology Lab V**

A practical course to give students the skills to become proficient in the area of manicuring, artificial nails and pedicures. Prereq: Permission.

**COS 200 (1-10) S
Cosmetology Upgrade**

Personal and professional development combined with advanced technical skills for licensed cosmetologists.

**COS 299 (1-10) S
Individual Projects & Cosmetology**

Independent study course for individual projects in the Cosmetology field. Prereq: Permission.

DIESEL TECHNOLOGY

NOTE: These courses include instruction in safety, environmental awareness, human relations, and leadership.

**HDM 090 (2-12) S
Preventative Maintenance for Trucks/Heavy Equipment**

Provides necessary knowledge and skills to perform preventative maintenance on trucks and heavy equipment.

**HDM 100 (18) S
Heavy Equipment Operator**

Study of safety factors, minor maintenance, servicing and hands-on working knowledge of basic principles involved in the operation and use of heavy construction types of equipment.

**HDM 101 (3) S
Introduction to Heavy Duty**

Covers the basics of hand tools, power tools, safety, measuring instruments, repair orders, lubrication, and some of the specialized tools used in the heavy-duty industry.

**HDM 102 (6) S
Electrical-Electronics, Basic**

Covers safety procedures when working with electricity, as well as fundamental electrical theory. Also includes types of circuits, Ohm's law, use of common test equipment and reading wiring diagrams. Prereq: HDM 101 or permission.

**HDM 103 (3) S
Intro to Truck & Trailer Maintenance**

Includes training on material safety data sheets (MSDS) and the identification of tools and their uses. Includes how to work safely with tools and equipment in a repair shop. Prereq: Permission.

**HDM 104 (6) S
Batteries, Generators & Alternators**

Learn to diagnose and repair charging systems commonly used in heavy-duty truck and equipment maintenance. Prereq: HDM 102

**HDM 105 (4) S
Truck & Trailer Preventive Maintenance**

Covers preventative maintenance including inspection of trucks and trailers, service of vehicles, and changing oil and lubing, according to manufacturers' specifications for problem prevention. Prereq: HMD 103.

**HDM 106 (5) S
Cranking & Lighting Systems**

Covers theory, operation and repair of starter motors commonly used in the industry. Includes control devices and wiring used with these motors. Covers troubleshooting and the use of common test equipment. Includes knowledge of truck equipment lighting systems, as well as the hardware to control them. Prereq: HDM 102.

**HDM 107 (9) S
Hydraulics & Pneumatics**

Covers theory, basic operation principles, design, function, testing and repair of selected types of hydraulic and air pumps, motors, hoses and accessories used on mobile equipment, as well as application and repair of pressure, flow, and directional control valves and actuators. Prereq: HDM 101 or permission.

**HDM 109 (4) S
Truck & Trailer Repair**

Covers how to make minor repairs to trucks and trailers, change tires, repair tires, and adjust wheel bearings to manufacturers' specifications. Prereq: HDM 105.

**HDM 111 (4) S
Truck & Trailer Maintenance**

Covers how to cut and weld using oxyacetylene, weld with arc and wire feed machines. Includes proper forklift operation in order to position equipment (using safety at all times). Prereq: HDM 109.

**HDM 113 (6) S
Basic Welding & Cutting – Diesel & Equipment Technician**

Introduces SMAC (shielded metal arc welding), oxyacetylene, and carbon arc skills involved in the repair and maintenance of heavy-duty trucks and construction equipment. Perform several pertinent tasks and projects contained in an industry-approved competency based learning module. Prior knowledge of hand and basic power tools is helpful. Prereq: Enrollment in the Diesel and Heavy-Duty Equipment Technology program, or permission.

HDM 123 (12) S
Diesel Engine Repair & Performance

Study and perform diagnosis, repair, tune-up, and servicing procedures on current diesel engines used in the heavy-duty truck and equipment industry. Disassemble, clean and inspect engines and components, installing replacement parts as needed. Prereq: HDM 101 or permission.

HDM 124 (5) S
Preventive Maintenance

Learn preventive maintenance practices commonly found in the trucking and equipment industry. Includes inspection and determination of failures along with the necessary repairs. Proper handling and disposal of hazardous material are integral parts of the class. Prereq: HDM 101 or permission.

HDM 127 (8) S
Drive Train

Covers diagnosis and repair of Drive Train components, including mechanical clutches, flywheels, standard transmissions, torque converters and automatic/power shift transmissions. Learn how to troubleshoot, diagnose, disassemble, and reassemble transmissions common to the industry; and to check universal joints, drivelines, differential assemblies and final drive units. Prereq: HDM 101 or permission.

HDM 128 (4) S
Basic Gasoline Engines

Study the basic operation of gas engines, diagnosing their condition by disassembling various types of current model engines. Prereq: HDM 101.

HDM 138 (15) S
Steering, Suspension & Brakes

Study components and systems relating to truck or equipment running gear. Covers theory, operation, diagnosis and repair of wheels tires, brakes, steering and suspension systems. Prereq: HDM 101 or permission.

HDM 145 (5) S
Running Gear, Suspension, Frame & Alignment

Covers construction, function and service to running gear and components found in vehicles used in construction, commercial and industrial operations. Designed to upgrade mechanics in the heavy equipment field and related industries.

HDM 149 (6) S
Container & Chassis Repair I

Provides training needed to repair land/sea shipping containers and involves the study of Material Safety Data Sheets documents (MSDS), safety precautions and inspection of containers both inbound and outbound. Includes documenting and performing needed repairs to containers by replacing damaged metal that does not meet the standards by welding and/or cutting, measuring to meet ISO tolerances, replacing wood flooring and decking in accordance with specifications. Prereq: WFT 100.

HDM 151 (6) S
Container & Chassis Repair II

Covers how to inspect containers, refrigeration units and chassis, making repairs on aluminum containers by riveting and welding. Includes chassis frame straightening, replacement of broken cross members, light and brake repair in accordance with ISO standards. Prereq: HDM 149 or permission.

HDM 156 (5) S
Air Brakes Basic

Covers principles of compressed air and includes study of construction, function and service of air brake systems.

HDM 158 (5) S
Power Transmission I

Covers basic principles of power transmission found in heavy trucks, including construction, function and service of various components. Prereq: Permission.

HDM 159 (6) S
Heavy-Duty Unit II - Power Transmission

Continuation of HDM 158. Covers construction, function and principles of servicing, involving major power transmission components found in the heavy truck repair industry. Prereq: HEM 158.

HDM 160 (5) S
Transportation Refrigeration

Study of the principles of refrigeration and how it applies to transportation, air conditioning as relating to truck, trailer, and container industries.

HDM 161 (5) S
Hydraulics & Pneumatics

Covers theory, laws and operating principles of hydraulics and pneumatics and how they relate to each other as well as the diesel and heavy equipment industry.

HDM 162 (6) S
Basic Electricity for Heavy Duty Trucks & Equipment

Provides basic electrical theory and electrical systems of a heavy-duty motor vehicle.

HDM 170 (5-2) S
Forklift Safety & Operation

Provides opportunity to obtain a lift truck operator's certification card. Covers current regulations as well as demonstrating practical fork lift operation.

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 176 (6) S
Diesel Engines - Basic

Provides basic working knowledge of diesel engines in trucks and equipment used in construction applications. Focuses on identification of engines and components, and measurement and assessment of internal parts. Includes research of information using manufacturer's manuals.

HDM 177 (5) S
Diesel Engines

Study of two-stroke Detroit diesel engines. Covers principles of construction, function and service to the basic engines and their accessories. Prereq: Employment in field of mechanics.

HDM 178 (5) S
Diesel Tune-up

Designed to upgrade the apprentice of journeyman mechanic in the principles of diesel engine tune-up. Prereq: Permission.

HDM 179 (5) S
Cummins Diesel Engines

Study of operation, maintenance, rebuild, tune-up and testing of Cummins diesel engines. Prereq: Apprentice or journey level mechanic.

HDM 180 (5) S
Allison Automatic Transmissions

Explores technical principles of the Allison automatic transmissions, covering the construction and function of the latest model of GM type transmissions. Designed to upgrade the apprentice or journey level technician. Prereq: Apprentice or journey level mechanic.

HDM 181 (5) S
Diesel Engine Fuel Systems

Explores operations, functions and service of current diesel fuel systems and their components. Designed to upgrade the apprentice or journey level technician on the principles of the diesel engine fuel systems. Prereq: Apprentice or journey level mechanic.

HDM 182 (6) S
Diesel Engines, Medium Duty

Study of medium duty diesel engines. Covers principles of construction, function and service to the basic engines and their accessories. Prereq: Permission.

HDM 184 (6) S
Refrigeration/Reefers

Study of principles of refrigeration and air conditioning as relating to truck, trailer and container industries, including function, service and repair. Prereq: Permission.

HDM 191 (4) S
Advanced Gasoline Engines

Learn the theory and operation of fuel and ignition systems used on industrial gas engines commonly found in the heavy-duty industry. Covers common types of ignition and carburetion systems. Prereq: HDM 128 or permission.

HDM 193 (6) S
Heating, Ventilation & Air Conditioning

Study the operation, system diagnosis and repair of heating, ventilation and air conditioning systems related to trucks and equipment. Covers retrofit of R-12 systems to R-134 a refrigerant. 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 (1-18) S
Special Topics Heavy Duty Mechanical Repair

Study selected procedures and skill tasks for truck and heavy equipment technicians. Course content, format and projects vary depending on topics. Prereq: Permission.

HDM 201 (5) S
Shop Practices

Apply the knowledge and tasks learned in prior mechanical skills units. Includes repair and service work on a variety of heavy-duty trucks and equipment. Repair procedures and shop policies will simulate work site situations. Students electing to work within the industry will complete a minimum of 66 supervised hours in trade related employment. Prereq: Permission.

HDM 298 (1-18) S
Advanced Special Topics Heavy Duty Mechanical Repair

Advanced study of selected procedures and skill tasks for truck and heavy equipment technicians. Course content, format and projects vary depending on topics. Prereq: Prior work site experience and permission.

DRAFTING • NORTH •**Construction & Design Drafting with CAD****MTC 160 (5) N**
Applied Mechanics I

Designed primarily for the non-engineering student. Covers basic concepts of force systems, equilibrium, moments, centroids, moments of inertia, and simple beam design as applied to structural steel. Includes loading criteria, tributary loads and deflection. Prereq: MAT 097, MAT 117 or equivalent.

MTC 161 (5) N
Applied Mechanics II

Continuation of MTC 160. Covers basic wood beam design, allowable stress, loading criteria, shear and deflections. Prereq: MTC 160.

TDR 109 (1) N
Construction & Design Drafting Lab

A supervised drafting development lab where students work on projects to increase competency and hands-on skills using appropriate software. May be repeated.

TDR 111 (5) N
Basic CAD Drafting for Construction & Design

Introduces basic Computer Aided Drafting practices using Autodesk's AutoCAD program. Focuses on drawing commands, layering, scaling, dimensioning and text styles as used in construction/design applications. Emphasis on developing production skills. First of a two-class sequence. Open lab.

TDR 112 (5) N
Intermediate CAD Drafting for 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 applications. May introduce isometrics and 3-D concepts. Emphasis on production skills. Prereq: TDR 111 or permission.

TDR 113 (5) N
Basic Drafting

Focus on drafting equipment and its use, basic linework, hand lettering, orthographic projections, isometrics and basic sheet layout. After introduction of basics, student may select discipline options including structures for construction/design HVAC and duct drawings, basic mechanical drawings, packaging design and electronics.

TDR 124 (5) N
Materials & Methods of Construction

Introduces basic materials used in construction, with discussion of manufacturing, design, and assembly processes for large and small buildings. Includes earth work and site development.

TDR 144 (5) N
Design & Construction Environment

Introduces basic organizational, business and legal aspects of the construction/design industry. Includes business forms, contractual obligations, employment issues, registration duties to the public, safety and other issues which may effect business.

TDR 164 (5) N
Systems in Buildings

Focus on major building systems including HVAC, water and waste, fire protection, electrical, and structural. Introduces the Uniform Building Code and types of construction. Historical discussion on heat loss calculation and lateral loads and their resisting elements.

TDR 174 (4) N
Intro to CAD for Architectural & Engineering Drafting

Computer-aided Design (CAD). Uses AutoCAD to produce construction drawings. Discusses of the impact of CAD on productivity and design practice.

TDR 175 (4) N
Intermediate CAD for Engineers & Architects

Continued skill-building with AutoCAD, including isometric and 3-D. Emphasis on techniques to increase productivity, as well as drawing and project complexity. Prereq: TDR 174.

TDR 176 (4) N
Advanced AutoCAD for Architectural & Engineering Drafting

Development of productivity tools such as macros, templates and system customization. Prereq: TDR 175.

TDR 261 (5) N
Contract Drawing Preparation I

Preparation of structural, architectural, and civil design drawings with emphasis on wood frame structures and light commercial buildings. Discussion on building codes, specifications, and building department requirements for obtaining building permits. Drawings to be prepared using Computer-aided Design (CAD). Prereq: 2nd year in program or permission.

TDR 262 (5) N
Contract Drawing Preparation II

Similar to TDR 261 with emphasis on structural steel and concrete structures and the inclusion of site work. Drawings will be prepared using CAD. Prereq: 2nd year in program or permission.

TDR 265 (5) N
Structural Detailing

Preparation of shop drawings for both structural and reinforcing steel using guidelines from American Institute of Steel Construction and Concrete Reinforcing Institute. Follows local shop detailing procedures. Prereq: 2nd year in program or permission.

TDR 270 (5) N
Construction Estimating

Introduces quantity take-offs and pricing of materials by working on problems common to the general contractor. Focus on creating an ordered method. Prereq: MAT 106 or permission.

TDR 271 (5) N
Advanced Estimating

Continuation of TDR 270, covering labor and business costs. Develops a system to prepare cost estimates for complete jobs from current contract documents. Prereq: TDR 270 or permission.

TDR 297 (2-10) N
Special Topics in Construction Engineering Drafting

Study of selected topics in construction engineering drafting as considered appropriate by the instructor and/or CEDT faculty. Course content, format and projects vary depending on topics. Prereq: Permission.

TDR 299 (2-9) N
Drafting Projects

Independent study to explore areas of special interest not normally covered in the drafting program. Prereq: Permission.

CAD for Industrial Applications**EDR 150 (4) N**
Electronics Drafting with CAD Applications

Intended for electronics, engineering design technology and electronic specialization students. Covers equipment usage, basic mechanical drafting concepts, block diagrams, logic diagrams, graphic symbols, schematic diagrams, printed circuit drawings and PC artwork layout. Includes computer-aided drafting skills and manual drafting skills.

EDR 151 (11) N
Intro to Engineering Graphics

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. Intended to be taken concurrently with EDR 163. Prereq: MAT 097.

EDR 152 (11) N
Engineering Graphics for Mechanical Design

Continuation of EDR 151. Emphasis on advanced mechanical assembly drawing practices and concepts. Students 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. Intended to be taken concurrently with EDR 261. Prereq: EDR 151 and 163.

EDR 153 (11) N
Statics & Strengths of Materials for Mechanical Design

Continuation of EDR 152. Introduction to engineering physics through the study of statics and strengths of materials. Examines how forces affect mechanical structures at rest or during unaccelerated motion. Includes frictional forces, concurrent-coplanar, non-concurrent-coplanar, parallel force systems and calculates their resultants, equilibrants or moments. Covers strengths of materials commonly used in mechanical design and manufacturing to study their ability to withstand mechanical and thermal strength of fasteners, bolted or riveted connections and welded joints. Co-Req: MAT 106. Prereq: EDR 152 and 261.

EDR 163 (4) N
Introductory AutoCAD for Mechanical Design

First of a 2-course sequence for learning to use the AutoCAD drafting and design software. Focuses on development of 2-dimensional drawing and editing skills using AutoCAD software to produce engineering drawings for the mechanical design profession. Emphasis on dimensioning, adding text, notes, library symbol and attribute definition, Modelspace and Paperspace drawing set-up and hardcopy output. Uses the most current version of AutoCAD. Co-Req: EDR 151. Prereq: CIS 101 or previous Windows 95/98/NT 4.0 experience.

EDR 164 (4) N
Intro to PRO/Engineer

Encompasses the fundamentals of Pro/Engineer parametric modeling CAD software. Topics include: system fundamentals, base and construction feature creation, sketching techniques, datum construction, application to design task, drawing creation and construction of assemblies from created parts. Prereq: EDR 152 or equivalent.

EDR 165 (4) N
Intro to SolidWorks & Parametric Solid Modeling

First of a 2-course sequence for learning SolidWorks mechanical design and modeling software. Create 3D CAD models using a feature-based, parametric solid-modeling design. Covers base, boss and cut feature creation using extruded, revolved, simple swept or 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. Prereq: EDR 164 or EDR 261 or permission.

EDR 198 (2) N
Electromechanical Drafting Workshop

Problem-solving workshop. Topics may include: study skills, note-taking systems, test-taking strategies and group problem-solving methods. Prereq: Permission.

EDR 251 (10) N
Schematic CAD Drafting & Basic PCB Design

Focuses on drafting of schematic diagrams for electronic circuits and the design of printed circuit boards (PCB) using a major CAD software package dedicated for schematic creation and PCB design. PCB design of boards utilizing standard thru-hole technology and surface mount technology will be covered. Manufacturing methods for PCBs included with lectures in specifications and standards for electronic schematics and design of PCBs.

EDR 252 (10) N
Advanced Printed Circuit Board Design

Continuation of EDR 251. Focus on high-density, diversified printed circuit board design. Projects will be done on PADS PERFORM printed circuit board design software. Board designs will be for digital circuits which will include a mix of analog and other types of circuitry. Board designs will utilize surface mount components. Most instruction will occur in lab situations with the instructor advisement on the placement and routing of integrated printed circuit board designs. Prereq: EDR 251.

**EDR 253 (7) N
Database Applications & Product Design**

Final course in the A.A.S. Degree Program. Advanced database output of completed circuit boards for use in automated fabrication and assembly processes. A design project involving the mechanical design of a small electronic product will be assigned as a final evaluation of the student's competencies in PCB design and drafting skills. Students will be given a schematic diagram of a small electronic product; will perform the conceptual mechanical design of the product, lay out the printed board(s) used in the product and create the necessary documentation required to manufacture the product. An examination covering the major elements of the two-year program will be given.

**EDR 261 (4) N
Advanced AutoCAD for Mechanical Design**

Second course in a 2-course sequence for learning to use the Auto CAD drafting and design software. Intro to advanced concepts in AutoCAD including 3D wireframe, and surface and solid modeling for the mechanical design process. Covers creation of 2D documentation using 3D models and Paperspace drawing set up techniques. Presents data translation using DSF, IGES and SAT file formats for sharing data with other CAD software programs. Prereq: EDR 163.

**EDR 264 (4) N
Advanced PRO/Engineer**

The second quarter of Pro/Engineer includes: Advanced modeling for sheet metal, plastics molding, casting and other processes; additional projects for creation of drawings and assemblies; tolerance stack-ups and interferences; advance engineering topics - import/export, SLA files, mass properties, etc. Prereq: EDR 164.

**EDR 265 (4) N
Advanced SolidWorks & Parametric Solid Modeling**

Second in a 2-course sequence for learning the SolidWorks mechanical design and modeling software. Covers 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 & assembly configuration management, top-down assembly modeling and advanced detail drawing generation among other topics. Prereq: EDR 165 or permission with previous SolidWorks experience.

**EDR 271 (4) N
Drafting & Design for Polymers & Other Materials**

Design and process considerations for plastics, ferrous and non-ferrous metals. Materials definition through chemical and physical properties. Lab, lecture and field trip experiences. Prereq: EDR 153, MAT 116 or permission. Computer fee.

**EDR 272 (11) N
Mechanical Design Applications**

Advanced applications course including industrial design requirements, design proposal, package design and design analysis. Lab, lecture, trips. Prereq: EDR 153, EDR 274, EDR 281 and MAT 116.

**EDR 273 (7) N
Mechanical Product Design Applications**

Continuation of EDR 272. Advanced applications including design study, layout and documentation principles for mechanical packaging designs for electronic products. Includes drawing trees, tolerance studies and interference studies. Prereq: EDR 165, EDR 271, and EDR 272, or EDR 164 and EDR 274.

**EDR 274 (4) N
Geometric Dimensioning & Tolerancing**

For those involved in mechanical drafting, design, engineering, manufacturing and quality control. Covers principles of dimensioning and tolerancing as defined by ANSI Y14.5M-1994, with references to the international standard. Includes detailed comparisons with standard dimensioning practices, symbology application methods, measuring techniques and benefits of geometric tolerancing. Prereq: EDR 152 or equivalent industry experience.

**EDR 275 (7) N
Drafting & Design for Polymer & Other Materials Laboratory**

Designs and process considerations for plastic, ferrous and non-ferrous metals. Materials definitions through chemical and physical properties. Lab, lecture and field trip experiences. Prereq: EDR 271 (may be taken concurrently), EDR 274, EDR 281 or permission. Computer fee.

**EDR 291 (4) N
Advanced AutoCAD Applications**

Includes introduction to AutoLISP, AutoCAD database, 3-D applications and solid modeling. Prereq: EDR 261 or EDR 281.

**EDR 298 (1-5) N
Special Topics in Electro-Mechanical Drafting/Design**

Special topics in electro-mechanical drafting and design with CAD application. Prereq: Permission.

**EDR 299 (1-5) N
Special Projects in Electro-Mechanical Drafting/Design**

Independent study in electro-mechanical drafting in a specialty area assigned and directed by the instructor. Prereq: Permission.

DRAFTING • SOUTH •**Technical Drafting & Design****TDR 121 (4) S
Drafting Technology I**

Basic drafting knowledge, skills, and standards required to prepare three-view and pictorial drawings to current industry standards.

**TDR 123 (4) S
Drafting Technology II**

Basic principles and practices involved in the creation of production drawings including: dimensions and tolerancing; sections; and auxiliary views. Emphasis on standard practices and variations permitted when required for clarity. Prereq: TDR 121 or permission.

**TDR 125 (4) S
Design Models**

Basic course in model work as applied to industry. Includes topographic and architectural displays and functioning mechanical models. Emphasis on the use of tools and materials and the display/model relationship to working drawings.

**TDR 126 (3) S
Space Geometry**

Basic principles of space geometry and use of direct projection techniques to resolve spatial relationships. Emphasis on projection techniques and application of principles to problem solutions. Prereq: TDR 121 or permission.

**TDR 127 (4) S
Drafting Technology III**

Application of standard drafting practices to produce detail and assembly production drawings. Included are unidimensional flat pattern drawings. Prereq: TDR 123 and 126 or permission.

**TDR 128 (3) S
Space Analysis**

Analysis of complex geometric space relationships. Emphasis on problem-solving technologies. Prereq: TDR 126 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 130 (3) S
Applied Descriptive Geometry**

Application of space geometry principles and techniques to problems in architectural, civil and mechanical drafting and design. Prereq: TDR 128 or permission.

TDR 131 (3) S
Intro to CAD 2-D

Understanding of the features, limitations, and considerations associated with the operation of a computer-aided design/drafting (CAD) system. Students will gain hands-on experience using the AutoCAD micro-based CAD software.

TDR 133 (3) 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 160 (5) S
Surveying /CAD Civil

Covers basics of surveying and mapping, to include survey planning and operations, measurement of distances, angles, and elevations. Includes taking field notes, calculating and plotting the survey data. Prereq: MAT 111 and 112 or permission.

TDR 169 (4) S
CAD - Electrical

Drafting techniques and standard practices used to prepare civil drawings. Emphasis on appropriate presentation of data.

TDR 179 (4) S
CAD - Mechanical

Techniques used to prepare mechanical engineering drawings. Includes basic mechanism geometry, detail and assembly drawings, emphasis on appropriate presentation of data.

TDR 226 (3) S
Intro to Computer-Aided Drafting

Intro to interactive CAD system and operation. Covers basic skills required to create and manipulate computer drawings. Hands-on experience. Prereq: TDR 121 or permission.

TDR 227 (3) S
Advanced Computer-Aided Drafting

Advanced CAD skills, including assembly and isometric drawings, symbol libraries, drawing, plotting, advanced drawing, customizing line styles and menus, bill of materials and 3-D modeling. Prereq: TDR 226 or permission.

TDR 228 (4) S
CAD Sheet Metal/HVAC

A basic understanding of CAD operation including interactive graphics systems start-up, setup if drawing session, menus and commands, geometry, editing, drawing storage and retrieval using the latest version of AutoCAD. Prereq: TDR 121 or equivalent.

TDR 229 (2) S
Intermediate CAD

Intermediate level of AutoCAD instruction which includes productivity tools, system customization, database management, slide show, and three dimensional product modeling fundamentals. Prereq: TDR 228.

TDR 230 (3) S
Basic CAD – 3D

Introduces the capabilities of the AutoCAD software to produce both 2-D isometric and basic 3-D graphics. Includes a review of absolute and relative point coordinate and polar coordinate data entry, isometric setup, isometric planes, circles and arcs, and translation of non-isometric objects. Covers true 3-D surfaces and 3-D viewing options. Constructions include the use of X, Y, Z filters, and the user-defined coordinate system (UCS). Prereq: TDR 131.

TDR 231 (3) S
Advanced CAD 3-D

Explores 3-D graphics and construction capabilities of AutoCAD Release 12. Topics include a review of point coordinate entry, X, Y & Z filters, and the user coordinate system (UCS). Introduces spherical and cylindrical coordinate entry along with 3-D viewing options, 3-D geometry construction, surface mesh, region, and solid modeling. Prereq: TDR 131 and 133 or equivalent.

TDR 233 (5) S
Field Specialty Drafting - Civil

Student/instructor designed course covering drafting techniques and practices specific to the field of civil engineering. Prereq: Completion of Technical Drafting & Design certificate.

TDR 235 (5) S
Field Specialty Drafting - Mechanical

Student/instructor designed course covering drafting techniques and practices specific to the field of mechanical engineering. Prereq: Completion of Technical Drafting & Design certificate.

TDR 236 (1) S
Design Project Considerations

Integration of basic elements of a design project; design process, team-working, project planning and management, and project presentation. Prereq: TDR 233 or 235, TDR 231 and MET 102.

TDR 237 (2) S
Design Project– 1

Practical application course utilizing the student's previously acquired skills. Concentration on the civil aspects of a major design project.

TDR 238 (2) S
Design Project– 2

Practical application course utilizing the student's previously acquired skills. Concentration on the aspects of a major design project.

TDR 239 (4) S
Design Project - Mechanical

Application of drafting skills and knowledge to the design and drawing of a moderately complex mechanical system, including development of formed sheet metal parts.

TDR 248 (4) S
CAD Key

Learn entry-level, computer-assisted drafting and design skill using CADKEY software.

TDR 249 (3) S
AUTOLISP

Learn specific skills in programming utilizing AutoLISP, the internal programming language of AutoCAD. Prereq: TDR 226 or six months field experience with AutoCAD or permission.

TDR 250 (3) S
CAD & CAM

Covers the use of G and M codes and MASTERCAM to produce programs to run Computer Numeric Controlled (CNC) equipment. Prereq: IMT 120 or two quarters of computer-aided drafting.

TDR 263 (2) S
Applied Mechanics 1

Graphical methods for determining resultants and equilibrants in coplanar, parallel and non-parallel force systems, such as beams and trusses. For drafting majors.

TDR 267 (3) S
Civil Design Considerations

Intended for Engineering Technology majors. See TDR 237 for description. Prereq: Second-year standing or permission.

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 or permission.

TDR 269 (3) S
Mechanical Design Considerations

Intended for Engineering Technology majors. See TDR 239 for description. Prereq: Second-year standing or permission.

TDR 272 (2) S
Applied Mechanics 2

Covers structural material strength and basic calculations involved when loading structural members and joints. For drafting majors.

TDR 280 (4) S
Geometric Dimensioning & Tolerancing

Basic interpretation of geometric tolerances on engineering drawings. All studies are based on ANSI Y14.5M-1982.

TDR 298 (1-10) S
Special Topics in Drafting

Individual or group study in industrial drafting. Prereq: Permission.

DRAMA**DRA 100 (5) N,C,S**
Intro to the Theatre

Intro to theatrical experience through play analysis, acting, directing, critique, stage and costume design, with emphasis on theatre as a performance art.

DRA 108 (1-5) N
Rehearsal & Performance

Participation in rehearsal and performance process culminating in fall quarter performance. Prereq: Concurrent enrollment in DRA 121, 122, or 123.

DRA 109 (1-5) N
Rehearsal & Performance

Participation in rehearsal and performance process culminating in winter quarter performance. Prereq: Concurrent enrollment in DRA 121, 122, or 123.

DRA 110 (3-5) N,S
Rehearsal & Performance

Participation in rehearsal and performance process culminating in spring quarter performance. Prereq: Concurrent enrollment in DRA 121, 122, or 123.

DRA 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 the character creation for the stage. Covers translating English to ASL. Prereq: ASL 202 or permission.

DRA 115 (5) N
Acting for the Camera

Introduces students to requirements for acting for the camera and how they differ from stage format. Covers elements of "electronic drama," essential technological and dramatic vocabulary and camera acting fundamentals. Students create filmed sequence for presentation. Recommended: DRA 121 and placement in ENG 101.

DRA 116 (4) N
Fundamentals of Acting for the Camera

Abbreviated 4-credit version of DRA 115. Covers the elements of "electronic drama," essential technological and dramatic vocabulary, and camera acting fundamentals. Allows students to create a filmed sequence for presentation. Recommended: DRA 121 and placement in ENG 101.

DRA 120 (5) C
Intro to Acting

Builds a foundation of theory and application with the broad use of improvisational techniques and movement for the actor.

DRA 121 (5) N,C,S
Acting

Theory and practice of acting fundamentals. Exercises in voice, movement, observation and imagination, leading to script analysis. Culminates in scene study, production, and performance process. Recommended: DRA 100 or 120.

DRA 122 (5) N,C
Acting

Continuation of DRA 121 with emphasis on characterization and further scene study. May culminate in public performances. Prereq: DRA 121.

DRA 123 (5) N,C
Acting

Continuation of DRA 122 with further emphasis on scene study, critical analysis, and scoring scripts. May culminate in public performances. Prereq: DRA 122.

DRA 131 (3) C,S
Intro to Technical Theater

Hands-on experience and instruction in various aspects of technical theater, with emphasis on drafting, designing, and construction of scenery. Students learn stage vocabulary, receive information on lighting and sound, take part in producing scenery for department quarterly productions and complete a design of their own. Course may require attendance at local theater productions.

DRA 160 (5) S
From Script to Stage

Intro to modern productions of Shakespearean plays with emphasis on relationship between Shakespeare's scripts and his plays.

DRA 170 (3) N
Theater Appreciation

For non-majors who wish to know more about the theatrical event, specifically within the Seattle area. Students will read and evaluate scripts and performances occurring locally, visit theaters and studios, talk with actors, directors and designers as well as participate in the theatrical experience with a taste of acting and improvisation.

DRA 180 (5) N
Music Theater Production

Covers the techniques of musical theater through participation in the production of a musical. Participation in any one of several areas is possible: acting; dance; stage management; technical theater; and business management. Specific work is contracted between student and instructor. Acquisition of dramatic roles determined by audition. Recommended: DRA 100 or 121.

DRA 182 (4) N
Intro to Music Theater Production

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: MUS 119, 130 and/or DRA 100 or 121.

DRA 200 (1-5) N,C
Series-Special Projects in Drama

Credit granted for individual student initiated and developed performances/projects under faculty supervision. Meets concurrently with other advanced Drama courses or at times to be arranged. Prereq: Permission.

DRA 201/202 (1-5) N,C
Special Studies

Variable credit, special project course. 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.

DRA 204 (5) C,S
Jazz I

Intro into 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.

DRA 205 (5) C,S
Jazz II

Continuation of DRA 204.

DRA 206 (5) C,S
Jazz III

Continuation of DRA 205.

DRA 211 (1-5) N,C
Theater Management

Variable-credit, special-project course in theater management. Content, credit and expectations derived by discussion with students, tailoring projects to student needs, instructor abilities, timeframes, and department activities. Prereq: Permission.

DRA 221 (5) N,C
Advanced Acting

Examination of acting styles and techniques with emphasis on scene study and analysis in contemporary and classical drama. Continuation of acting sequence (DRA 121 through 123). Prereq: DRA 123 or permission.

DRA 222 (5) N,C
Advanced Acting

Continuation of DRA 221. Prereq: DRA 221 or permission.

DRA 223 (5) N,C
Advanced Acting

Continuation of DRA 222. Prereq: DRA 222 or permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

DRA 224 (1-5) N,C
Production & Stage Management

Variable credit, special project course in production and stage management. Content, credit and expectations arrived at through discussion with students, a tailoring of the projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

DRA 231 (1-5) N,C
Props & Sound

Variable credit, special project course in props and sound. Content, credit and expectations arrived at through discussion with students, a tailoring of the projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

DRA 241 (1-5) N
Costuming

Variable credit, special project course in costuming. Content, credit and expectations are derived by discussion with students, tailoring projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

DRA 251 (1-5) N,C
Stage Scenery

Variable credit, special project course in stage scenery. Content, credit and expectations are derived by discussion with students, tailoring projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

DRA 261 (1-5) N,C
Stage Lighting

Variable credit, special project course in stage lighting. Content, credit and expectations are derived by discussions with students, tailoring projects to student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

DRA 271 (1-5) N,C
Acting

Directed study: Acting. Individual projects.

DRA 272 (1-5) N
Acting

Directed study: Acting. Individual projects.

DRA 273 (1-5) N
Acting

Directed study: Acting. Individual projects.

DRA 281 (1-5) N,C
Directing

Variable credit, special project course in directing. Independent in nature, content, credit and expectations. Projects are tailored through discussions with students based on student needs, instructor abilities, time frames, and department activities. Prereq: Permission.

DRA 291/292/293 (1-5) N,C
**Series-Special Projects in Drama:
Theatrical Internship**

Individual student initiated and developed performances/projects under faculty supervision. Meets concurrently with other advanced Drama courses. Prereq: Permission.

DRA 298 (1-5) N,S
Individual Projects in Theater

Individual projects in set design, lighting, costuming, directing, house management, acting, and the like as determined by advanced Drama students and the Drama faculty. Prereq: Advanced standing, permission.

**EARLY CHILDHOOD
EDUCATION****CCE 101 (5) N**
Human Development

A general introduction to the field of child development. The main focus will be to examine through an ages and stages approach physical, cognitive language, social, and emotional development of children from birth through young school age. The use of research in studying children will be explored as well as the major theorists. Students will become familiar with basic observation skills and apply the information gathered to the study of child development.

CCE 102 (2) N
**Issues & Trends in
Early Childhood Education**

Discussion of the profession in 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 113 (3) N
Human Exceptionalities

Emphasizes diversity and a value-based approach to human exceptionalities and disability using a lifespan view. Begins with a historical perspective, followed by an introduction to current trends and practices in early intervention, special and general education, and life-long supports for individuals with disabilities and their families.

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. A major assignment is to evaluate the physical environment of two ECE programs using accreditation criteria from the National Academy of Early Childhood Programs.

CCE 135 (5) N
Foundations of Early Learning

Covers special needs of infants, toddlers and two-year olds in caregiving settings. Topics included are: 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 Children

Introduces 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 (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. Help each other 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 150 (3) N
Teaching Exceptional Learners

Comprehensive update on special education and related issues and trends. Addresses adapting the curriculum for students of all ages, those with mild or significant disabilities, and any students requiring additional academic, behavioral, or linguistic support. Focuses on the supportive role of the paraeducator and the goal of inclusive educational experiences for all students.

CCE 153 (3) N
Creating Inclusive School Communities

Addresses importance of achieving inclusive classrooms for children and youth of all abilities. Explores specific strategies and activities including effective use of teams, cooperative teaching and learning, breaking down barriers to inclusion, and creating environments that recognize strengths and build relationships based on unique gifts and equality. Emphasis on the role of paraeducator.

CCE 154 (6) N
Field Learning Experience

Provides opportunity to continue learning, practicing, and fine tuning all teaching and interaction skills while working with individual and/or a small groups of students.

CCE 159 (4) N Behavior Management	Explores two approaches to discipline – behaviorism and child-centered guidance. On the behavior analysis side, the course covers how to manage the difficult child, administer effective rewards, construct cognitive behavior modification interventions, and build desired new behavior through chaining and shaping. On the guidance side, learn how to construct a social learning environment that facilitates social problem solving and personal responsibility.	N
CCE 160 (2-8) N Connecting to Children	These 4 modules provide an opportunity to demonstrate performances essential to the effective influence of young children.	N
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 project.	N
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.	N
CCE 170 (2-18) N Creating the Conditions for Learning	These 20 modules provide an opportunity to demonstrate performances necessary to create learning environments for children ages 2 to 5. The modules challenge teachers to investigate and engineer the broad range of quality activities that meet the needs and circumstances of one's own school without conflicting with most early childhood models or theoretical approaches.	N
CCE 175 (3) N Mathematics & Design	Presents methods for developing in 3,4 and 5 year-old children a sense of competence and enjoyment in exploring cognitive-mathematical activities. Covers activities for printing, designing, counting, number, sequencing, patterning, graphing, problem-solving, and exploring the world of logical-mathematical thinking. The goal is for children to develop effective habits of mind (wondering, figuring it out, predicting, and challenge seeking) and the ability to work cooperatively with others for extended periods of time.	N
CCE 185 (3) N Physical Education in Early Childhood Education	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.	N
CCE 195 (3) N Art for Young Children	Covers the means of providing the experience of art to young 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.	N
CCE 214 (3) N Building Learning Communities	Explore creating a learning community in a childcare or school age program including the use of effective communication skills, team building, motivation of parents and staff, and collaborative work on project goals. Covers the growth of parents as part of the learning community, and how to work with non-profit boards to support programs.	N
CCE 232 (4) N Parent Involvement in Early Childhood Education	Examines all the ways teachers can open themselves and the school to include parents as a part of the learning community. Includes a discussion of 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.	N
CCE 234 (3-4) 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.	N
CCE 240 (3) N Anti-Bias Curriculum	Examines anti-bias curriculum in early childhood education. Students evaluate learning environments and develop activities and materials that contribute to the sensitive inclusion of all peoples in the classroom community. Prereq: AME 150 (America's Ethnic History) or AME 151 (Societies and Cultures of the United States).	N
CCE 261 (1-6) N Reading 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	N
CCE 266 (3) N Building Thoughtful Expression	Explore the effects of television upon development, inquire into what thinking means, and develop the ability to facilitate the ability to think in young children. Introduces discoverable tutorial questions, simplifications, and levels of abstraction, and explores natural activities designed to develop the courage to participate in thinking and thoughtful dialog.	N
CCE 285 (5) N The Project Approach	For experienced teachers, who have been teaching several years, to explore how learning objectives assessment, and emergent curriculum combine to foster a creative, personally expressive, co-active, celebratory curriculum for a democratic learning community.	N
CCE 292 (12) N Classroom Research	Use your 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, discussion of quality education will be examined. Students will analyze their current knowledge and actions in their Early Childhood Education classroom.	N
ECONOMICS		
ECO 100 (5) N,C,S Survey of Economics	Basic principles of economics, determination of national prosperity, income inequality, the role of government, price determination, allocation of resources, economic systems, and market behavior.	N,C,S
ECO 102 (5) N,C,S Public Economics & Government	Politics, decision making, and current events of American government are examined by basic principles of economics. Emphasis on the role of government related to economic efficiency within the context of diverse political interests.	N,C,S
ECO 200 (5) N,C,S Principles of Economics/Microeconomics	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. Fulfills Global Studies requirement for the A.A. degree. Prereq: Intermediate Algebra or equivalent.	N,C,S
ECO 201 (5) N,C,S Principles of Economics/Macroeconomics	Analysis of the aggregate economy: GDP, inflation, business cycles, unemployment, fiscal and monetary policies, federal deficits, and international trade and finance. Prereq: Intermediate Algebra or equivalent.	N,C,S
ECO 203 (5) N,C Contemporary Problems in Economics	Analysis of current major economic problems and policies of a national and regional nature; economic growth, unemployment, poverty, inflation, and other specific topics.	N,C

ECO 215 (5) N,C
Intro to International Business

Examines business operations, private enterprise and governmental relationship in a world environment including investments, marketing, transportation, trade agreements, management and production decisions, and financial analysis. May be taken for business credit as BUS 215.

ECO 240 (5) N
The 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.

ECO 298 (1-5) N,C,S
Special Topics in Economics

Independent study or field work in selected economics topics under the supervision of sponsoring faculty. Prereq: Permission.

EDUCATION

EDU 102 (5) C
Families & Their Urban Environment

(Also listed as GEL 102.) Explores geologic processes and human life, and geologic solutions to environmental problems. Topics include recycling, impact of urban household waste/dumping on rural communities, environmental racism, and the impact of the urban environment on family health. Families' role in environmental awareness and family/community level problem-solving are studied. Prereq: Eligibility for ENG 101 and MAT 085.

EDU 197/198/199 (2-5) N,C
Education Community Service

Students volunteer in an educational setting, serving as literacy or ESL tutors in an on- or off-campus environment. Prereq: Permission.

EDU 200 (1-5) N,C,S
Peer Tutoring

Tutor training and/or experience. Focus on tutoring techniques and problems in any setting. For more information contact Humanities Division at North (206-527-3709) or Central (206-587-4164); Science and Mathematics Division at Central (206-587-3858); Languages & Cultures (206-344-4347); or the College Transfer Division(s).

EDU 201 (5) C
Intro to Education

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 Washington state student learning goals including the Essential Academic Learning Requirements (EALRS) for student learning.

EDU 210 (5) C
Intro to Bilingual Education - Strategies & Methods

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.

EDU 211 (5) C
Intro to Bilingual Education - History & Theory

Focus on historical, legislative, and sociopolitical 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.

EDU 220 (3) C
Assessing the Bilingual Student - Consideration for Regular & Special Ed Teachers

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.

EDU 250 (1-3) C
Paraprofessionals & Teachers: A Partnership

Comprehensive introductory course including knowledge and skills for 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.

EDU 271 (5) C
ESL Reading & Language Arts

Participants will learn methods of assessment, placement, and instruction of ESL students in reading and language arts. Instructional techniques focusing on the literacy level and age of the ESL student; integration of reading and language arts.

EDU 272 (5) C
Integrating ESL in the Mainstream Classroom

Specifically designed 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. Participants will be given a wide repertoire of strategies drawn from bilingual, ESL and mainstream methodologies.

EDU 291 (5-10) C
Using the World as a Classroom

Provides a unique opportunity to earn credit for various travel/study experiences in an international setting.

EDU 298 (9) C
ESL Methods for Diverse Language Students

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.

ELECTRONICS

Industrial Power & Control Technology

EPT 112 (5) N
Fluid & Power Mechanics

Practical and applied course on hydraulic, pneumatic, and mechanical systems commonly found in industrial applications today. Terminology, documentation, symbols and typical devices are studied and applied to give a working knowledge of these systems. Electro-mechanical and electro-hydraulic systems are also covered along with associated electronic controls.

EPT 197 (2-10) N
Special Topics

Study of selected topics as considered appropriate by the instructor and/or faculty. Course content, format, and projects vary depending on topics. Prereq: Permission.

EPT 220 (9) N
AC & DC Rotating Machinery

Quantitative analysis and practical laboratory verification of the performance of balanced three phase circuits, transformers, AC machines and DC machines.

EPT 221 (9) N
Motor Controls & PLC's

Analysis of the various techniques and components used in controlling the starting, stopping, reversal, acceleration and braking of both AC and DC motors. Emphasis is placed on reading and designing elementary and wiring diagrams. Introduction to programmable logic controllers (PLCs) is given followed by the practical application and programming of both the Square D SY/MAX and Allen-Bradley PLC-5.

EPT 222 (9) N
Variable Speed Drives & Servosystems

Study of both DC and AC variable speed drives. Review of thyristors used for power control in both DC and AC environments. Analysis of DC thyristor drives, AC inverter drives and flux vector drives, servosystems and servodrives, including review of closed loop feedback control. Overview of the National Electric Code including the study of code sections pertaining to sizing and installation of motors and motor control stations.

EPT 230 (5) N
Industrial Electronics-Digital

Intro to logic fundamentals, logic IC families and their characteristics, logic controls and associated circuitry. Topics include number systems, binary codes, logic gates, simplifying logic circuits, code conversion, flip-flops, clocks and timers, counters, shift registers, arithmetic circuits, TTL and CMOS circuits, semiconductor memories, D/A and A/D conversion, data communication, industrial applications, and microprocessors.

EPT 231 (5) N
Industrial Electronics-Analog

Study of analog devices, circuits and systems commonly found in industrial applications. Emphasis on the operational amplifier and the thyristor. Other topics include input transducers, optoelectronics, servomechanisms and industrial process control.

EPT 252 (5) N
Digital & Data Communication

Intro to digital and data communications, including systems and network topologies, telephone systems, grounding and low-speed data communication. Course is orientated toward industrial applications.

EPT 298 (1-5) N
Special Projects

Special problems course for students interested in furthering their study in industrial power and control technology. Prereq: Permission.

EPT 299 (1-7) N
Special Projects

Independent assignments in industrial power and control technology, under instructor supervision. Prereq: Permission.

evening program
Industrial Power & Control Technology**EEL 201 (5) N**
Industrial Transformers & Motors

First course in three-quarter sequence of evening classes offered in industrial power and control technology. Covers the fundamentals of electricity and magnetism, single phase and three phase circuits, transformers and electrical machines (AC and DC rotating equipment).

EEL 202 (5) N
Industrial Motor Controls

Second course in three-part series. Study of sequential control. Covers electromagnetic control devices and circuits for starting, accelerating, stopping, and reversing AC and DC motors. Also covers programmable logic controllers. Basic control circuits will be programmed on both the Square D SY/MAX line of PLC's and the Allen-Bradley PLC-5. Prereq: EEL 201.

EEL 203 (5) N
Industrial Motor Drives

Third course in three-course series. Fundamentals of power electronics and electric drives, electronic control of direct current and alternating current motors. Advance PLC (Programmable Logic Controller) programming, and the use of a PLC to control and electric drive are included in lab study. Prereq: EEL 202.

ELECTRONICS TECHNOLOGY

Also including:

Electronic Engineering Technology**Biomedical Equipment Technology****Digital Computer Electronics Technology****Electronics Communication Technology****EET 097 (3-6) N**
Understanding Electricity & Electronics

Practical, hands-on survey of electricity and electronics with lab projects. Covers DC/AC, semiconductors, and digital concepts and applications. Also includes safety issues, house wiring and household electronics.

EET 105 (3) N
Intro to Technology

Survey disciplines within the field of electronics and technologies related to electronic occupations to provide knowledge of the standards, practices and skills necessary for employment in electronic-related occupations.

EET 106 (2) N
Soldering & Safety in the Workplace

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 (4) N
Principles of Electronics

Equips learner with ability to analyze series and parallel circuits, measure circuit values with electronic test instruments, construct AC and DC circuits, and solve for unknown circuit variables. Basic concepts of energy, work, power, current, and voltage, as well as Ohm's and Kirchhoff's laws. Introduces magnetism, inductance, capacitance, transients, and AC theory and circuit analysis. Prereq: High school algebra.

EET 108 (4) N
Principles of Electronics, Laboratory

First in a series of courses designed for an in-depth study of electronics. Guided by performance goals, learn to analyze series and parallel circuits, measure circuit values with electronic test instruments, construct AC and DC circuits and solve for unknown circuit variables. Covers basic concepts of energy, work, power, current and voltage, as well as Ohm's and Kirchoff's laws. Includes an introduction to capacitance, transients, and AC theory and circuit analysis. Computer models will be used throughout accompanying hands-on labs. Prereq: High school algebra. Course is to be taken with EET 107.

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.

EET 112 (6) N
Fundamentals of Fluid Power & Electromechanical Systems

Intro to power transmission and control including mechanical, electrical/electronic, fluid power and related technologies. Covers fundamentals of industrial motion and control, mechanical, hydraulic and pneumatic systems, DC/AC motors, single-phase and three-phase transformers, motor controls, ladder logic diagrams, programmable logic controllers, power electronics and adjustable speed drivers.

EET 114 (5) N
Applied Physics

A comprehensive and practical coverage of physics for students in a vocational technical field. The course covers the basic laws of physics as applied to mechanics, matter and heat, wave motion and sound, electricity and magnetism, light and modern physics. Physical concepts as applied to industrial-technical fields are emphasized. Applications are used to improve the physics and mathematics competence of the student.

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: MAT 106 and 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. Co-Req: EET 117.

EET 127 (4) N
Intro to Digital & Analog Circuits

The third course in a series designed for 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: MAT 106, EET 107, and EET 117. Co-Req: EET 128.

EET 128 (4) N
Intro to Digital & Analog Circuits, Lab

Lab to accompany EET 127. Includes construction, debugging and adjustments of analog and digital circuits. Circuit performance is evaluated and compared 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 activity. Prereq: MAT 106 and EET 117. Co-Req: EET 127.

EET 130 (9) N
Computer Basics – A+ Certification

Introduction to basic computer knowledge and skills necessary for a network specialist. Emphasis on computer component integration and problem solving techniques. Introduces troubleshooting from a hardware and software approach and 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 161 (5) N,C
DC Principles of Electronics

Physics application to electricity and magnetism, electrical and electronic terms and units. Introduction to electronic measuring devices, electrical circuits, meter movements and DC circuit analysis. Prereq: High school or elementary algebra, MAT 101 or equivalent.

EET 162 (5) N
AC Principles of Electronics

Covers AC theory and principles. Prereq: MAT 109, EET 161 or equivalent, or acceptable score on electronics advanced placement test.

EET 163 (5) N
Solid State Electronics I

Analysis of characteristics of semiconductor devices and their application in common electronic circuits. Covers construction of simple power supplies and more complex amplifier circuits and regulators. Includes construction and measurement of devices and circuit parameters to verify math analysis of circuits designed.

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 I

Explanation of the op-amp, its nomenclature, IC package pin identification, characteristics and parameters. Prereq: EET 163.

EET 166 (5) N
Analog Circuits & Devices II

A further study of common analog devices, circuits and subsystems commonly found in the fields of communication and industrial controls. Prereq: EET 165 or equivalent.

EET 167 (5) N
Basic Electronic 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
Electronic Systems & Industrial Applications

Continues the applications of digital and analog circuitry to industrial measurement and control problems. Transducers, final control elements and interfacing are discussed. Emphasis on automated test equipment and programmable controllers. Prereq: EET 167.

EET 170 (5) N
Digital Circuits I

Fundamentals of digital electronics from simple concepts to interface circuits. Prereq: EET 165 or equivalent, or acceptable score on electronics advanced placement test.

EET 171 (5) N
Digital Circuits II

Continuation of EET 170. Logic fundamentals, logic IC families and their characteristics, logic controls and associated circuitry. Construction of logic control circuits and measurement of circuit parameters and functions. Also studied: logic numbering systems, Boolean algebra, detectors, combinational logic minimization techniques, ADA converters, memories and registers. Introduction to microcomputers and microprocessors.

EET 197 (2-10) N
Special Topics in Electronics

Study of selected topics as considered appropriate by the instructor and/or faculty. Course content, format, and projects vary depending on topics. Prereq: Permission.

EET 198 (1-2) N,C
Electronics Workshop

Open lab with instructor. Analog and digital course work enhancement. Other topics may include proper use of bench equipment, troubleshooting techniques, study skills, and group problem-solving.

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. Co-req: EET 208.

EET 208 (4) N
Advanced Principles of Electronics Laboratory

Laboratory course to accompany EET 207. Laboratory assignments cover circuit construction and measurement using power supplies, multimeters, oscilloscopes and other test equipment. Co-Req: EET 207.

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. Co-Req: EET 218. Prereq: MAT 118, EET 127, and EET 207.

EET 218 (4) N
Digital & Analog Circuits II, Laboratory

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. Co-Req: EET 217. Prereq: MAT 118, EET 127, EET 207.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

EET 241 (5) N
Principles of Telecommunications I

Introductory overview of basic telephony. Telephone apparatus and plant design, network design, network traffic planning, private networks, and switched networks, data systems, and testing equipment are presented through classroom activities and hands on lab experiences.

EET 251 (5) N
Microprocessor Fundamentals I

Intro to microprocessors and microcomputer systems. Covers microcomputer architecture, system organization, simple programming in machine and assembly language, interfacing I/O devices, and troubleshooting. Prereq: EET 210 or EET 170, and CSC 109 or equivalent.

EET 252 (5) N
Microprocessor Fundamentals II

Continuation of EET 251. Prereq: EET 251 or equivalent.

EET 271 (1-10) N
Advanced Technical Modules in 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. Formats include lectures, labs, independent research, and demonstration. Co-Req: EET 217 and EET 218; some modules may have additional requirements. Prereq: EET 112, EET 207 and EET 208.

EET 276 (1-10) N
Advanced Technical Modules in Power & Industrial 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. Formats may include lectures, labs, independent research, and demonstration. Co-Req: 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-oriented course serving as capstone experience. Students will plan, design, implement and present an electronics-oriented project of suitable complexity. Projects may make use of sensors, motors, optics, pneumatics, hydraulics, digital and analog circuitry, and software. Emphasis on application of technical knowledge, teamwork and effective project management. Prereq: EET 217, EET 218.

EET 286 (5) N
Biomedical Equipment I

Circuits and concepts for clinical equipment. Focus on patient monitoring equipment and servicing techniques. Includes hospital overview, biopotentials, electrocardiograms, hospital safety, transducers, amplifiers, defibrillation, blood pressure and infusion pumps. Preparation for patient monitoring sections of BMET Cert. test. Prereq: EET 211, EET 251, AHI 100, CHE 110, ZOO 128 or equivalent.

EET 287 (12.5) N
Biomedical Equipment II

Continuation of biomedical equipment theory. Advanced operation, repair, and preventive maintenance. Focus on electrosurgery, respiratory equipment, electroencephalography, pacemakers, clinical lab, ultrasound, radiology and nuclear medicine.

EET 291 (1-4) 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. (55 hours of job-related work experience = 1 credit.) Prereq: Completion of appropriate amount of designated program and permission.

EET 297 (4) N
Biomedical Technician Externship

Work experience in a hospital, clinic, laboratory or with equipment manufacturer. Students are assigned positions by instructor that provide experience similar to an entry-level biomedical equipment technician. Highest degree of responsible and ethical behavior expected of students in this program. 200 hours of externship = 4 credits. Prereq: Completion of EET 286 and permission.

EET 298 (1-5) N
Special Topics in Electronics Technology

Selected topics in electronics technology. Content and projects vary depending on topics. Prereq: Permission.

EET 299 (1-7) N
Special Projects in Electronics

Independent electronics study project assigned and directed by the instructor. Prereq: Permission, and enrollment in electronics program.

**EMERGENCY MEDICAL
TECHNICIAN (EMT)****AHE 190 (8) N**
Emergency Medical Technician

Upgrade emergency medical care skills. Meets the Washington State Department of Social and Health Services criteria for EMT certification. Prereq: Contact the Health/Medical Division office.

AHE 191 (2-5) N
EMT - Continuing Education

Provides continuing education for EMTs to meet annual requirements for recertification. Prereq: Certified, or Licensed emergency medical technician status.

ENGINEERING**Civil Engineering Technology****CET 230 (3) S**
Construction Technology

Basic analysis and design of timber and concrete structures and application of codes and material specifications. Prereq: EGR 124 and MAT 113.

CET 299 (variable) S
Special Topics in Civil Engineering

Special topics course in an individual or group study basis in the Civil Engineering Technology field. Prereq: Permission.

**Mechanical Engineering
Technology****MET 102 (3) S**
Creative Technical 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
Electronic Assembly (Short Term Training)

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 205 (4) S
Technical Statics

Study of forces and force systems in equilibrium. Includes analysis for forces in trusses, frames and machine components; additional topics include friction, location of centroids, and evaluation of area moments of inertia. Prereq: MAT 113.

MET 210 (4) S
Technical Strength of Materials

Principles of tension, compression, and shear stress are studied 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. Students are given problems for which they must build a hydraulic circuit with actual components in the fluid power laboratory.

MET 298 (1-10) S
Special Topics in Mechanical Engineering

Special topics course for an individual or group study basis in the mechanical engineering technology field. Prereq: Permission.

Engineering (Pre-major)

EGR 110 (1) S
Engineering Orientation

Covers fields of engineering, career options, and general information. Offered on a Satisfactory (S) grade basis only.

EGR 111 (4) S
Engineering Design & Creativity

Understanding of the creative process by examining the nature of creativity and its process. Group and individual projects will stimulate creativity in engineering design. Introduction to analysis and solution of engineering problems, applications of vectors and calculus in statics and dynamics.

EGR 123 (4) N,C,S
Intro to Engineering & Graphics Design

Covers principles of orthographic projection, free-hand sketching, pictorials, lettering, scales and use of instruments, basic dimensioning and descriptive geometry. Introduction to computer-aided and designed drafting. Prereq: MAT 122.

EGR 124 (4) S
Engineering Graphics

Continuation of EGR 123. 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: EGR 123.

EGR 140 (5) N,C
Engineering Problems

Covers problem-solving methods; analysis in measurements, probability and statistics; dimensions and unit systems; vector algebra; introduction to scalar statics. Prereq: MAT 122.

EGR/CSC 142(5) C,S
Computer Programming for Engineers

Central: Learn the general principles of modern programming, including how to design, implement, document, test and debug computer programs. Based upon Java. Covers objects, messages, expressions, statements, methods, classes, conditionals, iterations, arrays and collections.

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 MAT 122 (C,S).

EGR 161 (5) N,S
Plane Surveying

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.

EGR 170 (4) S
Intro to Material Science

Survey of materials used in engineering. Covers physical and chemical principles related to structure, properties and engineering applications. Materials studied will include metals, alloys, semiconductors, polymers, ceramics and composites. Prereq: CHE 140.

EGR 171 (1) S
Material Science Lab

Through hands-on, practical application, gain a better understanding of the terminology of engineering materials and of methods used to solve materials problems. Experiments reinforce and expand upon the knowledge gained in EGR 170. Includes a tour of an industrial materials testing lab. Prereq: EGR 170.

EGR 210 (5) N,C,S
Engineering Statics

Covers statics, Newton's Laws, resultants, force systems, equilibrium diagrams, analysis by vector algebra of two- and three-dimensional structures, frames, machines, trusses, beams and friction. Prereq: MAT 125 and EGR 140 or PHY 201.

EGR 215 (5) N
Fundamentals of Electrical Engineering

Basic circuit and systems concepts. Resistors, sources, capacitors, inductors and operational amplifiers. Solution of first and second order linear differential equations associated with basic circuit forms. Prereq: PHY 202 and MAT 125 (N).

EGR 220 (5) N,C,S
Mechanics of Materials

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: EGR 210 and MAT 125.

EGR 230 (5) N,C,S
Engineering Dynamics

Study of motion and the forces which affect the motion, includes rectilinear motion, curvilinear motion, plane motion, dynamic force analysis, work and energy, impulse and momentum. Prereq: EGR 210 with 2.5 or higher and MAT 126.

EGR 231 (3) N
Technical Writing

Explores basic formats and mechanics of writing demands in occupational areas related to engineering technologies. Emphasis concerns project types; layout and design; use of illustrations, schematics, and mathematics; writing for specific audiences; research and documentation. Supplemented with component on résumé writing. (Not recommended for first-year students.) Prereq: ENG 101 for most degrees and all EGR transfer students. Fulfills portion of transfer requirements for UW Engineering Programs.

EGR 260 (5) N,C
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: MAT 126, PHY 202, and CHE 140.

EGR 298 (1-5) N,C,S
Special Topics

A seminar of selected topics and/or activities in engineering. Prereq: Variable, dependent on topic.

EGR 299 (1-5) N,C,S
Independent Study

Independent study of approved engineering topics. Prereq: Permission.

ENGLISH

See the "Languages & Literature" section, page 237.

ENVIRONMENTAL SCIENCES

ENV 150 (5) N,C,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.

ENV 170 (5) S
Energy & Resources: Now & Future

Study of energy and other resources, including simple descriptions and definitions, personal needs and uses, and worldwide production and consumption now and in the future. Discussion on energy and resource alternatives.

ENV 201 (5) N,S
General Ecology

Covers the nature of ecosystems, energy flow, biogeochemical cycles, population dynamics, organization and dynamics of communities, and identification of environmental problems.

ENV 203 (5) N,S
Environmental Issues & Problems II

Discusses 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.

ENV 221 (5) 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.

ENV 298 (1-5) N,C,S
Special Topics

Seminar of selected topics and/or activities. Prereq: Variable, dependent on topic.

ENV 299 (1-5) N,C,S
Independent Study

Independent study of approved topics in environmental sciences. Prereq: Permission.

FILM & VIDEO COMMUNICATIONS**COM 101 (5) C**
Television Theory & Camera Composition

Intro to the fundamental concepts and basic techniques for single camera video production. Emphasis on becoming an active member of a production team and working through each stage of the production process. Covers: video as communication and artistic expression; developing treatments, outlines, and scripts; how to organize and direct a production crew; operating and understanding the function of video cameras, sound equipment, and lights; the rudiments of production design and video editing; operating outside the studio setting; and professional behavior.

COM 102 (5) C
Television Production & Post-Production

A continuation of COM 101, builds on the fundamentals of single-camera video production. Emphasis on students as active members of a production team and working through each stage of the production process. Introduces importance of pre-production, and a greater, more sophisticated level of detail is expected in writing, casting, blocking, designing, shooting and editing. Requires team projects and full participation in an in-studio class project designed to maximize each student's contribution and achieve a high technical standard under professional conditions. Explores post-production process and its role in shaping a final video piece.

COM 103 (5) C
TV Production Crew & Team Projects

A continuation of COM 102, builds on fundamentals of single-camera video production. Emphasis on students as active members of a production team, working through each stage of the production process.

COM 130 (3) C
Television Production Design

Intro to principles and processes of production design for television. Covers all aspects of television production design, including lighting, color, sets, props, plans, construction and painting. Augments coursework in COM 102.

COM 140 (3) C
Intro to Media Images

Introduces analysis of how sound and moving images are used in film, video, television and multimedia. Examines how these forms differ, what components they share, and how images and sound convey meaning. Through readings, class viewings, discussion, and written critiques, students learn to identify and describe the elements of production, develop a critical awareness of the aesthetics of the moving image, and explore the process of how scripts are realized in production.

COM 197 (1-5) C
Film & Video Communications

Allows students to earn work experience credit in the video field. Prereq: Permission.

COM 200 (4) C
Small Group Productions

Lab opportunity to create a variety of video projects within minimal crew environments. Introduces our 3/4 inch and S-VHS video cameras and editing systems. Concentrates on team production that would include in-studio multi-camera live-to-tape exercises, single camera news and documentary presentations, and single camera film style narrative pieces.

COM 214 (3) C
History of Film & Video

Examines development of film as art and entertainment: its early beginnings as novelty and sideshow; its refinement as an art form; its central role in mass culture. Emphasis on narrative film from the United States and abroad. Our viewings will consist of works that are significant because of their place in history, their artistic worth, or their stylistic interest.

COM 215 (3) C
Media Law & Ethics

Intro to the basic legal concepts applicable to the film, video and online industries, with particular emphasis on practical applications of the law.

COM 225 (5) C
Advanced Television Productions & Applied Communications

Explores single camera and multiple camera techniques in the production of television programs. Introduces visual style through lectures, hands-on workshops and individual and group projects. Also a lab course to produce and post produce material for their professional reels and Spring Showcase. Two written assignments will be submitted. Any number of scripts will be selected to be experimented with in workshops that will cover staging and blocking in both single camera and multiple camera environments. All class members will be expected to take on a variety of crew positions during these workshops and will be graded according to individual effort, quality of work and professional attitude.

COM 230 (2) C
Technical Operations

Provides extensive hands-on use of control room equipment including: an edit controller, switcher, effects generator, character generator, wave form monitor, time base corrector, audio board and communication system. Prereq: Second-year standing in the Film and Video Communications program.

COM 235 (3) C
Production/Management

Explores the complex process of analyzing, organizing, budgeting and implementing video and film scripts through lectures and hands-on workshops. Examines production management of projects that range from small format student video and film projects, commercials and PSAs, educational, industrial, to episodic television and feature motion pictures. Links with COM 200 (Small Group Productions) works in progress.

COM 236 (3) C
Audio Production

Exploration of the basics of sound theory, capture, creation, manipulation and duplication as it applies to video production.

COM 240 (3) C
Production Operations

Ongoing workshop to experience, in detail, what it takes to launch an in-studio, magazine format television program. Reviews pertinent material through brief lectures, and covers various phases of a production of their choice. Students create their own program to tape in the studio with at least two 3/4 inch cameras. Includes field trips to a local TV station, post production facility, and equipment rental service.

COM 250 (2) C
Portfolio Preparation

Explores careers in video, film, broadcast, corporate television and digital media. Focuses on students' career goals, job searching strategies and development of professional portfolios. Prereq: 2.0 or higher in all previous 200 level courses or permission from Associate Dean of Communications & Design division.

COM 260 (3) C
Directing

Focuses on the Director's role in bringing into play the myriad of elements involved in the creation of film and video productions through lectures, workshops and class assignments. Emphasizes aesthetic and technical choices that the Director might encounter through group exercises and personal guidance.

COM 270 (3-5) C
In-House Productions

Student Producers develop and manage short format, "sponsored" video projects. Topics may include: commercials, PSAs, corporate image and public relations material, personal profiles, and other works that would entail a working relationship between Client and Student Producer. Projects must not exceed two minutes running time unless pre-approved by the Instructor. Scripts developed during fall and winter quarters that meet the criteria stated above may be eligible for production this quarter. This course will be offered strictly as a lab. Assuming the role of Facilitator and Executive Producer, the Instructor will have final say regarding all aspects of each production and will oversee each project to completion.

COM 298 (1-5) C
Special Topics in Applied Visual Communications

Seminar on selected topics or activities in video communications. Prereq: Permission.

COM 299 (5) C
Individual Studies - Applied Video Communications

Independent study course of selected topic(s) in video communications. A mutually agreed-upon research project is assigned by the appropriate supervising faculty. Prereq: Permission.

FOREIGN LANGUAGES

See the "Languages & Literature" section, page 237.

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 recommends that students entering a World Language 101 class have attained eligibility for ENG 101. For information, contact the Humanities Division (N), Languages and Cultures Division (C), or College Transfer Division (S).

GENERAL EDUCATIONAL DEVELOPMENT

To take free GED classes, a student must be a U.S. citizen, have a green card, or be a refugee or immigrant.

GED 050 (1-15) N,C,S
Basic GED Preparation Level 5

Designed to prepare learners to successfully pass any two of the five GED subject-area tests.

GED 051 (1-15) N,C,S
Basic GED Preparation Math Level 5

Designed to prepare learners to successfully pass the GED Math test.

GED 052 (1-15) N,C,S
Basic GED Preparation Comm Level 5

Designed to prepare 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) N,C,S
Basic Computer Assisted GED Preparation Level 5

Provides learners the opportunity to improve their general reading, writing, math and test taking skills for the GED tests through the use of microcomputers and relevant basic skills software.

GED 060 (1-15) N,C
Advanced GED Preparation Level 6

Designed to prepare learners to successfully pass the three remaining GED tests needed to complete the Official GED certificate.

GED 061 (1-15) N,C
Advanced GED Preparation Math Level 6

Designed to prepare learners to use the necessary math concepts and applications needed to successfully pass the math portion of the official GED test.

GED 062 (1-15) N,C
Advanced GED Preparation Comm Level 6

Designed to help learners improve their 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) N,C
Advanced Computer-Assisted GED Preparation Level 6

Provides learners the opportunity to continue to improve their general reading, writing, math and test taking skills for the GED tests through the use of microcomputers and relevant basic skills software.

GEOGRAPHY

GEG 100 (5) N,C,S
Intro To Geography

Intro to major concepts of geography, including patterns of human occupancy, analysis of population, settlement, resource use and environmental concerns.

GEG 120 (5) N
Southern Africa - The Winds of Change

Focus on the current racial situation in South Africa. Attention given to U.S. interest in the region. Course includes discussion of Sub-Saharan Africa as it applies to South Africa.

GEG 155 (5) C
Global Political Geography

Survey of political geography and scientific theory, offering students an analytical understanding of forces that affect the territorial and functional role of the state in today's world. Contemporary cases of territorial and functional change among states are examined.

GEG 200 (5) N,C,S
Intro to Human Geography

Introduces 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.

GEG 205 (5) N,C,S
Physical Geography

Survey of character and location of different types of land forms, climates, soils, vegetation, minerals, water resources and significance to human occupancy. Meets natural science requirement.

GEG 207 (5) N,C,S
Economic Geography

Focus on human survival. Examination of 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.

GEG 230 (5) N,C,S
Urbanization in Developing Nations

Focus on cities in their cultural and economic contexts, geographical patterns, internal structure, problems facing these rapidly growing cities and selected policy solutions.

GEG 260 (5) N
Geopolitics of the Middle East

Geopolitics is the “game” nations “play” to extend influence and control over nations. Course focuses on the “game” as it relates to the Middle East, Arabs, Afghans, Persians, Egyptians, Israelis, Palestinians, and current events, and the geopolitics of petroleum. Course material is controversial. Course fulfills the Global Studies requirement for the A.A. degree.

GEG 298 (1-5) C,S
Special Topics in Geography

Independent study in selected geography topics under faculty supervision. Prereq: Permission.

GEOLOGY**GEL 100 (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. Introductory history of the biosphere, Earth's climate and its changes.

GEL 101 (5) N,C,S
Physical Geology

Covers the origin and development of minerals and rocks, changing features of the Earth's crust and the processes that have shaped these features. Lab included. One Saturday field trip required.

GEL 102 (5) N,S
Geology & the Human Environment

Focus on the effects of geologic processes and materials on human activity and vice versa. Emphasizes awareness of geologic aspects of our everyday environment including problems, formulation, and evaluation of solutions. Lab included. Three Saturday field trips required.

GEL 103 (5) N,S
Evolution of the Earth

Study of 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. One Saturday field trip required.

GEL 104 (5) N
Intro to Remote Sensing/GIS

Covers the fundamentals of ArcView and satellite remote sensing and the basics of using a geographic information system (GIS) to analyze and draw conclusions about the geology of Seattle and larger areas. Prereq: GEL 101, or PHY 103, or CHE 150, or equivalent or permission.

GEL 105 (5) C
Introductory Field Geology

Survey of main topics in 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. Practical field exercises involve data collection, analysis and presentation by small groups. Course requires extended overnight stays.

GEL 115 (1) N,C
Geology of the Northwest

A one-day field trip and five hour lecture on active and ancient geology in the Pacific Northwest. Covers faults, glaciers, fossils, landslides, and the Cascade Mountain Range. Equivalent to SCI 115.

GEL 118 (1) N,C
Volcanoes of the Northwest

Introduction to the origin and destruction of the Cascade volcanoes. May cover Mt. St. Helens, Mt. Rainier and Glacier Peak. Includes five hour lecture and one day field trip. Equivalent to SCI 118.

GEL 200 (5) N,S
Geology of the National Parks & Monuments

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.

GEL 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. Two Saturday field trips required.

GEL 208 (5) N,C,S
Geology of the Pacific Northwest

Covers the geologic history and description of Washington, Oregon and Idaho, and selected nearby areas. Emphasis on use of geologic principles to interpret present landscapes. Lab and field trips included. Prereq: GEL 101 or permission.

GEL 298 (1-5) N,C,S
Special Topics

Seminar on selected topics or activities in geology. Prereq: Variable, dependent on topic.

GEL 299 (1-5) N,C
Independent Study

Independent study of selected geology topics. Prereq: GEL 101 and permission.

GRAPHIC DESIGN & ILLUSTRATION**DES 101 (3) C**
Drawing I

Provides the fundamentals of drawing, especially as they apply to graphic design and illustration. Emphasis on spatial perception, composition, accuracy and the ability to develop an idea.

DES 102 (3) C
Drawing II

Draw the human figure from live models. Various media and techniques will be used to create form with line and tone. Emphasis on drawing accurate, dynamic and expressive representations of the human figure using elements of design in good composition.

DES 103 (3) C
Drawing III

Conceptualize and illustrate drawing skills and principles, including spatial perception, composition and figure drawing. Plan illustrations to fit within the context of a typographic design and layout.

DES 109 (2) C
Graphic Design Business Practices

Intro to professional issues, ethical standards, pricing, salaries, business management and contractual arrangement in the graphic design and illustration industries. Explores opportunities, both staff and freelance, using exercises, informational interviews and guest speakers.

DES 110 (2) C
History of Graphic Design

Provides understanding of the evolution of graphic design, including pivotal individuals from two historical points of view - relationships within their time, and relationships preceding and following their time.

DES 121 (3) C
Typography I

Intro to the recognition and practice of the elements of typographic style.

DES 122 (3) C
Typography II

Gain greater skill in recognition and practice of the elements of typographic style, successfully completing specific graphic design projects. Emphasis on combining typography and image, and the skillful use of typographic functions in page layout software.

DES 123 (3) C
Typography III

Practice typographic design and art direction. Emphasis on creating and meeting typographic design criteria based on client and context, and mastery of all necessary typographic elements in page layout software.

DES 131 (3) C
Graphic Design I

Intro to the social context and process of graphic design.

DES 132 (3) C
Graphic Design II

Intro to layout and advertising design. Implements the design process and principles of perception covered in DES 131.

DES 133 (3) C
Graphic Design III

Apply concepts from DES 131 and DES 132 to three-dimensional graphic design.

DES 145 (3) C
Graphic Production I

Learn the Macintosh operating system, including hardware and software. Emphasis on developing proficiency with illustration and page layout applications.

DES 146 (3) C
Graphic Production II

Study terminology and practical procedures in graphic production, including computer illustrations, design and digital prepress.

DES 147 (3) C
Graphic Production III

Covers digital manipulation for quality output including: scanning, various color modes, resolution, calibration, file formats, selection tools, image compositing, color correction, curves vs. levels, masks and layers, filters, Photo CD, UCR and GCR.

DES 197 (2-5) C
Work Experience - Graphic Design

Allows students to earn work experience credit in graphic design and illustration. Prereq: Permission.

DES 231 (4) C
Graphic Design IV

Graphic design with emphasis on expressive, creative and conceptual problem-solving in graphic design. Continuation of research skills development.

DES 232 (4) C
Graphic Design V

Covers conceptual approaches to information design, charts and graphs, and the design of text-heavy documents.

DES 233 (4) C
Graphic Design VI

Effective advertising campaigns for a variety of media, with practice in designing theoretical campaigns. Includes creation of effective presentations.

DES 234 (4) C
Graphic Design VII

Covers the design and production of a Corporate Identity system including trademark or logotype and applied graphics to a mix of visual business applications.

DES 235 (4) C
Graphic Design VIII

Create a self-promotional piece or series. Study basic concepts of exhibit design, and design and install the program final portfolio exhibit. Professionals from outside the program will review portfolio work.

DES 241 (3) C
Illustration I

Intro to illustration media and technique through study and practice of various media. Examines work and process of contemporary illustrators.

DES 242 (3) C
Illustration II

Explores humor in illustration using techniques from DES 241.

DES 243 (3) C
Illustration III

Explores the use of the human figure in illustration using techniques from DES 241 and 242.

DES 244 (3) C
Illustration IV

Explores illustration through digital media including vectors and bitmap programs.

DES 245 (3) C
Illustration V

Study scientific illustration through various media.

DES 251 (3) C
Multimedia I

Intro to the practice of Web page design as a graphic designer.

DES 252 (3) C
Multimedia II

Covers two-dimensional animation from the graphic design perspective.

DES 253 (3) C
Multimedia III

Develop skills learned in DES 251 and DES 252 in an independent project of the student's choosing.

DES 260 (3) C
Portfolio Prep

Develop, design and prepare a portfolio that represents individual creativity and demonstrates skill for seeking employment in the Graphic Design and Illustration field.

DES 299 (1-5) C
Independent Study

Independent study on selected graphic design and illustration topics. Prereq: Permission.

GRAPHIC IMAGING & PRINTING TECHNOLOGY

Note: The Graphic Imaging & Printing Technology curriculum is under revision. Contact the Communications and Design Division office for current information.

DTP 101 (4) C
Desktop Publishing I

Intro to design and creation of documents on the personal computer (Apple Macintosh or IBM-PC compatibles). Covers basic design techniques and appropriate applications for basic document production.

DTP 102 (4) C
Desktop Publishing II

Continuation of DTP 101. Stresses professional quality production, emphasizes design and layout.

DTP 103 (2) C
Desktop Publishing III

Continuation of DTP 102. Prereq: DTP 102.

GPT 100 (3) C
Intro to Digital Prepress I

A practical introduction to digital prepress. Course topics include: overview of digital prepress, fundamentals of typography, digital type, measuring systems, and beginning page layout. Develops basic operating skills with the Macintosh computer and its peripherals.

GPT 101 (3) C
Intro to Prepress

Intro to prepress processes and their relationships. Students learn how to prepare one- and two-color images for printing on an offset press. Includes basic techniques using the graphic arts camera, film assembly, and proofing. Emphasis on interpreting written and verbal instructions, as well as successfully working in groups.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

GPT 102 (3) C
Intro to the Press

An overview of types and capabilities of various presses, as well as current and future trends in the printing industry. Introduces image carrier preparation for offset printing, using both paper and metal plates, and basic printing techniques for single-color and simple two-color work. Students work individually and in groups to complete projects, with mentoring from second-year program students. A portfolio of assigned projects for course assessment is required.

GPT 103 (2) C
Intro to Finishing

Focuses on learning professional quality bindery skills while exposing various finishing operations and equipment. Students may tour a local bindery and meet industry representatives to learn about the latest finishing methods. Emphasis on calculating and programming paper cuts, learning safe equipment practices, identifying paper and other substrates, practicing effective communication skills, and critiquing finished products. Students will finish and bind completed projects and portfolios.

GPT 104 (2) C
Intro to Graphics Arts Industry

Overview of the graphic arts industry from history to the future. Covers the people and inventions that shaped the industry and the present and future changes in technology. Career choices, safety, and related industries also discussed. Students are given a thorough program overview/update, and are made aware of scholarship/job opportunities.

GPT 110 (4) C
Intro to Digital Prepress II

Builds on basic design, typography and computer skills learned in GPT 100. Students work on projects using current drawing and page layout programs. Develops skills in design and layout production, emphasizes effective use of type. Introduces digital trapping, and scanning for halftones and line art. Explores alternate forms of publishing, such as Web page production.

GPT 111 (4) C
Multicolor Prepress

Use of photomechanical and digital processes to prepare images created in GPT 110. Students continue using camera, film assembly and proofing techniques for prepress production, following job ticket instructions. Introduces press sheet layout and job engineering for two-color, two sided, tight register work. Covers halftone theory and production, pagination and multi-page document preparation techniques.

GPT 112 (3) C
Multicolor Press

Students work with one- and two-color printing processes to complete assigned projects using accurate positioning and registration. Various topics introduced each week, and students complete projects practicing their application. Emphasis on safe operation and proper equipment maintenance. Topics include: controlling plate exposures, printing screen tints and halftones, working with different dampening and inking systems, ink mixing using the Pantone Matching System (PMS) and understanding basic press chemistry. Students are expected to demonstrate increasing competence with the technical aspects of the printing process, building on skills and concepts presented in previous courses.

GPT 113 (2) C
Finishing

Students continue to improve their skills and knowledge of various finishing operations from the skills introduced in GPT 103. Includes padding, collating and gathering, drilling stitching, folding and programming and practicing paper cuts. Students learn about specialized bindery/finishing techniques, such as scoring, perforating, die cutting, embossing, foil stamping and a variety of book binding processes. Emphasis on safe operation of bindery equipment and effective communications, including recordkeeping and interpreting instructions. Research projects, guest speakers and field trips augment in-class demonstrations and projects.

GPT 120 (4) C
Digital Prepress with QuarkXPress

Final class of the GPT 100, 110 and 120 series on Digital Prepress, using the Macintosh computer. QuarkXPress will be introduced and used for production of many assignments. Line art and grayscale images will be adjusted using Photoshop and other current electronic publishing programs. Topics include advanced typography and design, digital type, and an introduction to digital scanning, halftoning and imagesetting.

GPT 121 (4) C
Prepress Practicum

Introduces new digital prepress techniques, including halftoning and imagesetting. Reviews traditional prepress techniques and continues coverage in use and maintenance of imagesetters and film processors. Students use professional quality production work habits and skills to produce prepress work, including a two-color multiple-page document.

GPT 122 (4) C
Press Practicum

Continues to develop basic presswork skills, applying them to different types of presses. Builds skills in the safe, basic operation of direct and register board feed systems, conventional and integrated dampening systems, and chain and chute delivery systems. A variety of two-color forms, including an eight-page booklet will be produced. Emphasis on quality control and efficiency. Students are expected to accurately read and interpret job tickets, track materials and record time spent to complete jobs.

GPT 197 (2-5) C
**Work Experience
Graphic Imaging & Printing Technology**

Gain work experience directly related to printing major. Course integrates classroom study with employment. Provides students with supervised work experience in an individual learning environment.

GPT 198 (2) C
**New Developments in
the Graphic Arts Industry**

Allows students as a group to pursue topics that pertain to the graphic arts industry and introduces current topics relevant to the program. Students may also be responsible for developing a written proposal and learning contract for pursuit of individual projects. All assessment and any special scheduling must be arranged with instructor.

GPT 200 (2) C
**Color Theory: Issues & Applications
in a Digital World**

Basic color course to discuss and explain the system of color reproduction for printing, photography and television, based on additive and subtractive color theory. Presents the perception of color, viewing conditions, color separation, different types of color measurement, digital color, use of UCR and GCR, and the influence of paper and ink on color reproduction. Guest presenters and field trips provide opportunities for students to be introduced to the latest in color technology.

GPT 201 (2) C
Estimating

Builds on general knowledge gained so far, introduces processes of planning production steps and estimating costs involved in producing a job. Topics include: determining shop overhead and budgeted hourly rates, developing effective communications needed to track jobs through the production process; analyzing and planning production steps; using computer estimating applications; and the importance and impact of accurate job plans, estimates, and internal communications. Practice producing accurate cost estimates using computers and estimating software.

GPT 202 (3) C
Production Management

Analyze and plan production of printing jobs, including: determining time required, methods and materials acquisition, and developing effective communications needed to track jobs through the production process. Includes employer/employee relations, customer service, motivation, communications, supervision, TQM (Total Quality Management), safety and hazardous waste management.

GPT 203 (3) C
Portfolio

Prepares for entry into job market. Students finalize resumes and organize a portfolio. "Live jobs" help incorporate learned material by producing comprehensive projects. A portfolio show allows students to present their work to potential employers. Classes may include guest speakers, field trips and discussion on industry topics.

GPT 211 (5) C
Digital Prepress & Imaging I

Emphasis on production of projects using electronic methods. Reviews production processes and expands electronic prepress concepts such as scanning and correcting digital halftones. Students work on advanced projects, including duotones and multiple page documents, and learn to use and maintain imagesetters and film processors. Introduces preflighting and troubleshooting output files. Students may work in collaboration with first year GPT students and/or students from other programs.

GPT 212 (3) C
Advanced Press

Application of previously learned skills to two-color and large offset presses. Covers differences between large press systems, care and adjustment of rollers, bearers and cylinder packing, feed and delivery systems, push and pull guide registration systems, ink and water systems, troubleshooting problems and press cleaning and maintenance. Introduces advanced topics such as waterless printing, hi-fi color, stochastic screening, digital press systems and direct-to-plate technologies. Students apply skills to reproduce multi-color projects and are responsible for scheduling, planning and completing live production jobs and simulating a commercial printing firm.

GPT 221 (4-8) C
Digital Prepress & Imaging II: Color Issues

Second part of GPT 211, GPT 221, GPT 231 series focusing on prepress using digital methods. Explores issues related to creating halftones, duotones and color images. Emphasis on scanning, adjusting images, and achieving professional-quality film output from the imagesetters. Covers both conventional and electronic film assembly techniques as well as color proofing techniques. Live production jobs may be substituted for assigned projects, as determined by the instructor.

GPT 222 (4-8) C
Process Color Press

Second part of GPT 212, GPT 222, GPT 232 series, continuing to refine press skills, operating different types of large and small presses with special emphasis on four-color process reproduction. Discussion of the comparison of spot-color and four-color reproduction processes and their implications for the press operator. Requires group projects with different types of substrates and inks, while continuing to work on equipment maintenance and safety practices. Live production jobs may be substituted for regularly assigned projects, as determined by the instructor.

GPT 231 (4-8) C
Production Prepress

Final course in digital prepress series GPT 211, GPT 221, GPT 231 with focus on demonstrating professional quality production work habits and skills. Application of previously learned prepress skills to live production jobs. Interpret directions, read job tickets, generate images, and produce plate-ready flats and proofs for projects of varying design and complexity, including process color work and jobs involving electronic imposition. In the second year of the program, students may specialize in either prepress or presswork, enrolling for 8 credits. Portfolios will be a major component of course assessment.

GPT 232 (4-8) C
Production Press

Focus on demonstrating professional quality production work habits and skills, with application of previously learned press skills to live production jobs. Using flats prepared in the Production PrePress course, students analyze job tickets to plate, print and finish production jobs to professional standards. Emphasis on quality control, efficiency, troubleshooting, and equipment maintenance. In the second year of the program, students may specialize in either presswork or prepress, enrolling for 8 credits. Portfolios will be a major component of course assessment.

GPT 261 (4) C
Electronic Publishing Software Applications I: Focus on Color

First course of a two-part series (GPT 261 & 262) with focus on creating and working with color images on the computer using current drawing, photo manipulation and page layout programs. Projects involve working with PMS and process color models and manipulation of scanned images. Covers preflighting and digital trapping using spot colors. Discussion of current trends in digital prepress technology, along with field trips and guest presenter.

GPT 262 (4) C
Electronic Publishing Software Applications II: Advanced Topics

Second course of a two-part series (GPT 261 & 262), exploring advanced issues in creating and working with color images on the computer using current drawing, photo manipulation and page layout programs. Continuing work on projects involving PMS and process color models. Advanced manipulation of scanned images and digital trapping using process colors will be discussed with guest presenters.

GPT 298 (2-3) C
Special Topics

Allows individual students to pursue studies in a particular area of specialization, and allows students as a group to pursue topics that are relevant to the Graphic Arts industry. Students may be responsible for developing a written proposal and learning contract for instructor approval. All assessment and any special scheduling to be arranged with instructor.

GPT 299 (1-5) C
Independent Study

Opportunity to independently pursue studies in a particular area of specialization, to complete a project, or pursue a topic that is relevant to the graphic arts industry. Students will be responsible for developing a written proposal and learning contract and timeline for instructor approval. All ongoing assessments and any special scheduling to be arranged with instructor. Upon completion of the contract, instructor will evaluate the student's work and assign a grade.

HABILITATION SPECIALIST

RFW 150 (3) N
Resident Care

Covers basic care of disabled children and adults in an institutional setting. Includes physical handling, hygiene, feeding, care for seizure patients and CPR methods.

RFW 166 (3) N
Intro to Habilitation

Focus on creating informal learning experience and formal learning programs for residents. Includes supervised laboratory experience.

RFW 167 (5) N
Teaching & Supporting Adults with Disabilities

Planning and implementation of habilitation programs, including development of goals and objectives, teaching techniques and data-keeping methods. Practicum leads to certification in various instructional systems, including the Murdoch Center Programs, preventive intervention, and reinforcement techniques.

RFW 170 (2) N
Manual Communication

Basic American Sign Language vocabulary and demonstration to hearing and non-hearing developmentally delayed persons to increase functional communication skills.

RFW 180 (1-5) N
Special Topics

Topics related to training of staff in residential facilities.

RFW 267 (5) N
Community-Based Curriculum for Adults with Disabilities

Learn curriculum development for residential settings. Includes assessment, teaching and evaluation procedures in areas of cognition, communication, social, behavioral, vocational, leisure and motor development.

HEALTH**HEA 025 (5) S**
Health

Covers physiology for understanding body functioning; includes info on organic and functional disease and disease prevention. Prereq: Appropriate placement on English and Basic Skills tests.

HEA 125 (5) C
Health & Wellness

Current health education and wellness theories, concepts and lifestyles. Overview of a lifelong commitment in the development of a health-promoting lifestyle. Emphasis on personal assessment, implementation and behavior change.

HEA 150 (5) N
Health & Human Sexuality

Covers principles of personality development, body functioning, problems and solutions; human sexuality and family education relating to psycho-sexual development, behavior, problems and solutions.

HEA 160 (5) S
Human Wellness & Fitness

Comprehensive study of human wellness. Includes topics on adequate fitness, nutrition, stress management, disease prevention, sexual wellness, spirituality, smoking cessation, substance abuse and weight control.

HEA 299 (1-5) N,C
Independent Study

Independent study in health education. Prereq: Permission.

HEATING, AIR CONDITIONING & REFRIGERATION DESIGN/ HVAC**ECT 101 (12) N**
Heating Theory, Equipment & Applications

Orientation to program requirements, HVAC industry and opportunities, technician training and safety procedures. Includes HVAC physical laws, fuels and combustion; 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; residential and commercial building construction with emphasis on HVAC systems. Prereq: ECT 106 or permission.

ECT 111 (2) N
Hydronic System Design

Introduction to hydronic system design. Includes equipment piping layouts, sizing, and control systems. Prereq: ECT 110.

ECT 197 (2-10) 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 depending on topics. Prereq: Permission.

ECT 206 (2) N
Computers in Engineering Application

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 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 Systems

Reviews the application of computerized, digital, electronic automation to HVAC systems.

ECT 211 (12) N
System Design & Application I

One of a three-part series in Heating, Ventilation and Air Conditioning Design Technology. Covers HVAC industry organization, business ethics, plans and specifications, codes, quotations, bidding, sub-contracts and negotiated contracts, project management, system evaluation and the design process, manual heating, ventilation and cooling load calculations and introduction to commercial controls systems.

ECT 212 (12) N
System Design & Application II

Part two of a three-part series in Heating, Ventilation and Air Conditioning Design Technology. Covers dry side design, including central air handling and package unit systems, fan performance and selection, duct design and terminal unit selections, heat exchange, psychometrics and systems associated with these systems.

ECT 213 (10) N
System Design & Application III

Part three of a three-part series in Heating, Ventilation and Air Conditioning 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 Systems, Components & Operation

Covers refrigeration for commercial applications. Provides description of various systems, controls and operations of each. Theory and application included with lecture and lab.

ECT 272 (5) N
Refrigeration - Application

Covers load calculations, system design and operation. Theory and application included with lecture and lab work. Prereq: ECT 271 or permission.

ECT 298 (2-10) 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 depending on topics.

ECT 299 (2-5) N
Special Topics 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 depending on topics. Prereq: Permission of instructor.

HISTORY

NOTE: (History 035 - 091 series fulfills high school completion requirements.) Prereq: Appropriate placement on English and Basic Skills tests.

HIS 035 (5) N,S
U.S. History I

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.

HIS 036 (5) N,S
U.S. 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.

HIS 037 (3-5) N,S
Washington State History

Covers the historical development of the Pacific Northwest, with emphasis on the development of Washington State. Contemporary, economic, political, and social problems are considered.

HIS 040 (5) S
History Research

Course is designed to provide a study of the purpose and method of historical research and includes such related topics as choosing a topic, gathering data, taking notes, writing a research paper, footnoting and developing a bibliography.

HIS 099 (3) S
Intro to American Civilization

Intro to American history, government and culture for foreign-born and/or developmental level students. Includes past and present political cultural aspects. Emphasis on the roots of American democracy and the U.S. system of federal government and their relationship to current events.

HIS 101 (5) N,C,S
World History: To 1500

Reviews the historic foundations and development of the great civilizations from prehistoric days to the Renaissance with emphasis on social, political, cultural, and economic aspects. Attention to the nature of history and its role as an intellectual and academic discipline.

HIS 102 (5) N,C,S
World History: 1500-1800

Reviews the foundations of modern civilization with emphasis on the scientific, industrial, and political revolutions that have transformed societies. Emphasis on the period of Western Renaissance and resulting cross-cultural contact on a global scale.

HIS 103 (5) N,C,S
World History: 1800 - Present

Study of world civilization during the 19th and 20th centuries. Introduction to dramatic events and often-conflicting forces and ideologies affecting contemporary life. Account of modern peoples' solutions to challenges and problems confronting civilization.

HIS 105 (3-5) C,S
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.

HIS 106 (5) N,C
Survey of U.S. History

Survey of American history from pre-colonial to the present with emphasis on political, social, cultural and economic developments.

HIS 108 (5) N
The World in Evolution to 1500

Provides a comparative study of the world's major civilizations (African, Chinese, European, Greco-Roman, Indian), with major emphasis on understanding value systems (Christianity, Hinduism, Judaism, etc.) and their expression in different political, social, economic and cultural-religious systems.

HIS 109 (5) N
The World in Revolution since 1500

Reviews the dynamics of revolutions shaping the modern world since 1500. Focuses on scientific, political, social, and industrial revolutions; socialism; imperialism; war; and contemporary conflicts in a global society.

HIS 111 (5) N,C
U.S. History 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 become the United States.

HIS 112 (5) N,C
U.S. History Since 1865

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.

HIS 113 (5) N,C,S
History
The Colonial & Early Republican Periods

Study of America in its formative period from its European, African, and native pasts, tracing its development from origins to early nationhood. Emphasis on the American Revolution.

HIS 114 (5) C
Nineteenth Century U.S. History

Examines changes shaping American society in the 1800s: sectionalism, the Civil War, the westward movement, industrialization, and emergence of the United States as a world power. Emphasis on social conflicts, including abolitionism, women's rights, labor, manifest destiny and Reconstruction.

HIS 115 (5) N,C,S
Twentieth-Century America

An era of conflict, war, uncertain peace, depression and great social changes. Emphasis on historical, economic, social, racial and political events that have formed the modern U.S.

HIS 118 (3) C
Philippine Heritage

Reviews the history and culture of the Philippines, including Indo-Malayan, Chinese, Spanish, and American influences on Philippine peoples, their values and behaviors.

HIS 120 (5) C
Survey of History of Africa South of the Sahara

Surveys the complexity of African societies, including colonialism and its impact, the rise of socialism, cold war, and the role of trade, kinship and ancestral spirit in light of the rise and fall of empires in Africa.

HIS 122 (1-2) N,C
Seattle History - Field Trips

Firsthand view of historic Seattle. Includes background lectures using audiovisual presentation and field trips to historic sites.

HIS 130 (3) C
History of Broadcasting

Examines the development of broadcasting in both radio and television. Explores the impact of cultural contributions, show business, news, advertising and telecommunications technology. Prereq: Enrollment in Central's Film and Video Communications Program.

HIS 135 (5) N,C
Survey of African-American History

Focuses on African heritage and its cultural continuity, the enslavement, colonization, and struggle for justice in the U.S.

HIS 136 (5) C,N
Asian-American History

Covers the experience of Asians in the United States from the period of immigration to the present. Emphasis on the impact of exclusionary immigration laws and the post-1965 development. Surveys the experiences of the Chinese, Japanese, Filipino, Korean, Asian, Indian and Southeast Asian refugees.

HIS 137 (5) N,C
History of the Native American

Traces course of White/Native American affairs from pre-Colonial America to the present. Probes White attitudes, values and misconceptions; Native American values, spiritual beliefs and the continuing struggle for sovereignty.

HIS 138 (5) C,N
Survey of Chicano History

Survey of Chicano 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.

HIS 140 (5) C,N
American Women's History

Survey of American women's roles, work, status, accomplishments, issues, and movements, from the pre-Colonial period to the present.

HIS 145 (5) C
Women, Race & Class

Focuses on the United States and its historical stratification by race, sex, and class. Examination of the experience of women in their own words, with emphasis on women of color. An examination of "her story" to help in understanding the conflict facing the women's movement.

HIS 150 (5) N,C,S
Multicultural Experiences in the U.S.

Focuses on experiences of selected people of color in America. Emphasis on historical and contemporary development, including sociological and psychological aspects.

HIS 191 (5) C
Biography in American History

Examines the place and role of selected figures in the making of American history. Not a search for the hero or heroine, but rather an inquiry into the human potential for affecting society in terms of change and development.

HIS 200 (5) N,C,S
Critical Issues for the 21st Century

Examines selected current political, economic, scientific, social, racial, and cultural problems from a U.S. history perspective.

HIS 208 (5) N,C,S
Russian History & Culture

Focuses on political, cultural and social life, stressing continuity and change from pre-revolutionary Tsarist Russia to the 1990s.

HIS 210 (5) N,C,S
The Pacific Century

Study of the transformation of selected Pacific Rim countries and their contributions to the modern world. Emphasis on responses to the problems and challenges of economic, political and social development. Attention to the impact of China and Japan on the region.

HIS 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.

HIS 215 (5) N,C
Vietnam Era

Reviews American history from 1945 to the present, with special emphasis on the Vietnam war, its origins and its impact upon the American scene. The civil rights movement, the cold war, the role of media, the rise of the "counter-culture," and the development of suburbia will also be explored.

HIS 218 (5) N,C
Field Trip: Europe

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.

HIS 251 (5) N,S
History of China

Survey of the development of Chinese society from ancient times to the present, including fine arts, literature, religion, and thought. Emphasis on the modern period.

HIS 264 (5) N,C,S
Pacific Northwest History

History of the Pacific Northwest and Washington state from the earliest times through exploration, settlement, and the modern era. Emphasis on the growth of the Northwest in relation to national developments, including ethnic contributions. Includes a unit on Seattle history.

HIS 268 (5) N,C
The Latin Americas

Covers the development of the Latin American republics, from Indian, European, and African foundations through independence and the 20th century. Focus on social, economic, cultural and political development.

HIS 298 (1-5) N,C,S
Special Topics in History

Independent study in selected history topics under faculty supervision. Prereq: Permission.

HIS 299 (3-5) N,C,S
Special Problems in History

Small class format to study and discuss selected topics in history. Prereq: Permission.

**HOSPITALITY/FOOD
PRODUCTION/CULINARY ARTS****Hospitality/Food
• NORTH •****CUL 101 (8) N**
Intro to Professional Cooking: Theory

Intro to fundamentals of professional cooking. Includes history of food service industry, professional attributes, kitchen safety, sanitation, nutrition, equipment and ingredient identification, basic kitchen ratios, weights and measures, pre-preparation, knife skills, basic aromatic and flavoring combinations, and theory of moist and dry heat cooking, stocks and sauces, basic baking, and breakfast preparation.

CUL 111 (3) N
Intro to Professional Cooking: Practicum

Intro to professional cooking. Includes kitchen safety, knife skills, basic cooking preparations, general housekeeping, sanitation, and clean-up.

HFS 147 (4-24) N
Special Topics

Additional specialty training at any of the previously listed cooking stations. May be repeated once for an additional 4-24 credits.

HFS 152 (6.5) N
Commercial Cooking I

Intro to commercial pantry (cold foods) production. Students work on salad bar, pizza production, breakfast and lunch, short-order, pot-sink and sandwiches to order. Focus on production and customer service, while receiving guided practice in basic methodology and terminology via verbal and written directions. Prereq: Acceptance to program and HOS 110, CUL 101 and CUL 111.

HFS 153 (5) N
Commercial Cooking II

Intro to commercial entree, vegetable, starch and soup (hot foods) production. Students produce, batch cook, and serve a variety of health menu items. Focus on commercial production, innovative presentation methods, display service, and multicultural cooking and menu items. Emphasis on problem-solving, timing and teamwork. Guided practice in basic methodology and terminology. Prereq: HFS 152.

HFS 154 (13) N
Commercial Cooking III

Intro to advanced commercial cooking techniques. Covers special diets, reforming of pureed foods, advanced display cooking, and school lunches. As student chef for the cafeteria, order and store produce and dry goods, and produce division catering functions. Students will develop a 2-week cycle menu and produce full cafeteria menu in a chef of the day format as an application project. Prereq: HFS 153, HFS 182, and HFS 183.

HFS 155 (2) N
Commercial Food Service Externship

Students choose between health care, school, employee feeding, catering, or correction food service venues for a 2-week externship. Students, with instructor support, are responsible for establishing an externship relationship with a venue. Daily work reports, menu research, and a final paper are required for students, and weekly report with assessment are required from the venue. Instructor conducts on-site visits and assessments, and contributes additional information and resources. Prereq: HFS 154.

HFS 162 (6.5) N
Intro to Dining Service

Students rotate through the tasks and responsibilities for four stations: busser, expediter, host, and dining room server. Focus is on customer service, professionalism, and working as a team. Covers use of interpersonal communication, industry terminology, safety and hygiene, as well as setting, detailing, and maintenance of tables and dining room. Prereq: Acceptance to program and HOS 110, CUL 101, and CUL 111.

HFS 163 (2.5) N
Fine Dining Service I

Continuation of HFS 162 with additional instruction in hosting. Focus on learning a variety of service styles such as Russian, French, and buffet and tray service. Covers all aspects of table service from casual, family style, to classical, along with the proper table setting for each service. Prereq: HFS 162.

HFS 164 (2.5) N
Fine Dining Service II

Focuses on banquet service and provides an introduction to types of beverage service including wines, beers, and liqueurs. Prereq: HFS 163.

HFS 165 (2.5) N
Fine Dining Service III

Covers components of advanced tableside service and special events. Focus on planning, service, and completion of special events. Emphasis on marketing to diverse audiences. Prereq: HFS 164.

HFS 166 (2.5) N
Fine Dining Supervisor

Focuses on professionalism and leadership skills. Emphasis on supervision of all guest contact for front-of-the-house operations including sales techniques, dining operations, and dining room personnel. Management theory introduces the total quality management concept. Prereq: HFS 165.

HFS 167 (2.5) N
Fine Dining Management

Students learn hands-on managerial functions of dining room service. Includes interviewing, staffing, training, and supervising, with an introduction to motivational techniques and other administrative duties. Management theory explores a variety of managerial concepts. Prereq: HFS 165.

HFS 173 (4.5) N
Restaurant Cooking I

Students work the pantry, vegetable, and starch stations for an a la carte food service. Covers advanced salad, sandwich, various cold plate preparations, and preparation of a variety of vegetables and starches applying proper cooking techniques. Students also work with classical, contemporary, and ethnic presentation. Emphasis on seasonal and nutritional preparations, upscale product usage, presentation, speed, and organization. Prereq: HFS 152, HFS 163, HFS 182, and HFS 192.

HFS 174 (10.5) N
Restaurant Cooking II

Covers requirements for working for Garde Manger, Banquet, Baking, Kitchen Administration, and Restaurant Line Cooking stations. Includes cold food applications, banquet styles of service; bread baking, basic dessert techniques, and presentation; and storeroom management, purchasing and receiving. Prereq: HFS 173.

HFS 175 (10.5) N
Restaurant Cooking III

Covers advanced restaurant line cooking stations: butcher, soup, sauce, and student chef. Includes entree production in the a la carte kitchen emphasizing food quality, presentation, and communication; meat cutting, poultry and seafood fabrication, and portion control; soup production and stock making; sauce making - classical and contemporary, base sauces and finished sauces; kitchen management, leadership, and organization skills. Students produce a menu to be served to the public, facilitating purchasing, preparation, and production of this meal. Prereq: HFS 174.

HFS 182 (2) N
Commercial Theory I

Introduces facilities and equipment, product identification, product usage, utilization, and storage. Focus on fruits, vegetables, grains, legumes, meat and poultry. Students will work on a group application project during the last 2 weeks. Prereq: HOS 110, HOS 101, and HOS 111.

HFS 183 (2) N
Commercial Theory II

Introduces concepts of menu planning and the importance of menus as a marketing tool. Covers menu considerations, cost controls, and recipe research and extension. Students will work on a team project due at the end of the quarter. Prereq: HFS 153 and HFS 182.

HFS 192 (2) N
Dining Room Theory I

Overview of the theory behind dining room service. Includes dining room hierarchy, psychology of the guest, history of regional foods and service, varietal wines, and import and domestic beers, including microbeers. Prereq: Acceptance into program.

HFS 193 (2) N
Dining Room Theory II

Continuation of HFS 192. Covers regional wines and spirits, types of glassware, and the aesthetics of environment including display pieces, products and styles. Develops job search skills by conducting a personal skill inventory, examining professional development associations, and developing new networking skills. Students take and complete the exam for the state Beverage Server certificate. Prereq: Acceptance into program.

HFS 194 (2.5) N
Restaurant Cooking Theory I

Covers stocks, soups, and sauces and thickeners. Discussion of food presentation including plate and platter presentation and selection, garniture and arrangement styles. Menu writing will be presented with emphasis on demographics and development of food service concepts. Students develop recipes using components of proper recipe writing. Covers techniques of baking, including methods and ingredient identification along with identification of types of cheeses. Intro to purchasing and receiving concepts. Prereq: HFS 173.

HFS 195 (2.5) N
Restaurant Cooking Theory II

Identifies types of meats, including beef, veal, lamb, pork, game meats, process meats, poultry and seafood. Introduces nutrients, nutritional guidelines and nutritional recipe modification. Examines relationship between nutrition, health, diet and environmental issues. Prereq: HFS 194.

HOS 110 (3) N
Principles of Sanitation

Introduces fundamentals of food service sanitation and safety and their importance to the food service industry.

HOS 161 (5) N
Principles of Restaurant Management

Human resource management, including staffing, interviewing, training, supervising, motivational techniques, handling "problem" employees, scheduling, planning, and controlling restaurant operations.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

HOS 162 (5) N
Food & Beverage Service & Management

Supervision of all guest contact or front-of-the-house operations, including menu planning, sales techniques, dining operations, banquet arrangements and catered functions, liquor, wine and tableside service procedures, types of service and personnel needed and duties.

HOS 163 (5) N
Food & Beverage Cost Controls

Cost control analysis, including menu costing, purchasing, ordering, receiving, storing, inventory/issuing, products, correct product handling and security systems, forecasting, budgeting and cost percentageing.

Specialty Desserts & Breads
• CENTRAL •**BAK 101 (4) C**
Intro to Desserts & Breads (Theory)

Intro to the fundamentals of 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 & creams; pastries; pies and tarts; cake mixing & baking. Prereq: Admission to program.

BAK 102 (3) C
Beginning Desserts & Breads (Theory)

A systematic presentation of 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; souffles and meringues; frozen desserts; chocolate sugar/work; bread and bread sculpture; centerpieces; and wedding cakes. Prereq: BAK 101.

BAK 111 (6) C
Intro to Desserts & Breads (Practicum)

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
Beginning Desserts & Breads (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, tempered and couverture chocolate, marzipan and royal icing, sugar work, meringues, mousses, soufflés, custards, frozen desserts, holiday desserts, compotes, chocolate candies, sauces, and fillings. Prereq: BAK 111.

BAK 113 (8) C
Intermediate Desserts & Breads (Practicum)

Development of independent bakery skills, including organization, accuracy and communication. Utilizing the theory and practicum of previous quarters, students will also practice discriminatory skills regarding texture, taste and appearance of finished products. Includes preparation using advanced techniques of intricate chocolate work, European cakes and plated desserts, with increased emphasis on presentation and artistic skills. Prereq: BAK 112.

BAK 123 (2) C
Advanced Desserts & Breads (Theory)

Preparation for industry placement. Covers advanced terminology and history of baking/pastry profession, profiling professional pathways and understanding industry advancement. Includes marketing skills and job placement preparation. Prereq: BAK 103.

BAK 124 (8) C
Advanced Buffet Desserts & Wedding Cakes (Practicum)

Production of the "Pastry Chef-of-the-Day" bakery line. This project summarizes knowledge and skill gained in all previous quarters, and will evaluate student progress in areas of organization, correct baking/cooking methods, production and decoration skills, and utilize self-evaluation skills and confidence. Prereq: BAK 113.

BAK 125 (8) C
Advanced Desserts & Breads: (Practicum)

Using theory and practicum experienced gained in previous classes, develop and design 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 200 (1) C
Desserts & Breads Externship Project

Application of baking principles to operations in a successfully-running site. Externship sites are chosen by students from a pre-established list including full-service off-site operations, hotels, restaurants, catering and deli/bakery establishments. Prereq: BAK 113.

BAK 299 (1-5) C
Special Projects, Specialty Desserts & Breads

Independent study course for individual projects in the desserts/pastry field. Prereq: Permission.

CUL 106 (1) C
Intro to Culinary Arts (Theory)

Intro to the basic fundamentals of culinary arts. Includes the theory of the various types of moist and dry heat cooking methods; product identification; preparation methods for soups, stocks, sauces, vegetables and side dishes, salads and dressings, hot and cold sandwiches, beverages and breakfast meats and eggs. Prereq: Admission to program.

CUL 116 (1) C
Intro to Culinary Arts (Practicum)

Intro to the fundamentals of culinary arts. Hands on application of the various types of moist and dry heat cooking methods; preparation methods for soups, stocks, sauces, vegetables and side dishes, salads and dressings. Students rotate into a different kitchen each day, preparing a variety of dishes.

HOS 106 (1) C
Advanced Bakery Counter Service (Practicum)

Explains advanced bakery counter service techniques. Includes experiences training beginning students in customer service (pastry sales, general housekeeping, and pastry case mise en place); responsibility for daily set-up; and supervision of merchandising and product organization. Prereq: HOS 105.

HOS 201 (4) C
Functions of Management

Covers management and communication theories and practices within the culinary arts and baking industries. Seminars on current issues (introduction to hospitality, Americans with Disabilities Act, sexual harassment, and other legal and human resource issues). Covers communications skills, functions of management, beverage management, and financial statement analysis. Prereq: Quarters 1, 2, 3, and 4 of the Specialty Desserts and Breads program.

Culinary Arts
• CENTRAL •**BAK 104 (1) C**
Intro to Baking (Theory)

For culinary arts students. Introduces basic bakeshop science and principles. Includes terminology; tools/equipment; ingredients; mixing and production methods; discussion of pre-prepared doughs; and quick bread, cookie and pie techniques. Prereq: CUL 101.

BAK 105 (1) 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 intermediate desserts. Prereq: BAL 104.

BAK 114 (.5) C
Intro to Baking (Practicum)

For culinary arts students. Introductory production of baked goods. Includes ingredient identification and preparation of quick breads, pies, tarts, cookies, biscuits, muffins, coffee cakes, cornbread, and popovers. Prereq: CUL 101.

BAK 115 (.5) C
Restaurant Baking (Practicum)

For culinary arts students. Production of baked goods including ganache, custards, creams, puddings, mousses and purees. Prereq: BAK 114.

- BAK 116 (5) C**
Fine Dining Baking (Practicum)
 For culinary arts students. Applies baking theory to production of yeast doughs (bread, puff pastry and choux), breads, focaccia, cakes, icings, decorations, mousses, tortes, puff pastries, and fine plated desserts. Prereq: BAK 115.
- CUL 101 (8) C**
Intro to Professional Cooking (Theory)
 Intro to fundamentals of professional cooking, including food service history, professionalism, kitchen safety, equipment, ratios/weights/measures, pre-preparation, dry vs. moist heat cooking, stock/sauce theory, ingredient identification, knife skills, and basic aromatic and flavoring combinations. Prereq: Admission to program.
- CUL 102 (5) C**
Quantity Cooking (Theory)
 Continued introduction to professional cooking, particularly theory relating to quantity food production. Includes trade terminology, heavy equipment, tool identification, mise en place, soups, salads, meats, fish, vegetables, starches, hors d'oeuvres, garnishes, and presentation. Prereq: CUL 101.
- CUL 103 (5) C**
Restaurant Cooking (Theory)
 Restaurant-level professional cooking, particularly menu planning, ordering, and preparing/producing complete meals ala minute. Also includes restaurant kitchen organization, fresh herb identification, seasonal vegetable/starch identification, market fluctuations/trends, plate presentation, cost control, purchasing, condiment production, menu writing, advanced cooking techniques, advanced fabrication, and recipe conversions, requisitions and modifications. Prereq: CUL 102.
- CUL 104 (4) C**
Fine Dining (Theory)
 Building on previous theory courses, this course emphasizes international fine dining cooking theory. Includes Latino, Japanese, Mediterranean and other international terminology; extensive nutritional discussion; menu feasibility studies; international ingredient identification; fine dining kitchen organization; international cooking methods; cooking method adaptations; written requisitions; garnitures; advanced plate presentation; advanced cooking methods; menu writing; and recipe studies. Prereq: CUL 103.
- CUL 111 (4) C**
Intro to Professional Cooking (Practicum)
 Hands-on intro, includes kitchen safety, knife skills, basic cooking preparations, sanitation/clean-up, stock preparation, meat/poultry/seafood fabrication, inventory, knife sharpening, and mock sauce preparation. Prereq: Admission to program.
- CUL 112 (8) C**
Quantity Cooking (Practicum)
 Preparation of international cafeteria-style 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: CUL 111.
- CUL 113 (8) C**
Restaurant Cooking (Practicum)
 Preparation of meals for on-campus restaurant, emphasizing creativity. Includes kitchen rotations, speed/organization emphasis, plate presentation, quality assessments, menu planning, seasonal products and terminology, innovative techniques, flexibility, teamwork, supervision skills, inventory, receiving, distribution, product evaluation, fabrication and preparation of complex soups, sauces, aiolis, dressings, sides and entrees from international and blended traditions. Prereq: CUL 112.
- CUL 114 (8) C**
Fine Dining (Practicum)
 Preparation of meals for on-campus fine dining room. Heavy emphasis on plate presentation, accuracy, speed, organization, professionalism, work habits, ethnic ingredients, healthy cooking methods, restaurant vs. fine dining kitchen organization, advanced fabrications, garniture and timing. Also covers pasta-making, sushi, tempura, pan-searing, pan-smoking, shallow-poaching and production of fine classical/contemporary Latino, Mediterranean, Japanese and student-created international menus. Prereq: CUL 113.
- CUL 200 (1) C**
Advanced Culinary Management (Clinical)
 Short, off-campus internship at local restaurant, caterer, hotel or other food service operation, emphasizing the management perspective. Includes on-site diary. Prereq: CUL 104.
- CUL 203 (4) C**
Chef of the Day (Practicum)
 Design and full implementation of a self-created menu in one of the on-campus restaurants. Under supervision, students design their own menus and prepare for its production, including inventory, requisitions, receiving, costing, recipe development, plate presentation, job descriptions and assignments. Menu production is supervised by the student and faculty members. Includes a final portfolio, judged on creativity, outcome and organization. Prereq: CUL 104.
- CUL 251 (4) C**
Buffet Catering, Garde Manger & Ice Carving (Theory)
 Floating summer quarter class. Intro to buffet, garde manger and ice carving principles. Includes theory discussion of buffet arrangement, garde manger, smoking and ice carving techniques, non-edible displays, aspic/gelee/chaud froids, garnishes, caviar, forcemeats and pates, cold sauces, charcuterie, foie gras, yeast breads, truffles, terrines, galantines, mousses, cures vs. brines, marinades and recipe studies. Prereq: CUL 101.
- CUL 255 (8) C**
Buffet Catering, Garde Manger & Ice Carving (Practicum)
 Floating summer quarter class. Intro to the preparation of ice carvings, buffet items and garde manger. Includes simple & complex salads; dressings; platter presentations, including forcemeat, galantines, mousses & pates; vegetable/fruit garnishes; yeast & quick breads; hot & cold international entrees; pastries, petits fours, cakes & desserts; ice carvings; and food/table arrangements. Prereq: CUL 101.
- CUL 299 (1-5) C**
Individual Projects Hospitality & Culinary Arts
- Hospitality • CENTRAL •**
- HAR 161 (4) C**
Cooks I
 Covers history of the food service industry, professional attributes, kitchen safety, sanitation, nutrition, equipment identification, basic kitchen ratios, weight and measures, pre-preparation, and cooking theory of moist and dry heat cooking. Prereq: Enrollment as an apprentice with the Washington State Chef Association.
- HOS 101 (5) C**
Intro to Customer Service (Practicum)
 Application of basic customer service theory in a full service restaurant or pastry case. Includes bussing, housekeeping, mise en place for both casual and formal restaurant settings, and customer service and sales techniques in bakery counter settings. Prereq: Admission to program.
- HOS 102 (1) C**
Customer Service (Practicum)
 Students refine customer service skills by further practice in a pastry case or full-service restaurant. Includes dining room arrangement, buffet setup and wait staff duties. In the bakery counter setting, students practice product rotation and merchandising. Prereq: HOS 102.
- HOS 103 (1) C**
Table Service (Practicum)
 Students acquire expertise in customer service by performing opening/closing procedures, using a variety of service techniques, and training bus staff. Prereq: HOS 102.
- HOS 104 (1) C**
Tableside Service (Practicum)
 Intro to leadership positions in the dining room. Mastery of French service; exhibition of tableside food preparation and service in a fine dining setting. Encompasses maitre d'hotel duties, supervision of opening/closing, training of wait staff and kitchen liaison duties. Prereq: HOS 103.

- HOS 105 (1) C**
Bakery Counter Service: Practicum
 For desserts students. Students assume responsibility for opening/closing, sales, organization and merchandising of product and training of first-quarter students at a retail pastry case. This course is pass/fail. Prereq: HOS 102
- HOS 106 (1) C**
Advanced Bakery Counter Service
 Responsible for daily set-up of pastry case. Supervises organization and merchandising of product, and assist in training first and second quarter students. This course is pass/fail. Prereq: satisfactory completion of first three quarters of program.
- HOS 109 (.5) C**
Advanced Customer Service
 Further exploration of customer service including communication strategies, behavior assessments, complaint resolution, customer characteristics, professionalism, teamwork, buffet arrangements and display of ice carvings. This course is pass/fail. Prereq: HOS 101.
- HOS 110 (3) C**
Principles of Sanitation
 Fundamentals of food service sanitation. Includes: microorganisms in food spoilage and food-borne illness, ways of limiting microbial contamination and growth during each stage of food preparation and service, creating a clean and sanitary environment, accident prevention and first aid, sanitation in crisis situations, and principles of designing safe and sanitary kitchens.
- HOS 111 (1) C**
Intro to Customer Service (Theory)
 Intro to dining room organization and customer service theories. Includes division of labor, types of table service/settings, mise en place, legal responsibilities, money tendering, handling difficult situations, and basic first aid. Prereq: Admission to program.
- HOS 122 (1) C**
Purchasing & Inventory (Theory)
 Introduces principles of food costing and 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: HOS 101.
- HOS 123 (1) C**
Food Costing Principles & Application
 Explores connection between profit and food cost; discusses product waste and defines costing terms and purchasing units. Students use mathematics skills to make conversions, cost bulk and subrecipes, and calculate the selling price of a menu item. Prereq: HOS 101.
- HOS 124 (2) C**
Computerized Menu Planning
 Familiarizes students with computers and word processing programs used to write recipes and menus. Includes basic MS Word skills, layout, design, formatting, grammar and descriptive writing. Prereq: MIC 102.
- HOS 197 (1-5) N,C**
Work Experience - Hospitality & Culinary Arts
 Cooperative work experience and instruction enables students to earn credits while they work. Helps students develop realistic expectations and a better understanding of the work environment while they acquire industry experience and references (helpful when looking for that important first job).
- HOS 200 (6) C**
Functions of Management
 Students will learn how coordinating managerial functions (planning, organizing, staffing, leading, and controlling) results in organizational effectiveness. Also covers communication, legal and human resources issues, financial statement analysis, beverage management, and customer service.
- Food Production**
 • SOUTH •
- FSD 100 (3) S**
Food Safety & Sanitation
 Intro survey course for food service students. Covers sanitation guidelines as suggested by the National Restaurant Association's "Service Safe" program. Fundamentals of hazard analysis of critical control point (HACCP) management.
- FSD 101 (3) S**
Orientation to Food Production
 Intro to classic cooking, history, terminology, cooking methods, sanitation and safety guidelines, USDA meat identification and use of hand tools. Prereq: Standard entry into Food Science Dept. or permission.
- FSD 102 (5) S**
Theory 5
 Front-of-the-house dining room operations, including menu design and layout; business functions for dining rooms and bars; tableside service and merchandising; sanitation and safety; service history and styles; dining room personnel management; and beverage service. Prereq: Permission.
- FSD 103 (5) S**
Theory 3
 A survey course for food preparation. Covers professionalism, sanitation and safety principles, station assignment within a brigade, marketing of special menus, inventory control, produce specification, purchasing, farinaceous products, hors d'oeuvres, dairy products, salad and salad sauces, storage and usage. Prereq: FSD 102 or permission.
- FSD 104 (5) S**
Theory 1
 A survey course for food production. Covers: USDA beef, veal, lamb and pork specifications, purchasing and usage; fish and shellfish purchasing; yield testing and cost analysis of protein products; proper receiving, storage and issuing procedures for meats and seafoods. Sanitation and safety principles and practices are included. Prereq: FSD 102 and 103 or permission.
- FSD 105 (5) S**
Theory 2
 A survey course providing the principles of food and beverage control procedures for the Culinary Arts industry. Areas covered include: determining standards, forecasting sales, budget generation, controlling sales income, labor costs, techniques for analysis, corrective action and evaluation. Prereq: FSD 102, 103 and 104 or permission.
- FSD 106 (5) S**
Theory 4
 Exposes, through theory and application, cold food preparation and display techniques. Includes the art of garde manger; forcemeats, use of gelatin and aspic, pâtés, terrines, galantines, and mousse. Covers concept and study of hors d'oeuvres; finger food, canapés and other related subjects. Studies elements of charcuterie; sausage making and the curing of meats. Includes a performance test which requires the application of ACE (American Culinary Federation) standards in order to plan, prepare, assemble and display a culinary salon show platter. Prereq: FSD 102, FSD 103, FSD 104 and FSD 105 or permission.
- FSD 108 (5) S**
Operations
 Basic understanding of restaurant operations from a control viewpoint, concentrating on understanding the revenue sources and calculating product cost of each area. Intro to human relations skills and supervisory techniques necessary to function effectively as a supervisor in a business setting. Prereq: FSD 115 or permission.
- FSD 110 (5) S**
Food Server 1
 First of three courses introducing the complexities of front-of-the-house/food service operations. A practical dining room laboratory is used to emphasize tray and arm service; Continental and French service. Terminology, trade terms, sanitation and safety are stressed. Prereq: Permission.
- FSD 111 (5) S**
Pantry 1
 Basic salad and sandwich preparation for volume operations. Covers fresh produce specifications, storage and usage, sandwich meats and filling, baked goods and garnish, use of cook's knife and vegetable knife, basic vegetable cuts, and safety, care and storage of hand tools. Practical laboratory experience is provided. Prereq: Current enrollment in Hospitality Production Program.

FSD 112 (5) S Food Preparation 1	FSD 124 (5) S Food Preparation 3	FSD 137 (5) S Meat Cutting 2
Intro to basic quantity cooking. Covers cooking methods; knife and hand tool use, safety and care; production skills for quantity food preparation; and sanitation and safety guidelines. Prereq: FSD 101 or permission.	An advanced course in quantity cookery. Introduces Continental and Classic French culinary methods. Covers organizational and management skills with advanced terminology and production techniques. Prereq: FSD 121 or permission.	Continuation of Meat Cutting 1 with emphasis on portion cutting and specialty meat products. Covers yield testing, cost analysis, meat specification for bid, menu item development and team management skills. Prereq: FSD 136 or permission.
FSD 113 (5) S Purchasing	FSD 130 (5) S Pantry 2	FSD 138 (5) S Garde Manager 1
Provides opportunity to acquire and enhance human relations skills through interpersonal contact with various individuals in an official capacity. Enhances storeroom inventory management skills through effective purchasing techniques. Prereq: FSD 115 or permission.	An advanced course in pantry and deli preparation and organization. Emphasis on speed skills, quantity production, plate presentation and seasonal production. Dining room pantry production is practiced. Industry guidelines for sanitation and safety are covered. Prereq: FSD 111 or permission.	Exposes the student to cold food preparation and cold food display techniques. Covers patés, terrines, galantines, meat curing and platter presentation.
FSD 114 (5) S Food Server 4	FSD 131 (5) S Restaurant Baking 1	FSD 140 (5) S Food Preparation 4
Provides an orientation to basic understanding of management skills in the food service industry. Emphasis on dining room supervision and special techniques in hostess, reception and cashiering. Prereq: FSD 143 (Food Server 3) or permission.	Introduces a variety of puff doughs, including the assorted methods of mixing, enrobing and folding by hand and machine. Intro to paté à choux, pastry creams, commercial puddings, basic plated desserts, sauces, and plate presentations. Prereq: Permission.	Covers classical cuisine methods including advanced hand skills, complex compound entrees and specialty menu items. Explores garde manger work. Continued emphasis on sanitation, safety and organizational skills. Prereq: FSD 124 (Food Preparation 3) or permission.
FSD 115 (5) S Inventory	FSD 133 (5) S Sauce 1	FSD 141 (5) S Sauté 2
Provides an understanding of skills and responsibilities involved in storeroom controls. Covers receiving, storage, issuing, inventory management, recipe costing, yield determination, storeroom organization and application, and HACCP components. Includes computerized inventory record development in multiple software applications. Prereq: Acceptance into Culinary Arts Program or permission.	An entry level course in basic sauce station production and organization. Introduces basic stocks, foundation sauces, sauce variations and soup formulas. Includes exposure to herb and spice combinations and industry standards for sanitation. Prereq: Permission.	Intermediate-level sauté/line preparation and organization. Stresses coordination and speed; complex garnish and sauce-building; sanitation and safety standards. Prereq: FSD 134 or permission.
FSD 120 (5) S Short-Order Cookery	FSD 134 (5) S Sauté 1	FSD 143 (5) S Food Server 3
Familiarizes student with short order breakfast and lunch cookery. Covers breakfast egg and meat cookery, hot sandwich and "fast food" production, speed and portion control, station organization and management, and sanitation and safety guidelines. Prereq: Permission.	Intro to sauté/line station production and organization. Primary sauté skills for meat, poultry, seafood and pasta preparations; pan sauce preparation; use of wine and liquors; plate garnish and presentation. Covers industry sanitation and safety standards. Prereq: Permission.	Development of professionalism and management skills. Emphasis on dining room supervision, special techniques in reception and related duties. Prereq: FSD 122 or permission.
FSD 121 (5) S Food Preparation 2	FSD 135 (5) S Restaurant Baking 2	FSD 145 (5) S Garde Manger 2
An intermediate course in quantity food production, its organization and management. Emphasis on portion control, basic sauce work, meat, fish and poultry production identification, and complex quantity food production. Prereq: FSD 112 or permission.	Second of two modules (two weeks ea.). Introduces basic mixing methods of yeast doughs, preparation of enrobed doughs, and shaping of a variety of rolls, basic and specialty breads, breakfast and savory items. Includes understanding of ingredients and their uses, correct scaling, baking, finishing methods, and safety and sanitation procedures. Prereq: Completion of Culinary Production Certificate Program (GPA 2.75 or higher) or permission.	Covers the fundamentals of cold food production and display techniques. Course topics include: cold hors d'oeuvres (canapés, finger sandwiches and savories), cold set mousses; the principles and applications necessary for sausage-making; concepts and application of salt curing and smoking of meats and fish. Applies principles of platter design and buffet set-up. Prereq: Current enrollment in Culinary Arts Program.
FSD 122 (5) S Food Server 2	FSD 136 (5) S Meat Cutting 1	FSD 150 (5) S Sauce 2
An intermediate course for Food Servers. Covers flambé and tableside techniques, industry performance and opportunities, and continued emphasis on terminology and theory. A luncheon-oriented menu is studied. Prereq: FSD 110 or permission.	Intro to basic restaurant trade meat cutting: beef, veal, lamb, pork, poultry, and seafood. Covers receiving, storage and processing of produce, yield testing, industry standards of sanitation and HACCP guidelines. Prereq: FSD 104 or permission.	Sauce preparations and soup production. Intro to compound sauces and use of flavor enhancers; national and specialty soups; use of wines and liquors in sauce production. Industry standards for sanitation and safety are implemented. Prereq: FSD 133 or permission.
		FSD 151 (5) S Sauté 3
		Advanced course in sauté/line preparation and organization, with modernization of classical techniques of cooking. Covers plate presentation, garnishes and sauces, station organization and management, and industry standards for sanitation. Prereq: FSD 141 or permission.

FSD 152, 153, 154, 155, 156 **S**

Practical supervisory courses that coordinate student workers in a quantity food preparation environment with specific emphasis on institutional cooking. Scheduling, requisitioning of product, purchasing skills, portion control and production skills are demonstrated. Covers supervision of subordinate personnel and training techniques.

FSD 152 (5)
Prep Lead**FSD 153 (5)**
Student Lunch Lead**FSD 154 (5)**
Pantry Lead**FSD 155 (5)**
Short Order Lead**FSD 156 (5)**
Sauté Lead**HOS 180 (1-8)**
Field Application

Provides students with applied experience in an occupational setting. Lab hours are individualized to meet the specific needs of the student. Credits vary in proportion to the total clock hours of the practical experience undertaken. A stipend may be received by the student for services given.

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. Use of the Food Guide Pyramid to evaluate dietary intake. Assignments include a practical evaluation of nutrition information.

Food Production Management
• SOUTH •**FSD 106 (5)** **S**
Food Theory VI

Theory and application of cold food preparation and display techniques. Includes the art of garde manger, forcemeats, use of gelatin and aspic, patés, terrines, galantines and mousse. Covers concept and study of hors d'oeuvres, finger food, canapés and other related subjects. Studies elements of charcuterie, sausage-making and the curing of meats. Includes a performance test which requires the application of ACE (American Culinary Federation) standards in order to plan, prepare, assemble and display a culinary salon show platter. Prereq: FSD 102, FSD 103, FSD 104 and FSD 105 or permission.

FSD 138 (5) **S**
Garde Manger

Cold food preparation and display techniques. Covers pate, terrines, galantines, charcuterie, meat curing and platter presentation. Prereq: Completion of Hospitality Production Certificate (GPA 2.75 or higher) or permission.

FSD 144 (5) **S**
Service Lead

Entry-level supervisory course of dining room service. Covers scheduling of student workers, layout of seating and tableware, marketing of specialty products and receptions. Includes supervision of subordinate personnel and training techniques. Prereq: Completion of Hospitality Production certificate (GPA 2.75 or higher) or permission.

FSD 152 (5) **S**
Production Lead 1

Management development course for food production supervision. Covers coordination of student workers in a quality food preparation environment. Demonstrates scheduling, requisitioning of product, purchasing skills, portion control and production skills. Also covers supervision of subordinate personnel and training techniques. Prereq: Completion of Hospitality Production certificate (GPA 2.75 or higher) or permission.

FSD 153 (5) **S**
Production Lead 2

Continuation of Production Lead 1. Covers scheduling, requisitioning of products, purchasing skills, portion control, production skills, supervision of subordinate personnel and training techniques. Prereq: Completion of Hospitality Production certificate (GPA 2.75 or higher) or permission.

FSD 154 (5) **S**
Production Lead 3

Continuation of Production Lead 2. Covers scheduling, requisitioning of supplies, exhibiting purchasing skills, exhibiting and explaining (to underclassmen) portion control, demonstrating production skills, supervision of subordinates (underclassmen) and demonstrating training techniques. Prereq: Completion of Hospitality Production Certificate (GPA 2.75 or higher) or permission.

Pastry & Specialty Baking
• SOUTH •**FSD 139 (5)** **S**
Cooking I

Exposure course in commercial food preparation for pastry and specialty baking students only. Covers vegetable and starch preparations, main course protein cookery, and a la minute preparations. Sanitation and safety guidelines are applied. Prereq: Permission.

FSD 160 (2) **S**
Pastry & Baking Orientation

Prepares for entry into hands-on pastry courses. Covers trade terminology, overview of the hospitality industry with special emphasis on pastry production, job opportunities, professional organizations and selection and use of tools of the trade. Includes orientation about the program and facility, metric and U.S. measurement conversions and calculations. Hands-on knife skills will be taught and demonstration of mixing skills observed. Requires a research report on an assigned baking ingredient. Prereq: Permission.

FSD 166 (5) **S**
Bread 1

First of four modules (two weeks ea.). Intro to basic mixing methods of yeast doughs, preparation of enrobed doughs, and shaping of a variety of rolls, basic and specialty breads, breakfast and savory items. Includes understanding of ingredients and their uses, correct scaling, baking, and finishing methods, and safety and sanitation procedures. Prereq: FSD 160 or permission.

FSD 167 (5) **S**
Cookies 1

First of two modules (two weeks each). Intro to basic mixing methods. Student prepares assorted cookie doughs using the one stage creaming, sponge methods, prepare basic types of cookies and their assorted finishes. Includes understanding of ingredients and their uses, correct scaling, baking and finishing methods, and safety and sanitation procedures. Selection, care and handling of equipment will be emphasized. Prereq: FSD 160 or permission.

FSD 168 (5) **S**
Cakes 1

First of two modules (two weeks each). Intro to the following mixing methods: two stage, flour batter, sponge, high ration, chiffon, angel food and modified sponge methods. Student prepares assorted breakfast items, fill, mask, pour and finish basic cakes and roulades. Includes understanding of ingredients and their uses, correct scaling and baking methods. Prereq: FSD 160 or permission.

FSD 169 (5) **S**
Pies

First of two modules (two weeks each); Intro to a variety of pie doughs, pie fillings, decorative finishes of single and double crusted pies, baked and unbaked pies, custards, curds, strudels and simple desserts. Prereq: FSD 160 or permission.

FSD 170 (5) S
Cookies 2

Second of two modules. Provides exposure to leadership, organization, scheduling and evaluation of team members and product. All mixing methods will be reinforced by teaching them to junior classmates. Introduces advanced methods in preparation of cookies and savory items and piping and dipping skills with assorted mediums. Students assist junior team members in gaining an understanding of ingredients and their uses, correct scaling and baking methods, and in the selection, care and handling of equipment. Safety and sanitation practices will be reinforced. Prereq: FSD 167 or permission.

FSD 171 (5) S
Bread 2

Second of four modules. Practice of basic mixing methods of yeast doughs and muffin mixes; preparation of the three enrobed doughs from start to finish, including uniform shaping of individual product. Student prepares assorted rolls, breads, muffins, croissants, breakfast pastries and savory items. Includes understanding of ingredient functions and characteristics. Correct scaling, baking, and finishing methods will be reinforced as well as the practice safety & sanitation procedures. Prereq: FSD 166 or permission.

FSD 172 (5) S
Bread 3

Third of four modules. Covers mixing assorted yeast doughs and specialty breads. Includes assisting junior students in the preparation of the three enrobed doughs from start to finish, including uniform shaping of individual product, and assisting preparation of assorted rolls, breads, muffins, croissants, breakfast pastries, and savor items while exercising quality and quantity control. Reinforces understanding of ingredient functions and characteristics. Also assist junior students in correct scaling, baking, and finishing methods, as well as the practice of safety and sanitation procedures. Prereq: FSD 171 or permission.

FSD 175 (5) S
French Pastry 1

Practical exposure to the fundamentals of assorted enrobed, non-yeasted doughs, basic creams, fillings and cooked doughs. (pate a choux). Prereq: FSD 160 or permission.

FSD 176 (5) S
Dessert 1

Opportunity to apply, develop and design basic individual plated desserts. Planning, organization, portion control and plate presentation will be emphasized. Prereq: FSD 160 or permission.

FSD 177 (5) S
French Pastry 2

Advanced course in basic French pastries where the application of different batters and fillings will be emphasized. Develop skills in assembling, producing and decorating classic French pastries. Prereq: FSD 160 or permission.

FSD 178 (5) S
Decorating 1

Intro to the practicality and techniques of basic cake mixing, filling, assembling, masking, icing and decorating cakes. Covers assorted cheesecake fillings, curds and tarts, along with basic tool handling and piping skills. Prereq: FSD 160 or permission.

FSD 179 (5) S
Dessert 2

Practice in designing desserts from basic products to classical dessert variations. Skill in the production of complex desserts in the industry will be emphasized and applied. Covers numerous plate presentations and an understanding of portion control and practicality. Prereq: FSD 176 or permission.

FSD 180 (5) S
Cakes 2

Advanced two-week course to give exposure to leadership, organization, scheduling, and evaluation of team members and product. Mixing methods and an understanding of ingredients and their uses, correct scaling and baking methods will be reinforced by assisting/teaching junior classmates. Introduces advanced methods in preparation of cakes, quick breads and assembled cake products, including masking and pouring with assorted mediums. Prereq: FSD 168 or permission.

FSD 183 (5) S
Chocolate 1

First of three practical chocolate courses to provide basic knowledge and application of types of couvertures used in the making of assorted "chocolates." Skill in basic chocolate decorations and tempering with different methods will be emphasized and the cooking of ganaches, fudges and "candy centers" will also be taught. Prereq: FSD 160 or permission.

FSD 184 (5) S
Decorating 2

Review of basic cake mixing, filling, assembling, masking, icing and decorating. Emphasis on more elaborate cakes as well as color application in decoration. Development of greater skills in design composition and pastry bag techniques. Prereq: FSD 178 or permission.

FSD 185 (5) S
Petits Fours

Advanced course and creation of petits fours: classic petits fours glace and petits fours sec and contemporary petits fours, using a wide variety of media for composition. Covers skill in filling, assembling, cutting and pouring with assorted mediums while also developing decoration skills. Prereq: FSD 160 or permission.

FSD 186 (5) S
Bread 4

Last of four modules. Students plan, organize, manage and evaluate a bread team of 4 to 12 junior students. Develop leadership by preparing a daily plan under the guidance of the instructor, then delegate, supervise, evaluate tasks and solve problems as needed. Practice quality and quantity control, reinforce the understanding of ingredient functions and characteristics, and assist junior students in correct scaling, baking, and finishing methods, as well as the practice safety and sanitation procedures. Prereq: FSD 172 or permission.

FSD 188 (5) S
Chocolate 2

Reinforces tempering methods, molding chocolate molds and enrobing assorted candy centers. Develops basic skills for dipping chocolates with emphasis on the creation of chocolate decorations and assorted mediums for the creation of "chocolates." Prereq: FSD 183 or permission.

FSD 189 (5) S
Decorating 3

Practical exposure to advanced classical cake batters, specialty fillings and icing mediums. Covers techniques for mixing, filling and icing basic round and square cakes, skills in decoration and pouring methods, basic special event cake orders and practicality in decoration. Prereq: FSD 184 or permission.

FSD 190 (5) S
French Pastry 3

Final course in French pastries. Focus on production of basic pastries (required for performance test) and advanced and seasonal pastries using local and regional ingredients. Reinforces skills in production and presentation. Prereq: FSD 177 or permission.

FSD 191 (5) S
Decorating 4

Introduces a larger variety of fillings, such as classic European mousses, Bavarian creams and specialty fillings, along with a broader variety of icing mediums and creativity in decoration. Reinforces speed skills, icing and decorating, advanced specialty cake orders and organization of the daily production. Prereq: FSD 189 or permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C

Intermediate Acctg. I

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

FSD 192 (5) S
Show Pieces

Utilizes the mediums from the 7:00 classes for application in the creation of basic show pieces. Develops planning, assembling and blending of different mediums for larger show pieces. Also covers finishing details and display techniques. Prereq: FSD 160 or permission.

FSD 193 (5) S
Head Pastry 1

Intro to the organization and running of a basic bakery production lab area with 18-25 junior students. The student inventories, orders and receives, stores fresh and dry goods, maintains a par level of ingredients, and develops leadership by delegating, supervising, evaluating tasks, and solving problems as needed. Emphasis on supervision in production quality and quantity. Reinforces the understanding of ingredient functions and characteristics by assisting junior students in correct scaling, baking, finishing methods, and the practice of safety and sanitation procedures. Prereq: FSD 186 or permission.

FSD 194 (5) S
Head Pastry 2

Provides management skills and responsibilities in the organization and operation of the annex lab. Emphasis on specialty cake orders, including wedding cakes and applying skills to the finishing of special orders. Students supervise subordinate personnel overseeing the practice of safety and sanitation. Prereq: FSD 193 or permission.

FSD 195 (5) S
Decorating 5

Final course in decorating. Continued development of technical skills, speed, organization and leadership skills. Covers customer relations and production of wedding cakes. Includes planning and practicing for the performance test. Prereq: FSD 191 or permission.

FSD 196 (5) S
Chocolate 3

Final course on chocolate. Emphasis on leadership and achieving a professional level in the chocolate field. Develops and refines skills and speed. Prereq: FSD 188 or permission.

FSD 197 (5) S
Dessert 3

Final dessert course. Emphasis on leadership. Planning of dessert menu for second week with participation of team members. Develops organization and supervision of station. Prereq: FSD 179 or permission.

HOS 180 (1-8) S
Food Service Field Application

Applied experience in an occupational setting. Lab hours are individualized to meet student need, supportive to the field experience. Credit varies in proportion to total clock hours of practical experience undertaken. Students may receive a stipend for services rendered. Prereq: Permission.

HOS 299 (5) S
Individual Projects Hospitality & Culinary Arts

Covers general projects as developed by faculty related to culinary training. Prereq: Enrollment in SSCC Food Science Program (second quarter or higher) or permission.

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 096 (3) S
The College Puzzle - Understanding How the Pieces Fit

Intro to college life to assist individuals in understanding how the academic system works. Develops the basic skills and understanding necessary for active participation in all phases of the college experience.

HDC 100/PSY 100 (1-3) N,C,S
Career Planning

Introduces 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) N,C,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 (1-3) C
College Survival Skills

Study skills for new/returning students. Time management, use of college support services, effective reading and note-taking, writing clarity, memory improvement and successful test-taking. Can be taken in 1-credit modules including: Time Management, Test Taking, Listening & Note-Taking, and Thinking & Reading.

HDC 103 (3) C
Self-Awareness Through Critical Thinking & Problem-Solving

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 104 (2) N,C
Increasing Personal Power - Communication & Assertiveness

Intro to methods of self-expression, listening, and response to others. Stress-reduction communication methods, active listening, passive listening, body language and conflict resolution. This course is based on the Wednesday noon Women's Center lecture series. The class explores barriers to, and sources of, women's power.

HDC 105 (3) N,C
Career Assessment

Career information and personal assessment related to a specific occupation or career. Individual counseling along with the development of a specific personal plan for further education or training. May include résumé-writing or informational interviewing skills.

HDC 106 (1-2) N,C,S
Interviewing, Resumes, Job Hunting & Employee/Employer Interaction

Short, intensive course in creative job-hunting techniques - how to identify personal skills and focus a job search; where and how to look for jobs; how to get hired.

HDC 110 (3) N,C
Pre-Training for High Tech & Trades

Prep for vocational study. Develop basic skills necessary in technical fields, the trades and other occupations. Includes work on math and technical anxiety, career planning, basic tool and computer use, problem-solving, assertiveness and basic study skills. Prereq: Permission.

HDC 111 (1) N,C
Math Study Strategies

Provides an opportunity for students to learn and adopt skills and strategies for a successful math experience. Covers what you need to know to study math, how to discover math learning strengths, how to improve memory, listening, note-taking, reading and test-taking techniques.

HDC 112 (1) N,C
Managing Time & College Expectations

Develop specific skills to be more successful in college. Focuses on the development of effective time management skills and a thorough understanding of classroom and campus expectations and responsibilities.

HDC 113 (1) N,C
Reading & Textbook Note-Taking Strategies

Become a self-directed learner for reading and thinking both academically and personally. Focuses on the development of practical knowledge and strategies to assist students towards that goal.

HDC 114 (1) N,C
Listening & Lecture Note-Taking Strategies

Increase listening and lecture note-taking skills.

HDC 115 (1) N,C
Test-Taking Skills & Anxiety Management

Strategies for effective test-taking and test anxiety mitigation to enhance testing performance and curriculum retention. Includes assessment of personal learning style, test and question types and strategies, study habits and environment, sources of anxiety and reduction strategies and resources and planning for testing.

HDC 119 (1-3) N
Stress Management

Focus on changing stressful situations and personal responses to them. Topics include time management, cognitive restructuring, health and wellness, and relaxation training.

HDC 120 (3-5) N,C,S
Intro to Leadership Theory & Practice

Theory behind various leadership styles such as situational, multicultural, and servant leadership, through selected readings, discussions, lectures, and structured experiences. Options available for student involvement with various student activities and programs or on-campus committees/task forces.

HDC 121 (2) N,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 130 (3) C
Work & Well-Being

Exploration of causes of job dissatisfaction and means of alleviating it.

HDC 190 (1-2) N,C
Women in Society

(N) For women in school and those considering returning to school. Covers re-entry problems, balancing home and college responsibilities, assertiveness and self-confidence, overcoming barriers; support group setting. (C) Lecture and discussion on issues related to women's changing roles in society. Includes speakers from college and community.

HDC 197 (2-3) N,C
Leadership Practice & Application

Course combines students' experiences such as serving on a college off-campus committee, or active involvement with student organizations or student government with workshops/seminars leadership and career skills.

HDC 199 (1-3) S
Independent Study

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) N,C,S
Orientation to Success in the American College

Provides international students with the knowledge and skills for success in American community colleges.

HDC 294 (1-2) C
Individualized Career Development

Designed to help students with confused or non-existent goals develop awareness of their own patterns of aptitudes, interests, and personality traits. Career counseling session, writing assignments, career research and assessment will help students develop self-awareness through self-evaluation. Independent study with a counselor. Prereq: Counselor's signature.

HUMANITIES**HUM 101 (5) N,C,S**
Humanities in Thought & Action

Covers significant movements in Western culture and values through major works of art, drama, literature, philosophy, music, architecture and language. Historical and political writings reveal forces affecting the humanities, from the beginning of civilization to the fall of the Roman Empire.

HUM 102 (5) N,C,S
Humanities in Thought & Action

Continuation of HUM 101. Covers the age of Charlemagne to the Enlightenment.

HUM 103 (5) N,C,S
Humanities in Thought & Action

Continuation of HUM 102, from the French and American Revolutions to contemporary issues. Recommended: Placement in ENG 101 (N).

HUM 104 (5) N,C
Visual Thinking & Communication Skills

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 ENG 098 or higher.

HUM 105/ISP 105 (5) N,C
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 in intercultural communication gained from the study of diverse cultures through literature, theory and guest lecturers.

HUM 110 (3-5) N,C,S
Intro to Film

Examines Hollywood filmmaking as an art form, a business, and a shaper of culture. Students view, discuss and critically analyze classics, features and documentaries for increased understanding of literary and artistic elements. Also covers the impact of films on personal experience, American culture and the world.

HUM 111 (5) S
Critical Thinking & Ethics in the Workplace

Intro to critical thinking, logic, and scientific reasoning with applications to other courses, everyday life and work. Topics relate directly to the programs of study and future careers of technical education students.

HUM 112 (5) N,C,S
Responsibilities & Rights in a Free Society

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. Assists students in thinking clearly about these issues and adds the dimension of values to the critical thinking process.

HUM 113 (5) S
Applied Esthetics

Development of an esthetic approach to technology and the world of work. Concepts of quality, beauty, good design, and a good work environment will be explored from a variety of viewpoints including the philosophical, multicultural, psychological, economic and technological.

HUM 114 (5) S
Life Cycles of Technology

Enables students to use history: its content, analytical process, research methods, analytical methods and writing techniques to anticipate, understand and benefit from historical change. Provides students with insights into the nature of the life cycles of businesses, products, materials and processes using the techniques of research, analysis and writing of history.

- HUM 115 (3) S**
Perspectives of the Chinese Garden
 Overview of the history, meaning and significance of Chinese gardens. Covers art, poetry and architecture; language and calligraphy; the influence of Confucianism, Daoism and Buddhism native flora and geography; plants and their symbolism; principles and styles of Chinese garden design; and the place of the Chinese garden in the world today.
- HUM 149 (2) C**
Ways of Learning
 Students will study and write about their learning at Seattle Central Community College. Along with readings and seminars on learning and learning styles, students will keep journals and write about their past, present and planned education in order to describe and analyze their own learning for themselves and others. Students will assess their education in other classes, and will prepare exit assessment projects.
- HUM 150 (5) C,S**
Ways of Knowing
 Course in self-assessment or self-evaluation in which students will write and talk about their own education. Includes a study of learning styles and an exploration of individual learning styles in order to create a meeting ground.
- HUM 160/ISP 160 (5) N,C,S**
Ways of Knowing
 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: ENG 101 placement.
- HUM 187 (1-3) C**
Information Resources in Humanities
 Examines various research strategies for locating, evaluating and applying information resources in humanities. Emphasizes proficiency using various electronic databases, including those available on the library's information networks, the online catalog, and other standard research tools and retrieval techniques.
- HUM 189 (3) C**
Using Learning
 Students complete a portfolio project which allows them to evaluate their own learning, create a product that reflects that evaluation, and apply the learning to future goals outside the college.
- HUM 197 (2-12) C**
Work Experience - Humanities
 Allows students to earn work experience credit in the humanities field. Prereq: Permission.
- HUM 200/CMN 245 (5) N,C,S**
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 ENG 101 (N).
- HUM 210 (5) N**
Gay & Lesbian Studies
 Introduces various complex historical, social, and cultural issues surrounding gay and lesbian experience. Multi-disciplinary examination of: coming out; gay identity and gay culture; gender issues; bisexuality; transgender identity; AIDS; and gay rights. Class will read fiction, poetry, autobiography, history, essays, and plays, as well as look at representations of gays and lesbians in film. Prereq: Placement into ENG 101.
- HUM 231 (5) N**
Cultural Monuments of Southern Europe/Field Study
 Lecture series and tour of the classical, medieval, Renaissance and modern monuments of France, England, Italy, Greece, and Germany; emphasizing history, art, and architecture of these countries, together with their political, economic, and religious backgrounds. Prereq: Permission, valid passport, deposit for tour.
- HUM 232 (5) N**
Intro to French Civilization & Contemporary Culture
 An 11-week study, travel and homestay program in Nantes, France, Seattle's sister city since 1980. Students gain firsthand knowledge of daily French life while living with families and attending classes. Students attend classes in French Language, and Civilization and Contemporary Culture, organized by the Foreign Student Division of the University of Nantes and NSCC. Prereq: FRE 103, valid passport, permission, tour deposit, and French visa.
- HUM 234/ISP 234 (5) N**
People, Morality & the State in Chinese History
 Covers concepts of Chinese civilization in its various stages, from the earliest days to the present. Emphasis on morality-based political philosophy of Confucianism with other conflicting or complementary views of people, nature, society and state.
- HUM 250 (5) N**
Issues in the Humanities
 Critical thinking following readings, video discussions, writings and discussions in class groups. Weekly preparatory writing for seminars and essay for midterm and final exams. HUM 250/251 may be taken out of sequence. Prereq: ENG 101 or permission.
- HUM 251 (5) N**
Issues in the Humanities
 Critical thinking following readings, video discussions, writings and discussions in class groups. Weekly preparatory writing for seminars and essay for midterm and final exams. HUM 250/251 may be taken out of sequence. Prereq: ENG 101 or permission.
- HUM 261/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.
- HUM 289 (5-10) C**
Chinese Language Through Experiential Activities
 See course description listed for HUM 298.
- HUM 290 (5-10) C**
German Language Through Experiential Activities
 See course description listed for HUM 298.
- HUM 291 (5-10) C**
Spanish Language Through Experiential Activities
 See course description listed for HUM 298.
- HUM 292 (5-10) C**
French Language Through Experiential Activities
 See course description listed for HUM 298.
- HUM 293 (5-10) C**
Italian Language Through Experiential Activities
 See course description listed for HUM 298.
- HUM 294 (2-5) C,S**
Independent Projects in Humanities
 Independent projects based on humanities research. Prereq: Permission.
- HUM 295 (2-5) C**
Independent Projects in Humanities (For Teachers Only)
 Curriculum practicum for teachers. Prereq: Permission.
- HUM 296 (2-5) C**
Independent Projects in Humanities (For Teachers Only)
 Continuation of HUM 295 or independent curriculum project on a different topic than that studied in HUM 295. Prereq: Permission.
- HUM 297 (5-10) C**
Japanese Language Through Experiential Activities
 See course description listed for HUM 298.
- HUM 298 (5-10) C**
Portuguese Language Through Experiential Activities
 Self-paced, experiential courses for students planning to attend a language school outside the U.S. while studying the culture of the country.
- HUM 299 (2-5) N,C,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

Course 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.

INDUSTRIAL MACHINING TECHNOLOGY

IMT 101 (8) S Orientation to Lathe Practices

Includes set-up and operation of the power hacksaw to prepare work for the lathe, and the set-up and use of the engine lathe for turning, facing and threading operations, also the use of the pedestal grinders in grinding tool bits.

IMT 110 (8) S Milling Machine Operations

Introduces milling machine operations including milling cutters, adapters, cutting feeds and speeds, holding devices, setups and alignments, precision detail machining and special emphasis on safety. Prereq: IMT 101.

IMT 111 (8) S Advanced Milling Machine Operations

Continuation of IMT 110, includes: precision detail machining, interchangeable and symmetrical fits, machine gearing ratios, finishing, indexing and cutter selection. Prereq: IMT 110.

IMT 112 (3) S Precision Grinding

Includes operation of surface grinding, cylindrical grinding and tool cutting machines. Covers composition of grinding wheels, identification of different wheels and their use on specific materials.

IMT 119 (10) S Intro to Computer Numeric Control Manufacturing

Computer numerical machining including history, manuscripting and machine control and theory. Prereq: Basic machine technology training or permission.

IMT 120 (10) S Intermediate Numeric Control Manufacturing

Includes machine language programming, codes, trigonometric applications, production processes, editing and tooling lab projects. Prereq: IMT 119 or permission.

IMT 121 (10) S Advanced CNC

Emphasis on practice and flexibility between machine types, and machine languages. Includes production and costs as they relate to tool selection, speeds and feeds, and set-ups from various jobs. Prereq: IMT 120 or permission.

IMT 125 (3) S Math Applications in IMT I

Intro to basic machine shop mathematics. Includes whole numbers, fractions, decimals, ratios and proportions; trigonometry using tables and calculators; and the calculation of speeds and feeds for various types of machine tools.

IMT 126 (3) S Math Applications in IMT II

Continuation of IMT 125. Includes: problem solving; regular polygons and circles; and table of constant formulas used to determine altitudes, length of sides, diagonals and areas. Triangulation and taper problems are solved with the application of trigonometry. Prereq: IMT 125 or equivalent.

IMT 127 (3) S Math Applications in IMT III

Continuation of IMT 126. Includes drawing to scale, problems of circles and semi-circles, prisms, and cylinders. Charts and formulas are used to solve threading problems. Prereq: IMT 126.

IMT 228 (3) S Math Applications in IMT IV

Continuation of math series for machine trades. Includes problem solving of prisms, pyramids, cones, frustums and spheres. Also covers the determination of volumes, altitudes, areas and lateral surfaces, and computation of compound gearing trains for indexing and leads. Prereq: IMT 127.

IMT 229 (3) S Math Applications in IMT V

Continuation of math series for machine trades. Includes problem solving using the six basic trigonometry functions. Computations include base, sides, angles and perpendiculars in addition to gear design, gear terminology and problem-solving of gear dimensions. Prereq: IMT 228.

IMT 297 (2-12) S Special Topics in Machining

Special topics in machining on an individual or group study basis in the Industrial Machining Technology field. Prereq: Permission.

INDUSTRIAL MANUFACTURING TECHNOLOGY

INT 100 (3) S Overview of Manufacturing Processes

Study of how machined parts are fabricated. Includes limited hands-on experience on both lathe and milling machines. For Engineering, Drafting and Quality Assurance majors.

INT 125 (5) S Electrical Safety

Covers Federal OSHA and the State of Washington (WISHA) electrical safety standards as they apply to general industry. Types of hazards associated with electricity, single and three-phase systems, cord and plug connected equipment, hazardous locations and safety related work practices, as well as understanding of the government regulations. Emphasis on electrical hazard recognition and OSHA inspection procedures.

INT 130 (5) S Cranes & Material Handling

Introduces various types of overhead cranes, hoists and powered industrial trucks used in general industry. Covers basic information concerning overhead and gantry cranes, wire rope, slings, crane inspection and maintenance, and operations and maintenance of industrial trucks. Discussion of appropriate OSHA and ANSI standards and related requirements.

INT 155 (5) S Pipe Fitting & Plumbing

Introduces the selection and use of pipe and tubing for purpose of supplying air, water, oil and electrical wiring to machinery.

INT 160 (5) S Intro to Safety & Health

Covers both Federal OSHA (29 CFR 1910) and State of Washington (WISHA) general industry standards as they apply to the industrial manufacturing industry. Students will learn the hazards associated with the manufacturing industry and how to apply these standards to ensure compliance with the Occupational Health and Safety Act of 1970.

INT 161 (5) S Applied Industrial Hygiene

Introduces general concepts of industrial hygiene and sampling techniques. Topics include recognition of 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 and how to apply these standards to ensure compliance with the occupational Safety and Health Act of 1970.

INT 197 (1-10) S
Industrial Internship

Provides the opportunity for students to 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. Students 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. Students gain understanding of 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. Students gain understanding of the proper techniques to conduct a complete and accurate investigation.

INT 220 (5) S
Ergonomics

Introduces application of ergonomics principles for the reduction of stresses and strains to the employee's body. Topics include 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 TECHNOLOGY

See *Computer Information Systems*.

INDUSTRIAL POWER & CONTROL TECHNOLOGY

See *Electronics*.

INTEGRATED MEDIA COMMUNICATIONS**IMC 100 (3) C**
Media Publications

Intro to writing types and principles associated with professional activities in media-based industries. Covers writing fundamentals, basic business writing, reviews and articles for publication. Includes designing and creating publications.

IMC 101 (3) C
Design for the Visual Arts

Fundamentals of basic design and creative problem-solving. Exploration and application of design principles.

IMC 297, 298, 299 (6 ea) C
Integrated Media Communications

This three-quarter, project-based course includes the design and production of a magazine, and provides beginning students with design and business principles, writing, computational and teamwork skills. Course is designed for students in the disciplines of Apparel Design & Services, Graphic Design & Illustration, Commercial Photography, and Graphic Imaging & Printing Technology.

INTERNATIONAL BUSINESS

Note: Program is under revision. Please contact the Business Program Division for current course offerings (206-527-3730).

INTERNATIONAL STUDIES**ISC 197/198/199 (2-5) C**
Intercultural Studies Internship

Requires the intern to develop knowledge about the country being visited and may include: a brief history, major political institutions, major celebrations/holidays, including social and political institutions. The intern will also be asked to describe his/her initial internship experience as it relates to an education career and could include: exploration through informational interviewing, observations, readings, and special topic research.

ISP 101/SOC 101 (5) N
The Global Society

Topics include human interaction, social institutions, social stratification, socialization, deviance, social control, social and cultural change. Emphasis on the globalization of cultures and societies in producing the world system.

ISP 105/HUM 105 (5) N,C
Understanding Intercultural Communications

Interdisciplinary focus on the values, patterns, history, and attitudes that create and sustain cultures; emphasis on skills and empathy in intercultural communication gained from study of diverse cultures through literature, theory and guest lectures.

ISP 110 (5) N
Intro to Global Studies

Provides basic knowledge necessary to live in an interdependent and interconnected world. Intro to the diversity in the world's biophysical landscape and examination of human inter-connectedness through time and space; major global issues and problems such as migration, food and hunger, and environmental pollution and development. Explores cultural diversity and unity at global, regional, and national levels.

ISP 112 (5) N
The Contemporary World

Intro to the nation-state system, power elements, and major problems facing nations today, including population, hunger, nuclear proliferation, energy, nationalism, and North-South/East-West relations. May be taken for political science credit as POL 112.

ISP 120 (5) S
Intro to Scandinavian Culture

Introduces the Scandinavian culture, providing an overview of the geography, heritage and history of the members of the Nordic Council: Denmark, the Feroe Islands, Finland, Greenland, Iceland, Norway, Sweden and Aland. Estonia will also be covered.

ISP 160/HUM 160 (5) 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.

ISP 170/SOC 170 (5) N
Intro to Contemporary China

Multi-disciplinary survey course on the people, history, culture, and socio-economic political systems of Chinese society. Students are encouraged to learn as much historical background as possible.

ISP 201 (5) N,C,S
Intro to International Political Economy

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/WMN 205 (5) N,C,S
Women in the Global Context

Interdisciplinary introduction to the study of women in Asia, Africa, Latin America, the Middle East or indigenous women in some Western societies. Explores commonalities and differences among women in various societies and cultures. Focus on women of specific societies or regions varies depending on instructor.

ISP 210/HIS 210 (5) N
The Pacific Century

Study of the transformation of Pacific Asia and its contribution to the modern world. Emphasis on responses to problems and challenges of economic, political, and social development. Attention to impact of China and Japan on contemporary Pacific Asia.

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 three faces of hunger - acute, chronic, and hidden - and evaluates proposed strategies using scientific measures as well as the voices of people.

ISP 234/HUM 234 (5) N
People, Mortality & the State in Chinese History

Covers concepts of Chinese civilization in its various stages, from the earliest days to the present. Emphasis on morality-based political philosophy of Confucianism with other conflicting or complementary views of people, nature, society, and state.

ISP 251/HIS 251 (5) N
History of Chinese Civilization

Development of Chinese society from ancient times to the present, including philosophy, literature, fine arts, religion, foreign relations, science and technology.

ISP 255/ART 255 (5) N,C,S
History of the Art of Asia

Survey course of the paintings, sculpture, architecture and crafts of India, China, Japan and Southeast Asia. Influences brought about through invasion, assimilation and transformation of Hinduism, Buddhism, Daoism and Confucianism as they are reflected in the arts, history and culture. Slide and lecture format.

ISP 260 (5) N
World Migration

Study of human migration in time and space including pre-colonial, colonial and current transnational migration. Examines causes of voluntary and involuntary migration and their impact on economic, social and cultural aspects of peoples lives. Covers how migration led to the formation of diasporas in different parts of the world, and studies recent trends in return migration among the Peruvian Japanese, Caribbean and Irish Americans along with other case studies.

ISP 261/HUM 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.

ISP 293/HUM 293/SOC 293 (5) N
Global Studies
Projects & Practicum (Pacific Asia)

Introductory and experimental knowledge of the people, history, culture and economic development in Pacific Asia. Field trip to selected Pacific Asian countries, lecture, on-site assignments and pre- and post-trip classroom work.

INTERPRETER TRAINING

ITP 115 (3) C
Survey of Interpreting

Overview of the field of interpretation. Topics include history, terminology, competencies, professional ethics and environmental factors. Research paper required. Prereq: Acceptance into the ITP program or permission.

ITP 119 (4) C
Deaf-Blind Interpreting

Covers specialist skills necessary for Deaf-Blind interpreting. Cultural norms and etiquette, tactile modifications of ASL, commonly used communication modes, interpreting visual information and environmental considerations for the interpreter are emphasized through interactive instruction, simulations, guided interpreting practice, blind-fold experiences and guest presentations by Deaf-Blind people. Course consists of four hours of lecture and two hours of field work/lab outside of class. Prereq: ASL 203 or permission.

ITP 145 (3) C
Ethics of Interpreting

Exploration of how values, character, and skills in interpersonal relations are developed. Discussion of the applications of the RID Code of Ethics to different interpreting situations is included. Prereq: Acceptance into ITP, or permission.

ITP 160 (4) C
ASL-to-English Interpretation I

Introduction of interpretation from ASL to English in the consecutive mode. Application of the Gish approach to information processing. Dual task performance, short-term memory building, paraphrasing skills, shadowing techniques and other pre-interpretive skills are studied. Prereq: ASL 203 with a 2.5 or better. Co-Req: ITP 161.

ITP 161 (4) C
English-to-ASL Interpretation I

Taken concurrently with ITP 160. Introduction of interpretation from English to ASL in the consecutive mode. Emphasis on vocabulary development and ASL expressions. Prereq: ASL 203 with a 2.5 or better. Co-Req: ITP 160.

ITP 162 (4) C
ASL-to-English Interpretation II

Continuation of ITP 160 with interpretation of increasingly complex discourse. Gradual shift from consecutive to simultaneous interpretation. Prereq: ITP 160 with a 2.5 or better or permission. Co-Req: ITP 163.

ITP 163 (4) C
English-to-ASL Interpretation II

Continuation of ITP 161. Increases fluency, facility and stamina, with increased difficulty of text, discourse and vocabulary from English to ASL. Increased facility with receptive and expressive finger spelling. Prereq: ITP 161 with a 2.5 or better, or permission. Co-Req: ITP 162.

ITP 164 (4) C
ASL-to-English Interpretation III

Continuation of ITP 162 with interpretation of increasingly complex discourse in the simultaneous mode. Students will demonstrate proficiency in interpreting ASL to English. Prereq: ITP 162 passed with 2.5 or better, or permission. Co-Req: ITP 165.

ITP 165 (4) C
English-to-ASL Interpretation III

Continuation of ITP 163. To be taken concurrently with ITP 164. Prereq: ITP 163 passed with 2.5 or better, or permission. Co-Req: ITP 164.

ITP 216 (3) C
Interpreting Specialized Settings

Intro to specialized settings within the field of interpretation. Covers basic vocabulary, ethical considerations and general issues involved with professional areas of interpretation, which include mental health, medical, legal, educational (K-12), substance abuse programs, performance, and religious settings. Prereq: Completion of ITP 260 or permission.

ITP 217 (3) C
Professional Entry Preparation

Prepares students for immediate entry into the world of professional interpreting. Topics include professional certification, techniques for solving ethical and practical problems that occur in everyday interpreting, needs and requirements of potential employers, accessing referral agencies, and networking with future colleagues. Prereq: Permission. Co-Req: ITP 255.

ITP 245 (4) C
Applied Interpreting Experience I

Students accumulate a total of 80 hours participating in four kinds of experiences: 1) Supervised Experience - 10 hours, 2) Mock Experience - 30 hours, 3) Tutorial Experience - 20 hours, 4) Unclassified Experience - 20 hours. Prereq: ITP 164 and ITP 165 or permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

ITP 246/247 (1-5) C
Applied Interpreting Support

Continued development of interpreting techniques with practical experience for students in mock interpreting field placements. Prereq: Completion of ITP 260 (Interpreting IV) and ITP 245 (Applied Interpreting Experience I) with a 2.0 or better, or equivalent with permission.

ITP 250 (4) C
Applied Interpreting Experience II

Second of three courses in which the ITP student applies to real-life situations the knowledge and skills they have learned. Prereq: ITP 260 and ITP 245 (w/2.5 or higher), or equivalent with permission.

ITP 255 (4) C
Applied Interpreting Experience III

Continuation of ITP 250 with same distribution of the required 80 hours. Prereq: Satisfactory performance in ITP 250.

ITP 260 (4) C
Interpreting IV

Course builds upon the level of difficulty of interpreting skills by using increasingly challenging material. Students continue to increase stamina and duration of interpreting, facility with receptive and expressive finger spelling, and use of idioms. Students build skills through classroom and lab practice, and will learn appropriate feedback and self-assessment techniques. Prereq: ITP 164 and ITP 165, with a 2.5 or higher, or permission.

ITP 261 (4) C
Interpreting V

Continuation of ITP 260 with increasing complexity of discourse. Prereq: Completion of ITP 260 with a 2.5 or higher, or permission.

ITP 262 (4) C
Transliteration

Pass/Fail course. Intro to transliteration. Covers contact varieties of ASL used in transliteration. Practice on exercises to establish foundation for transliteration. Prereq: ITP 261 or permission.

ITP 299 (1-5) C
Independent Study

Selected topics in interpreter training. A mutually-agreed-upon research project is assigned by the appropriate supervising faculty. Prereq: Permission.

JOURNALISM**JRN 100 (5) N,C**
Intro 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: ENG 101 placement.

JRN 101 (5) N,C,S
Media Writing

Covers newsworthiness, sources, news gathering techniques (beat, interview, observation, research), writing and editing stories for newspaper, radio and television; law and ethics, influence on society, and values.

JRN 102 (2-4) S
Newswriting

Continuation of JRN 101. Emphasis on special assignments such as feature writing and in-depth reporting. Prereq: JRN 101 or permission.

JRN 103 (4) S
News Editing

Editing of news copy for publication; headline writing and layout. Prereq: JRN 102 or permission.

JRN 104 (2-3) N,C,S
College Publications

Intro to newspaper production. Includes writing, editing and layout. Students examine current newspapers and produce their own news and feature articles. Prereq: JRN 102, or another newswriting course, or permission (S); ENG 101 eligibility (C).

JRN 105 (3) C,S
College Publications

Hands-on course in college publishing. Covers basics of advanced reporting and writing through work on college newspaper and other assignments. Prereq: JRN 104 or another newswriting course, and mastery of basic news reporting techniques.

JRN 106 (3) C
Publications Leadership

Advanced practicum on the student newspaper, arranged by contract. Focus on skills and responsibilities required of editorial or management positions (editor-in-chief, copy editor, business manager, etc.) for college newspapers.

JRN 199 (2-5) S
Independent Study in Journalism

Internship on a professional publication through arrangement between editor and journalism instructor, or management position on college publication. Prereq: JRN 101 and 104, plus permission.

LANDSCAPE HORTICULTURE**LHO 100 (1) S**
The Landscape Industry

Survey of the landscape industry. Learn about career opportunities, work requirements, training requirements, trade organizations, certificate programs, opportunities for continuing education, and related four-year degree programs.

LHO 105 (3) S
Landscape Design Basics

Explore the basics of design, then apply your vision to a residential or commercial setting. Develop skills in drafting and drawing, plant placement and aesthetics. Present the finished product to your peers. This course will accommodate both landscape professionals and home owners.

LHO 107 (1) S
Weed Identification

Recognize common lawn and landscape weeds by sight, develop proficiency in the use of weed identification manuals and learn to use a CD-ROM weed identification program.

LHO 108 (1) S
Weed Management

Explore weed biology, become familiar with various weed management strategies (cultural, biological, chemical), and understand how to apply an integrated approach to weed management. This course helps prepare for the weed section of the WSDA pesticide license exam.

LHO 109 (3) S
Plant Health Care

Learn the basic principles of plant health care and integrated pest management. This course will cover Washington State pesticide laws, pesticide safety, environmental concerns, and basic information on integrated insect and disease management of landscape and nursery plants. It will prepare students to take "Ornamental Insect and Disease Control Exam" and obtain their pesticide applicator/consultant license from the Washington State Department of Agriculture.

LHO 111 (3) S
Greenhouse Operations

Intro to greenhouse operations and management, including production practices, maintenance methods and environmental control systems. Lab work involves propagation and maintenance in the school greenhouse. Industry overview through field trips to local production greenhouses.

LHO 112 (3) S
Nursery Operations

Examine the world of retail and wholesale nursery operations. Gain an inside look through field trips to local nurseries. Learn the basic methods of business operations and apply these skills in the school retail garden center.

LHO 115 (3) S
Fall Plant Identification

Gain a new appreciation of the plants around you! Learn to identify and properly use ornamental shrubs, trees, vines, and ground cover adapted to the Pacific Northwest.

LHO 116 (3) S
Winter Plant Identification

Learn about conifers adapted to the Pacific Northwest landscapes and broadleaf plants that provide special winter interest - flowers, fragrance, attractive bark and fruit.

- LHO 117 (3) S**
Spring Plant Identification
 Learn to identify and properly use broadleaf evergreen and deciduous woody plants adapted to Pacific Northwest landscapes.
- LHO 118 (1) S**
WSNLA Certification Review
 Prepare for the Washington State Nursery and Landscape Association certification exam with a guided review. Prereq: LHO 115, LHO 116, LHO 117 and LHO 150, or permission.
- LHO 119 (3) S**
Native Plants for Northwest Landscapes
 Explore the successful use of native plants in landscapes: plant identification and culture, native plants in urban landscapes, native plant revegetation and plant ecology.
- LHO 120 (3) S**
Herbaceous Plant Identification
 Learn to 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.
- LHO 121 (4) S**
Landscape Design I
 Provides introductory drafting skills and working knowledge in residential landscape design. Topics include drafting techniques, lettering, line work, graphics, scale work, developing a plot plan, orthographic and isometric drawings, and creating a residential planting plan.
- LHO 125 (4) S**
Landscape Design II
 Covers principles of art and how they are applied in the plan, including composition to create a sense of unity between all things observed. Emphasis on spatial understanding, aesthetic and functional use of plants and trees, and the historical background of the landscape arch. The complete design program is studied, from client interview to final working drawings. Prereq: LHO 121.
- LHO 130 (4) S**
Fall Maintenance Planning & Procedures
 Covers tools, materials procedures, techniques and standards of workmanship. Includes hands-on experience.
- LHO 135 (4) S**
Intro to Drainage and Irrigation Systems
 An in-depth study of irrigation and drainage installation technique, theory, and cost management.
- LHO 137 (3) S**
Landscape Management
 All landscape professionals - designers, contractors, and maintenance personnel - must understand landscape management operations. Course covers turf management, hand tool and small equipment operation, maintenance practices, safety, environmental issues, and the impact of design on maintenance requirements.
- LHO 140 (3) S**
Intro to Arboriculture
 Introduces the current science and practice of managing trees in urban landscapes. This course will prepare students for the ISA Certified Arborists Examination.
- LHO 150 (2) S**
Horticulture Science I
 Discover the basic principles of plant anatomy, physiology, adaptations, control of growth and development, plant-soil-water relations and ecological considerations in two quarters.
- LHO 151 (2) S**
Horticulture Science II
 Exploration and discussion of plant-soil-water relations, metabolism, control of growth and development, plant adaptations, ecology and environmental considerations. Emphasis is placed on group research project involving an environmental topic related to horticulture industry. Prereq: LHO 150.
- LHO 152 (3) S**
Soils
 In-depth study of soil properties, management and conservation. Emphasis on plant-soil relationship, evaluation of urban soils, and use of appropriate soil amendments. Includes overview of inorganic and organic fertilizers.
- LHO 155 (3) 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 (2) S**
Garden Renovations
 Hands on instruction in the renovation process. Work through renovation of 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 161 (1) S**
Equipment Troubleshooting
 Reliable equipment saves time and money! Hands on practice of preventative maintenance and basic repair on power equipment used in the landscape horticulture industry.
- LHO 162 (2) S**
Irrigation Troubleshooting and Repair
 Be the hero on the job site! Develop problem-solving skills to make adjustments and emergency repairs to existing irrigation systems in the landscape.
- LHO 163 (2) S**
Landscape Construction Equipment
 Experience safe handling and operation of heavy equipment used in the landscape industry. An introduction to riding lawn mowers, skid steer loaders and wheel loaders. Steel-toed boots required. Hardhats provided.
- LHO 164 (2) S**
Water Features
 Learn how to design, install, and maintain ponds, fountains, and waterfalls for the residential landscape. Learn how to solve problems and create an aquatic focal point for the landscape.
- LHO 165 (1) S**
Measuring a Landscape Site
 Review or learn how to measure a landscape site and convert your measurements into a base map. Hands-on techniques and insights help to accomplish this puzzling task. Course accommodates both landscape professionals and homeowners.
- LHO 180 (1-8) S**
Field Applications
 Applied experience in occupational setting and individualized to meet needs of the student in the field. Credit varies depending on number of class hours and fieldwork undertaken. Stipend may be received for fieldwork. Prereq: Third-quarter standing; permission.
- LHO 189 (3) S**
Intro to Landscape Construction
 Introduces the standards and procedures of the industry. The course covers the proper and accepted methods of a multitude of landscape installations. Lecture topics will include construction specifications, project sequencing and safety practices.
- LHO 197 (variable) 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.
- LHO 210 (3) S**
Plant Problem Diagnostics
 Learn to diagnose and manage plant problems: insect, disease, cultural, and environmental maladies. Course stresses a total plant health care approach that utilizes cultural, biological, and chemical strategies. Prereq: LHO 109 or permission.
- LHO 215 (3) S**
Plant Propagation
 Learn the art and science of plant propagation by seed, cuttings, division and grafting. Hands on instruction and field trips to plant production facilities. Recommended: LHO 111.
- LHO 217 (2) S**
Plant Propagation Workshop
 Continues to explore propagation and refine skills. Follow plant materials propagated in LHO 215. Work on production of specific species and quantities for sale in the retail garden center. Prereq: LHO 215 or permission.

- LHO 220 (4) S**
Turf Grass Culture
 Covers types of turf soils and sequential steps from propagation through seed-bearing, including methods of turf identification. Pest identification, prevention and control studied in detail. Prereq: LHO 112 or permission.
- LHO 226 (4) S**
Retail Floristry - Intermediate
 Continuation of flower shop operating procedures, including selection and buying of flower shop accessories, weddings and the florist's role, sales, and florist's relationship to other decorative fields. Includes outside speakers and lab projects. Prereq: LHO 202 and LHO 205.
- LHO 231 (4) S**
Floral Design - Intermediate
 Continuation of LHO 205. Lecture and lab experience in floral design. Students will design and construct fresh flower designs and artificial arrangements, and gain skill and efficiency. Prereq: LHO 205.
- LHO 236 (3) S**
Irrigation Design I
 An in-depth study of irrigation design theory, hydraulics, fluid behavior, microclimatization and application technology.
- LHO 238 (3) S**
Maintenance Estimating & Bidding
 Estimating material cost and quantity for bidding individual jobs and annual contracts. Includes design of efficient residential and commercial landscapes. Prereq: LHO 137 or permission.
- LHO 240 (2) S**
Intro to Urban Forestry
 Overview of the industry, including professionalism, ethics, and responsibilities of individuals and companies involved in urban forestry. Prereq: Second-year standing or permission.
- LHO 242 (4) S**
Tree Selection
 Correcting pathological or non-pathological tree failure and knowledge of the anatomy and physiology of a tree. Prereq: LHO 240 or permission.
- LHO 244 (4) S**
Transplanting & Establishing Urban Trees
 Provides skills and understanding to determine high-risk-hazard trees. Covers proper tree transplanting, soil nutrition, and use and care of tools. Prereq: Second-year standing or permission.
- LHO 246 (4) S**
Urban Tree Management
 Covers determination of proper chemical and natural control of insects and diseases as well as fertilizing and plant nutrition requirements. Prereq: LHO 152.
- LHO 248 (4) S**
Urban Tree Problems
 Diagnosis and treatment of environmental tree problems, insects, diseases and wounds. Prereq: LHO 246 or permission.
- LHO 250 (3) S**
Small Business Management for Horticulture
 Organization/operation of horticulture-related small business. Success and failure factors, capital sources, record-keeping, interpretation of financial statements, taxation, credits and collections, legal problems, management principles, proprietorships, partnerships and corporations.
- LHO 255 (4) S**
Small Engine Repair
 Study of operation and maintenance of power mower equipment used in horticulture. Includes safety, leadership and work ethics. Prereq: Second-year standing or permission.
- LHO 256 (4) S**
Advanced Tree Pruning & Removal
 Covers tree climbing and pruning techniques for tree care operations. Includes basic tree biology as well as equipment usage, ropes, knots, rigging and safe work practices. Student participation in supervised tree climbing is optional. Prereq: LHO 155 and LHO 246 or permission.
- LHO 257 (4) S**
Diagnosis of Hazardous Trees, Cabling & Bracing Technologies
 Covers corrective cabling, bracing and proper tool use. Focuses on duties and responsibilities of each crew member. Prereq: Second-year standing or permission.
- LHO 262 (4) S**
Landscape Design III
 Refining the design process through a step-by-step problem-solving method. Emphasis on organization of outdoor spaces for use and enjoyment. Explores field of "hardscaping" and introduces refining construction drawings to scale. Prereq: LHO 121 and LHO 125 or permission.
- LHO 264 (4) S**
Landscape Design IV
 Covers elevation, sectional, and perspective drawing. Prereq: LHO 125 or permission.
- LHO 265 (3) S**
Landscape Contracts & Specifications
 Practical application of bidding and estimating procedures and techniques within the landscape industry. Introduces industry opportunities and standards.
- LHO 266 (4) S**
Landscape Design V
 Refinement of the residential design process, reviewing sectional, elevation and perspective drawings with an emphasis on specifications and estimation. Focus on designing "outdoor rooms" and use of theme gardens. Prereq: LHO 121, LHO 125, LHO 262, and LHO 264 or permission.
- LHO 267 (3) S**
CAD for Landscape I
 Provides experience in designing landscapes, generating planting plans and reports, irrigation design, estimates and bids, supplier and purchasing information, and customizing data libraries and client reports using the computer as a design tool, rather than teaching design theory itself. Uses professional software. Prereq: Read and write English, familiarity with PC operation and terminology, including file management, Windows environment, and mouse operations.
- LHO 268 (3) S**
CAD for Landscape II
 Continuation of LHO 267 to enhance fundamental design skills by creating land and area symbols, elevation drawings, customizing supplier and purchase information, customizing plant and hardscape libraries, creating customized reports and irrigation designs. Uses professional software. Prereq: Read and write English, familiarity with PC operation and terminology, including file management, Windows environment, and mouse operations.
- LHO 272 (4) S**
Landscape Construction Project - Fall
 Practical application of standard landscape contractor's trade procedures and techniques to enhance the residential landscape. Covering equipment and tool care, safety and usage.
- LHO 273 (4) S**
Landscape Construction Project - Spring
 Application of standard trade procedures/techniques for residential landscaping. Covers care and safe use of tools used in garden structures and in trade. Full complement of skills addressed in two quarters in LHO 272 and LHO 273. Prereq: LHO 189 or permission.
- LHO 285 (4) S**
Interior Landscaping
 Covers interior landscaping, including design principles, types of landscaping, plant containers, environmental requirements, design procedures, plant selection and contracts.
- LHO 291 (4) S**
Arboretum Planning Techniques
 Provides information for compiling data necessary to develop an overall plan for an arboretum, to present a general plan and perspectives so that results can be evaluated, expanded and/or implemented. Prereq: Second-year standing or permission.
- LHO 295 (2-8) S**
Externship
 On-the-job work experience with a landscape/horticulture industry employer, coordinated between the firm and the college. Prereq: Third-quarter standing and/or permission.

LHO 299 (2-4) S
Special Topics

Special topic course on an individual or group study basis in the landscape horticulture field. Prereq: Permission.

LANGUAGES & LITERATURE**American Sign Language****ASL 101 (5) N,C**
ASL I

Intro to American Sign Language (ASL) using conversational methods. Covers vocabulary, grammatical usage, and culturally appropriate behavior regarding Deaf people. Prereq: Eligibility for English 101.

ASL 102 (5) N,C
ASL II

Continuation of ASL 101 to build mastery of ASL grammar skills, increase vocabulary, and gain a deeper knowledge and appreciation of Deaf culture. Prereq: ASL 101 or permission.

ASL 103 (5) N,C
ASL III

Continuation of ASL 102 with focus on certain grammatical features such as spatialization, directionality, and non-manual components. Intensive work in vocabulary development, and continued study of Deaf culture. Prereq: ASL 102 or permission.

ASL 104 (5) C
ASL Skills Enhancement

Course designed to maintain or increase skills learned in ASL 101 - 103. Students' performance will be videotaped for critique, exposing them to a variety of signing styles. Prereq: ASL 103 with permission.

ASL 120 (5) C
Intro to Deaf Studies

Overview of the types, causes, treatment, and psychological aspects of Deafness; history of Deaf people; education of Deaf people; and deaf culture. As part of the A.A. degree, this course will count as a sociology requirement corresponding to the Individuals and Societies requirement for the University of Washington.

ASL 125 (5) C
American Deaf Culture

Discussion of Deaf people as a culture, a group of people held together by its strength of culture rather than its disability, Deaf minorities, and current issues in the field. As part of the A.A. degree, this course counts as an anthropology requirement (Individuals and Societies requirement for the University of Washington).

ASL 201 (5) C
ASL 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, acquiring ASL idioms and slang, and proficiency in ASL grammar. Prereq: ASL 103 (ASL III) or permission.

ASL 202 (5) C
ASL V

Continued development of receptive and expressive skills. Students will produce/receive narratives at a near-native level and decrease dependency on English syntax structures. Prereq: ASL 201 (ASL IV) or permission.

ASL 203 (5) C
ASL VI

Students will continue vocabulary development and will be able to participate in most formal and informal conversations on social and work topics. Signing errors seldom interfere with understanding and rarely disturb native signers. Prereq: ASL 202 (ASL V) or permission.

ASL 210 (5) C
The Linguistics of ASL

Intro to basic concepts of linguistics as applied to American Sign Language. Examination of basic areas of linguistic inquiry including phonology, morphology, syntax and language use. Prereq: ASL 103 (ASL III) or permission.

ASL 299 (2-10) N,C,S
Independent Study for ASL

Independent study of selected topic(s) in ASL. A mutually desirable research project is assigned by faculty.

Chinese**CHI 101 (5) N,C,S**
Elementary Modern Chinese

First segment of an 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. Everyday expressions and vocabulary, and background on history, culture and customs. Intended for students who have not previously studied Chinese. Recommended: Eligibility for ENG 101 (C).

CHI 102 (5) N,C,S
Elementary Modern Chinese

Continuation of CHI 101. Prereq: CHI 101 or permission.

CHI 103 (5) N,C,S
Elementary Modern Chinese

Continuation of CHI 102. Prereq: CHI 102 or permission.

CHI 104 (3) N
Chinese for International Business

Intensive study of Chinese Phonetic Transcriptions (Pinyin) and survival skills in daily interaction involving the use of target language. Emphasis on daily colloquialism and basic business phraseology. Some background information on business culture and customs that make people think and behave differently in Chinese speaking societies. Intended for International Business students with no prior exposure to the language.

CHI 201 (5) N,C
Second-Year Chinese

Emphasizes using Chinese language in speaking, listening, reading, writing and translation. Prereq: CHI 103 or permission.

CHI 202 (5) N,C
Second-Year Chinese

Continuation of CHI 201. Studies similarities and differences between Chinese and English. Prereq: CHI 201 or permission.

CHI 203 (5) N,C
Second-Year Chinese

Use of Chinese in varied social settings. Includes writing academic papers and researching in Chinese. Prereq: CHI 202 or permission.

English High School Completion**ENG 040 (5) N,S**
Composition I

Assessment and development of skills and knowledge of 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.

ENG 041 (5) N,S
Composition II

Assessment and development of language skills and communications skills in a pre-technical career-oriented context. Emphasize paragraph and multi-paragraph writing and revision in a variety of formats and for a variety of purposes. Research paper or project relating to educational or career opportunities. Prereq: Appropriate placement testing and counseling.

ENG 042 (5) N,S
Composition III

Assessment and development of language and communications skills and knowledge. Emphasizes effective communication 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.

ENG 045 (5) S
Literature II - World Literature

Survey of English literature through reading and discussing novels, essays, poetry, and drama. Author's purpose, style and point of view.

ENG 046 (5) S
Literature III - American Literature

The American heritage is surveyed through its literature. Reading and analysis of fiction, poetry and dramatic readings. Writing assignments include book reviews, biographical sketches, and interpretations of characters or verse.

Pre-College English

Designed to help students improve their reading, writing, thinking, and study skills. For information about courses, contact the following offices: North - Humanities Division (206-527-3709) or Testing Office (206-527-3675); Central - Testing Office (206-587-6913); South - College Transfer (206-764-5357). Instructors will recommend the next appropriate course for students who complete a course in developmental English.

ENG 070 (3) S
Intro to Transitional English

Development of basic skills required for vocational/technical communications. Using computers to organize, write, and edit technical communications. Taken concurrently with ICT 098.

ENG 080 (3-5) N,C,S
Learning Center

Individual and small group study to improve listening, speaking, study skills, reading comprehension and rate, vocabulary, phonics and word skills, spelling, grammar, writing sentences, paragraphs and essays. Prereq: Permission or placement; consult college testing office. Does not replace an ENG 090-level class but may be taken concurrently with one of the 090-level classes.

ENG 081 (3-5) C,S
Learning Center

Continuation of ENG 080. Prereq: ENG 080.

ENG 082 (3-5) C,S
Learning Center

Continuation of ENG 081. Prereq: ENG 081.

ENG 084 (2-5) S
Spelling & Vocabulary

Improving vocabulary through study of prefixes, suffixes, roots, context clues, and essential vocabulary words; improving spelling through practice and study of spelling rules and patterns. Study spelling or vocabulary depending on assessment of greater need.

ENG 086 (5-10) N,S
Grammar & Punctuation I

Emphasis on basic sentence-level grammar: prepositional phrases, subject-verb identification, conjunction, and sentence types. Practice in thinking, writing, proofreading and editing. Prereq: ESL 096/7 or above or placement on English placement test or teacher recommendation. Open to native and non-native speakers of English.

ENG 087 (5) N
Grammar & Punctuation II

Intensive study of English verb system, including the twelve tenses, modals, active and passive voice, gerunds and infinitives. Learn forms, practice usage, and work on subject-verb agreement and consistency of tenses. Prereq: ESL 096/7 or above or placement on English placement test or teacher recommendation. Open to non-native speakers of English only.

ENG 088 (5) N
Grammar & Punctuation III

Intensive study of clauses and reduced clauses (noun, adjective, adverb), both form and usage as well as participle forms. Prereq: ESL 096/7 or above or placement on English placement test or teacher recommendation. Open to non-native speakers of English only.

ENG 090 (2-5) S
Independent Study of Basic English

Addresses individual learning needs of students in college preparatory reading or writing skills. Credit awarded according to students' mastery of various skills as determined by the successful completion of material specified by the instructor.

Prerequisite for ENG 091 through 098:

North -

Appropriate placement on the English placement test or permission.

Central & South -

Appropriate placement; Contact the Testing Office.

ENG 091 (3-5) C,S
Basic Reading & Study Skills I

Essential reading and study skills. Includes techniques for developing good reading skills and habits, vocabulary development, comprehension, textbook reading and classroom skills. Prereq: See above.

ENG 092 (3-5) C,S
Basic Writing Improvement I

Emphasis on the sentence. Includes basic sentence grammar and practice in thinking, writing, editing and proofreading. Prereq: See above.

ENG 093 (3-5) N,C
Reading & 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: See above.

ENG 094 (3-5) N,C,S
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. At Central, this course is for students who have completed ENG 092 but still need more work at that level. Prereq: See above.

ENG 095 (3-5) N,C,S
College Preparatory Reading & Study Skills 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. Study strategies for test-taking, note-taking, and outlining. Prereq: See above.

ENG 096 (3-5) N,C,S
College Preparatory Writing III

Building writing skills through clear, correct sentences, well-developed paragraphs and coherent short essays. Prereq: see above (N); ENG 094 or ESL 095 or permission (S).

ENG 097 (3-5) N,C
College Preparatory Reading IV

Increase general knowledge of fiction and non-fiction through overview of concepts and vocabulary needed to interpret, appreciate and respond to a wide range of reading selections. Prereq: See above.

ENG 098 (3-5) N,C
College Preparatory Writing IV

Emphasis on writing skills for essays or longer papers. Practice in collecting, shaping, revising, editing and proofreading papers. Includes grammar, punctuation and other skills needed for effective writing. At Central, this course is for students who have completed ENG 096 but still need more work at that level. Prereq: See above.

ENG 099 (5) N
College Preparatory Writing V

Emphasis on writing skills for longer, more fully developed essays. Practice in collecting, shaping, revising, editing and proofreading papers. Includes some review of grammar, punctuation, and other skills needed for effective writing. Prereq: See above.

College Transfer English**LIT 234/FRE 234 (5) C,S**
Telling Stories: Identity in History & Folklore

Analyzes the process of identity creation and declaration in mythology, history and folklore through myths, stories and historical events. Focuses on anecdotes, narratives and humor to delineate individual, national and group identities. Includes quarter-long group and individual projects. Prereq: ENG 101.

LIT 236/SPA 236 (5) C,S
Latin American Colonial Literature

Panoramic view of Latin American literature during and after the Spanish arrival. Covers the socio-historical background, and includes thematic modules for discussion of texts in relationship to the period. Tracks the origins of multicultural and transcultural interdependence among ethnic groups since colonial times.

ENG 101 (5) N,C,S
Composition

Intro to the writing process. Writing assignments focus on major strategies of non-fiction prose, with subject matter drawn from firsthand experience and observation. Prereq: Satisfactory performance on English placement test.

ENG 102 (5) N,C,S
Composition

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: ENG 101.

ENG 103 (5) S
Transitional English

Improvement of skills required for vocational/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.

ENG 104 (5) N,C,S
Advanced English Grammar

Study of grammar and rhetoric of the English sentence. Includes sentence structure, grammar of the paragraph, usage, diction and mechanics. This course is not remedial. Prereq: Eligibility for ENG 101 or permission.

ENG 105 (3) N,C,S
Applied Composition

Covers skills and strategies needed to meet writing demands in college and on the job. Prereq: Satisfactory performance on English placement test.

ENG 106 (3) N,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: ENG 105 or permission.

ENG 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: ENG 106.

ENG 109 (5) C
The Art of Reading

Offers a variety of experiences in college-level reading. Emphasis on critical analysis of works selected from across the disciplines. Students develop a strategic approach to efficient reading and active learning.

ENG 110 (5) N,C
Ancient Literature

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. Works studied 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: Placement in ENG 101.

ENG 114 (5) C
American Dialects

Introductory survey of the contributions other languages and dialects have made to American English, its make-up and creative communicative dynamics.

ENG 120 (5) N,C,S
Contemporary World Literature

Cross-cultural survey of 20th century literature from Latin America, Africa, Asia, Europe and the United States. Reading and discussion of major modern novelists who have influenced the form and content of other writers. Prereq: Placement into ENG 101 (N).

ENG 131 (5) N,C,S
Intro to Poetry

Study, appreciation and analysis of the form, meaning, music and metaphor of poetry. Includes poems from diverse sources. Prereq: Placement into ENG 101 or permission (N).

ENG 132 (5) N,C,S
Intro to Fiction

Survey course 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 ENG 101 (N).

ENG 133 (5) N,C
Intro to Dramatic Literature

Study and analysis of great works of the theater. Consideration of major themes and trends of playwrights from the Greeks to the present. Prereq: Placement into ENG 101 (N).

ENG 135 (5) N,C
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 ENG 101.

ENG 141 (5) N,C
Shakespeare

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 ENG 142). May take one or both classes. Prereq: ENG 101 placement.

ENG 142 (5) N,C
Shakespeare

Continuation of ENG 141. May take one or both classes. Prereq: ENG 101 placement.

ENG 150 (3-5) C
Writing for the Media - Scriptwriting

Creating stories and characters and scripting them for video productions. Prereq: Computer literacy.

ENG 151 (5) N,C,S
Creative Writing

Reading and writing fiction, poetry and drama with emphasis on effective elements and techniques. Prereq: ENG 101 or permission.

ENG 152 (5) N,C,S
Creative Writing

Continuation of ENG 151. Prereq: ENG 151 and ENG 101 or permission.

ENG 153 (5) N,C
Creative Writing

Continuation of ENG 152. At Central includes workshops and seminars for those with writing experience. Emphasis on writing, editing and proof-reading manuscripts. Includes literary magazine production experience in editing, design and layout. Prereq: ENG 151 and ENG 152 or permission.

ENG 155 (3) C
Writing for the Media - Advanced Scripting

Development of individual and small group scripts, teleplays, adaptation of short stories, and individual projects. Projects to be used in the video festival. Co-Req: COM 200.

ENG 201 (5) N,C,S
Advanced Composition

Reading and writing exposition with emphasis on context, audience, and rhetorical options. Provides critique experience for own and others' writing. Prereq: ENG 101 or permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

**ENG 202 (5) N,C,S
Research & Writing**

Library research using old and new technologies, and on writing research papers based on the research. Topics vary by instructor. Prereq: ENG 102 (N).

**ENG 203 (3) C
Writing for the Media: Advanced Script Writing**

This course will emphasize writing for film and videotape productions utilizing exterior and interior settings. Students develop scripts for 3-7 minute small group production pieces which will be shot, edited and produced in COM 225.

**ENG 211 (5) N,C
Major British Writers**

Includes works from the Anglo-Saxon period through Shakespeare, examined from social and ideological perspectives. Prereq: Placement into ENG 101 (N).

**ENG 212 (5) N,C
Major British Writers**

Donne through the early Romantics. Prereq: Placement into ENG 101.

**ENG 213 (5) N,C
Major British Writers**

Main figures of the Romantic Movement, Victorian Age, and first half of the 20th century. Prereq: Placement into ENG 101.

**ENG 221 (5) N
Survey of American Literature**

Literature of the United States from Colonial times to the early 19th century. Prereq: Placement into ENG 101.

**ENG 222 (5) N,C,S
Survey of American Literature**

19th century writers with emphasis on short stories and growth of the American novel. Prereq: ENG 101 placement.

**ENG 223 (5) N,C,S
Survey of American Literature**

Late 19th and 20th century writers with emphasis on modern fiction, drama, poetry and trends in literature. Practice of critical techniques. Prereq: ENG 101 placement.

**ENG 224 (5) N,C,S
Survey of Literary Masterpieces of the United States.**

Selected literature illustrating the richness and variety of writing. Represents enduring concerns and questions of American literature. Prereq: ENG 101 placement.

**ENG 225 (5) N,C,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: ENG 101.

**ENG 226 (5) C,S
Literature of Emerging Nations - Third World Literature**

Traditional and contemporary literature from Africa, Asia and South America.

**ENG 227 (5) N
The Literature of the American West**

Literature about the American West by people of the American West with emphasis on cultural, historical, and sociological concerns. Prereq: Placement into ENG 101.

**ENG 228 (5) N,C,S
Literature of American Cultures**

Literature of writers from a variety of cultures including Asian-American, African-American, European American, Chicano and Latino American and Native American. Analysis of the writing and sociological, political, and historical contexts of the authors. Prereq: Placement into ENG 101 (N).

**ENG 229 (5) C
African-American Literature**

Survey of African-American literature, poems, essays, short stories and novels. Ideas range from ambivalence about change and relief from war, to a look into the 1920s and contemporary issues of the 60s and 80s.

**ENG 230 (5) C
Renaissance Literature**

Study of major literary works created during the transitional period between the Middle Ages and modern times, from 1350-1650 A.D.

**ENG 231 (3-5) N,S
Children's Literature**

Children's and adolescent literature from diverse cultures within the United States. Covers the power and elements of story and reflection of values. Prereq: Placement into ENG 101 (N).

**ENG 232 (5) S
Young Adult Literature**

Emphasizes young adult literature from diverse cultures within the United States, exploring values reflected and the power and elements of story.

**ENG 233 (2-5) S
Coming of Age Across Cultures**

Study of "coming of age" literature in two or more countries.

**ENG 235 (5) C
Holocaust Literature: Voices From the Holocaust**

Examines, literature written by survivors of the Holocaust or the Shoah. Read firsthand accounts written by people who survived to write and publish their memories. Meet one of the authors. Develop a historical context for World War II and the rise of Nazi Germany. Understand and learn to use the context of events to understand the literature which we read.

**ENG 236 (5) N,C,S
Between the Wars**

Explores the character, mood and atmosphere of post-WWI American writers, including African American, Native American, Asian American, and European American. Considers the implications and nature of their work in the context of their time. Prereq: ENG 101 placement.

**ENG 240 (5) C,N
Reading & Writing Autobiography**

Covers the art of autobiography from two aspects: reading autobiographies of well-known people, and writing one's own. Involves both critical and personal writing assignments, with an emphasis on the personal dimension of writing. Recommended: ENG 101.

**ENG 241 (5) N
Reading & Writing Autobiography**

Continuation of ENG 240. Prereq: ENG 240 and placement into ENG 101.

**ENG 251 (5) N,C,S
Studies in the Novel**

Studies major novels associated with specific philosophical or chronological periods, e.g., the great Victorian novelists, the Naturalists, and American Realists. In each of three quarters, five novels are usually covered. Prereq: Placement into ENG 101 (N).

**ENG 252 (5) N,C,S
Novels of Western Literature**

Emphasis on European and American novels from the past two centuries viewed in the philosophical and historical contexts of its time. Prereq: Placement into ENG 101 (N).

**ENG 253 (5) C,S
Studies in the Novel**

Continuation of ENG 252.

**ENG 263 (5) N,C
The Bible as Literature**

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: Placement into ENG 101.

**ENG 265 (5) C
Literature & Society**

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.

**ENG 291 (5) N,C,S
Literature by Women**

Literature of women writers from a variety of cultures such as Asian, African, European, Latino and Native American. Explores the contexts and lives of the characters considering culture and gender in their values and attitudes. Prereq: placement into ENG 101 (N).

ENG 292 (5) C,S
Literature by Women: Global Perspectives

A survey of literature by women from perspectives including African, Asian, Latin American, Middle Eastern and other non-western cultures.

ENG 293 (5) N,C,S
Special Studies in Literature - Science Fiction

Selected readings in science fiction and fantasy from the 19th century to present. May include American, British, and continental European writers.

ENG 294 (5) C
Copy Editing/Writing I

Applying basic composition/research skills to technical communications. Covers rhetoric, deconstructing writing sample, theoretical basis of structure, style standards, constructive use of language, colloquialism/standard English, syntax, coherence, and grammatical style. Prereq: ENG 101/102, and proficiency in word processing.

ENG 295 (5) C
Copy Editing/Writing II

Second course of two sequential advanced writing courses in technical communications. Covers writing and editing techniques, style standards, editing for meaning, editing comprehension/print and electronic text and data graphics, and style standards. Focus on Aldus format for documentation. Prereq: ENG 101/102, and proficiency in word processing.

ENG 296 (1-3) N
Independent Study

Individual project. Student and instructor create syllabus and outcomes for the quarter. Prereq: Permission.

ENG 299 (1-5) N,C,S
Special Topics in English

Individual project. Student and instructor create syllabus and outcomes for the quarter. Prereq: Permission.

**English as a Second Language -
Beginning and Intermediate****ESL 006 (1-18) C,S**
Pre-Literacy, Level 1**ESL 010 (1-15) N,C,S**
Level 1, Integrated Skills

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.

ESL 011 (1-15) N,C,S
Level 1A, Integrated Skills

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 (1-15) N,C,S
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,S
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,S
Level 1, Reading & Writing Skills**ESL 016 (1-15) N,C,S**
Level 1, Speaking & Listening Skills**ESL 017 (1-15) C,S**
Level 1, Multiple Skills Lab

Tutoring in specific areas for students in ESL Level 1. Prereq: Permission.

ESL 018 (1-15) C,S
Level 1, Workplace Literacy**ESL 019 (1-15) C,S**
Level 1, VESL**ESL 020 (1-15) N,C,S**
Level 2, Integrated Skills

Practice in listening skills, understanding idiomatic expressions and producing appropriate responses in contextual situations. Continued emphasis on basic vocabulary, reading, and writing. Prereq: ESL 010, ESL 012 (N), or placement.

ESL 021 (1-15) N,C,S
Level 2A, Integrated Skills

Beginning-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 010, ESL 012, or placement (N); ESL 013 or placement (S,C).

ESL 022 (1-15) N,C,S
Level 2B, Integrated Skills

Beginning-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 021 or placement.

ESL 023 (1-15) C,S
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 025 (1-15) C,S
Level 2, Reading, Writing & Grammar Skills**ESL 026 (1-15) N,C,S**
Level 2, Speaking & Listening Skills**ESL 027 (1-15) N,C,S**
Level 2, Multiple Skills Lab

Tutoring in specific areas of ESL Level 2. Prereq: Permission.

ESL 028 (1-15) C,S
Level 2, Workplace Literacy**ESL 029 (1-15) C,S**
Level 2, VESL**ESL 030 (1-15) N,C,S**
Level 3, Integrated Skills

Intermediate level course for non-native speakers of English. Continued emphasis on writing practice and reading to improve vocabulary, comprehension and speed, and writing practice. Coping and cultural orientation skills needed for vocational or academic program. Prereq: ESL 020 or placement, ESL 022 (N).

ESL 031 (1-15) N,C,S
Level 3A, Integrated Skills

Intermediate-level course for non-native speakers of English with continued emphasis on improving vocabulary, reading comprehension, and speed. Writing practice includes sentence construction and simple paragraphs. Prereq: ESL 020, ESL 022 or placement.

ESL 032 (1-15) N,C,S
Level 3B, Integrated Skills

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 020, ESL 031 or placement.

ESL 033 (1-15) C,S
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 (1-15) N,C,S
Level 3D, Fast Track

Fast track course for students who have the ability to study at a faster pace than their classmates. Covers ESL 031, 032 and 033 in one quarter (North covers ESL 031 and 032). NSCC 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) N,C,S
Level 3, Reading, Writing & Grammar Skills**ESL 036 (1-15) N,C,S**
Level 3, Speaking & Listening Skills**ESL 037 (1-15) N,C,S**
Level 3, Multiple Skills Lab

Tutoring in specific areas for students in ESL Level 3. Prereq: Permission.

ESL 038 (1-15) C,S
Level 3, Workplace Literacy

ESL 039 (1-15) C,S
Level 3, VESL

ESL 040 (1-15) N,C,S
ESL Level 4 Integrated Skills

Emphasis on oral and listening skills, reading instruction to improve vocabulary, comprehension and speed and writing practice. Prereq: ESL 030, ESL 032 or placement (N).

ESL041 (1-15) N,C,S
ESL Level 4A, Integrated Skills

Intermediate level course for non-native speakers of English with emphasis on improving vocabulary, reading comprehension and speed. Prereq: ESL 030, ESL 032 or placement (N); ESL 032 or placement (C, S).

ESL 042 (2) N
ESL Level 4B, Integrated Skills

Intermediate level course for non-native speakers of English with continued emphasis on improving vocabulary, reading comprehension, and speed. Writing practice includes sentence construction and paragraph development. Prereq: ESL 030, ESL 041 or placement.

ESL 044 (1-10) N,C,S
Level 4D Fast Track

Fast track course for students who have the ability 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) N,C,S
ESL Level 4, Reading and Writing

Intermediate level course for non-native speakers of English with continued emphasis on improving vocabulary, reading comprehension, and speed. Writing practice includes sentence construction and paragraph development. Prereq: ESL 041 or placement in Level 4. Call Testing Center to take the ESL Placement Test.

ESL 046 (1-15) N,C,S
ESL Level 4, Speaking and Listening

For ESL students at level 4 to practice, develop, and improve speaking listening skills needed for daily life, jobs, and student educational goals. Emphasis on communication skills, not specific pronunciation.

ESL047 (1-15) C,S
ESL Level 4, Computer Assisted

Tutoring in specific areas for students in ESL Level 4. Prereq: Permission.

ESL 048 (1-15) C,S
Workplace ESL 4

Designed for and taught in a workplace setting. Course is customized.

ESL049 (1-15) C,S
Vocational ESL 4

Supports vocational technical and employment training.

ESL 050 (1-15) N,C,S
ESL Level 5, Integrated Skills

High Intermediate ESL course to develop reading, writing, and grammar skills for students preparing to take college level courses. Prereq: ESL 042, ESL 044 or placement on the ESL Placement Test.

ESL051 (1-15) N,C,S
ESL Level 5A, Integrated Skills

High intermediate ESL course with emphasis on reading, writing, speaking and listening, and grammar skills. Emphasis on accuracy of sentence level grammar and reading skills involving vocabulary development and inferencing skills.

ESL 052 (1-15) N,C,S
ESL Level 5B, Integrated Skills

High intermediate ESL course with continued emphasis on reading, writing, speaking and listening and grammar skills to prepare students for vocational or academic coursework and for employment.

ESL 055 (1-15) N,C,S
ESL Level 5, Reading and Writing

At the completion of this course, students will have grown in their ability to use information and communication technology (C,S). Focuses on improving writing skills for students in Level 5 (N).

ESL 056 (1-15) N,C,S
ESL Level 5, Speaking and Listening

Upon completion, students will 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, face-to-face and on the telephone.

ESL 057 (1-15) C,S
ESL Level 5, Computer Assisted

A self-paced, individualized instructional setting for ESL Level 5 students to build on English skills learned in core ESL classes.

ESL 060 (1-15) N,C,S
ESL Level 6 Integrated Skills, Advanced ESL

Emphasis on writing multi-paragraph compositions and reading a variety of texts.

ESL061 (1-15) N,C,S
ESL Level 6A Integrated Skills, Advanced ESL

Emphasis on writing multi-paragraph compositions and reading a variety of texts

ESL062 (1-15) N,C,S
ESL Level 6B

The second sub-level in the ESL Level 6 sequence and covers approximately $\frac{1}{2}$ of the level six competencies prescribed by the Washington Basic Skills Competencies.

ESL065 (1-15) N,C,S
ESL Level 6, Reading and Writing

At the completion of this course, students will have grown in their ability to use information and communications technology (C,S). Focuses on improving writing skills for students in Level 5 (N).

ESL 066 (1-15) N,C,S
ESL Level 6, Speaking and Listening

At the completion of this course, students will be able to listen actively and speak so others can understand them.

ESL 067 (1-15) C,S
ESL Level 6, Computer Assisted

A self-paced, individualized instructional setting for ESL Level 3 students to build on English skills learned in core ESL classes.

ESL 068 (1-3) N,C,S
Educational Interviewing for ESL Students

This course helps ESL students at all competency levels identify their current abilities, characteristics, styles and readiness to learn and introduces them to campus resources.

ESL 071 (1-15) N,C,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.

ESL 072 (1-15) N,C,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.

ESL 073 (1-15) N,C,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.

ESL 076 (1-15) N,C,S
ESL 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.

ESL077 (1-15) N,C,S
ESL Pronunciation

Intro to some of the basics of accurate English pronunciation for non-native speakers of English: sentence stress and unstress, linking of consonant sounds across word boundaries, basic intonation patterns and other features.

ESL078 (1-15) N,C,S
ESL Pronunciation

Intro to some of the basics of accurate English pronunciation for non-native speakers of English: certain consonant sounds, troublesome consonant clusters and other features.

English for Non-native Speakers - College Transitional ESL

ESL 084 (1-5) S English for Non-Native Speakers Telecourse

Thirty-hour telecourse to help high beginning ESL students improve their speaking, listening comprehension skills and vocabulary. View videotapes specifically designed for this level and do speaking, listening, comprehension and vocabulary development exercises. Additional drills and activities as assigned. Students are required to attend ten three-hour class meetings on campus.

ESL 085 (1-5) S Survey of English Grammar - Verb Review for Vocational Students

Covers all areas of basic English grammar for students who are under-prepared for college level ESL classes. Emphasizes sentence-level writing. Focuses on simple compound, and complex sentences, all active verb tenses and parts of speech. Vocabulary from vocational courses will be used in the grammar lessons. Prereq: Placement on the English placement test.

ESL 088 (3) N Advanced English Pronunciation I

Advanced course on accurate English pronunciation. Covers certain vowel and consonant sounds, word and sentence stress. Prereq: Placement in ESL 092/093 or above or permission.

ESL 089 (1-5) N,C Pronunciation Practice & Vocabulary Development

Practice pronunciation, listening, conversation and writing skills to reinforce the work of ESL classes or other vocational or academic courses. May be repeated up to a maximum of eight quarters (ESL 089A-H). Must be taken in conjunction with recommended ESL classes. Prereq: Enrollment in ESL 092-099 or permission.

ESL 090 (3-5) N,C,S Oral Communication: Standard Pronunciation for Non-Native Speakers

Improving oral expression and listening comprehension. Emphasis on oral communication in small groups and informal presentations. Prereq: ESL 051, ESL 062 or permission (C); placement in ESL 092/093 or permission (N); placement on the English placement test (S).

ESL 091 (3-5) C,S Listening & Note Taking Skills for ESL Students

Improving listening, speaking and note-taking skills necessary for college lecture courses. Participate in lectures, workshops and videotaped lectures. Prereq: Permission or placement on the English placement test.

ESL 092 (5) N,S Basic English Reading for 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). Co-Req: ESL 093.

ESL 093 (5) N,S Basic English Writing for Non-Native Speakers

Focus on control of English sentence structure, syntax, grammar and punctuation. Emphasizes writing skills. Prereq: ESL 042, ESL 043, ESL 044 or placement on ESL Placement Test (N); ESL 051 or placement on English placement test (S). Co-Req: ESL 092.

ESL 094 (5) N,S English For Non-Native Speakers II - Reading

For non-native speakers reading at seventh- to eighth-grade level. Develop reading comprehension and speed. Prereq: ESL 092/093, ESL 061 or placement on ESL Placement Test (N); ESL 092 or placement on English placement test or permission (S). Co-Req: ESL 095.

ESL 095 (5) N,S English For Non-Native Speakers II - Writing

Designed for non-native speakers of English. Focuses on mastering sentence control and developing clear, coherent paragraphs. Emphasizes developing fluent, effective writing. Prereq: Placement on English placement test, ESL 093 or permission (S); ESL 092/093, ESL 061 or placement on ESL placement test (N). Co-Req: ESL 094.

ESL 096 (5) N,C,S College Preparatory English For Non-Native Speakers I - Reading

For non-native speakers reading at ninth- to tenth-grade level. Increase reading comprehension and speed, improve vocabulary, and build confidence using college preparatory materials. Prereq: ESL 062, ESL 094/095 or placement on ESL placement test (N); ESL 094, placement on English placement test, or permission (S). Co-Req: ESL 097.

ESL 097 (5) N,C,S College Preparatory English For Non-Native Speakers I - Writing

Practice writing correct English sentences and develop coherent paragraphs into short essay answers and lab reports. Emphasis on strengthening writing skills. Prereq: ESL 095, placement on English placement test or permission (S); ESL 062, ESL 094/095 or placement on ESL Placement Test (N). Co-Req: ESL 096.

ESL 098 (5) C College Preparatory English for Non-Native Speakers II - Reading

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 (5) C College Preparatory English For Non-Native Speakers II - Writing

Developing 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 Co-Req: ESL 091 or ESL 098.

French

FRE 101 (5) N,C,S Elementary French

Fundamentals of grammar and syntax, pronunciation, oral and written exercises, reading and conversation, and cultural aspects of the countries in which French is spoken. Written assignments and oral practice with tapes required outside of class. Intended for students with no previous French studies. Recommended: Eligibility for ENG 101 (C).

FRE 102 (5) N,C,S Elementary French

Continuation of FRE 101. Emphasis on pronunciation and oral and written communication. Prereq: FRE 101 or permission.

FRE 103 (5) N,C,S Elementary French

Continuation of FRE 102. Developing skills in oral and written communication while mastering pronunciation techniques. Prereq: FRE 102 or permission.

FRE 201 (5) N,C Second-Year French

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: FRE 103 or permission.

FRE 202 (5) N,C Second-Year French

Continuation of FRE 201. Prereq: FRE 201 or permission.

FRE 203 (5) N,C Second-Year French

Continuation of FRE 202. Prereq: FRE 202 or permission.

**FRE 204 (2-5) N,C,S
Advanced French Language & Literature**

Advanced study of core literature and grammar. Students will choose an area of interest and prepare regular compositions and presentations. May include creating and performing adaptations of plays and short stories. Prereq: FRE 203 or permission.

**FRE 205 (2-5) N,C
Advanced French Language & Literature**

Continuation of FRE 204. Prereq: FRE 204 or permission.

**FRE 206 (2-5) N,C
Advanced French Language and Cultures**

Continuation of FRE 205. Prereq: FRE 205 or permission.

**FRE 210 (4.5) C
French Civilization**

Intro to aspects of contemporary French society. Taught in French. Part of overseas study program in France.

**FRE 215 (4.5) C
Intro to French Literature**

Study of French literature, and literary analysis for intermediate-level students through the study of selected modern texts. Taught in French. Part of overseas study program in France.

**FRE 231 (5) N
Advanced French Language Literature**

Advanced review of all major concepts of French grammar and broadening of vocabulary base. Class meets in conjunction with FRE 201 groups for grammar review, but advanced students have more challenging reading and writing assignments. Some tutoring in small group work with FRE 201 students is expected. Prereq: FRE 203 or permission.

**FRE 232 (5) N
Advanced French Language Literature**

Continuation of FRE 231. Prereq: FRE 231 or permission.

**FRE 233 (5) N
Advanced French Language Literature**

Continuation of FRE 232. Prereq: FRE 232 or permission.

**FRE 234/LIT 234 (5) C,S
Telling Stories: Identity in History & Folklore**

Analyzes the process of identity creation and declaration in mythology, history and folklore through myths, stories and historical events. Focus on anecdotes, narratives and humor to delineate individual national and group identities. Includes quarter-long group and individual projects. Prereq: ENG 101.

**FRE 298 (2-5) N,C,S
Independent Study in French**

Independent study of selected topic(s) in French. To be arranged with instructor. Prereq: Permission.

German**GER 101 (5) N,C,S
Elementary German**

Covers pronunciation, fundamentals of grammar and syntax, oral and written exercises, reading and conversation and cultural aspects of the countries in which German is spoken. Oral practice with tapes required outside class. Intended for students with no previous German studies. Recommended: Eligibility for ENG 101 (C).

**GER 102 (5) N,C,S
Elementary German**

Continuation of GER 101. Focus on syntax, oral and written exercises, reading and conversation, fundamentals of grammar and culture, and pronunciation. Prereq: GER 101 or permission.

**GER 103 (5) N,C,S
Elementary German**

Continuation of GER 102. Emphasis on speaking, reading, writing and grammatical concepts. Prereq: GER 102 or permission.

**GER 199 (1-2) N,C,S
Independent Study in German**

Covers intermediate text of contemporary short stories, providing insight into aspects of the human condition after World War II. Furthers skills in German beyond GER 103. Prereq: Permission.

**GER 201 (5) C
Second-Year German**

Increases proficiency in all four language skills: reading, writing, speaking and listening comprehension. Obtain practice in speaking and listening through classroom discussion of the readings, as well as group discussions of general topics. Includes a thorough grammar review. Prereq: GER 103 or permission.

**GER 202 (5) C
Second-Year German**

Overview of the German language, history, culture, customs and holidays. Acquire conversational skills for daily usage and reading and writing skills. Covers analysis and discussion of newspaper and magazine articles and film. Taught in German. Some grammatical functions will be explained in English. Prereq: GER 201 or permission.

**GER 203 (5) C
Second-Year German**

Increases the student's reading, speaking and writing skills. Covers a selection of the 20th century German (Austrian, Swiss) literature in the various genres: short story, film script, poetry and novel. Students will undertake writing a newspaper based on the contents of a film script. Prereq: GER 202 or permission.

**GER 236 (5) C
German Language & Civilization**

Survey of German language and intro to aspects of political, social, and cultural life of the German-speaking world from the beginning through 20th century. Emphasis on language origin and development, culture, customs, holidays, literature, and contemporary society in relationship to the world today. Compares and contrasts American culture and society. Taught in English and English translations.

**GER 238 (5) C
Comparative Literature**

Survey of German and Slavic literature with literary analysis and comparison of main literary movements, authors, and significant works of prose, poetry, and drama forms from beginning to contemporary. Exposes culture and language usage through German/Slavic literature. Compares and contrasts American culture and society. Taught in English and English translations.

**GER 299 (1-5) N,C
Independent Study in German**

Furthers skills beyond the level of GER 103. Uses an intermediate text of contemporary short stories. Prereq: Permission.

Hebrew**HEB 101 (5) C,S
Modern Hebrew**

Develops speaking, listening, reading, and writing skills through the knowledge of grammatical rules, the acquisition of vocabulary, and extensive conversational practice. Examines the culture of speakers of modern Hebrew, primarily through the use of newspaper materials and through the arts. Recommended: Eligibility for ENG 101.

**HEB 102 (5) C,S
Modern Hebrew**

Continuation of HEB 101. Prereq: HEB 101 or permission.

Japanese**JPN 101 (5) N,C,S
Elementary Japanese**

Intro to Japanese conversation, grammar, culture, and the Japanese hiragana and katakana writing systems. Intended for students who have not previously studied Japanese. Recommended: Eligibility for ENG 101 (C).

**JPN 102 (5) N,C,S
Elementary Japanese**

Continuation of JPN 101. Includes development of speaking, listening, reading, and writing skills. Introduces the kanji (Chinese character) writing system and up to 100 basic characters. Prereq: JPN 101 or permission.

JPN 103 (5) N,C,S
Elementary Japanese

Third quarter continues the development of language skills in all areas. Presents another 100 Chinese characters. Prereq: JPN 102 or permission.

JPN 201 (5) N,C
Second-Year Japanese

Covers basic grammar, vocabulary, and writing systems learned in the first year to bring students to intermediate level speaking, reading, writing and aural comprehension of the language. Introduces mastery of hiragana, katakana and 100 kanji. Prereq: JPN 103 or permission.

JPN 202 (5) N,C
Second-Year Japanese

Continuation of JPN 201. Expansion of grammar, vocabulary and writing systems to intermediate level of speaking, reading and writing. New kanji introduced. Prereq: JPN 201 or permission.

JPN 203 (5) N,C
Second-Year Japanese

Continuation of JPN 202. Expansion of basic grammar, vocabulary, and writing systems. Intended to bring students to intermediate level of speaking, reading, and writing. Introduces new kanji and the use of the Japanese dictionary. Prereq: JPN 202 or permission.

JPN 298 (1-10) N
Study Abroad - Japanese

To be arranged with instructor. Prereq: Permission.

JPN 299 (2-5) N,C,S
Independent Study for Japanese

Independent study of selected topic(s) in Japanese arranged with faculty. Prereq: Permission.

Linguistics**LAN 101 (5) C**
Intro to Linguistics

Introduces the study of natural language. The similarities in the basics of language as an instrument of thought and communication will be presented as well as the sources for cultural differentiation between all linguistic materials.

LAN 110 (5) N,C,S
Comparative Linguistics: American Sign Language & English

Intro to linguistics as applied to English and American Sign Language. Examination of phonology, morphology, syntax and language use. Prereq: ASL 103 and eligibility for ENG 101 or permission.

Russian**RUS 101 (5) N,C**
Elementary Russian

Intro to Russian emphasizing speaking, listening and reading comprehension. Covers the writing system and basic grammar concepts. Studies culture and contemporary customs. Intended for students who have previously studied Russian. Prereq: Eligibility of ENG 101 (C).

RUS 102 (5) N,C
Elementary Russian

Continuation of RUS 101. Emphasis on speaking, reading, writing and grammatical concepts to ensure proper pronunciation in simple conversation. Covers reading simple texts. Prereq: RUS 101.

RUS 103 (5) N,C
Elementary Russian

Continuation of RUS 102. Emphasis on speaking, reading, writing and grammatical concepts. Continued development of proper pronunciation, facility with conversation, and the ability to read texts with the aid of a dictionary. Prereq: RUS 102.

RUS 236 (5) C
Survey of Russian Culture & Language

Interplay of artistic, social and political forces on the development of Russian culture from the Kievan period to the present. Emphasis on language origin and development, culture, customs, holidays, literature and present society in relationship to the world today. Compares and contrasts American culture and society. Taught in English and English translations.

RUS 238 (5) C
Comparative Literature

Survey of German and Slavic literature with literary analysis and comparison of main literary movements, authors, and significant works of prose, poetry, and drama forms from beginning to contemporary. Exposes culture and language usage through German/Slavic literature. Compares and contrasts American culture and society. Taught in English and English translations.

RUS 299 (2-5) C
Independent Study for Russian

Independent study of selected topics in Russian arranged with instructor. Prereq: Permission.

Spanish**SPA 100 (4.5) C**
Comparative Spanish Grammar

Systematic analysis of English and Spanish grammatical structures, with practical exercises on selected grammatical points suggested by students.

SPA 101 (5) N,C,S
Elementary Spanish

Fundamentals of grammar and syntax, oral and written exercises, pronunciation, reading and conversation, and cultural aspects of the countries in which Spanish is spoken. Oral practice with tapes required outside of class. Intended for students who have not previously studied Spanish. Recommended: Eligibility for ENG 101 (C).

SPA 102 (5) N,C,S
Elementary Spanish

Continuation of SPA 101. Emphasizes pronunciation, and oral and written communication. Prereq: SPA 101 or permission.

SPA 103 (5) N,C,S
Elementary Spanish

Continuation of SPA 102. Intended for students with two quarters of Spanish studies or equivalent. Prereq: SPA 102 or permission.

SPA 110 (4.5) C
Basic Spanish Conversation

Emphasis on developing speaking skills. Augments skills developed in Elementary Spanish. Students may repeat the course once to earn up to 9 credits.

SPA 201 (5) N,C
Second-Year Spanish

Continuation of SPA 102. Reviews grammatical structures through study of Hispanic culture, literature and art throughout the world. Introduces vocabulary for basic business, medical and legal transactions. Prereq: SPA 103 or permission.

SPA 202 (5) N,C
Second-Year Spanish

Continuation of SPA 201. Emphasis on the four aspects of language use: reading, writing, listening and speaking through composition, oral presentation, guest speakers, etc. Prereq: SPA 201 or permission.

SPA 203 (5) N,C
Second-Year Spanish

Continuation of SPA 202. Prereq: SPA 202 or permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

SPA 210 (4-5) C
Intermediate Conversation

Emphasis on developing speaking skills. Augments skills developed in SPA 210. Students may repeat the course once to earn up to 9 credits. Prereq: SPA 103 or SPA 110.

SPA 236/LIT 236 (5) C
Latin American Colonial Literature

Literary expressions of Colonial times through 18th century in Spanish America and Peninsular Spain. Representative and outstanding prose works of 16th and 17th centuries.

SPA 238 (5) C
Chicano Narrative

Introduces significant works in Chicano literature. Study of genre developing and understanding the implications of interdependence among diverse cultural groups.

SPA 299 (2-5) N,S
Independent Study in Spanish

Independent study of selected topics in Spanish arranged with instructor. Prereq: Permission.

Tagalog**TAG 101 (5) C**
Beginning Tagalog

Develops basic speaking, listening, reading and writing skills through knowledge of basic grammatical rules and sentence patterns and through acquisition of a basic vocabulary. Examines the cultural elements in the language along with the historical background that has affected it. Prereq: ENG 101 eligibility.

TAG 102 (5) C
Intermediate Tagalog

Continues to develop basic conversational, reading and writing skills through knowledge of basic vocabulary. Examines additional cultural elements in the language along with historical background that has affected it. Prereq: ENG 101 eligibility and TAG 101 or permission.

TAG 103 (5) C
Advanced Tagalog

Develops more sophisticated conversational skills, storytelling and expository writing capabilities. Examines and practices grammatical rules and sentence patterns related to non-actor foci of Tagalog verbs. Demonstrates and utilizes expansion of simple sentences by adding modifiers, enclitics and conjunctions. Prereq: ENG 101 eligibility and TAG 101 and 102 or permission.

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 on culture and customs.

VTN 101 (5) S
Elementary Vietnamese 1

Prereq: SLEP/ASSET scores indicating ENG 101 readiness or permission.

VTN 102 (5) S
Elementary Vietnamese 2

Prereq: VTN 101, SLEP/ASSET scores indicating ENG 101 readiness or permission.

VTN 103 (5) S
Elementary Vietnamese 3

Prereq: VTN 101, VTN 102, SLEP/ASSET scores indicating ENG 101 readiness or permission.

LIBRARY RESEARCH**LIB 101 (1-5) C,S**
Intro to Information Resources

Examines various strategies for locating, evaluating, and applying information resources in the research process with attention to information policy issues such as censorship and freedom of information. Emphasis on proficiency at using various electronic databases, including those available on the library's information networks and the online catalog, as well as other standard research tools and retrieval techniques.

LIB 140 (3) N,S
Internet Information Resources

Develops skills for locating and evaluating information resources on the Internet. A graphical browser, Netscape and various search techniques will be employed - browsing from a hierarchical directory; searching for more specific information from one of many search engines available, or addressing specific sites using the URL (Uniform Resource Locator). Emphasis on how information is structured on the Internet, rather than on technical details. Recommended: Familiarity with common computer commands in Windows environment.

LIB 150 (1) N,C,S
Research in the Electronic Environment

Intro to the research process using electronic information systems including online library catalogs, periodical databases and the Internet. Emphasizes analyzing information needs, choosing appropriate resources and developing effective search skills and strategies. Explores principles of database searching and Internet search engines. Extensive online work. Prereq: Eligibility for ENG 101 and basic computer skills. Recommended: Familiarity with e-mail.

LIB 180 (5) N
Learning for the 21st Century

Emphasis on building skills and techniques for successful lifelong learning and identifying personal learning styles and strengths that facilitate learning in an online environment. Through a quarter-long research project, students will examine strategies for locating, evaluating and applying information resources in the research process with attention to information policy issues like censorship and freedom of information. Prereq: Placement in ENG 101.

LIB 299 (1-3) S
Special Problems in Library Research

Small group setting to cover selected topics in Library Science.

MARINE TECHNOLOGY**Marine Deck Technology****MGO 112 (2) C**
Marlinspike

Practical instruction in use of line, cordage, wire rope and splicing methods. Includes reeving tackles and rigging stages, boatswains' chairs, pilot ladders and emergency steering gear.

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

Focuses on chart navigation and basic methods of piloting with emphasis on use of charts and nautical publications, the IALA "B" buoyage system and solving standard navigation problems. Covers how 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; and formulate anchorage procedures.

MGO 124 (2) C
Basic Vessel Handling

Covers fundamentals of shiphandling for small vessels based on single-screw theory. Applied instruction in shiphandling techniques, includes: backing and filling; "Y-backing"; emergency stopping; flanking; and docking and undocking. After demonstration, students experience techniques for themselves using a small training vessel.

MGO 133 (6) C
Seamanship Practicum

Introductory underway practicum where students receive indoctrination to both watchstanding duties and shipboard responsibilities of an able seaman. Student performs all deck-related tasks one might expect to encounter when actually at sea. Involves 12-hour voyages weekly throughout the academic quarter aboard SMA's training vessels.

MGO 137 (2) C
Electronic Navigation

Introduces standard electronic equipment and systems used to aid navigation and communication. Topics cover: radar, gyro compass, depthsounder, Loran C, RDF, GPS, GMDSS and radiotelephone. Includes training in radar piloting and collision avoidance theory using SMA's computer radar simulator. (NOTE: This course is not designed to satisfy the requirements of either 46 CFR 10.480 or 15.815. Students pursuing the license option will need to take a USCG-approved radar observer course from an organization so certified by the Coast Guard.)

MGO 140 (3) C
Nautical Rules of the Road

Comprehensive study of the 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 166 (6) C
Navigation Practicum

Advanced underway practicum. Under instructor supervision, student assumes role of mate aboard ship and is responsible for navigating the training vessel and operating all related navigational equipment as well as directing the deck crew while it is underway. Requires demonstration in competency, proficiency and confidence in navigating a vessel without guidance. Includes 12-hour voyages weekly throughout the academic quarter aboard SMA's training vessels.

MTS 201 (2) C
Naval Architecture

A survey course in ship design and construction as it relates to all types of vessels. Emphasis on basic naval architecture and management considerations regarding ship structure. Topics include hull structure and components, vessel design process, design stresses, tonnage measurements and load line assignments.

MTS 202 (2) C
Stability

Covers principles, terms and procedures used in the determination of transverse, longitudinal and damage stability of ships. Topics include 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 introduction 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 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. Topics include use of a sextant in determining position and range, measuring speed by RPM, fuel consumption and use of the speed log.

Marine Engineering Technology

MTS 212 (4) C
Auxiliary Machinery & Ship Design

Introductory course to auxiliary machinery and naval architecture. Topics include 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
Marine Diesel Engine Maintenance & Operation

Theory, operation, troubleshooting and repair of marine diesel engines. Fundamental operating procedures for marine diesel engines is studied; instruction combines classroom lecture with applied training in diesel engine labs.

MTS 221 (4) C
Applied Marine Electricity

Applied course in AC and DC motors and generator applications. Students apply AC and DC electrical theory to typical marine equipment. Topics covered include 3-phase circuits and transformers. The student receives practical experience in operating marine electrical equipment in the laboratory, on a panel board simulator and aboard SMA's training vessels (dockside). Prereq: MGO 127 or permission.

MTS 228 (5) C
Marine Hydraulics

Basic survey course utilizes lectures, laboratory experiments and practical demonstrations with simulation models. Emphasis on routine maintenance, troubleshooting and repair of marine hydraulic equipment. Students disassemble, analyze and reassemble 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 Marine Diesel Engines

Continuation of MTS 217. Advanced training in the disassembly and rebuilding of marine diesel engines. Special emphasis is placed on air intake systems, fuel injectors, governors, lubrication systems, cylinder wear, ring wear, piston clearances, bearing wear and crankshaft alignment. Prereq: MTS 217.

MTS 263 (3) C
Propulsion Systems

Introductory course focusing on the principles, operation, maintenance and repair of select propulsion systems. Topics include design and application of engines and related systems such as fuel, lubricating, cooling, exhaust and heat recovery. Additional topics include reduction gears, shafting, bearings and propellers.

MTS 285 (3) C
Marine Boilers

Combines classroom instruction with actual "hands on" training in operating steam boilers. Covers the principles, operation, maintenance and repair of marine boilers.

MGO 127 (4) C
Fundamentals of Marine Electricity

Fundamentals of AC and DC electricity and elementary electronics. Focuses on basic theory of electricity, measurements and instruments, routine maintenance of electrical components and general operation of shipboard electrical systems. Prereq: MGO 119, MAT 101 or permission.

MGO 147 (6) C
Marine Engineering Practicum

Introductory underway practicum, where students 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 throughout the academic quarter aboard SMA's training vessels.

MGO 177 (6) C
Advanced Engineering Practicum

Advanced underway practicum where, under instructor supervision, student assumes the role of Designated Duty Engineer aboard ship and is responsible for all facets of the operation of the engine room and related equipment while the training vessel is underway. Requires demonstration in competency, proficiency and confidence in running an engine room without guidance. Involves weekly 12-hour voyages throughout the academic quarter aboard training vessels. Prereq: MGO 147.

Marine Fundamentals

Note: ENG 105 - Applied English Composition - is a required course for the Marine Engineering Technology and the Marine Deck Technology Programs.

MGO 101 (2) Principles of Marine Mechanics C

Provides training in proper tool usage including 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 and etiquette, and regulatory considerations. General topics include fastenings, bearings, seals, gasketing methods and other relevant materials and equipment.

MGO 103 (3) Survival Craft C

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. Topics include lifeboat nomenclature and equipment, launching procedures, handling by oars, inflatables and other types of lifesaving equipment.

MGO 105 (3) Leadership & Management C

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) Seamanship C

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). Topics include nomenclature, ship structure, vessel equipment, deck fittings, knots and splices, rigging and watchstanding duties.

MGO 113 (3) Marine Safety C

Covers basic damage control, marine fire-fighting and other safety topics to prepare for employment in the marine industry. Topics include 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 119 (3) Marine Mathematics C

Reviews algebraic and trigonometric methods. Topics include 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 200 (4-5) At Sea Internship C

Provides actual at-sea experience on vessels of at least 500 gross tons that operate beyond the boundary line. Thirty to sixty day internship allows the students to demonstrate their 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. Application of classroom and laboratory learning to the "real world" of an ocean going vessel.

MTS 284 (2) Shipboard Pollution Prevention C

Utilizing a non-technical format, this course reviews issues in pollution prevention and control as they impact on the duties and tasks performed by deck and/or engineering personnel onboard ship.

MTS 294 (2) License Seminar C

Seminar consists of lectures and discussions on licensure knowledge requirements for deck/engineering candidates preparing to take the U.S. Coast Guard deck/engineering exams. Students learn to consult and reference the Code of Federal Regulations, Title 46 and other publications.

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.

MAT 080 Lab Classes

Individualized instruction in the following subjects with course content designed to meet the student's specific needs and preparation: Arithmetic, Algebra I, Algebra II, Geometry, MAT 098 (with instructor permission), and preparation for vocational/technical math. Students may need to enroll in MAT 080 for more than one quarter in order to achieve their individual objectives. Faculty and tutors assist in this laboratory format.

Math Laboratory Courses • NORTH •

MAT080A	Arithmetic I
MAT080B	Arithmetic II
MAT080C	Algebra I
MAT080D	Algebra II
MAT080E	Algebra III
MAT080F	Algebra IV
MAT080G	Geometry I
MAT080H	Geometry II
MAT080I	Trigonometry
MAT080J	Independ. Study

Math Laboratory Courses • SOUTH •

MAT 086 Geometry I S

Covers points, lines and angles, triangles, parallel lines, polygons, proofs on congruence and similarity of triangles. Prereq: MAT 085 with a 2.0 or higher. Calculator required.

MAT 087 Geometry II S

Continuation of MAT 086. Covers perimeter and area of polygon, circles, three-dimensional (solid) geometry and an introduction to right triangle trigonometry. Prereq: MAT 086 with a 2.0 or higher. Calculator required.

Math Lecture Courses
• N, C, S •

MAT 080 Arithmetic Skills S

MAT 081 Basic Math Skills N,C

MAT 083* Arithmetic (5) S

High school level course emphasizing the structure of the number system. Review of fundamental arithmetic, particularly the addition and subtraction of fractions and decimals. Introduces elementary algebraic concepts, reviews problem solving strategies and applications and introduces primary concepts of probability, statistics, and geometry. Prereq: Basic computational math skills.

MAT 084* Algebra I C,S

Covers operations with signed numbers, solutions of first equations, polynomials and factoring. Prereq: MAT 083 w/2.0 or higher or placement exam (C).

MAT 085* Algebra II C,S

Continuation of MAT 084. Covers system of equations, graphs, rational expressions and equations, radical expressions and equations, quadratic equations. Prereq: MAT 084 w/2.0 or higher or placement exam (C).

MAT 089 Independ. Study N,C,S

**Also offered as laboratory courses at South Seattle Community College.*

MAT 097 Elementary Algebra (5) N,S

Introductory course including basic operations with signed numbers, solutions of linear equations and inequalities, word problems, products and factorization of polynomials, properties and operations of polynomials. Intensive study equivalent to one year of high school algebra. Prereq: MAT 080 B, MAT 081, MAT 083, math placement exam or permission.

MAT 098 Intermediate Algebra (5) N,C,S

Sets and the real number system, polynomial and rational expressions, exponents and radicals, word problems, systems of linear equations and graphs. Prereq: One year of high school algebra and placement exam, or MAT 080 D, MAT 085 (2.2 or higher or placement exam (C), 2.0 or higher (S)) or MAT 097.

MAT 100 Math for Health Careers (3) N

Review of basic math and algebra for those entering the health field. Applications of concepts to calculate dosages, flow rates, infusion times, and pediatric medication. Use of decimals, fractions, ratios, proportions and percents. Prereq: Math placement test.

MAT 102 College Algebra (5) S

Bridges the gap between Intermediate Algebra and Pre-Calculus functions and is for students in Math and Science. Strongly recommended in preparation for MAT 122. Prereq: MAT 098 or permission.

MAT 103 Geometry & Visualization (5) N,C

Lecture and computer lab course in problem solving in plane geometry, geometry on the sphere, three-dimensional geometry and transformational geometry. Uses both synthetic and analytic methods. (C) Emphasis on geometry in plane and sphere, transformational geometry, and plane patterns with an introduction to three dimensional geometry. Extensive use is made of computers. Prereq: MAT 098 (with 2.0 or higher) or placement exam.

MAT 104 Trigonometry (3) N

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: MAT 098 or placement exam.

MAT 106 Applied Algebra & Trigonometry I (5) N

Focus 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 MAT 098. Prereq: MAT 097 or equivalent or placement test.

MAT 107 Mathematics: A Practical Art (5) N,C,S

Designed to enhance mathematics literacy. Intended primarily for liberal arts majors, but other majors are encouraged to enroll. Instructor chooses topics centered around a theme such as management science, decision making, modeling, statistics or history of the environment. Prereq: MAT 098 (2.0 or higher) or placement exam.

MAT 110 Applied Math for Technicians (3) C,S

Emphasis on applications of mathematics to vocational and technical courses. Prereq: Satisfactory performance on Math placement test.

MAT 111 Applied Mathematics I (5) S

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.

MAT 112 Applied Mathematics II (5) S

Includes factoring, algebraic fractions, fractional and quadratic equations, rational exponents, operations with radicals, oblique triangles, law of sines and cosines and trigonometric graphs. Prereq: MAT 111 or permission.

MAT 113 Applied Mathematics III (5) S

Vector analysis, resolution of vectors, properties of logarithms, exponential and logarithmic equations, radical equations, analytic geometry, statistics, inequalities and applications. Prereq: MAT 112 or permission.

MAT 114 Mathematical Applications for Technicians (5) C

Practical applications for vocational and technical programs. Includes whole numbers, fractions, decimals, exponents, quadratic expressions, percentage, ratios and proportions, introduction to geometry and trigonometry.

MAT 115 Solutions to Word Problems in Algebra (3) S

Helpful in business, technical, physics, and college transfer courses. Systematic techniques for solution of algebraic word problems. Prereq: MAT 085 or concurrent enrollment.

MAT 116 Applications of Mathematics to Management, Life & Social Sciences (5) N,C,S

(Formerly MAT 156) Mathematics with emphasis on applications to business, finance, management, life and social sciences. Mathematical models, graphs and algebraic exponential and logarithm functions. (C) Emphasizes material related to business, finance and management topics. Prereq: MAT 098.

MAT 117 Elements of Calculus (5) N,C,S

(Formerly MAT 157) An intuitive and elementary treatment of differential and integral calculus, polynomials, powers, exponential and logarithmic functions. Applications from the social sciences, biology, medicine, ecology, physics, business and economics. Emphasis on material related to business, finance and management topics. (C) Emphasizes material related to business, finance and management topics. Prereq: MAT 116 (102, 120 or 122).

MAT 118 Applied Algebra & Trigonometry II (5) N

Activity-based math course focusing 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: MAT 098 or MAT 106.

MAT 120 (5) N
Pre-calculus

Covers the general nature of functions: polynomial, rational, exponential, logarithmic and trigonometric functions. Prereq: MAT 098 (with grade of 2.0 or higher) and either high school trigonometry, MAT 103, MAT 104, or placement exam. A graphing calculator may be required by some instructors.

MAT 122/123 (5 ea) N,C,S
Pre-Calculus

(MAT 122 formerly MAT 105) Intro to functions: polynomial, rational, exponential, and logarithmic. Study of trigonometry, analytic geometry in two and three dimensions, and related algebra topics. MAT 122 Prereq: MAT 098 or placement exam. MAT 123 Prereq: MAT 122.

MAT 124/125/126 (5 ea) N,C,S
Calculus with Analytic Geometry

Differentiation of algebraic and transcendental functions, definite and indefinite integral, techniques of integration, vectors, vector-valued functions, multivariable calculus, partial differentiation, multiple integral and applications.

NOTE: Generally, institutions cover the same material over the entire sequence. However, some topics may be covered at different points in the sequence. It is recommended that students who transfer before completing the entire sequence consult an advisor.

MAT 124 Recommended: MAT 123 (N,C).

MAT 125 Continuation of MAT 124. Prereq: MAT 124.

MAT 126 Continuation of MAT 125. Prereq: MAT 125.

MAT 170 (5) N
Math for Elementary School Teachers

Develop a repertoire of problem solving tools with emphasis on non-routine and multi-step problems. Focuses on understanding of the fundamental operations of arithmetic focusing on whole numbers, decimals, fractions, examining patterns, and learning about geometry, data and chance. Prereq: MAT 098.

MAT 198 (1-5) N
Mathematics Workshop

A problem-solving workshop approach to math topics considered appropriate by the instructor. Topics may include study skills, note-taking systems, test-taking strategies and group problem-solving approaches.

MAT 215 (2) N,S
Word Problems for MAT 124 - Calculus

Word problem class, to be taken concurrently with MAT 124. Problem sets will follow topics presented in MAT 124. Develops critical thinking skills, to transition between applied and theoretical calculus. New technologies may be used for problem-solving. Enhances skills necessary to compete more successfully in math/science programs at four-year schools.

MAT 216 (2) S
Word Problems for MAT 125

Word problem class, to be taken concurrently with MAT 125. Develops critical thinking skills and bridges the gap between applied and theoretical calculus. New technologies may be used for problem-solving. Enhances skills necessary to compete more successfully in math/science programs at four-year schools. Problem sets will follow topics presented in MAT 125.

MAT 220 (3-4) N,C,S
Linear Algebra

Examines systems of linear equations, matrices, determinants, vector spaces, inner product spaces, eigen values, eigenvectors, similarity of matrices, Jordan form and linear transformations. Transfers to the University of Washington as MATH 308. Prereq: MAT 126.

MAT 224 (3) N,C,S
Vector Calculus

Extension of MAT 126. Includes vector-valued functions, vector and scalar fields, line and surface integral, and the theorems of Green, Gauss, and Stokes. Transfers to the University of Washington as MATH 328. Prereq: MAT 126.

MAT 238 (3) N,C,S
Differential Equations

Intro to solution of ordinary differential equations. Existence and uniqueness theorems, elementary methods of solution, linear differential equations and power series. Transfers to the University of Washington as MATH 307. Prereq: MAT 126.

MAT 240 (5) N,C,S
Elementary Statistics

Covers descriptive methods, probability and probability distributions, samples, decisions, hypothesis testing, statistical inferences, analysis of variance and regression, applications. Prereq: MAT 098.

MAT 245 (5) N
Intro to Statistics & Quality Control

Covers statistics and quality control in the workplace using elementary statistics. Focuses on goals, philosophy and basic control chart concepts; statistical measures of the center and dispersion of data; and the specifics of control charting. Prereq: MAT 106.

MAT 298 (1-5) N,C,S
Special Topics in Mathematics

Problem-solving for special math topics. Prereq: Permission.

MAT 299 (1-5) N,C,S
Independent Study

Independent study of problems or topics of special interest. Prereq: Permission.

MEDICAL ASSISTING

The Medical Assisting program at North Community College has been revised. Call the Health/Medical Division office at (206) 527-3790 for the latest information on courses available beginning fall 2002. The Modular Medical Assisting program is planned as a self-paced, modular program with both day and evening hours available.

METEOROLOGY**MEY 100 (5) N,C,S**
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 (1-5) N,C
Special Topics

Seminar on selected topics or activities in meteorology. Prereq: MEY 100 or permission.

MEY 299 (1-5) N,C
Independent Study

Independent study of approved topics in meteorology. Prereq: MEY 100 and permission.

MUSIC**MUS 100 (5) N,C,S**
Music in the Western World

Intro to classical music providing an understanding of musical expression through works of the great composers. Emphasizes music listening through recordings, films, and special performances.

MUS 101 (5) N,C,S
First-Year Theory

Rudiments of music notation, scales, intervals, and triads, rhythmic and melodic sight-reading and dictation. Simple four-part writing and analysis. Correlated keyboard exercises. For music majors and minors.

MUS 102 (5) N,C,S
First-Year Theory

Continuation of MUS 101. Prereq: MUS 101 and MUS 125, or permission.

MUS 103 (5) N,C,S
First-Year Theory

Continuation of MUS 102. Prereq: MUS 102.

MUS 105 (5) S
Experience Rhythm

Learn the basics of rhythm for a variety of musical styles. With this knowledge, create your own rhythm-based music, such as drumming, rap and dance music. Open to everyone from beginners to students with musical experience.

MUS 109 (5) S
World Beat: Global Studies Through Music

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.

MUS 110 (5) N,C,S
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.

MUS 113 (5) N
Music in the United States

Overview of musical developments in the United States from Colonial times to the present. Live performances, videotapes and recordings illustrate the lectures. Examines contributions of ethnic/minority groups and the relevant social issues connected with these musical experiences.

MUS 116 (5) S
Rock Music - History

Examines rock music as a musical, social, cultural, economic and political force in the United States. Emphasis on the early rock music development. Fulfills the Integrated Studies requirement.

MUS 117 (5) S
Rock Music II

Examine rock music as a musical, social, cultural, economic, and political force in the United States. Emphasis on the later decades of rock music development. Fulfills the Integrated Studies requirement.

MUS 119 (2-3) N,C,S
Beginning Group Instruction - Voice

Emphasis on beginning techniques of breath control, placement of tone, posture, and other basic concepts. Recommend enrollment in MUS 125 for students without experience in reading music.

MUS 120 (2) C,S
Intermediate Group Instruction - Voice

Continuation of MUS 119. Prereq: MUS 119 or permission.

MUS 121 (2) N,C,S
Beginning Group Instruction - Piano

Laboratory course for the general student to develop technical proficiency and sight-reading skills.

MUS 122 (2) N,C,S
Intermediate Group Instruction I - Piano

Class piano for students with previous keyboard experience. Prereq: MUS 121 or permission.

MUS 123 (2) N,C,S
Intermediate Group Instruction II - Piano

Continuation of MUS 122. Prereq: MUS 122 or permission.

MUS 125 (5) N,C,S
Fundamentals of Music

Introductory course in reading and writing music for non-majors. Builds musical knowledge and skills to complement student's natural music ability.

MUS 130-139 (1-2 ea) N,C,S
Individual Instruction Series: Voice, Piano, Strings, Brass, Woodwinds, Percussion, Organ, Guitar, Harp

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series (to be paid directly to instructor). Prereq: Permission.

MUS 140 (1-5) N,C
College Choir

Focus on musicianship, vocal techniques, and performance skills for the large choral ensemble through study of literature from all stylistic periods. One concert presented at end of quarter in various musical styles and cultures. Daily attendance required. Course may be repeated for up to 15 credits. Prereq: Ability to match pitch.

MUS 141 (2) S
College Chorus/South Singers

Vocal ensemble. May be repeated for additional credit.

MUS 142 (1-2) N,S
Community Chorale

Performs literature for the large choral ensemble. Meets one evening weekly.

MUS 143 (2) N,S
Vocal Ensemble

Small vocal ensemble performs music from several different periods, including the contemporary era.

MUS 144 (2) S
Vocal Jazz Ensemble

Small vocal ensemble which performs jazz music.

MUS 145 (2) C,S
Pop Vocal Ensemble

Singing group featuring pop, Broadway show tunes and jazz. Focus on enjoyment and enrichment. Performances quarterly.

MUS 146 (5) C
Jazz Ensemble I

Jazz Ensemble will be the Jazz performance group for Seattle Central. Students will participate in both Jazz Combo - duo, trio, quartet, etc. and big band settings. Selected music will draw from representative genres, composers, and performers. Prereq: Ability to play an instrument and sight read music at a 12th grade level or higher.

MUS 147 (5) C
Jazz Ensemble II

Continues the study of jazz performance repertoire, musicianship and technical skills introduced in MUS 146. Provides opportunity to learn the art of ensemble playing and singing in the jazz idiom. Focuses on small group and large ensemble rehearsal techniques, practice routines and improvisation. Prereq: Ability to sight read music at a 12th grade level or higher.

MUS 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. Avant-garde and contemporary jazz styles are examined and performed in a small group setting. Prereq: Ability to read music at a 12th grade level or higher.

MUS 149 (2) N
Jazz Combo

Performance class requiring reading and improvisational skills. Develops small ensemble skills in the jazz musician as a vocalist or instrumentalist.

MUS 150 (1-5) N,S
Studio Jazz Orchestra

Emphasis on big band concept. Style and performance techniques. Prereq: Performance ability.

MUS 151 (2-3) N,C,S
The Performance Experience

Instruction on presenting a public performance - the skills beyond the notes. Students may work as soloists or in small combinations. For chamber music groups, folk ensembles, traditional, ethnic groups, and acoustic jazz groups. Prereq: Performance ability.

MUS 153 (1-2) N
Contemporary Jazz Ensemble

Membership by audition. Combines talents of professional and student musicians in the big-band experience. Students 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.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

MUS 154 (1-2) N,S
Symphonic Band

Wind band literature, both contemporary and traditional. Evening rehearsal. Membership by audition.

MUS 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.

MUS 157 (5) C
Jazz Improvisation II

Continues study of jazz improvisation through application of theoretical and technical concepts relating to the art of spontaneous improvisation. Students 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.

MUS 158 (5) C
Jazz Improvisation III

Augments repertoire by studying compositions of modern jazz improvisers such as Chick Corea, Herbie Hancock and Wayne Shorter. Students learn techniques associated within the style and receive instruction on the fundamentals, repertoire and technical studies introduced in MUS 156 and MUS 157. Recommended: MUS 157. Prereq: Knowledge of major/minor scales, modes and basic keyboard skills and permission.

MUS 161 (5) C,S
American Popular Music

History of American popular music from colonial times to contemporary styles. Analysis of musical characteristics, as well as social/cultural contexts of development.

MUS 163 (5) C
Musical Theater Stage Performance

Principles of voice production, resonance and projection. This course fills the gap between the teacher's studio and professional performance, for an effective presentation of varied materials.

MUS 182 (4) N
Intro to Musical Theater Production

Basic instruction in dramatic and vocal discipline of musical discipline. Learn basic techniques of analysis, rehearsal and performance of musical theater through the study of scenes and in-class performance of designated scenes. Recommended: MUS 119, 130 and/or DRA 100 or 121.

MUS 201 (3) N,C
Second-Year Theory

Continuation of MUS 103, completing the periods up to Impressionism. Chromatic harmony, modulations and related modern concepts. Prereq: MUS 103.

MUS 202 (3) N,C
Second-Year Theory

Continuation of MUS 201. Advanced 4-part harmony, especially relating to form and development. Prereq: MUS 201.

MUS 203 (3) N,C
Second-Year Theory

Continuation of MUS 202. Advanced music theory and practice from common practice to chromatic harmony. Prereq: MUS 202.

MUS 204 (3-5) N,C
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.

MUS 221 (2) N,C,S
Advanced Group Instruction - Piano

Continuation of MUS 123. Technique, repertoire, and theory, with emphasis on classical compositions. Prereq: MUS 123 or permission.

MUS 222 (2) N,C,S
Advanced Group Instruction - Piano

Continuation of MUS 221. Prereq: MUS 221 or permission.

MUS 223 (2) N,C,S
Advanced Group Instruction - Piano

Continuation of MUS 222. Prereq: MUS 222 or permission.

MUS 298 (1-5) C
Practicum in Music

Practicum in various skills in music. Tutorial assistant in piano theory. Coaching vocal students. Apprenticeship in use of electronic equipment (Broadway Performance Hall).

MUS 299 (1-5) N,C,S
Practicum in Music

Course structure determined by student and instructor. Allows research performance in area of interest. Prereq: Permission.

NETWORK MULTIMEDIA**MMT 101 (5) N**
Intro to Multimedia

Comprehensive view of the multimedia industry. Studies basic components of multimedia design through overviews of industry standards, interaction with professional designers of multimedia and experience with real world examples. Students build their own simple multimedia projects. Introduces PowerPoint as a basic storyboarding, organization and presentation tool. Prereq: CIS 101 or permission.

MMT 105 (5) N
Digital Imaging

Covers basic digital imaging techniques, including processing images for presentations, authoring and the Web. Prereq: CIS 101.

MMT 107 (5) N
Multimedia Authoring & Animation

Intro to multimedia authoring processes and concerns, including information and interface design. Provides skills for a quick start to successful assembly of various multimedia elements. Covers the integration of on-screen design with content for a variety of digital formats with an emphasis on production. Prereq: CIS 101 or permission.

MMT 115 (3) N
Multimedia Uses in Business

Students develop and deliver a business plan and production schedule to a prospective client for a multimedia program, product, or service. Prereq: DOS, Windows, Computer H/W Basics, Word Processing, Spreadsheets, ENG 101, MAT 099, and program entrance approval.

MMT 117 (5) N
2-D Animation in Flash

Create distinctive animation and interactivity for Web pages. Flash is a popular vector-based Web graphics editor, animation and authoring tool. In Flash you can draw graphics, create animation effects and add interactive controls while keeping file size compact for fast downloads. Prereq: MMT 101 or permission.

MMT 121 (5) N
Advanced Web Page Design

Learn to build a multimedia Web site. Explore Dreamweaver's multimedia capabilities using animation, video sound and image examples. Learn behaviors, importing and exporting, site architecture, layers and timelines. Explore Firework's Web capabilities using vector and raster manipulation. Learn splicing, imaging mapping, optimizing, rollovers, styles and animation. Introduces Flash, DHTML, streaming media and other current multimedia Internet technologies. Course assumes a working knowledge of HTML. Prereq: CIS 111 or MMT 101.

MMT 205 (5) N
Digital Media Techniques & Technology

Intro to capturing, compression and streaming of video and audio with an emphasis on delivery platform issues. Addresses asset management, file structure and naming conventions. Prereq: CIS 101, MMT 101, MMT 105, MMT 107 or permission.

MMT 207 (5) N
Multimedia Production

Provides hands-on experience with major software authoring tools for multimedia with an emphasis on production. Students implement project management strategies for both individual and team projects. Prereq: MMT 101, MMT 105, MMT 107 and MMT 205 may be taken concurrently or permission.

MMT 298 (1-5) N
Special Topics in Multimedia Technology

Study of selected topics in multimedia technology as considered appropriate by the instructor and/or faculty. Course content, format, and projects vary depending on topics.

MMT 299 (2-5) N
Independent Study - Multimedia Technology

Provides additional opportunities for advanced MMT students to continue learning multimedia production in a greater variety of authoring programs. Prereq: Completion of program courses and permission.

NETWORK TECHNOLOGIES

NET 120 (5) N,C
Network Essentials CompTIA Network +

Provides students with background to understand local area networking information in Microsoft courses on workstations and networking. Introduces the foundation of current networking technology for local area networks (LANs), wide area networks (WANs), and the Internet. Prereq: EET 130 or an A-Plus certificate.

NET 122 (5) N,C
Network OS 1 – Win2K Professional

Intro to knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a single-domain or multiple-domain Microsoft Windows 2000 Pro network. Provides prerequisite knowledge and skills required for future courses. Prereq: EET 130 (A+ cert.), or NET 120 (NET + cert.), or ITC 140 or permission.

NET 123 (3) N
Human Relations Skills in the Workplace

Provides new tools to diagnose workplace "people challenges," strategize solutions and communicate clearly with bosses, co-workers and internal customers to produce positive change. Course designed around the American Electronic Association's skills deemed most valuable by technology employers.

NET 124 (5) N,C
Network OS 2- Win2K Server

Continuation of NET 122. Provides support professionals with skills to install, configure, customize, optimize, network, integrate and troubleshoot Windows 2000 Pro. Prereq: EET 130 or NET 122 (NET 122 may be taken concurrently).

NET 126 (5) NC
Network OS 3 – Win2K Network Infrastructure

Continuation of NET 124. Covers capacity planning, multiple domain management, trust relationships, implementing RAS, interoperating with Novell Netware and Windows 2000 Pro troubleshooting. Prereq: NET 124.

NET 128 (5) N
Network OS 4 – Win2K Active Directory

Continuation of NET 126. Provides support professionals with skills to design, implement and support Windows NT Server network operating system in a multi-domain enterprise environment. Examines implementing server directory services, server analysis and optimization, network analysis and optimization and troubleshooting. Prereq: NET 124 or permission.

NET 129 (5) N
Intro to Computer Hardware Technology

Intro to skills and knowledge necessary for the technical support specialist. Computer assembly/disassembly, adding/replacing adapter cards, resolving system resource conflicts. Includes introduction to serial interface, cable configurations, printer controls with escape sequences, ASCII characters and print styles.

NET 134 (5) N,C
Network Communications - TCP/IP

Provides students with knowledge and skills required to set up, configure, use and support Transmission Control Protocol/Internet Protocol (TCP/IP) on major operating systems used on computers in the networked environment. Prereq: NET 122, NET 124 (NET 124 may be taken concurrently) or NET 142 or permission.

NET 136 (5) N
Novell Netware Operating Systems

Provides in-depth training of Novell Netware network operating system and other network operating systems. Examines the evolution of Netware including Netware 4.x and 5.x. Emphasis on the design and implementation of Netware based on client/user applications and need. Prereq: NET 122, NET 124.

NET 138 (5) N,C
UNIX for Network Administration

Intermediate course covering 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. Advanced concepts will include multi-user, multi-tasking, time-sharing networked communications, and set-up and maintenance of an Internet server.

NET 140 (5) N
Network Management - Unix Shell Scripts

Applies analysis of current industry standards and occupational analysis to develop content, including Unix host administration with shell scripts and the use of Perl language for administrative functions. Covers basic Internet operations on Unix systems, with a focus on data collection on the World Wide Web. Prereq: NET/CIS 138 or permission.

NET 142 (5) N,C
Network Management - CISCO I

Provides students with classroom and laboratory 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: EET 130, NET 122 (NET 122 may be taken concurrently).

NET 144 (5) N,C
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) N,C
Network Management - CISCO III

Continuation of NET 144. Instruction introduces and extends the student's knowledge and practical experience with 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: NET 142, NET 144.

**NET 150 (5) N
Network Security Fundamentals**

Designed to provide both Windows 2000 and Unix Network Administrators an awareness of security-related issues and the essential skills needed to implement security in such networks. This course is the first course offered that prepares students for the Security Certified Network Professional Exam.

**NET 156 (5) N
Designing a Secure Network for a Win2K Network**

Learn to design a security framework for small, medium, and enterprise networks by using Microsoft Windows 2000 technologies. Course contains four units that describe the securing of specific areas of the network: to local network users, to remote users and offices, between private and public networks and to partners. Prereq: NET 124.

**NET 190 (5) N
DOS for Technicians**

Detailed study of MS-DOS, intended specifically for students in the Network Technology program. Discussion of computer concepts including operating systems. Intro of most common DOS commands used for disk and file operations. Discussion of batch files and DOS configuration, especially the use of AUTOEXEC.BAT and CONFIG.SYS files. Study of special DOS utility programs, especially DOSHELL and DOSKEY. Students will attain fluency in DOS in order to use, install, upgrade, and troubleshoot DOS computers. Windows is also discussed and examined as a graphical extension of DOS.

**NET 197 (2-10) N
Special Topics in Network Specialist Technology**

Study of selected topics as considered appropriate by the instructor and/or faculty. Course content, format, and projects vary depending on topics. Prereq: Permission.

**NET 198 (2-5) N
Special Projects for LAN**

Study of selected topics as considered appropriate by the instructor and/or faculty. Course content, format, and projects vary depending on topics. Prereq: Permission.

**NET 224 (5) N
Exchange Server**

Intro to Microsoft Exchange Server through lectures, demonstrations, discussions and hands-on labs. Skills necessary to configure an Exchange server; develop infrastructure for Exchange server; choose client installation and integration strategy; develop long-term administration strategies; develop security strategies; configure message recipients; import directory data from other mail systems; install and configure Exchange Server clients; configure address lists and accounts by using the Administrator program; configure message tracking, server locations, and security; manage site security, users, distribution lists, the directory and public and private information stores; and back up and restore an Exchange server; configure a link monitor and server monitor.

**NET 228 (5) N
SQL Server**

Intended for system administrators who want to obtain the skills to become SQL Server Administrators. Covers several tasks including: installing, configuring, and supporting SQL Server, managing storage, setting up user accounts, assigning permissions, transferring data in and out of SQL Server and diagnosing system problems.

**NET 242 (5) N
CISCO CCNP I**

Advanced course introducing new content and extending previously learned networking skills to empower students to enter the workforce. Course content is based on current industry standards and occupational analysis. Focuses on advanced routing and uses Cisco routers connected in local-area networks (LANs) and wide-area networks (WANs) typically found at medium to large network sites. Students will learn to select and implement the appropriate services required to build a scalable routed network. Prereq: NET 142, NET 144 and NET 146.

**NET 298 (2-5) N,C
Special Projects for LAN**

Study of selected topics as considered appropriate by the instructor and/or faculty. Course content, format, and projects vary depending on topics. Topics could include Microsoft Back Office – IIS, Proxy Server, Site Server, Transaction Server, SNA server and SQL server Prereq: EET 130 (N), NET 120 (N), NET 126 (C) and permission.

**NET 299 (2-5) N
Independent Study in Network Technology**

Study of selected topics as considered appropriate by the instructor and/or faculty. Course content, format, and projects vary depending on topics. Prereq: Permission.

NURSING

NOTE: Most courses require concurrent enrollment. Please check program section for specific requirements.

Licensed Practical Nursing**NUR 116 (6) N
Nursing Fundamentals**

Intro to nursing fundamentals, theoretical background for basic nursing skills and processes. Prereq: Permission.

**NUR 117 (3) N
Nursing Fundamentals - Lab & Clinical Practices**

Fundamentals in nursing, including basic skills, laboratory practice and supervised clinical experience. Beginning communication skills also included. Prereq: Permission.

**NUR 118 (1-2) N
Clinical Nursing Skills I**

Theory and laboratory work associated with NUR 131. Laboratory classes provide knowledge and training for intermediate level nursing practice.

**NUR 119 (1-2) N
Clinical Nursing Skills II**

Continuation of NUR 118; assoc. with NUR 141.

**NUR 124 (5) N
Fundamentals of Anatomy & Physiology**

Intro to structure and function (anatomy and physiology) of human body. Foundation for clinically-related subjects including nutrition and pathological body conditions. Prereq: Permission.

**NUR 125 (2) N
Community Resources**

Identification of community social and health services on federal, state and local levels. Addresses health issues impacting the community at large. Prereq: Permission.

**NUR 126 (2) N
Legal Aspects & Career Opportunities**

Role of the practical nurse on the health team. Covers legal responsibilities, licensure, career opportunities, nursing organizations and trends. Prereq: Permission.

**NUR 127 (5-6)* N
Medical/Surgical Nursing - Child/Adult I**

Covers common conditions of illness throughout the life span. Prereq: All first-quarter NUR courses, concurrent enrollment in NUR 131, and permission. * Total credits for NUR 127 & NUR 128 = 13 (either 5+8 or 6+7).

**NUR 128 (7-8)* N
Medical/Surgical Nursing - Child/Adult II**

Continuation of NUR 127. Prereq: NUR 127 and permission. *Total credits for NUR 127 & 128 = 13 (either 5+8 or 6+7).

NUR 131 (4.5) N
Clinical Nursing Practice I

Supervised hospital and nursing home practice (medical/surgical care of the child/adult and chronic and convalescent patients) to expand nursing skills. Prereq: All first-quarter NUR courses.

NUR 132 (2) N
Nursing Process I

Covers assessment, planning, implementation, and evaluation of nursing practice. Prereq: Permission.

NUR 133 (3) N
Maternal/Newborn Theory

Study of the care of the mother and the newborn including prenatal, labor and delivery, and postnatal nursing. Prereq: Fourth-quarter standing.

NUR 134 (2) N
Maternal/Newborn Clinical

Application of practical nursing care in a maternity unit, delivery room and newborn nursery. Prereq: Fourth-quarter standing and concurrent enrollment in NUR 133.

NUR 137 (1) N
Selected Services

Additional experience in an elective clinical setting such as community health agencies, specialized hospital and clinical areas, doctors' offices and mental retardation centers. Prereq: NUR 127, NUR 128, NUR 131, NUR 141, NUR 151, and NUR 152.

NUR 138 (2) N
Pediatric Nursing

Application of nursing skills in pediatric clinical setting. Prereq: Permission.

NUR 139 (1) N
Senior Experience

A four-day, full-time clinical assignment, provides experience in full-shift nursing care on a work-like schedule. Expands medical/surgical nursing experience. Prereq: Fourth-quarter standing.

NUR 141 (4.5) 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. Prereq: All first- and second-quarter classes.

NUR 142 (2) N
Nursing Process II

Continuation of NUR 132. Prereq: Permission.

NUR 151 (3) N
Basic Pharmacology I & Pharmacy Calculations

Covers basic medications currently used, major drug classifications, generic and brand names, dosages, side effects and other drug interactions. Prereq: Permission.

NUR 152 (3) N
Basic Pharmacology II

Continuation of NUR 151. Prereq: Permission.

NUR 153 (1) N
Administration of Medications

Application of NUR 151 and NUR 152 to clinical setting. Prereq: NUR 151, NUR 152, and third-quarter of practical nursing program.

NUR 154 (2) N
Intravenous Therapy Skills

Intermediate course in intravenous therapy which provides theoretical background for intravenous infusion and clinical application skills using the nursing process. Prereq: Enrollment open to licensed nurses and medical assistants with division and instructor approval.

NUR 155 (1-6) N
Special Topics in Practical Nursing

To assist foreign students, pre-nursing, and advanced placement students to meet special needs for licensure, or other student interests. Tailored to meet State Board (LPN) recommendations or faculty recommendations to accomplish student/program objectives. Prereq: Permission.

LPN/RN Transition

NUR 106 (4) 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. Methods of instruction will be individualized, based upon initial diagnostic assessment. Taken concurrently with NUR 120, NUR 140, and NUR 162.

NUR 120 (1) C
LPN/RN Transition: Assessments & Intervention

Integrates critical thinking in practical caregiving situations. Emphasis on principles used in performing selected nursing skills in various contexts. Taken concurrently with NUR 106, NUR 140, and NUR 162.

NUR 140 (2) C
Pharmacology for LPN/RN Transition

Application of critical thinking and the nursing process to medication administration. Focus on enhancing current knowledge for the safe administration of medications at the RN level. Discussion of the roles and responsibilities of the nurse in drug therapy. Major classifications of drugs studied include autonomic nervous system agents, parenteral fluids, electrolytes, vitamins and minerals, endocrine agents, neurologic agents, respiratory agents, and selected cardiovascular agents. Taken concurrently with NUR 106, NUR 120, and NUR 162.

NUR 162 (2) C
Pathophysiology for LPN/RN Transition

Develops comprehensive understanding of pathophysiological processes that occur in selected major organ systems of the body. Serves as a basis for the scientific rationale in providing health care. Discussion of key concepts related to regulation of homeostasis, movement and cognition, and oxygenation and circulation. Taken concurrently with NUR 106, NUR 120, and NUR 140.

Nursing - Associate Degree

NUR 100 (1) C
Pharmacology for Nurses I

Intro to the basic concepts of drug therapy and development of knowledge base essential for safe medication administration. Topics include terminology, resources, and regulations related to drug therapy; principles of pharmacokinetics, pharmacodynamics, and pharmacotherapeutics; and dosage calculations. Discussion of the roles and responsibilities of the nurse in drug therapy. Prereq: Taken concurrently with NUR 101, NUR 110, NUR 111, & ANP 214.

NUR 101 (4) C
Nursing I - Fundamentals of Nursing

Intro to core nursing concepts. Focus on concepts relevant to the behaviors used to meet basic physiological and psychosocial needs. Intro to principles of critical thinking in nursing and the use of the nursing process as a foundation for practice, with application to basic human needs. Emphasis on the role of the nurse in health care, cultural views of health, and principles of growth, development, and the aging process. Prereq: Taken concurrently with NUR 100, NUR 110, NUR 111, & ANP 214.

NUR 102 (2) C
Nursing IIA - Medical/Surgical Nursing

Continuation of NUR 101. Focus on adaptive and maladaptive physiological responses associated with selected illness with discussion on application of the nursing process in relation to fluid and electrolyte imbalances, acid-base imbalances, and endocrine alterations. Prereq: Taken concurrently with NUR 112, NUR 122, NUR 123, NUR 160, & ENG 102.

NUR 103 (3) C
Nursing III - Medical/Surgical Nursing

Continuation of NUR 102 with discussion on application of the nursing process in relation to neurologic, musculoskeletal, chronic respiratory, and chronic cardiovascular alterations. Prereq: Taken concurrently with NUR 113, NUR 135, NUR 161, & NTR 150.

- NUR 110 (1) C**
Trends & Issues I
 Intro to the discussion of issues in nursing. Includes images and impressions of nursing, current trends in health care delivery and the profession of nursing, and legal and ethical issues. Prereq: Taken concurrently with NUR 100, NUR 101, NUR 111 & ANP 214.
- NUR 111 (3) C**
Nursing Practice I
 Provides opportunities to apply nursing concepts introduced in NUR 101. Focus on application of concepts relevant to basic physiological and psychosocial needs and adaptation. Emphasis on utilization of the nursing process as the scientific basis for practice. Experience is gained in basic assessment, care planning, and principled application of nursing skills. Prereq: Taken concurrently with NUR 100, NUR 101, NUR 110 & ANP 214.
- NUR 112 (3) C**
Nursing Practice II
 Continuation of NUR 111. Focus on developing a sound knowledge and skill base for providing nursing care. Experience is gained in complete assessment, care planning, and principled application of nursing skills. Prereq: Taken concurrently with NUR 102, NUR 122, NUR 123, NUR 160 & ENG 102.
- NUR 113 (4) C**
Nursing Practice III
 Continuation of NUR 112. Focus on integrating nursing theory, clinical data, and psychomotor skills in providing nursing care and on developing skills in setting priorities. Experience is gained in individualized assessment, care planning, and principled application of nursing skills. Prereq: Taken concurrently with NUR 103, NUR 135, NUR 161 & NTR 150.
- NUR 122 (2) C**
Nursing IIB - Psychosocial Nursing I
 Focus on psychosocial nursing topics pertinent to caring for persons in medical-surgical settings. Therapeutic and professional communication techniques are discussed and practiced, including patient interviewing and teaching. Emphasis on assessment of adaptation in self-concept, role function, and interdependence of clients who are coping with acute and chronic illness. The nursing process is applied to address psychosocial issues for persons experiencing illness and loss. Prereq: Taken concurrently with NUR 102, NUR 112, NUR 123, NUR 160 & ENG 102.
- NUR 123 (1) C**
Pharmacology for Nurses II
 Continuation of NUR 100 designed to apply critical thinking and the nursing process to medication administration. Major classifications of drugs to be studied include autonomic nervous system agents, parenteral fluids, electrolytes, vitamins and minerals, and endocrine agents. Prereq: Taken concurrently with NUR 102, NUR 112, NUR 122, NUR 160 & ENG 102.
- NUR 135 (1) C**
Pharmacology for Nurses III
 Continuation of NUR 123, major classifications of drugs to be studied include neurologic, respiratory, and selected cardiovascular agents. Prereq: Taken concurrently with NUR 103, NUR 113, NUR 161 & NTR 150.
- NUR 160 (1) C**
Pathophysiology for Nurses I
 Develops comprehensive understanding of pathophysiological processes that occur in selected major organ systems of the body. Knowledge serves as a basis for the scientific rationale in providing health care. Discussion of key concepts related to regulation of homeostasis. Prereq: Taken concurrently with NUR 102, NUR 112, NUR 122, NUR 123 & ENG 102.
- NUR 161 (1) C**
Pathophysiology for Nurses II
 Continuation of NUR 160 with discussion of key concepts related to movement and cognition, and oxygenation and circulation. Prereq: Taken concurrently with NUR 103, NUR 113, NUR 135 & NTR 150.
- NUR 201 (2) C**
Nursing VI - Psychosocial Nursing II
 Continuation of NUR 122. Focus on psychosocial nursing topics pertinent to caring for persons with psychological illness. Discussion of key concepts related to psychosocial assessment and therapeutic interventions in psychiatric disorders. Prereq: Taken concurrently with NUR 206, NUR 211, NUR 216, NUR 240 & NUR 260.
- NUR 204 (3) C**
Nursing IV - Obstetric Nursing
 Focus on recognizing and promoting normal responses, as well as on understanding common maladaptive responses, to childbearing. Discussion on application of the nursing process to the childbearing family. Prereq: Taken concurrently with NUR 205, NUR 214 or NUR 215, NUR 219, & NUR 230.
- NUR 205 (3) C**
Nursing V - Pediatric Nursing
 Focus on recognizing and promoting normal childhood growth and development, and on understanding adaptive and maladaptive physiologic and psychosocial responses, to illness in childhood. Discussion on application of the nursing process to the well and ill child and family. Prereq: Taken concurrently with NUR 204, NUR 214 or NUR 215, NUR 219 & NUR 230.
- NUR 206 (2) C**
Nursing VII - Medical/Surgical Nursing
 Continuation of NUR 103 with discussion on application of the nursing process in relation to integumentary and immune alterations. Prereq: Taken concurrently with NUR 201, NUR 211, NUR 216, NUR 240, & NUR 260.
- NUR 207 (3) C**
Nursing VIII - Medical/Surgical Nursing
 Continuation of NUR 206 with discussion on application of the nursing process in relation to acute respiratory, acute cardiovascular, gastrointestinal, and renal alterations. Prereq: Taken concurrently with NUR 217, NUR 220, NUR 241, NUR 261, NUR 285, & PSY 260.
- NUR 211 (3) C**
Nursing Practice VI
 Focus on the process of understanding the self and behaviors of others and on developing interpersonal skills needed for the practice of psychosocial nursing. Prereq: Taken concurrently with NUR 201, NUR 206, NUR 240, & NUR 260.
- NUR 214 (3) C**
Nursing Practice IV
 Focus on applying the nursing process to assist mothers, infants, and others during labor, delivery, and postpartum. Prereq: Taken concurrently with NUR 204, NUR 205, NUR 219 & NUR 230.
- NUR 215 (3) C**
Nursing Practice V
 Focus on promoting normal childhood growth and development and adaptation of children and their families to illness. Prereq: Taken concurrently with NUR 204, NUR 205, NUR 219 & NUR 230.
- NUR 216 (3) C**
Nursing Practice VII
 Focus on providing comprehensive care and on developing an understanding of the interrelationships of various components of patient data and health care interventions. Prereq: Taken concurrently with NUR 201, NUR 206, NUR 211, NUR 240 & NUR 260.
- NUR 217 (5) C**
Nursing Practice VIII
 Continuation of NUR 216, focuses on analysis of patient data and health care interventions, initiating nursing assessments and interventions, and developing leadership skills. Prereq: Taken concurrently with NUR 207, NUR 220, NUR 241, NUR 261, NUR 285, & PSY 206.
- NUR 219 (1) C**
OB/Peds Cross-Training: Assessments & Interventions
 Integrates critical thinking in practical obstetric and pediatric caregiving situations. Emphasis on principles used in performing selected nursing skills in various contexts. Prereq: Taken concurrently with NUR 204, NUR 205, NUR 214 or NUR 215 & NUR 230.
- NUR 220 (1) C**
Nursing Leadership Seminar
 Intro to issues of leadership in nursing. Includes leadership traits and styles, problem-solving process, change process, team communication, conflict management, and principles of delegation and time management. Prereq: Taken concurrently with NUR 217, NUR 241, NUR 261, NUR 285 & PSY 206.

NUR 230 (2) C
Trends & Issues II

Continuation of NUR 110. Includes job search and résumé-writing, implications of health care trends, meeting professional obligations, and role transition. Prereq: Taken concurrently with NUR 204, NUR 205, NUR 214 or NUR 215 & NUR 219.

NUR 240 (1) C
Pharmacology for Nurses IV

Continuation of NUR 135, major drug classifications studied include anesthetic agents and immune system agents. Prereq: Taken concurrently with NUR 201, NUR 206, NUR 211, NUR 216 & NUR 260.

NUR 241 (1) C
Pharmacology for Nurses V

Continuation of NUR 240, major drug classifications studied include selected cardiovascular and gastrointestinal agents. Prereq: Taken concurrently with NUR 207, NUR 217, NUR 220, NUR 261, NUR 285 & PSY 206.

NUR 260 (1) C
Pathophysiology for Nurses III

Continuation of NUR 161 with discussion of key concepts related to protection. Prereq: Taken concurrently with NUR 201, NUR 206, NUR 211, NUR 216 & NUR 240.

NUR 261 (1) C
Pathophysiology for Nurses IV

Continuation of NUR 260 with discussion of key concepts related to oxygenation and circulation, and metabolism and excretion. Prereq: Taken concurrently with NUR 207, NUR 217, NUR 220, NUR 241, NUR 285 & PSY 206.

NUR 285 (1) C
Gerontology for Nurses

Focus on understanding normal aging changes, differentiating these changes from disease, and correlating these changes with implications for nursing care. Discussion of psychosocial issues faced in aging, and legal and ethical issues common in gerontological nursing practice. Prereq: Taken concurrently with NUR 207, NUR 217, NUR 220, NUR 241, NUR 261 & PSY 206.

NUR 299 (1-5) C
Independent Study in Nursing

Independent study in selected nursing topics under faculty supervision. Prereq: Permission.

Nursing Assistant

NUR 107 (6) N
Orientation to Nursing Practice

Classroom and laboratory training in basic concepts and skills needed by nursing in preparation for clinical assignments. Explanation, demonstration and practice utilized. Includes CPR and AIDS training.

NUR 109 (2) N
Nursing Assistant - Clinical Experience

Fifty hours in a clinical setting. Provides practice in skills and use of concepts taught in NUR 107 and opportunities to learn skills not offered in class and laboratory facilities.

NUTRITION

NTR 105 (5) N
Intro to Food Science

Study of biological and chemical consequences of food preparation. Lectures and lab experiments will explore questions such as: why cut potatoes turn brown, why starch thickens sauces, and why bread rises.

NTR 150 (5) N,C,S
Human Nutrition

Intro to nutrition, emphasizing relationship of nutrition to growth, development, health, physical and mental functioning. Examination of sources, functions, interrelationships and human requirements of nutrients.

NTR 155 (5) N,C
Advanced Human Nutrition

Covers contemporary topics in nutrition. Emphasis on origins of the American diet, nutrition's role in disease and behavior, and the safety of the food supply. Prereq: NTR 150.

NTR 160 (5) N
American Food Ways

Explores the evolution of the North American diet and eating rituals. Looks at the foods available in U.S. supermarkets which reflect the contributions of American native populations and immigrants from Europe, Asia, Africa, South America, and the Pacific Islands.

**OCCUPATIONAL TEACHER/
 TRAINER EDUCATION**

OTE 105 (3) S
Elements of Instruction (State Unit I)

Intro for those planning, or beginning to teach in a vocational setting or conduct training in industry. Provides learners with a survey in basic teaching and learning processes involved in preparing students for/in, industry. Includes basics on learning, motivation and learning styles; occupational analysis and course organization; selecting and preparing teaching materials, presentation methods, evaluation of student outcomes and working with diverse student populations.

OTE 110 (5) S
Occupational Specialty Assessment

Designed for the A.A.S. degree candidate in Vocational and Technical Instructor Education. By successful completion of the course objective, the student will demonstrate proficiency in the occupational specialty for field of instruction and training. Credit awarded for their level of expertise, years of experience and industry training and non-credit course work. They will determine what requirements need to be met to earn the A.A.S. degree and what skill enhancement will qualify them as a vocational instructor/trainer. Recommended: OTE Certificate.

OTE 120 (3) S
Occupational Analysis & Program Planning (State Unit II)

Offered in combination with OTE 125 (Course Organization). A study of research methods and identification of resources to determine the skills, knowledge and attitudes needed for employment in and performance of a given occupation. This information provides the essentials for instructional planning and developing a program of vocational instruction for secondary occupational instructors and trainers in the industry. Prereq: OTE 105 or equivalent.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

OTE 125 (3) S
Course Organization (State Unit III)

Offered in combination with OTE 120 (Occupational Analysis and Program Planning). Teaches the steps in developing a course of study and implementing the occupational analysis. Covers the principles and practices of course organization and curriculum design and developing specific components of an occupational course of study such as the course outline, syllabus and lesson plans. Prereq: OTE 105 or equivalent.

OTE 140 (3) S
Instructional Materials & Media (State Unit VI)

Covers selection, development, design and use of appropriate materials to meet instructional goals. Designed for those planning to teach in a vocational setting or train in industry, while providing an introduction to a variety of visual materials, teaching aids and computer generated presentations. Class meetings may include off-site visitations to experience the latest technologies. Prereq: OTE 105 or equivalent.

OTE 150 (3) S
Assessment & Evaluation Methods (State Unit IX)

Basic course in assessing the outcomes of student's learning in occupational-technical courses and the methods used in evaluating student's readiness, progress, understanding and competency. Various traditional and contemporary methods, and their application, are studied and analyzed in terms of measuring student progress, as well as instructor effectiveness. Discussion on the standards of and steps used in assigning grades and credit. Prereq: OTE 105 or equivalent.

OTE 170 (3) S
Leadership Development Techniques (State Unit XXV)

Intro to leadership principles, including motivational strategies, morale building and positive habits for personal leadership development. Prereq: OTE 105 or equivalent.

OTE 197 (1-15) S
Internship or Cooperative Education Experience

Following an orientation, students spend time in the field under guidance of instructor and on-site mentor to learn about operations, policies, procedures, culture and behavioral standards in a given business, office, industry, shop, lab, store, or other setting directly related to the student's course, certificate or degree program. Students spend time as interns or cooperative education students and meet with the faculty coordinator. May be used as an internship during ongoing program coursework or upon completing the course work or both. Prereq: Permission.

OTE 210 (3) S
Shop/Lab Project Management & Organization (State Unit X)

Planning, organizing and managing the laboratory or shop learning environment; planning and tracking of projects centered around student learning as well as projects of remodeling, retooling, curriculum or program revision. Will be using teams to work on projects; may use software application for plotting and tracking of projects. Prereq: OTE 105 or equivalent.

OTE 225 (3) S
Needs Assessment/Survey Techniques

Focus on community needs assessment - its importance, design, and how it is conducted. Includes development of good survey techniques, planning and participation in a community needs assessment survey. Prereq: OTE 105 or equivalent.

OTE 230 (3) S
History & Philosophy of Vocational Education (State Unit XVIII)

Development, function and emerging pattern for vocational education. Includes history of the field and study of present problems to gain perspective on future developments. Prereq: OTE 105 or equivalent.

OTE 235 (3) S
Intro to Organization & Administration of Vocational Education (State Unit XVII)

Focus on federal, state and local legislation and policies regarding vocational education administration and operation. Includes review of cooperating agencies, advisory committees, finances and budgets. Prereq: OTE 105 or equivalent.

OTE 238 (3) S
Coordination Techniques for Vocational Education Programs (State Unit XV)

Development and application of management systems for vocation (at the community college or high school level) within the framework of federal, state and local laws, regulations and policies. Prereq: OTE 105 or equivalent.

OTE 240 (3) S
The Community College

Focus on the development, steps and guidelines required for the evaluation, organization and operation of a comprehensive community college. Prereq: OTE 105 or equivalent.

OTE 250 (3) S
Occupational Guidance & Information (State Unit XIV)

Covers purpose and role of occupational guidance and information. Emphasis on the role of the instructor in the guidance process. Prereq: OTE 105 or equivalent.

OTE 252 (3) S
Computer Literacy for Vocational Education

Overview of data processing systems, computer hardware and different types of computers. Emphasis is on microcomputers in education, including software for computer aided instruction and management applications. Includes the basics on the design of the materials, presentations and creating filing systems. Prereq: OTE 105 or equivalent.

OTE 255 (3) S
Public Relations for Vocational-Technical Instructors

Covers purpose and implications of industry and public relations as viewed from the local, state and national level. Includes techniques used to establish effective relationships with vocational technical education publics. Studies in-depth relationships of marketing and promotion, public relations and recruitment. Prereq: OTE 105 or equivalent.

OTE 260 (1-10) S
Vocational Curriculum Planning Seminar

Emphasis on problem-solving and group participation to determine vocational skills and knowledge needed for vocational occupations. Prereq: OTE 105.

OTE 265 (3) S
Instructional Strategies

Intro to the latest theory and effective practices in teaching students who come from diverse cultural and ethnic backgrounds. Emphasis on techniques that will work in obtaining identified student outcomes. Prereq: OTE 105.

OTE 270 (3) S
Conference Leading Techniques

Emphasis on conference-leading and problem-solving techniques. Includes cooperative participation in defining facts and decision-making. Prereq: OTE 105 or equivalent.

OTE 282 (3) S
Contemporary Concepts in Vocational Education

Analysis of contemporary concepts in vocational education, with particular emphasis on implications to programs in Washington state. Discussions centered around career education, current research, and the increasingly diverse needs of industry. Prereq: OTE 105 or equivalent.

OTE 298 (1-10) S
Independent Study

Provides students with an opportunity for research, advanced study or special projects in their field and the option to work on them independently under the guidance of an instructor. Credits vary depending on the project scope, following the lecture portion of the course, the number of hours to complete the course and the number of credits attempted. Prereq: Permission.

OTE 299 (1-10) S
Special Topics

Seminar study of an approved topic directly related to the student's course/program, certificate or degree. May be a capstone activity to demonstrate competencies acquired in the program. Prereq: Permission.

OCEANOGRAPHY**OCE 100 (5) N,C,S**
Survey of Oceanography

The ocean in terms of physical, chemical, geological and biological processes; human influence upon the ocean's natural equilibrium processes.

OCE 299 (1-5) C
Independent Study

Study of selected topics in oceanography: the ocean in terms of physical, chemical geological, and biological processes; man's influence upon the ocean's natural equilibrium processes. Prereq: OCE 100 and permission.

OPHTHALMIC TECHNICIAN**OPH 115 (3) C**
Ocular Science

Survey of ocular anatomy and physiology, eye diseases and disorders, ocular pharmacology, eye surgeries, and the post-operative patient.

OPH 116 (4) C
Clinic & Office Procedures

Intro to the role of the ophthalmic technician. General office procedures, taking patient histories, conducting preliminary ocular exams and aseptic technique.

OPH 120 (4) C
Ocular Instrumentation

Intro to ocular instruments and equipment; includes applications and operations. Covers the lensometer, slit lamp biomicroscope, tonometry, visual field testing and automated fields, automated refractors and keratometry. Prereq: OPH 115 and OPH 116.

OPH 122 (2) C
Optical Concepts & Devices

Intro to basic optics, eyeglasses, contact lenses and visual aids. Prereq: OPH 115 and OPH 116.

OPH 130 (6) C
Refractometry

Covers refractometry methods, measurements and instrumentation.

OPH 197 (2-5) C
Work Experience - Ophthalmic Technician

Allows students to earn work experience credits in the ophthalmic technician field. Prereq: Permission.

OPH 295 (3) C
Ophthalmic Dispensing Business I, II, & III

Practice in a simulated dispensary under direct supervision of a Washington state-licensed ophthalmic dispenser. All business functions administered by student teams, over three academic quarters to fully develop business plans and implementation. Prereq: Completion of first-year requirements.

OPH 298 (1) C
Opticianry Workshops

Incorporation of advanced ophthalmic skills with new technology, critical thinking and problem-solving. Provides students with the opportunity to pursue professional areas of interest which may not be reflected in current course offerings.

OPTICIANRY/SCHOOL OF**OPH 100 (2) C**
Orientation to Ophthalmic Dispensing

Intro to optical mechanics, ophthalmic dispensing and optics, and products. Overview of the optical business and the job of the ophthalmic dispenser. Prereq: Eligibility for ENG 101 and MAT 084.

OPH 101 (5) C
Optical Theory I

Focus on ophthalmic lens optics and eyeglass fabrication process. Introduces practical application of ophthalmic lens equations. Includes study of powers of spectacle lenses including ophthalmic prisms and aberrations.

OPH 102 (4) C
Optical Theory II

Continuation of OPH 101. Introduces reflection and refraction principles. Emphasis on light theories, propagation, ray tracing, plane surfaces and prisms.

OPH 103 (3) C
Optical Theory III

Covers multi-focal lenses: origin, development, types and applications. Includes study of presbyopia and other conditions requiring correction, and introduces presbyopic prescription analysis.

OPH 105 (3) C
Ocular Anatomy & Physiology

Covers anatomy and physiology of the human eye, including relation of ocular anatomical structures to the visual process. Emphasis on ocular terminology.

OPH 106 (5) C
Contact Lens Technology I

Basic principles of contact lenses. History, manufacturing methods, terminology, optics, equipment for fitting and evaluation of contact lens candidates. Lab demonstration on use of radius gauge, ophthalmometer, thickness and diameter gauges, shadow graph and biomicroscope.

OPH 107 (5) C
Ophthalmic Dispensing I

Intro to responsibilities of the ophthalmic dispenser, including facial measurements, cosmetic considerations, frame fitting and selection based on prescription. Lab experience emphasizes practical projects, role-playing and demonstrations.

OPH 108 (5) C
Ophthalmic Dispensing II

Ophthalmic dispensing procedures relating to complex prescriptions. Fitting, adjusting and ordering procedures with emphasis on multi-focal and absorptive lenses. Low-vision aids discussed. Communication skills refined.

OPH 110 (3) C
Optical Lab Technology I

Covers lens surface grinding, ophthalmic laboratory procedures, laboratory safety procedures, lens planing and design as related to eyeglass fabrication, and basic optical terminology. Prereq: Eligibility for ENG 101 and MAT 084.

OPH 111 (3) C
Optical Lab Technology II

Continuation of OPH 110. Intro to lab machinery, including applications, maintenance and repair, operation of focimeter, application of optical instruments and tools. Covers ophthalmic lens inspection process.

OPH 112 (3) C
Optical Lab Technology III

Continuation of OPH 111, emphasis on lens edging process. Covers manual skills, processing flow of the finishing laboratory, lens standards, and insertion of hand-edged projects into plastic and metal frames.

OPH 113 (5) C
Finishing I

Covers finishing work, with emphasis on procedures and machinery for automatic edging. American National Standards Institute guidelines studied. Intro to lens toughening procedures and stress testing.

OPH 197/198/199 (2-5) C
Work Experience - Opticianry

Allows students to earn work experience credit in the field of opticianry. Prereq: Permission.

OPH 203 (5) C
Contact Lens Technology II

Basic fitting techniques of hard and soft lenses. Includes patient instruction and contact lens adjustments. Discussion of bifocal, scleral, and specialty lenses.

OPH 204 (6) C
Contact Lens Technology III

Continuation of OPH 203. Emphasis on available lenses, solutions and accessories; diagnostic and fitting skills; development of biomicroscopy and keratometry skills.

OPH 205 (2) C
Contact Lens Technology IV

Continuation of OPH 204. Emphasis on ocular surfaces in interaction with foreign objects, ocular pharmacology, and the refractive examination.

OPH 211 (5) C
Finishing II

Continuation of finishing laboratory skills, with emphasis on efficient production flow. Includes layout of multi-focal lenses, and study of plastic lenses and tinting.

OPH 212 (5) C
Finishing III

Continuation of OPH 211. Emphasis on efficiency, speed and accuracy. Includes finishing procedures for special lenses, frames, and mountings.

OPH 215 (3) C
Benchwork Procedures

Independent work on projects to develop production skills and workmanship. Lab time is scheduled, but students choose project completion date.

OPH 295,296,297 (3 ea) C
Ophthalmic Dispensing Business I, II & III

Students acquire real-world opticianry experience through practice in a retail optical store on campus under direct supervision of a Washington state-licensed optician. All business functions including sales and management are administered by student teams, over three academic quarters to fully develop salesmanship, business plans, and implementation. Prereq: Completion of first-year requirements.

OPH 299 (7) C
Comprehensive

Typical workshops include advanced ophthalmic skills incorporating new technology, critical thinking and problem-solving. Students pursue professional areas of interest, related to the field of Opticianry, which may or may not be reflected in current course offerings.

PARENT EDUCATION

FAM 040,041,042 (2.5)	N,C
FAM 050,051,052 (2.5)	N,C
FAM 060,061,062 (2.5)	N,C
FAM 070,071,072 (2.5)	N,C
FAM 080,081,082 (2.5)	N,C
FAM 090,091,092 (2.5)	N,C
FAM 146,147,148 (1-2.5)	N
FAM 149 (1-3)N	N
FAM 156,157,158 (1-2.5)	N
FAM 166,167,168 (1-2.5)	N
FAM 176,177,178 (1-2.5)	N
FAM 186,187,189 (1-2.5)	N
FAM 196,197,198 (1-2.5)	N

Parent-Child Study Laboratory

Students with children, birth through six 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 180 (1-5) N,C,S
Special Topics for Parents of Young Children

Online Distance Learning. Covers topics for parents and those who work with children on the care and teaching of young children.

FAM 181 (1-5)	N
FAM 182 (1-5)	N
FAM 183 (1-5)	N

Special topics for childcare providers course focusing on working with parents, special needs children, multi-cultural curriculum, dealing with stress and burnout, and management and personnel issues.

FAM 190 (1-5) N,C
Foster Parent Training**PHARMACY TECHNICIAN****AHI 100 (3) N**
Intro to Medical Vocabulary

General survey course in medical terminology introducing health service workers to the basic rules and fundamentals in medical vocabulary-building.

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 (2) N
Orientation to Pharmacy Practice

Intro to pharmacy technician as a career. Includes history, introduction to pharmacy information resources and drug distribution control. Students visit job sites where pharmacy technicians are employed to observe their job tasks.

PHA 120 (3) N
Pharmacy Calculations

Mathematics review with introduction to calculations encountered in pharmacy practice.

PHA 130 (2) N
OTC Drugs

Overview and uses of drug classifications available without prescriptions (over-the-counter drugs).

PHA 140 (2) N
Sterile Products & Aseptic Technique I

Covers aseptic technique in preparing sterile solutions and pharmaceuticals. Teaches laminar flow hood usage, preparation of intravenous fluids and hyperalimentation fluids. Students also practice filling unit dose carts and learn to prepare IV fluid labels using hospital based software.

PHA 141 (2) N
Sterile Products & Aseptic Technique 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. Lab included.

PHA 145 (1) N
Pharmacy Ethics

Focuses on commonly encountered ethical dilemmas from pharmacy practice. Introduces ethical decision-making models and problem-solving solutions.

PHA 150 (3) N
Pharmacology I

Knowledge of drugs, their classification, action, and uses.

PHA 151 (3) N
Pharmacology II

Continuation of PHA 150.

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. Students gain proficiency using two different pharmacy prescription filling software. Real prescriptions are filled in pharmacy lab.

PHA 161 (2) N
Pharmacy Technology II

Continuation of PHA 160. Intro to the top 200 drugs. Students use pharmacy software to process real prescriptions in the pharmacy lab. Computerized insurance billing and report generation studied. Intro to hospital and nursing home application software.

PHA 170 (4) 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. Inventory control, third party insurance billing, and pharmacy record keeping are taught. Hands on practice emphasized.

PHA 190 (3-13) N
Pharmacy Technician Externship

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 281 (2) N
Pharmacy Self Care Products & Practices

Addresses a broad range of health concerns, including how to identify common conditions amenable to self-care, how to select appropriate treatment options ranging from non-prescription to non-drug therapies, how to prevent adverse effects from the use of medications, and what strategies to adopt to encourage healthier lifestyle habits. Also addresses the rationale behind conventional and alternative, complementary therapies.

PHILOSOPHY**PHI 100 (5) N,C,S**
Intro to Philosophy

Intro to philosophical thought and issues, intellectual systems and writings of the great philosophers; the nature of philosophy, the meaning of knowledge, values, reality, and related subjects.

PHI 102 (5) N,C
Contemporary Moral Problems

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. Also discussed is the issue of what means are justified in trying to bring about social change.

PHI 110 (5) N,C,S
Intro to Social Ethics

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.

PHI 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 level and global levels. Focuses on newly emerging infectious diseases (AIDS, drug resistant tuberculosis) and on environmentally induced diseases, such as asthma, cancers, chemical sensitivity, reproductive disorders, etc.

PHI 118 (5) C,S
Practical Reasoning & Decision Making

A non-symbolic approach to logic and critical thinking. Emphasis on analyzing and evaluating real life examples of reasoning.

PHI 120 (5) N,C,S
Intro to Logic

Examination of principles of Aristotelian and symbolic logic, deductive argument and proof. Covers the meaning of language and its place in the reasoning process. Application of logic to other fields.

PHI 160 (5) C
Historical Intro to the Philosophy of Science

Historical development of selected concepts from science and the philosophy of science.

PHI 215 (5) N,C
Intro 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.

PHI 240 (5) C
Liberation Ethics

Examines the morality of liberation, through general theoretical and conceptual analysis, with the focus of the inquiry on conceptions of liberty, oppression, and justice. Also examines vis-à-vis: 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.

PHI 245 (5) C
Conceptualizing Race/Confronting Racism

Focus on questions and topics such as: What is race?; Do/should races exist?; the nature of racism; What, if any, is the nature of the relationship between racism and other forms of oppression, or is there only one primary system of oppression?; What, if any, is the nature of the relationship between believing that races exist and being a racist?; Can we/should we eradicate racism?; Is celebrating the distinctive features of racial identity racist or anti-racist? Approach is through texts, discussion, guest speakers, videos, and other concrete, community-centered learning methods. Prereq: Eligibility for ENG 101.

PHI 250 (5) C
Feminist Philosophical Perspectives

Focus on questions such as the nature of sexism and feminism; "sisterhood" as an empowering, unifying truth or an oppressive, difference-stifling myth; the nature of the relationship between sexism and other forms of oppression; the relationship between sex and gender; celebrating a uniquely female way of knowing or as being morally judgmental, sexist or feminist? Approach is through texts, discussion, guest speakers, videos, and other concrete, community-centered learning methods. Prereq: Eligibility for ENG 100.

PHI 255 (5) C
Marxist Philosophy Examined

Examines questions such as: 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 for why lesbians, gays, or bisexuals should support Marxism? Is Marxism Eurocentric? How can a person consistently support both Marxism and feminism? Must a Marxist be opposed to religion? What is political freedom? Prereq: Eligibility for ENG 100.

PHI 267 (5) N,C,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.

PHI 298 (1-5) N,C,S
Special Topics in Philosophy

Independent study in selected philosophical topics under faculty supervision. Prereq: Permission.

PHI 299 (3-5) N,C,S
Special Problems in Philosophy

Examines great philosophical questions and philosophers. To be agreed upon by instructor and student.

**PHOTOGRAPHY/
COMMERCIAL PHOTOGRAPHY**

Note: The Photography curriculum is under revision. Contact the Communications and Design Division office for current information.

PHO 111 (3) C
Basic Camera Techniques

Basic use, functions and techniques of the 4 X 5 view camera.

PHO 112 (3) C
Advanced Camera Techniques

Provides camera assignments to develop skills in handling view camera and lenses. Six-week focus on architectural photography, with emphasis on perspective and distortion control. Prereq: PHO 111 and second-quarter standing.

PHO 121 (4) Basic Science/Photo Lab Procedures I Basic methods, equipment and techniques of preparing, processing and finishing negatives and prints. Prereq: Entry in photography program.	C	PHO 214 (3) Advanced Photo Illustration II Continuation of PHO 213. Advanced assignments utilizing skills acquired in previous quarters for high-quality portfolio material. Prereq: PHO 213.	C	PHO 244 (3) Portraiture II Full-length, group, child, publicity and illustrative portraiture. Electronic flash lighting technology, subject direction and special printing techniques. Prereq: PHO 243 and fifth-quarter standing.	C
PHO 122 (3) Photo Lab Procedures Advanced laboratory practices, film and print processing techniques involving densitometry and quality control procedures. Prereq: PHO 121 and second-quarter standing.	C	PHO 215 (3) Editorial Photography Organization of event. Small camera techniques. Research, planning, shooting, proofing and storyboard, with emphasis on print cropping, layout and visual interest for publications. Prereq: Third-quarter standing.	C	PHO 245 (3) Portraiture III Continuation of PHO 244. Review of practical lighting techniques and familiarity with the use of single- and multiple-light sources, chimera, reflectors, gobos, front projection, telemarketing and computer use in the studio. Students will go on various location shoots and study high-volume portrait photography in a portrait studio. Prereq: PHO 244 and sixth-quarter standing.	C
PHO 125 (3) Photo Lab Workshop I Film development, printing and print finishing for assignments from other photography classes. Prereq: Second-quarter standing.	C	PHO 221 (3) Advanced Photography Techniques See PHO 121 and 122. Advanced printing techniques multiple printing, montage, sandwich printing and others. Prereq: Fourth-quarter standing.	C	PHO 281 (4) Portfolio Preparation Production of weekly assignments to be used in final photographic portfolio, emphasizing selection and finishing of professional portfolio pieces. Prereq: Fifth-quarter standing.	C
PHO 126 (3) Photo Lab Workshop II Continuation of PHO 125. Prereq: PHO 125 and third-quarter standing.	C	PHO 225 (3) Photo Lab Workshop III See PHO 125 and 126. Prereq: Fourth-quarter standing.	C	PHO 291 (4) Individual Projects Continuation of PHO 281, with weekly projects. Review of ASMP Professional Business Guide. Prereq: PHO 281 and sixth-quarter standing.	C
PHO 131 (4) Basic Photo Lighting Intro to tungsten lighting equipment and techniques, photo lighting fundamentals; photo assignments. Prereq: Entry in photo program.	C	PHO 226 (3) Photo Lab Workshop IV Continuation of PHO 225. Prereq: Fifth-quarter standing.	C		
PHO 132 (3) Advanced Photo Lighting Lighting techniques for specific subjects, consumer items, glassware and other products. Planning and lighting difficult objects, specular surfaces, and complex shapes. Prereq: PHO 131 and second-quarter standing.	C	PHO 231 (3) Basic Color Photography Principles of color photography for both negative and positive color theory; exposing and processing E-6 and C41 products. Review of densitometry and its applications to color photography. Prereq: Third-quarter standing.	C		
PHO 197 (2-5) Work Experience: Photography Allows students to earn work experience credit in the photography field. Prereq: Permission.	C	PHO 232 (3) Color Photography II Emphasis on C41, negative color processing and printing using automatic Kreonite processor. Use of Duratrans material to make large transparencies. Assignments geared to industry needs. Prereq: PHO 231 and fourth-quarter standing.	C		
PHO 210 (3) Digital Imaging An advanced course in the creative and technical requirements of digital imaging. Students will learn program techniques of photographic retouching, enhance and image composition.	C	PHO 233 (3) Advanced Color Photography I Emphasis on E-6, reversal color process, transparency exposing and processing. Assignments simulate industry standards, requiring high technical ability. Prereq: PHO 232 and fifth-quarter standing.	C		
PHO 211 (4) Basic Commercial Photography Methods and techniques of photographing merchandise and products for advertising layouts and editorial purposes. Includes commercial studio terminology.	C	PHO 234 (3) Advanced Color Photography II Continuation of PHO 233. Prereq: PHO 233 and sixth-quarter standing.	C		
PHO 213 (4) Photographic Illustration II Advanced composition, set design and advanced lighting techniques. Model selection and direction. Assignments in advertising and photo illustration. Prereq: Fifth-quarter standing.	C	PHO 243 (3) Studio Management Fundamentals of portraiture, equipment, lighting, and camera processing methods. Prereq: Fourth-quarter standing.	C		

PHYSICAL EDUCATION

NOTE: All physical education courses are co-ed.

PEC 104 (2) Beginning Martial Arts Instruction in the practical self-defense techniques of Goju Ryu Karate-do. Learn and practice the knowledge, skills and philosophies of the Karate system. Includes fundamentals of stances, blocks, strikes, kicks and movement, as well as offensive and defensive strategies.	N,C
PEC 105 (2) Intermediate Martial Arts Students will already possess basic skills, having completed PEC 104 or obtained formal rank up to and including green belt. Allows for working with individuals at all skill levels. Includes opportunity to adjust to the type of self-discipline and interaction required in the Goju Ryu Karate.	N,C
PEC 106 (2) Advanced Martial Arts Prerequisites include intermediate skills and knowledge, successful completion of PEC 105 or formal rank of brown belt or above. Includes working with participants at all skill levels to foster self-improvement and appreciation of Karate as an art, sport, physical conditioning and self-defense tool.	N,C
PEC 109 (2) Slimnastics Exercise course adapted to individual needs for body muscle toning and weight control.	C

PEC 110 (2) N,C
Aerobics

Students improve cardiorespiratory fitness through rhythmic, dynamic, large-muscle exercise performed to music. Workouts consist of warm-up, workout, cool-down, strengthening and flexibility segments. Information relevant to current fitness-related issues, trends and topics included.

PEC 111 (2) C
Skills & Techniques of Swimming**PEC 112 (2) C**
Intermediate Swimming

Skills and techniques of swimming. Prereq: Beginning Swimming.

PEC 113 (2) N,C
Badminton

Intro to basic skills of badminton: clears, serves and drives. Intermediate skills introduced will depend upon class progress. Rules of play and basic singles and doubles strategies will be discussed. Opportunity for gameplay and tournament play also provided.

PEC 114 (2) C
Beginning Tennis**PEC 115 (2) N,C**
Beginning Volleyball

Incorporates basic volleyball skills such as forearm and overhead passing, serving and spiking. Additionally, basic offensive and defensive strategies for 6-on-6 team play will be included. Opportunity will also be given for modified gameplay and tournament play.

PEC 118 (2) C
Intermediate Tennis

Prereq: PEC 114 or permission.

PEC 121 (2) C
Handball**PEC 123 (2) C**
Racquetball**PEC 129 (2) N,C**
Intermediate Volleyball

Instruction on intermediate attacking, passing and serving techniques, and multiple offensive systems and defensive patterning practice. Students should be able to understand the rules, perform fundamental skills, and utilize basic offensive and defensive strategies prior to enrollment. Prereq: PEC 115 or permission.

PEC 130 (2) N,C
Beginning Basketball

Instruction in the basic individual skills of dribbling, passing and shooting, as well as team skills and strategies, with a practical application of both skills and strategies during in-class drills, modified gameplay, structured scrimmage and tournament play.

PEC 131 (2) N,C
Beginning Weight Training

Using a variety of resistance equipment, workouts will include both individualized and instructor-driven programs: super-set, pyramid and circuit training. Discussion topics will include safety, nutrition, supplementation, muscle anatomy/physiology, steroids and other ergogenic aids.

PEC 132 (2) N,C
Intermediate Weight Training

Intermediate workouts include both individualized and instructor-driven programs. Activities and lecture topics will be similar to those in PEC 131. Prereq: Prior experience and working knowledge of weight training (N); PEC 131 or permission (C).

PEC 136 (2) N,C
Yoga

Postures or asanas, breathing, meditation exercises for physical and mental fitness. Yoga is presented as a philosophy and an art form, taking the student through a number of poses, explaining their purposes as they are attained.

PEC 143 (2) N
Walking for Fitness

Develops cardiorespiratory fitness through progressive workouts including warm-ups, walking sessions and cool-downs. Discussion and lectures cover safety, walking technique, and issues and trends related to walking and physical fitness.

PEC 145 (2) N
Jogging

Develops cardiorespiratory fitness through progressive workouts including warm-ups, walking sessions and cool-downs. Discussion and lectures cover safety, jogging technique, and issues and trends related to jogging and physical fitness.

PEC 150 (1-3) N,C,S
Physical Fitness

Instruction in developing, executing and maintaining individualized fitness programs. Emphasis given to health-related fitness components, including cardiorespiratory fitness, muscular strength and endurance and flexibility. Related discussion topics may include fitness, nutrition and wellness.

PEC 151 (1-3) N
Intermediate Physical Fitness

Instruction in manipulating existing individualized fitness programs to meet personal goals. Emphasis given to health-related fitness components. Discussion topics will be similar to those listed in PEC 150.

PEC 155 (3) N
First Aid & Personal Safety

American Red Cross Standard First Aid and Community CPR certification (adult, child, infant). Provides instruction in advanced rescue skills including two-person CPR, pocket mask, bag-valve-mask and automated external defibrillation (advanced certification available).

PEC 160 (2) N
Step Aerobics

Development of cardiorespiratory and musculoskeletal fitness by incorporating choreographed, rhythmic movements performed on a bench or step. Current fitness-related issues, trends and topics will also be discussed.

PEC 165 (2) N
Body Conditioning

Through using lightweight resistance equipment, muscular strength, muscular endurance and flexibility of the upper body, abdominals, back and lower body are improved. Workouts consist of resistance exercise performed to music, stretching and fitness-related discussions.

PEC 170 (2) N
Intro to Jazz Dance

Teaches fundamentals of dance technique while improving strength, flexibility and anaerobic capacity. Jazz style, which borrows from ballet and contemporary street dance, also builds postural awareness and develops motor skills. Lecture topics include safety, injury prevention, spinal health and nutrition.

PEC 175 (2) N
Ballet Basics

Fundamentals of ballet style. Stresses proper technique and body mechanics to avoid dance-related injury. Emphasis on flexibility and strength, focusing on basic movements including plie, tendu, developpe, and battement; and joint stability and range of motion. Topics include "kinesthetic memory," basic nutrition, rest and the application of ballet to other dance and movement styles.

PEC 298 (1-5) N,C,S
Special Topics

Seminar on selected topics and/or activities in physical education. Prereq: Variable, dependent on topic.

PEC 299 (1-5) N,C
Independent Study

Independent study of approved topics in physical education. Prereq: Permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

PHYSICS**PHY 100 (5) N,C,S**
Survey of Physics

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.

PHY 101 (5) N,C,S
General Physics I

First of three non-calculus-based courses covering the entire field of physics. Includes kinematics, vectors, forces, dynamics, work, energy, momentum, torque and gravitation. Lab included. Prereq: MAT 098 (w/2.2 or higher) (C); MAT 099.

PHY 102 (5) N,C,S
General Physics II

Continuation of PHY 101. Covers heat, gas laws, electricity, magnetism and electrical circuits. Lab included. Prereq: PHY 101 or permission.

PHY 103 (5) N,C,S
General Physics III

Continuation of PHY 102. Covers electromagnetic waves, optics, atomic and nuclear physics. Lab included. Prereq: PHY 101 (N); PHY 102 or permission (C,S).

PHY 111 (5) S
Technical Physics

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: MAT 112.

PHY 112 (5) S
Technical Physics

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 PHY 111.

PHY 113 (5) S
Technical Physics

Covers electrostatics, direct current circuits, magnetism, electromagnetic induction, alternating current, capacitance, inductance, resonance, vacuum tubes and transistors. Prereq: Basic algebra and PHY 112.

PHY 118 (5) N
Technical Physics for Electronics

Intro to the physics of electricity and magnetism. Includes study of energy, work, harmonic motion and waves, electrostatics, magnetism, electro-dynamics and electromagnetic waves. Prereq: MAT 106 and SCI 101.

PHY 201 (5) N,C,S
Engineering Physics I

Calculus-based study of kinematics, dynamics, energy, and momentum in linear and rotational coordinates; Newton's Laws of Motion. Lab included. Prereq: MAT 124 (w/2.2 or higher) (C); w/2.0 or higher (N,S) and one year of high school physics.

PHY 202 (5) N,C,S
Engineering Physics II

Maxwell's classical laws of electricity and magnetism developed from the study of the Laws of Coulomb, Ampere, Gauss and Faraday. Lab included. Prereq: PHY 201 and MAT 125.

PHY 203 (5) N,C,S
Engineering Physics III

Intro of waves and oscillations to study sound, geometric and physical optics. The dualistic particle-wave nature of microscopic phenomena is developed as an introduction to modern physics. Lab included. Prereq: PHY 201 (N); PHY 202 (C,S).

PHY 298 (1-5) N,C,S
Special Topics

Independent work in physics laboratory and/or library. Prereq: Permission.

PHY 299 (1-5) N,C,S
Independent Study

Independent study of physics problems or topics. Prereq: Permission.

POLITICAL SCIENCE**POL 022 (5) N,S**
Contemporary World Problems

Provides a study of critical issues and areas in the world today. Historical background and perspective is developed in each area studied.

POL 101 (5) N,C,S
Intro to Political Science

Intro to theory, organization, politics and administration of government. Includes political theory, comparative systems, political socialization, public administration, political parties and elections, and international relations. Foundation course for political science studies.

POL 102 (5) N,C,S
American Government

Survey of the origin and development of the U.S. government. Covers Colonial history, the Confederacy and the creation of a federal system, the functions of Congress, the presidency, and courts. Includes interest groups, civil liberties, political parties and elections.

POL 111 (5) C,N
The American Presidency

Explores the evolution of the American presidency. Includes the presidents' personalities, character, leadership, and public relations. Examines presidential campaigns and the roles of the president as Chief Diplomat, Chief Executive, Chief of State, Commander-In-Chief and Chief Bureaucrat.

POL 112 (5) N,C
The Contemporary World

Intro to the nation-state system, elements of power, major problems facing nation-states today including population, hunger, nuclear proliferation, energy, nationalism, and North-South/East-West relations. May be taken for international studies credit as ISP 112.

POL 170 (5) C
Minority Politics in America

Focus on socio-political developments leading to current status of minorities in America. Critical review of proposed solutions to minority tensions.

POL 204 (5) C
Bill of Rights

Survey of the origin and development of judicial review and concepts of civil rights and civil liberties comprising due process, free speech, religion and equal protection. Includes background on current U.S. court and legislation decisions.

POL 205 (5) C
Political Economy

Study of basic economic terms and concepts, by surveying various nations/regions politically and economically. Discussion of 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.

POL 210 (5) N,C,S
State & Local Government

Examines state and local government, comparing Washington state to and contrasting it from other U.S. state governments. Focuses on problems of overlapping geographical boundaries and proliferation of semi-autonomous units of administration. Includes effects of urbanism and growth of metropolitan areas.

POL 213/WMN 213 (5) N
Women & Politics

Intro to concepts of power and policy issues as they relate to women. 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.

POL 215 (5) N
Information & Society

Explores the history of information technologies from print to computing, and how these technologies have shaped culture and history. Covers how information technologies have shaped the American cultural landscape from the printing press through telephone, telegraph, television and computing.

POL 217 (3-7) N
Internship in Politics

Internship as a participant-observer in a political campaign, political party or special interest group. Increases political sophistication of students by exposure to decision-making experiences. Prereq: Permission.

POL 220 (5) N
Comparative Political Systems

Covers democratic and authoritarian governments. Includes political and economic systems of wealthier nations of the West and less developed Third World Nations. Examines Great Britain, France, Japan, Russia, China, India, Nigeria, Mexico and Iran.

POL 230 (5) N,C,S
International Relations

Intro to international and regional governmental organizations. Examines major issues in the international arena including nationalism, rise of the Third World, imperialism, the arms race, environmentalism, and foreign policy. Emphasis on that which fosters or frustrates world peace and prosperity.

POL 255 (5) C,S
Government & Politics of the Middle East

Problems of traditional society versus construction of a modern state. Emphasis on Arab-Israeli relations and impact on international affairs.

POL 298 (1-5) N,C
Independent Study in Political Science

Independent research and writing on selected political science topics under faculty supervision. Prereq: Permission.

POL 299 (3-5) N,C,S
Special Problems in Political Science

Seminar class requiring study and written reports on political science topics. Prereq: Permission.

PSYCHOLOGY**PSY 100 (3) N,S**
Career Planning & Personal Evaluation

Systematic approach to better understanding of self and appropriate occupational areas. Includes group and individual testing, discussion of values, interests and aptitudes, and individual counseling interviews.

PSY 110 (5) N,C,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.

PSY 160 (5) N
Psycho-Physical Development - The Life Span

Survey of human physical, psychological, and social development from infancy through death. Emphasis on major developmental theories, research and methods of studying life-span development.

PSY 200 (5) C
Contemporary Problems in Psychology

Major socio-psychological contemporary problems leading to maladaptive behavior and its roots in social disintegration, drug addiction, alcoholism and divorce; Examines violence, sexual harassment, and molestation of women and children. Prereq: PSY 110 or permission.

PSY 206 (5) N,C,S
Developmental 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: PSY 110 or permission.

PSY 210 (5) N,C,S
Personality & Individual Differences

Intro to the study of personality and individual differences, including theory, measurement, and research. Application of psychological principles to problems of everyday living.

PSY 215 (5) N,C,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 & anxiety disorders, and disorders of childhood and old age.

PSY 217 (5) C
Intro to Probability & Statistics for Psychology

Covers descriptive statistics, probability theory, probabilistic variables and experimental outcomes, distributions, experiments, sampling, hypothesis testing, normal distribution, T-tests, correlation, etc. Prereq: Intermediate algebra.

PSY 220 (3) N,C,S
Psychology of Human Relations

Covers dynamics of organizations and human resources in the workplace. Includes motivational theory, leadership, group processes, organizational theory, participatory management, conflict management and counseling. Primarily for vocational students. Prereq: Satisfactory performance on placement test (S).

PSY 222 (5) N
Survey of Physiological Psychology

The workings of the nervous system. Exploration of the brain's capacity in language, hunger and thirst, learning and memory, emotions, sexual behavior, depression, schizophrenia, and repair after injury. Recommended: PSY 110 or a biological science course.

PSY 230 (5) N,C,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.

PSY 245/SOC 245 (5) N,C,S
Social Psychology

The effect of others on self-concept, social cognition, aggression, conformity, helping, loving and liking, competition and cooperation, and prejudice and discrimination. Research and autobiography by two of the following groups must provide content and illustration: African Americans, Asian Americans, Native Americans and Hispanic Americans. May be taken as SOC 245.

PSY 250 (5) C
Psychology of African Americans

Designed to provide an in-depth look at contemporary psychological research and issues involving African Americans. Topics include Black personality, institutional racism and the educational system, counseling African Americans, and methods of dealing with racism in daily life.

PSY 257/WMN 257 (5) 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.

PSY 260 (5) N
Applied Behavioral Psychology

Description of intervention techniques. Emphasis on operant, classical and social learning theories, and application of learning theories in personal and human service settings.

**PSY 291 (1-5) N
Special Topics in Psychology**

Laboratory work, reading or research in special areas in psychology. May be repeated. Prereq: Permission.

**PSY 294 (1-5) N,C
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: PSY 110 and permission.

**PSY 295 (1-5) N,C
Practicum in Psychology**

Continuation of PSY 294. Prereq: PSY 294 and permission.

**PSY 298 (1-5) N,C,S
Individual Study in Psychology**

Independent study in selected psychology topics under faculty supervision. Prereq: Permission.

**PSY 299 (3-5) N,C,S
Special Problems in Psychology**

Small group seminar for study and discussion of selected psychology topics. Prereq: Permission.

REAL ESTATE

Note: The Real Estate Program is under revision. The following represent courses offered as of Spring 2002. For current course offerings, please contact the Business and Engineering Technology Division (206-527-3730).

All Real Estate courses meet Department of Licensing requirements for renewal of real estate and/or appraisal licenses.

Students for whom English is a second language must obtain 70 percent on the CELT Listening and Structure Tests and must present test scores to the instructor on the first day of class.

**RES 100 (5) N
Real Estate Fundamentals**

Revised pre-license course which prepares the student for the Washington State Real Estate Salesperson License exam. Also introduces sales and listing practices, financing, appraising, title, escrow and property management. Approved for Department of Licensing Sales/Broker Licensing Test (60 clock hours).

**RES 110 (3) N
Real Estate Investments**

Examines real estate investments and the use of finance as a tool to increase profits. Students learn how to evaluate risk and make sound investments in land, apartments, commercial buildings, rehabs and small rental properties. (30 clock hours.)

**RES 140 (3) N
Real Estate Sales Practice**

Learn the sales process: obtaining and servicing listings, prospecting, qualifying the buyer, showing real property, negotiating and servicing the sale. Includes time organization and goal-setting. Prereq: RES 100 or RES 110 or RES 130, or a real estate license.

**RES 141 (3) N
Land Use Principles & Practice**

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.

**RES 150 (1.5) N
Residential Sales & Leasing Documentation**

Washington real estate broker and agents practices, emphasizing agency law, contracts, torts and Multiple Listing forms. Prereq: RES 100, RES 110 or RES 130, or 6 months' experience in the real estate industry. (15 clock hours.)

**RES 170 (3) N
Real Estate Law**

Principles of law governing real estate, including acquisition, encumbrance, transfer, rights and obligations of parties, and Washington state regulations thereof. Prereq: RES 100 or RES 110 or RES 130, or real estate-related experience.

**RES 175 (3) N
Intro to Title**

Emphasis on real estate sales, finance, escrow and title insurance fields. Provides a foundation in title insurance, various types of liens and other items of record and off-record that affect real property. Covers methods of clearing title. (30 clock hours.)

**RES 180 (3) N
Principles of Real Estate Appraisal**

Intro to the appraisal process. Definitions of real estate values, market analysis, and highest and best use. Analyzes the principles used in the development of a real estate appraisal in the context of the traditional approaches to value. Recommended: RES 100 or RES 130, or real estate experience.

**RES 181 (1.5) N
Standards of Professional Practice in Appraisal**

Focus on requirements for ethical behavior and competent performance set forth in the Uniform Standards of Professional Appraisal Practice and Washington State Regulations. (Provides 15 clock hour state requirement.) Prereq: RES 180 or appraisal experience.

**RES 183 (3) N
Real Estate Appraisal Procedures**

Presents methodologies used in valuation of various types of real estate. Introduces the three approaches to value and applies the techniques to a specific property. Prereq: RES 125 or 180, which may be taken concurrently, or real estate experience.

**RES 190 (3) N
Real Estate Escrow I**

Entry-level course in escrow principles and procedures covering laws, real estate and escrow documents, escrow closings and title exceptions. Prereq: RES 100 or RES 105 or RES 130 or taken concurrently, or real estate experience.

**RES 191 (2) N
Advanced Escrow Closing System**

Computerized escrow closing. Covers information entry, trust accounting, producing documents, letters and closing statements using Advanced Escrow Closing software. Prereq: RES 190 or six months' escrow closing experience. (20 clock hours.)

**RES 195 (3) N
Real Estate Escrow II**

Extensive work in real estate contracts, assumptions, mortgages (FHA, VA, and conventional) and wraparounds. Prereq: RES 190 or 6 months' current experience in escrow.

**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 certificate toward a CPM designation. (30 clock hours.)

**RES 202 (3) N
Residential Property Management**

An Institute of Real Estate. Management course (IREM 202). Functions in residential property management and analysis, rental policies and surveys, lease provisions, inspection, building codes, tenant relations, operating policies and financial result analysis. IREM provides a certificate toward a CPM designation. (30 clock hours.)

**RES 203 (3) N
Commercial Property Management**

An Institute of Real Estate Management course (IREM 203). Training in commercial property management. Includes personnel policies, marketing, tenant management, property maintenance, security, collection, lease provisions and record-keeping systems. IREM provides a certificate toward a CPM designation. (30 clock hours.)

**RES 210 (3) N
Principles of Real Estate Investment & Commercial Sales**

Focuses on practical knowledge in listing and selling investment and commercial properties and income property ownership. Learn principles and techniques to determine return on equity, depreciation and tax-deferred advantages of exchanging vs. selling. Prereq: RES 100 or RES 105 or RES 110 or RES 130 or RES 140 or taken concurrently, or real estate experience. (30 clock hours.)

RES 230 (5) N
Professional Business Practices of Brokerage Management

Focuses on practical knowledge of real estate brokerage operations. Introduces the latest concepts in general business and management practices. Focuses on the responsibility of a broker, and the operations of a brokerage. Satisfies both Washington state educational requirements for 30 hours of Brokerage Management and 30 hours of Business Management. Prereq: RES 100 or RES 130 or real estate sales license. (60 clock hours.)

RES 260 (3) N
Real Estate Finance-Commercial

Reviews methods for financing commercial and investment properties. Covers lenders, underwriting requirements, loan submission and alternative financing methods. Prereq: RES 100 or RES 130 or real estate experience. (30 clock hours.)

RES 266 (3) N
Real Estate Loan Underwriter

Intro to underwriting residential loans. Includes underwriting documents, analyzing appraisals, applications, verifications, and formulas for buyer qualification. Prereq: RES 160 or RES 165 or RES 166, or experience in real estate financing. (30 clock hours.)

CWE 100 (2-5) N
Cooperative Education - Work Experience

On-the-job training in field of study. Assignments will be developed based on instructor goals and objectives. Prereq: current paid or unpaid employment and permission of instructor and Cooperative Education Director, room CC2343A. (See Cooperative Education section for specific information.)

CWE 110 (5) N
Classroom to Workplace Success

Linked seminar for professional/technical students to transition successfully from classroom to work. Course satisfies 5 credits of General Education distribution requirements for AAS degree students when taken concurrently with 3 credits of CWE 100 Co-op Education Work Experience. Prereq: Faculty and Co-op Education permission

RELIGION

REL 150 (5) S
Intro to Western Religions

A social-historical survey of religions that have developed west of the Indus river. Course designed to promote a better understanding of those traditions and their cultural influences on history.

REL 151 (1) C
Intro to Eastern Religions

A social-historical survey of religions that have developed east of the Indus river. Course designed to promote a better understanding of those traditions and their cultural influences on history.

RESIDENTIAL FACILITIES WORKER

See Habilitation Specialist.

RESPIRATORY CARE

RCP 101 (1) C
Respiratory Care Orientation

Intro to concepts and principles that prepare the learner for successful completion of the Respiratory Care program. Emphasis on preparing for school, college resources available, financial assistance, effective classroom skills, communication skills, study skills, strategies for taking examinations, time management skills, and stress and anger management. Prereq: Permission.

RCP 110 (2) C
Intro to Respiratory Care

Intro to the respiratory care profession. Focus on historical development as well as current overview of the respiratory care practitioner role, medical ethics, death and dying. Prereq: Permission.

RCP 112 (2) C
Applied Microbiology & Chemistry

Overview of the components encompassing microbiology including: development, fundamentals of chemistry, basic cell structure, relationships between humans and microbes, and chemical and physical requirements of microbes. Covers microorganisms, differentiation of microbes, factors in disease and resistance, components of respiratory care infection control procedures, and means for controlling organisms. Prereq: Permission.

RCP 114 (4) C
Respiratory Care Fundamentals I

Intro to procedures used to assess and treat common respiratory diseases. Emphasis on skills necessary to safely and effectively apply medical gas and aerosol therapy. Prereq: Permission.

RCP 115 (1) C
Pharmacology for Respiratory Care I

Intro to pharmacology including calculation of drug dosages, respiratory drug classifications and names, and dosages for aerosolized bronchodilators. Prereq: Permission.

RCP 120 (4) C
Clinical Practice I

Organization and function of an acute care hospital and typical respiratory care department. Continuation of skill development from RCP 114.

RCP 123 (1) C
Pathophysiology for Respiratory Care I

Intro to pathophysiology including pathogenesis of diseases, inflammation, disease transmission, etiology, epidemiology, pathology, clinical findings, treatment and prognosis.

RCP 124 (5) C
Respiratory Care Fundamentals II

Continuation of RCP 114. Emphasis on skills necessary to safely and effectively care for patients with artificial airways. Application of basic concepts of asepsis to respiratory therapy equipment to prevent spread of infection and disease. Intro to electrocardiography, continuous positive airway pressure (CPAP) therapy, arterial blood gas interpretation and bedside spirometry.

RCP 125 (1) C
Pharmacology for Respiratory Care II

Covers respiratory drug dilution and solution strengths, classifications of respiratory drugs and effects on the body, and the effects of cardiopulmonary drugs on the autonomic nervous system.

RCP 130 (5) C
Clinical Practice II

Continuation of RCP 120, with emphasis on sterilization techniques, managing patients with artificial airways, and performing chest percussion and bronchial drainage.

RCP 133 (1) C
Pathophysiology for Respiratory Care II

Covers infectious diseases of the lungs, and pulmonary considerations of HIV and AIDS.

RCP 134 (5) C
Respiratory Care Fundamentals III

Continuation of RCP 114 and RCP 124. Intro to techniques and equipment used in mechanical ventilation.

RCP 135 (1) C
Pharmacology for Respiratory Care III

Covers mucus-controlling agents in RCPs, surfactant agents in RCPs, aerosolized anti-infective agents, and chemical mediators.

RCP 137 (4) C
Cardiopulmonary Anatomy & Physiology

Functional characteristics of the human cardiopulmonary system and methods of measuring pulmonary component function. Includes laboratory practice in preparation to perform basic pulmonary function tests in the clinical setting.

RCP 139 (2) C
Skills Review III

Skills review course required for students returning to the program and requesting advanced standing. Combines self-study and lab demonstrations. High motivation level required. Course not required for program degree.

RCP 196,197,198,199 (2-5) C
Work Experience - Respiratory Care

Allows students to earn work experience credit in the respiratory care field. Prereq: Permission.

RCP 240 (4) C
Clinical Practice III

Continuation of RCP 130. Emphasis on managing patients with artificial airways, patients on mechanical ventilation and ICU monitoring techniques.

RCP 241 (2) C
Respiratory Care of Critically Ill Adults

Focuses on diagnosis, treatment and special considerations of the patient. Examines the logic and reasoning skills used by the expert Respiratory Care Practitioner. Students apply clarity, accuracy, precision, relevance, depth, breadth, logic and significance through laboratory and physical means to provide safe and effective care. Prereq: Acceptance into Respiratory Care program.

RCP 243 (1) C
Pathophysiology for Respiratory Care III

Covers the etiology, epidemiology, pathology, clinical findings, treatment and prognosis of chronic obstructive pulmonary diseases. Emphasis on asthma, bronchiectasis, cystic fibrosis, restrictive lung diseases and environmental lung diseases.

RCP 244 (3) C
Respiratory Care Fundamentals IV

Continuation of RCP 114, RCP 124 and RCP 134. Covers all aspects of monitoring critically ill patients (hemodynamics). Discussion of chest trauma, ARDS, and sepsis syndrome.

RCP 245 (1) C
Pharmacology for Respiratory Care IV

Continuation of RCP 115, RCP 125 and RCP 135. Covers advanced concepts including identification of drugs and mediators involved in airway activities and critical care.

RCP 250 (6) C
Clinical Practice IV

Emphasis on treatment of newborn infants and children suffering from various cardiopulmonary disorders.

RCP 251 (3) C
Respiratory Care of Infants & Children

Adaptation of respiratory care practices for treatment of infants and children. Focus on anatomical, physiological and emotional differences from adults, and modifications of equipment and therapy techniques to effectively treat their cardiopulmonary disorders.

RCP 253 (1) C
Pathophysiology for Respiratory Care IV

Covers cardiopulmonary diseases and diseases of the pleura and chest wall. Emphasis on myocardial infarction, disorders of pulmonary circulation, ARDS, pleural effusion, pleural empyema, pneumothorax, kyphoscoliosis, chest trauma, and burn and inhalation injuries.

RCP 254 (3) C
Respiratory Care Fundamentals V

Covers advanced concepts and skills to care for neonates and pediatric patients. Provides training in establishing and maintaining the patient including ventilation systems and pediatric equipment.

RCP 260 (6) C
Clinical Practice V

Safe and effective management of a patient on a mechanical ventilator.

RCP 264 (3) C
Respiratory Care Fundamentals VI

Builds on the concepts and skills needed to care for critically ill patients. Emphasis on advanced methods of diagnosing and monitoring respiratory disorders including pulmonary function studies and sleep studies.

RCP 270 (6) C
Clinical Practice VI

Continuation of RTT 260. Focus on determining ventilator discontinuance, transporting ventilator-dependent patients, and setting up and monitoring various auxiliary airway pressure maneuvers.

RCP 272 (4) C
Comprehensive Review of Respiratory Care

Introduces computer use in health care. Emphasizes both resumé and computerized board examination preparation. Covers groundwork preparation for National Board for Respiratory Care Entry Level and Advanced Practitioners examinations. Focuses on logic and reasoning skills used by the expert Respiratory Care Practitioner.

RCP 274 (2) C
Pulmonary Rehabilitation & Home Care

Intro 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, and RCP 264.

RCP 276 (3) C
Advanced Patient Assessment

Appropriate assessment of the respiratory patient utilizing and analyzing history, physical examination, lab data, CXR, PFT and EKG data.

RCP 299 (1-3) C
Independent Study in Respiratory Care

Student conducts independent study in selected respiratory care topics under the supervision of the program director. Topics will coincide with content and competencies of the quarter's curriculum.

SCIENCE**MSC 101 (5) N**
Intro to Material Science

Intro to the molecular structure of different materials and the resulting affects in tensile strength and heat transmission. Emphasis on semiconductors and applications to electronic devices. Prereq: PHY 102, PHY 118, CHE 101, or equivalent; and MAT 118, MAT 120, or equivalent; or permission.

SCI 090 (5) N,S
Basic Scientific Ideas

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) N,C,S
Intro to Science

Basic principles and current scientific thought in the major fields of science, including history, philosophy, and methodology. Credit not granted to students who have completed major-level science courses. Non-lab course. When offered at North, identified as writing component course for transfer to the University of Washington.

SCI 101 (5) N
Intro to Physics & Chemistry

Survey of the fundamental concepts in mechanics and inorganic and organic chemistry, with many hands-on exercises. Prepares for the solid state and the physics: electricity and magnetism course. Co-ordinated labs with math and technology courses. Prereq: MAT 098 or MAT 106 or equivalent or permission.

SCI 104 (5) C,S
Physical Science

Intro to the physical world through everyday applications of physical science principles. Examination of fundamentals of physics and chemistry in light of the scientific method.

SCI 112-118 (1 ea) N,C
Northwest Field Trips

Series of 1-credit courses consisting of five hours of lecture and a one-day field trip. Varying transportation fees are required.

SCI 112 (1) N,C
Seashore Life

Explores seashore life in the Pacific Ocean and Puget Sound.

SCI 113 (1) N
Marsh Ecology

Provides opportunity for beginning and experienced birders to explore the science of ornithology in the classroom and in the field. Lab credit.

SCI 114 (1) C
Field Astronomy

Covers astronomy from a hands-on perspective out in the field.

SCI 115 (1) N,C
Geology of the Northwest

The best of the region's geology. Includes the Seattle Fault, ancient glaciers, fossil forests, landslides, Cascade Mountains and northeastern Oregon. Five hours of lecture and one day-long field trip. Lab credit. Equivalent to GEL 115.

SCI 116 (1) N,C
Edible Plants of the Northwest

One day field trip and five hour lecture focusing on edible and medicinal plants of the Pacific Northwest. Lab credit.

SCI 117 (1) N,C
Wildflowers of the Northwest

Classification and ecology of lowland to alpine wildflowers of the Pacific Northwest. Includes five hour lecture and one day field trip. Lab Credit.

SCI 118 (1) N,C
Volcanoes of the Northwest

Intro to the origin and destruction of Cascade volcanoes. May cover Mt. St. Helens, Mt. Rainier and Glacier Peak. Includes five hour lecture and one day field trip. Lab credit. Equivalent to GEL 118.

SCI 119 (3) N
Natural History of the Pacific Northwest

Geology, zoology, and botany presented together integrated around field excursions to various biomes in the Pacific Northwest. Field trips required. Lab credit. Transportation fees are required.

SCI 160 (5) C
(PHI 160) Philosophy of Science

Historical development of scientific concepts and the philosophy of science.

SCI 296 (5-10) C
Natural History: Tropical Ecosystems in Costa Rica

Self-paced experiential courses for students planning to attend a language school outside the U.S. while studying the culture of the country.

SCI 297 (5-10) C
Natural History: Tropical Ecosystems

Self-paced experiential courses for students planning to attend a language school outside the U.S. while studying the culture of the country.

SCI 298 (1-5) N,C,S
Special Topics

Seminar of selected topics or activities in the sciences. Prereq: Variable, dependent on topic.

SCI 299 (1-5) N,C,S
Independent Study

Independent study of approved topics in the physical sciences. Prereq: Permission.

SENIOR ADULT EDUCATION**FAM 012 (1-3) N,C,S**
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 (1-3) N,C,S
Living Skills for Seniors

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) N,C,S
Positive Growth for Seniors

Includes classes in self-image, writing your life story, decision-making, widowhood, interpersonal communication and similar topics.

FAM 029 (2) C
Senior Adult Discussion

Open, informal discussions comparing periods of ancient history with current events. Discussion participation encouraged.

SEN 001 (0) N
Avocational Explorations for Seniors

Opportunities for learning avocational skills and developing personal talents, hobbies and interests.

SOCIAL & HUMAN SERVICES**SHS 100 (5) C**
Intro to the Human Services

Overview of the human service field with emphasis on the emerging role of the new professional. Includes career development, attitudes and values, behavioral and cultural differences, individual and group intervention techniques and community awareness. Prereq: Eligibility for ENG 101 and MAT 084.

SHS 103 (5) C
Survey of Institutions

Intro to social welfare institutions. Explores common social problems such as poverty, homelessness, substance abuse, racism, sexism, etc. Emphasis on social systems set up to solve these problems. Develops use of critical thinking skills in analysis of issues including the presentation of quantitative information and the possible interpretations of statistics. Local community issues and concerns used in illustrations. Prereq: Eligibility for ENG 101 and MAT 084.

SHS 106 (5) C
Principles of Interviewing & Counseling

Intro to interviewing and basic counseling skills. Exploration of personal values, motivations, biases and needs. Development of beginning-level counseling skills and awareness of unique qualities each brings into the helping profession. Foundation for advanced counseling courses. Prereq: Eligibility for ENG 101 and 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. Group participation, role-playing and simulations included in class. Prereq: Eligibility for ENG 101 and MAT 084.

SHS 150 (1) C
HIV/AIDS Workshop

Meets requirements for social and human service professionals in the fields of counseling, alcoholism and/or substance abuse. Includes topics on etiology and epidemiology of HIV, transmission and infection control, testing and counseling, clinical manifestations and treatment, and psychosocial issues. Approved by the Washington State Division of Alcoholism and Substance Abuse.

SHS 197,198,199 (2-5 ea.) C
Field Placement: 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
Advanced Counseling Techniques

Intro to psychopathology and assessment and counseling theories. Covers ethics, personality theory, counseling techniques, and other counseling issues, and development of a personal style of assessment and counseling. Prereq: SHS 106.

SHS 205 (3) C
Crisis Management & Intervention

Intro to crisis theory and techniques for beginning mental health/human services person. Emphasis on high-stress populations requiring immediate intervention. Includes psychiatric emergencies, sexual assault, incest, battered women, death and dying, loss, assessment techniques and in-depth interviewing skills. Prereq: Eligibility for ENG 101 and MAT 084.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			
In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).			

- SHS 207 (3) C**
Behavior Management
 Designed for foster parents and other adults working with children and adolescents with behavioral problems. Covers the learning theory and its application to children in a variety of settings. Includes development of the knowledge base needed to effectively help children manage their behavior as well as skill development activities to ensure a thorough understanding of concepts basic to behavior modification and behavior management. Prereq: ENG 101 and MAT 084 eligibility.
- SHS 210 (3) C**
Multicultural Counseling
 Effective counseling approaches which take into account client differences in culture, gender, sexual orientation, physical abilities and ethnicity. Students are expected to interview client group representatives and assess community resources. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 215 (5) C**
Adolescent Development & Treatment
 Focus 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: Eligibility for ENG 101 and MAT 084.
- SHS 231 (3) C**
Physiology/Pharmacology of Chemical Dependency
 Effects of chemical dependency on the body, including basic biochemical action, organ/system effects, poly drug interactions and physiological management of the disease. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 232 (3) C**
Chemical Dependency & the Family
 Examination of chemical dependency problems in the family, including family roles and dynamics, adult children of alcoholics, interventions and family work as focus of treatment. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 233 (5) C**
Chemical Dependency Counseling
 Overview of specialized recovery techniques, including individual, group and family approaches. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 235 (5) C**
Intro to Chemical Dependency
 Overview of use and abuse of legal and illegal drugs. Analysis of patterns of dependency and addiction associated with prescription, over-the-counter, and illegal substances. Exploration of methods of prevention, control and treatment. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 241 (5) C**
Residential Services & Community Resources in Mental Health
 Covers the range of services, consumer population appropriate for each, and treatment philosophy, milieu and structure of residential services. Survey of state, residential and community mental health services. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 242 (5) C**
Mental Health Diagnosis in Chemical Dependency & Other Human Service Settings
 Intro 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 084.
- SHS 245 (3) C**
Mental Health Overview
 Relationship between mental functioning and body physiology; behavioral and physical dysfunctions and reactions to prolonged stress; theories of pain, holistic health, nutrition, cross-cultural perspectives on healing, biofeedback, meditation, psychosomatic diseases and stress reduction. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 246 (5) C**
Community Rehabilitation in Mental Health
 Focuses on psycho-social theories, treatment models and community-based programs as well as the use of medication as a form of treatment. Includes a review of major medications, their uses and side effects. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 250 (4) C**
Client & Community Advocacy
 Discussion of the roles of the advocate in a helping situation, use of community advocacy resources, and effective use of the media, law, negotiation, and political process to achieve needed services for people. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 255 (5) C**
Dual Diagnosis: Treatment Issues & Services
 Explores skills and knowledge needed for working with clients experiencing both 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 unique to this population, local services available for the mentally ill chemically abusing (MICA) client; and case management for the MICA client. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 265 (5) C**
Management & Supervision
 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: Eligibility for ENG 101 and MAT 084.
- SHS 270 (3) C**
Law & Ethics in Chemical Dependency
 Study of the role of law and professional ethical standards in the delivery of chemical dependency services. Theoretical and practical applications are discussed, using Washington Administrative Code requirements as case examples. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 275 (3) C**
Chemical Dependency & Domestic Violence
 Specifically designed for those working with chemically addicted, abusive clients and their interactions with family members. Study of treatment goals for treatment of domestic violence to foster client understanding of anger, how to turn it into a useful tool, and utilize healthy and appropriate modes of communication. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 280 (3) C**
Chemical Dependency Case Management
 Emphasis on oral and written communication skills; formulating up-to-date, accurate and understandable case files and records; and becoming familiar with federal and state confidentiality regulations in handling chemical dependent client records. Students will formulate concise treatment plans in accordance with legal requirements. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 296 (1) C**
Human Services Workshop
 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. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 297 (2) C**
Human Services Workshop
 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. Prereq: Eligibility for ENG 101 and MAT 084.
- SHS 298 (3) C**
Human Services Workshop
 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. Prereq: Eligibility for ENG 101 and MAT 084.

SHS 299 (1-5) C
Independent Study Research
 Individual or group research projects on human service programs and problems. May include field or library research. Learning contract between student and instructor required first week of quarter.

SOCIAL SCIENCES

SSC 103 (5) N
Human Dimensions of Work
 Covers human relations issues in the modern workplace. Includes contextual approach to understanding human relations in the workplace with scientific research methods and theories of worker motivation and satisfaction. Examines work in relation to economy and other social institutions, diversity, prejudice and discrimination, interpersonal dynamics in work groups, leadership, conflict resolution, work and stress, and workplace ethics. Focuses on practical understanding of human relations issues and effective ways of dealing with them.

SSC 119 (1-3) C
Contemporary Issues in Women's Studies
 Examination of the issues and theoretical positions involved in women's studies and the feminist movement.

SSC 130 (3-5) N,C
Death, Dying & Living
 Study of the experience surrounding dying and death. Examines such situations as dealing with the death of others, your own death, the biology of death, suicide, and other issues.

SSC 187 (1-3) C
Information Resources in Social Sciences
 Examines various research strategies for locating, evaluating, and applying information resources in social sciences. Emphasizes proficiency using various electronic databases, including those available on the library information networks, the online catalog and other standard research tools and retrieval techniques.

SSC 197 (1-12) C
Work Experience - Social Sciences
 Allows students to earn work experience credit in the social science field. Prereq: Permission.

SSC 210 (5) N
Criminology
 Covers criminology as applied to contemporary social problems such as crime, poverty, unemployment, social class, gangs, deviance and social controls in urban and suburban communities.

SSC 220 (3) N
Global Issues
 A social science course designed to provide vocational technical students with an insight into topics on an international nature.

SSC 290 (2) N,C
Curriculum Practicum
 Designed for educators. Examines the development of teaching/learning materials based on areas covered in the study and travel program. Includes class work and field trip.

SSC 294 (2-5) N,C
Practicum in the Social Sciences
 Application of theory and methodology in actual practice. Provides experiential learning in a community service agency. This is arranged during the first week of class, as an individual contract between student and instructor.

SSC 297 (5-10) N,C
Travel/Study Experience
 Hands-on learning opportunity for students in domestic and/or foreign travel. Focuses on learning outside the classroom and taking advantage of cross-cultural materials including historic sites, geographical locations, geological formations, museums, art centers, regional customs and foods, language enhancements, specialized research libraries, local universities, legislatures, etc. that are only available through travel.

SSC 295,298-299 (2-5) N,C,S
Practicum in the Social Sciences
 Designed to enable the participants to learn about basic research techniques, assist in planning and conducting a research project, and assist in processing the resulting data.

SOCIOLOGY

SOC 101/ISP 101 (5) N
The Global Society
 Intro to the globalization of cultures and societies in producing the world system. Exploration of global events, trends, and issues within the context of international inequality. Course content regarding specific societies and issues for study may vary, depending upon instructor. May be taken as ISP 101.

SOC 102/ANT 102 (5) N,C
Intro to American Culture
 Focus on unique American values, behavior and world view as compared to others' values and world views, and implications and consequences of these differences. Insight into ourselves from the perspectives of anthropology and sociology. Field trips included. May be taken as ANT 102.

SOC 105 (5) C
Sociology of African Americans
 Evaluation of the sociological impact of the African American experience in relation to various social systems in America.

SOC 106 (5) C
Sociology of Asian Americans
 Examination of Asian American experiences in the United States from a sociological perspective. Analysis of Asian American ethnic communities, social institutions, activities and issues.

SOC 107 (3-5) C
Sociology of Filipinos in America
 Examines the cultural, historical and situational forces shaping the Filipino community in America today. Studies the social and behavioral patterns of Filipino Americans within and outside of their community.

SOC 108 (5) C
Sociology of the Middle East
 Social dynamics and cultural processes of Middle Eastern societies, incorporating theory research and concepts. Understanding of contemporary crises in the region through analysis of confrontation of Western/Northern societal patterns with indigenous cultures of the Middle Eastern peoples.

SOC 110 (5) N,C,S
Survey of Sociology
 Covers human social interaction with emphasis on group aspects of human behavior. Covers culture, socialization, family, education, urbanization, gender roles, social class, deviance, race, sexuality, demography and social change.

SOC 120 (3-5) C
Sociology of the Media
 Sociological perspective of print and electronic media, including television, film, news and advertising. Analysis of media institutions and the way they affect social, political, and cultural discourse and identities. Examines way in which American identity shapes and is shaped by the media and the changes in this identity from one period to another.

SOC 130 (5) C
Living, Death & Dying
 Death and dying from a sociological perspective. Focus on relationships between death and other concepts such as socialization, stratification and culture. Resources and skills needed to work with the dying. Emphasis on realistic look at death to reduce denial and increase preparation.

SOC 150 (5) N,C,S
Race & Ethnic Relations in the United States
 Examination of the majority-minority pattern of interaction in American society. Includes theories of race relations, and issues shaping intra- and interracial ethnic relations.

SOC 170/ISP 170 (5) N,C
Intro to Contemporary China
 Basic knowledge of the people, history, culture and social systems of contemporary Chinese society. May be taken as ISP 170.

SOC 220 (5) C
Sex Roles and Society
 Survey of causes and consequences of sex/gender roles. Examines the relationships between men and women in the U.S. and other regions. Focuses on a historical, biological, economical, psychological and anthropological perspective identifying and discussing the discernible recurring sex role patterns.

SOC 223 (5) C
Behavior Statistics

Analysis of research data including levels of measurement, tendency, dispersion, probability and the normal curve. Emphasis on statistical methods applied to behavior problems. Strongly recommended for students majoring in sociology, psychology, political science and history. Prereq: Intermediate algebra or permission.

SOC 230/PSY 230 (5) N,C,S
Human Sexuality

Survey of sexual behavior. Covers historical, physiological, psychological, and social components of sexuality and its deviations. May be taken as PSY 230.

SOC 245/PSY 245 (5) N,C,S
Social Psychology

Examines the effect of others on the individual in such areas as self-concept, social cognition, aggression, conformity, helping, loving and liking, competition and cooperation, and prejudice and discrimination. Research and autobiography by two of the following groups must provide content and illustration: African Americans, Asian Americans, Native Americans, and Hispanic Americans. May be taken as PSY 245.

SOC 250 (5) N,C
Marriage, Family & Intimate Relationships

Surveys the concept of family as a mode for personal living. Personal adjustment, parent-child relationships, marital and alternative structures, and contemporary issues facing today's family systems will be analyzed.

SOC 255 (5) C
The Older Adult in a Changing Society

Intro to the field of gerontology. Includes basic concepts, emerging theories and new research. Emphasis on the creation of more realistic goals, and expectations for older persons and senior programs.

SOC 270 (5) N,C
Social Problems

Processes of social and personal disorganization and reorganization in relation to poverty, crime, drug use, family dissolution, mental disorders, sexual minorities, overpopulation, and other social problems.

SOC 275 (5) C
Law & Society

The role of law in American society - what it is and what it should be. Survey of basic constitutional, business, and personal legal concepts in theoretical and practical settings.

SOC 298 (1-5) N,C,S
Special Topics in Sociology

Independent study in selected sociology topics under faculty supervision. Prereq: Permission.

SOC 299 (3-5) N,C
Special Problems in Sociology

Small group seminar to discuss selected sociology topics. Prereq: Permission.

SPEECH

See Communication.

SPE 102 (3) C
Human Relations and Communication in the Workplace

Provides students with specific skills to help communicate their expertise successfully and work effectively on the job. Addresses communication skills useful in finding gainful employment.

SUPERVISION & MANAGEMENT**SMG 100 (3) S**
Leadership & Supervision

Intro to leadership styles and effectiveness; role of a leader in supervising. Functions and challenges of the front line supervisor in contemporary business settings, industrial sites and public organizations. The prerequisite course for required courses in SMG certificate and AAS degree program. Prereq: Minimum ASSET test scores.

SMG 103 (3) S
Supervising a Diverse Workforce

Examines perceptions held by supervisors and employees in connection with culturally and behaviorally diverse workers. Working with and supervising diverse population groups. Explores current legislation and challenges of an evolving workforce.

SMG 110 (3) S
Financial Management

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: Participants should have a 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
Supervision & Group Behavior

Overview of group dynamics, moderation, strategies and productivity in the work place. Emphasis on diversity in the work place. Prereq: SMG 100.

SMG 150 (3) S
Training, Orientation & Employee Development

Intro course for students starting, or planning to start training. Survey of basic teaching and learning processes involved in preparing students in industry. Includes: basics in learning, motivation and learning styles; occupational analysis and course organization; selecting and preparing training materials; presentation methods; and evaluation of student outcomes and learning styles.

SMG 197 (1-15) S
Internship or Cooperative Education Experience

Following an orientation, opportunity provided to spend time in the field under guidance of instructor and on-site mentor to learn about operations, policies, procedures, culture and behavior standards in a given business, office, industry, shop, lab, store or other setting directly related to the student's course, certificate or degree program. Students spend time as interns or cooperative education students and meet with faculty coordinator. May be used as an internship during ongoing program coursework or upon completing coursework or both. Prereq: Permission.

SMG 201 (5) S
The Manager as an Entrepreneur

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 characteristics of the entrepreneurial disposition 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 from the beginning: timelines, evaluation, implementing budgeting concepts and the skills applicable to formulating a budget request strategy with specific and measurable outcomes. Focuses on the team concept used in business and government; includes computer lab applications.

SMG 217 (3) S
Organizational Behavior

Introductory course for those who want to add knowledge of strategies available to develop an effective organization. Provides history of the field, overview of areas in which organizational behavior interventions can be of use, and an exposure to the types of interventions that may be used in their own work environments.

SMG 220 (3) S
Personnel Performance Management

Principles and techniques for employee performance programs, appraisals, coaching and counseling, disciplinary process, and wage surveys. Exploration of 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

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 265 (3) S
Marketing Management

Overview of marketing, promotion, advertising, sales, public relations, and customer service in an organization. Compares, contrasts, and defines the role of each function in business.

SMG 295 (Variable) S
Externship in Supervision & Management

Opportunity to earn college credit for supervisory work experience in the City of Seattle PREP program and other similar programs. Requires documentation and supporting data, and work experience with examination when deemed necessary to support documentation. Exact credit will be determined by evaluation process and number of hours worked. Prereq: SMG 100.

SMG 298 (1-10) S
Independent Study

Opportunity for research, advanced study, or special projects in student's (or group) field. Option to work independently under guidance of an instructor, following classroom instruction and orientation to the topic. Credits vary depending on scope of project, following lecture material, number of hours to complete, and number of credits attempted. Prereq: Permission.

SMG 299 (1-10) S
Special Topics

A seminar study of an approved topic directly related to the students' course/program, certificate or degree. The Capstone might be in the form of a portfolio, in-depth project or other activity, accompanied by an oral presentation and evaluated by faculty and industry representatives. Can also be an activity to demonstrate competencies acquired in a certificate or degree program. For example, a student in a Marketing in Business program might choose topics related to: marketing, sales, advertising, retail management, advertising, promotion, customer service, consumer behavior, marketing research, entrepreneurship and business communication. Prereq: Permission.

SURGICAL TECHNOLOGY

STT 111 (5) C
Surgical Technology Lab

Principles and techniques of operating room procedures. Includes surgical scrub techniques, gowning and gloving, aseptic technique, creating and maintaining a sterile field, draping materials, basic instrumentation and patient transport. Prereq: Permission.

STT 113 (8) C
Surgical Technology I

Intro to surgical technology. Includes legal and ethical aspects; relationships with co-workers; hospital organization and inter-departmental relations; physical and psychological aspects of patient care; operating room techniques and procedures. Prereq: Permission.

STT 115 (2) C
Clinical Orientation

Intro to health care and the operating room. Observation of the environment, routines, supplies and equipment, patient-team interaction, and application of scientific principles. Prereq: Permission.

STT 123 (14) C
Surgical Technology II

Microbiology, pharmacology and anesthesiology relating to the surgical patient. Includes additional perioperative care techniques and surgical procedures, pathophysiology, and the technologist's role in surgery. Also, general, orthopedic, gynecological, genitourinary-reproductive and ophthalmic specialties.

STT 125 (5) C
Clinical Practice I

Clinical practice, with focus on development of entry-level skills.

STT 133 (5) C
Surgical Technology III

Continuation of STT 123. 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.

STT 135 (8) C
Clinical Practice II

Continuation of STT 125. Advanced clinical practice to develop entry-level skills.

STT 200 (20) C
Intro to Perioperative Nursing

Covers duties and responsibilities of perioperative nursing and technical skills for OR nursing. Physical and psychological concepts of patient care, and procedures required to scrub and/or circulate in the operating room. Prereq: Washington state RN licensure.

TECHNICAL COMMUNICATIONS

TEC 110 (4) C
General Editing

Read and edit print and electronic technical writing samples. Emphasis on consistency, appropriateness, impact, analyzing and writing samples, applying decoding guidelines to proofreading and processes, applying decoding techniques to deconstructing, and systems process mapping. Prereq: ENG 101/102 or equivalent, and TEC 120 or equivalent.

TEC 120 (5) C
Principles of Developmental Editing

Intro to the developmental stages of editing. Explores editing techniques, using both technical and expository writing samples. Emphasis on critical reading, and communication of critical comments. Prereq: ENG 101/102.

TEC 130 (4) C
Style Guides & Visual Design

Builds upon TEC 120. Focuses on principles of physical design and models for documentation. Covers production eyeball, visual design, GUI, Gestalt layout techniques, packaging and Web page layout. Co-Req: TEC 120.

TEC 140 (4) C
Mapping Information/Architecture

Studies theories and concepts in cognitive mapping, and develops skills in logical, sequential thinking and inductive organization of ideas and information. Computers are used for simulations, in-depth problem-solving/writing projects, and applying principles of networking architecture and information mapping to carry out editing/writing projects. Focuses on triage, the art of adapting, applying alternative writing techniques according to specified parameters, word page limits, and 80%/20% rule of functionality. Prereq: MIC 101, MIC 110, or permission.

TEC 150 (4) C
Specialization

Explores the impact of localization and globalization on the need to produce/edit/analyze communication that is clear, meaningful and culturally appropriate. Covers applications of "technology tools of the trade" to writing documentation for better translation, multiple "languages," simple sentences to fit differing language structures, linguistics, comparative linguistics, sensitivity grammar/writing style, and the art of condensing documentation. Prereq: MIC 101 or equivalent.

TEC 197 (1-5) C
Work-Based Learning

Students earn work experience credit in technical communications. Work experience may be paid or non-paid and/or in the form of internships. Prereq: Permission.

TEC 200 (5) C
Senior Seminar I

First of two linked project-based courses applying skills and knowledge gained in the Technical Communications program to planning and implementing a major writing/editing project. Work independently in teams or as an intern. Industry mentors are assigned to each project to critique and advise on work produced. Emphasis on research, fact checking, project management, teamwork, work quality and work standards. Prereq: Completion of Technical Communication program's first year, or permission.

TEC 220 (5) C
Senior Seminar II

Continuation of TEC 200. Prereq: TEC 200.

TEC 230 (1-4) C
Technical Communications Seminar

Explore the social, political, economic and professional dimensions of the technical communications field. Explores the human qualities critical to employment and professional advancement, and the nature of the work environment and future direction of the occupation. Industry and labor representatives, as guest speakers, will present topics including triage, industry-technology trends, ethical issues, environmental issues, new theories and practices impacting the industry, and professional responsibility, communication changes, global communication issues, and dynamics of the workplace. Prereq: Enrollment in Technical Communications program or permission.

TEC 294 (5) C
Copy Editing/Writing I

First of two sequential advanced writing courses designed to develop composition/research skills required in the workplace. Engage in intensive writing/editing projects, drawing materials from both print and electronic sources. Prereq: ENG 101/102 or equivalent, proficiency in Office Suite.

TEC 295 (5) C
Copy Editing/Writing II

Second of two sequential advanced writing courses designed to develop basic composition/research skills required in the technical communications industry. Engage in intensive writing/editing projects. Concepts presented include ethics, writing and editing techniques, style standards, editing for meaning, editing print and electronic text and graphics. Prereq: ENG 101/102 or equivalent; proficiency in use of Office Suite; TEC 294 or equivalent.

TEC 299 (1-5) C
Independent Study

Independent study of approved topics in technical editing/writing. Prereq: Permission.

TELECOMMUNICATIONS**TSM 101 (5) S**
Telecommunications I

Intro to various forms of communication including telephony, cellular, and microwave. Wiring techniques - wiring, fiber optics, wave guides, etc. Prereq: DCT 163.

TSM 201 (5) S
Telecommunications II

Advanced wireless communication, including extensive studies of line-of-sight, satellite systems, and cellular systems. Advanced studies of microwave theory, receiver systems, and transmitter systems, including TWT and Klystron amplifiers, redundancy, and antenna systems. Prereq: TSM 101.

TSM 250 (4) S
Telecommunications III

Covers video communications, both cable and wireless; includes introduction to integration of various communication techniques. Prereq: TSM 201.

TSM 280 (4) S
Telecommunications IV

Capstone course combining techniques mastered in prior courses culminating in an integration problem utilizing two or more communication systems. Prereq: TSM 201 and TSM 250.

TRUCK DRIVING (COMMERCIAL)**CTD 131 (18) S**
Fundamentals of Truck Driving

Provides student drivers the technical and background knowledge necessary to test for Washington State Commercial Driver's License written knowledge test, and then begin CTD - 132. Prereq: CDL Learner's Permit - Department of Licensing, Current DOT Physical Examination - Long form and card, Current Copy of Driving Abstract (driving record), No DUI's last 5 years.

CTD 132 (7) S
Basic Driver Training

Provides student drivers the technical and practical driving and operational skills necessary to safely and efficiently operate commercial motor vehicles. Students test for their Class "A" Washington State Commercial Driver's License and after successful completion will have the basic entry-level skills to drive a commercial vehicle. Prereq: CTD 131.

CTD 133 (7) S
Advanced Driver Training I

Provides student drivers the technical and practical driving experience necessary to safely and efficiently operate commercial motor vehicles in actual day-to-day driving situations. Includes operation of commercial motor vehicles under direction of their employer. Prereq: CTD 132.

CTD 136 (10) S
Heavy Duty Mechanics Basic Driver Training

Provides student mechanics the technical knowledge and practical skills to test for their Washington State Commercial Driver's License. After successful completion of the basic entry level skills, provides student mechanics the skills to drive a commercial vehicle. Prereq: 1 Year of Heavy Duty Mechanic Skills, Current DOT Physical Examination - Long form and card, Current Copy of Driving Abstract (driving record), CDL Learner's Permit - Department of Licensing.

CTD 138 (24) S
Basic Fundamentals of Commercial Vehicle Driving

Gives student drivers the technical and background knowledge to test for the Washington State Commercial Driver's License written test. During the course, students will skill test for the Class "A" Washington State Commercial Driver's License.

CTD 298 (2-10) S
Special Topics/Training for Commercial Truck Driving

Short-term individual training for those who currently have or have had a CDL License.

VIDEO COMMUNICATIONS

See Film & Video Communications

WELDING FABRICATION TECHNOLOGY**WFT 100 (2) S**
Welding Processes & Applications

Exploration of the applications and criteria for selecting the most widely used welding and weld-related metal joining processes, namely, 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 101 (1) S
Use of Power Tools in Welding Fabrication

Project-oriented set of practical exercises that convey knowledge of and practical use of both air- and electric-powered metal fabrication tools used for assembly, drilling, die cutting, polishing, deburring, grinding, chipping, sanding, sawing, shearing, punching, forming and threading. Prereq: Permission.

WFT 105 (2) S
Use of Blueprints in Welding Fabrication

Intro to blueprinting reading for both mechanical and structural welded fabrications. Investigation into: use of lines, views and projections, extraction of dimensions and material list ("takeoffs"), and interpretation of fabrication details and operation sequences. Covers use of welding symbols. Prereq: Permission.

WFT 106 (2) S
Basic Layout Skills

Incorporates both lecture and laboratory exercises which involve 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. Presentation of shortcuts to achieve both dimensional accuracy and quality assurance. Prereq: Basic math skills and ability to read blueprints or permission.

WFT 107 (2) S
Advanced Layout

Classroom study and lab exercises using parallel, round, and radial development methods as well as triangulation. Includes scaling up and down from models and construction of production locating and forming jigs. "Field trip" to on-campus or local industry CAD station advisable. Prereq: WFT 106, basic math skills, ability to read blueprints, or permission.

WFT 108 (3) S
Fabrication Estimating & Layout

Explores the practical uses of basic math skills for estimating and layout in fabrication of welded products. Includes use of a calculator, data books, tables and model construction. Prereq: Basic math skills or permission.

WFT 109 (2) S
Development of Welding Procedure

Opportunity for the more experienced student to explore and experiment with reasonable possibilities in joint design, process selection, filler products, weld position, and the essential and non-essential variables of a welding procedure. Serves as a "recipe development" course for making good welds. Prereq: Cutting, forming and arc welding skills, ability to read blueprints or permission.

WFT 110 (3) S
Motor Vehicle Welding Fabrication

Intro to welding fabrication skills involved in maintenance and repair of highway and other motor vehicles. Prior knowledge of hand and basic power tools is helpful. Students will perform a number of pertinent exercises including fabrication of projects. The pace of the course is tailored to the skills of each student. Demonstrably capable students are encouraged to take on more advanced projects. Prereq: Enrollment in the Motor Vehicle Maintenance program or permission.

WFT 119 (2) S
Use of Press Brake in Welding Fabrication

A study of the operating principles of press brake forming along with practical fabrication experiences using a press brake. Explores the advantages, disadvantages, and limitations of the press brake through construction of sample projects. This course involves industry visitation(s) to observe CNC production press brakes. Prereq: Basic math skills, ability to read blueprints, (prior fabrication experience is helpful) and, ability to lift 50 lbs., or permission.

WFT 120 (5) S
Shielded Metal Arc Welding

Incorporates a project-oriented set of practical exercises that convey knowledge of equipment along with theory of operation and applications of the venerable and still-useful Shielded Metal Arc Welding (SMAW) process AKA "Stick Welding". Mild steel and stainless steel are commonly welded with this process in a variety of industrial applications particularly for maintenance and repair. While somewhat rare, SMAW can be used to join cast iron, bronzes and aluminum. Prereq: Some experience with OAW ("gas welding") or permission.

WFT 121 (5) S
Basic Oxyacetylene Cutting & Joining

Focuses on practical exercise in the safe and efficient use of the oxyacetylene flame for both cutting and joining applications. Covers flame cutting with hand and machine assists, welding, brazing, braze welding, hardfacing and soldering.

WFT 122 (1) S
Air Carbon Arc Cutting (CAC-A)

Focuses on laboratory exercises in the popular, safe, and incredibly efficient use of carbon Arc Cutting with Compressed Air (CAC-A) - A.K.A. "arcar," "gouging," or "scarfing" - for weld joint preparation and for efficient disassembly of existing fabricated structures. Prereq: Some experience with hand tools or permission.

WFT 123 (2) S
Use of Welding Symbols

A progressive presentation of the scheme of welding symbols and their use in modern welding fabrication. The major class activity involves interpretation of welding symbols as found on blueprints. Prereq: WFT 105, ability to read blueprints, or permission.

WFT 124 (5) S
Gas Metal & Flux Core Arc Welding

A project-oriented set of practical exercises that convey knowledge of equipment along with theory of operation and applications of the popular Gas Metal & Flux Core Arc Welding (GMAW & FCAW) processes (A.K.A. "MIG" and "Dualshield," "Innershield," etc. respectively). Mild steel, aluminum, and stainless steel are commonly welded with these processes in a variety of industrial applications. Prereq: Some experience with OAW ("gas welding") desirable or permission.

WFT 125 (3) S
Flame-Shaping as a Forming Method

Classroom study and lab exercises using the effects of heat upon welded fabrications. Heat effects are treated both as a problem for correction and as a tool used to form material. Covers various methods to avoid and control distortion, which are applied in the construction of projects. Prereq: WFT 121 or permission.

WFT 126 (3) S
Punching & Shearing

Incorporates lab exercises in the setup and use of the power shear and punch to make weldment parts in a fabrication setting. Also explores alternative methods of cutting. Industry visitations are necessary to become acquainted with numeric control and production cutting devices and systems. Prereq: WFT 101 WFT 105, and WFT 106 or permission.

WFT 127 (5) S
Gas Tungsten Arc Welding

A project-oriented set of practical exercises that convey knowledge of equipment along with theory of operation and applications of the Gas Tungsten Arc Welding (GTAW) process (A.K.A. "TIG" and "Heliarc"). The high quality welds produced by this process are commonplace in pressure piping systems, aerospace products, and when using heat-sensitive metals. The GTAW process provides both high quality and excellent weld appearance. Prereq: Experience with OAW ("gas welding") and at least one arc welding process or permission.

WFT 128 (5) S
Fabrication of Aluminum Weldments

A project-oriented set of learning activities culminating in lab exercises involving the fabrication of aluminum weldments - either new fabrications or maintenance operations. Prereq: Experience with at least one arc welding process to include GMAW or GTAW or permission. Recommended: Prior experience with steel fabrications.

WFT 129 (5) S
Weldment Inspection & Evaluation

Covers the basics of welding inspection methods and criteria for determining compliance with defined standards. Presents systematic evaluation methods in the light of design purpose with the aim of distinguishing quality from acceptability. Includes a review of the applications of the more popular welding processes. Prereq: Experience with at least one arc welding process to include GMAW or GTAW, ability to lift 50 lbs., or permission.

How to Read Course Descriptions

COURSE			WHERE COURSE IS OFFERED
PREFIX	NUMBER	CREDIT HOURS	
ACC	251	(5)	N,C
Intermediate Acctg. I			

In-depth review of financial accounting principles. Prereq: ACC 220 or permission (N); ACC 102 or permission (C).

WFT 130 (3) S
Welding Certifications

An exploration into the nature and purpose of welding performance certifications. An overview of popular certifications and tests. Examines standards for performance that ensure consistent product quality. Includes practical exercises in developing proper performance techniques. Prereq: Fourth-quarter standing or permission.

WFT 131 (3) S
Material Handling

Examines the safe and efficient methods for handling - transporting and tracking - materials, supplies, and structures as found in a welding fabrication shop. Includes practice of the uses of rigging devices, leverage, and cranes. Covers methods of protective transport. Prereq: WFT 100, WFT 101 or permission.

WFT 132 (5) S
Maintenance & Repair Welding Techniques

Nearly one-half the welding done today can be categorized as maintenance and/or repair. WFT 132 explores a set of experiences with welding fabrication techniques used to maintain and repair structures that are worn, damaged, or have missing parts. Presents identification and recognition of individual metal properties using a variety of materials. WFT 132 is recommended as a background for WFT 133 "Salvage & Reconstruction of Weldments." Prereq: Knowledge of hand & power tools; experience with Blueprint Reading, OAC, OAW, TB, SMAW, and CAC-A; ability to lift 50 lbs., or permission.

WFT 133 (5) S
Salvage & Reconstruction of Weldments

This course is a recommended sequel to WFT 132 (Maintenance & Repair). Covers methods and techniques for the safe and efficient disassembly of welded fabrications and other mechanical structures. Determining the causes for material failure is emphasized as an essential part of repair. Prereq: WFT 132, knowledge of hand and power tools, blueprint reading experience, OAC, OAW, TB, SMAW, GMAW, FCAW & CAC-A, ability to lift 50 lbs., or permission.

WFT 134 (5) S
Use of Heat Treat

This course is a recommended sequel to WFT 132 (Maintenance & Repair Welding Techniques). Examines the uses of heat in fabrication for other than parts joining. Presents common heat treat operations and their applications. Such operations can enhance the usefulness and reliability of weld fabrications. Industry visitation(s) are part of this course. Prereq: WFT 132, knowledge of hand and power tools, OAC, OAW, SMAW, GMAW, FCAW & CAC-A, ability to lift 50 lbs., or permission.

WFT 135 (4) S
Submerged Arc Welding

Incorporates practical exercises to provide familiarity with Submerged Arc Welding (SAW) equipment, principles of operation, welding techniques and applications. "Sub arc" is a wire-feed arc welding process in which the arc is submerged beneath a blanket of granular flux which acts as a cleaning agent; this is totally different from underwater welding. Independent (prearranged) student industry site visitations enrich the college lab experience. Prereq: Experience with arc welding processes, especially GMAW and/or FCAW, ability to lift 50 lb., or permission.

WFT 136 (4) S
Plasma Arc Welding

Incorporates practical exercises to provide familiarity with the equipment required, the principles of operation, and the techniques to perform Plasma Arc Welding (PAW). PAW is a developmental outgrowth of Gas Tungsten Arc Welding (GTAW) with limited, albeit important applications. It is quite important that the student have a firm understanding of GTAW before studying PAW. Prereq: Experience with arc welding processes, especially GTAW, ability to lift 50 lb., or permission.

WFT 137 (4) S
Construction of Welding Location Jigs & Fixtures

Incorporates practical exercises in the use of welding fabrication locating jigs and fixturing devices for welding, as well as for drilling, punching, forming, and to gauge dimensions for quality control. Covers jigs made from both standard fixtures and custom-built parts. Prereq: Blueprint reading, ability to perform basic layouts, and experience with arc welding processes, ability to lift 50 lb., or permission.

WFT 138 (2) S
Advanced Fabrication of Weldments

Experiences with a comprehensive group of activities involving all major fabrication areas including design and development, estimating, layout, cutting, forming, fit up, tack welding and product assessment. Fabrication of an approved project of the student's own design is encouraged. Prereq: All the 100 WFT courses or permission.

WFT 139 (3) S
Employee Rights & Responsibilities

Exploration of the welding fabrication workplace from the vantage of the employee's rights and accompanying obligations. Presents strategies for the establishment and maintenance of a time and effort commitment. Emphasizes record keeping and proper marketing of fabrication skills with a frequently updated impact résumé. Written reports are an important part of this course. Prereq: WFT 100, WFT 101, WFT 109, WFT 129, WFT 130, WFT 131 or permission.

WFT 140 (6) S
Industry Internship

Provides on-the-job training with college coordination to assist in analyzing and categorizing particular experiences in light of the large field of welding fabrication. While the particulars of internships vary greatly, there are common experiences that help develop confidence and technical and job-keeping skills. Report writing is a major part of this course. Prereq: All 100 WFT courses, ability to lift 50 lbs., and permission.

WFT 180 (10) S
Beginning and Intermediate Blacksmithing

Intro and development in the field of decorative forged metal work. Includes tool making, garden and household hardware and fixtures formed from steel, copper, bronze, and various finishes.

WFT 197 (6) S
Industry Internship

On-the-job training with college coordination to assist in analyzing and categorizing particular experiences in light of the large field of welding fabrication. While the particulars of internships vary greatly, there are common experiences that will help develop confidence and technical and job-keeping skills. Report writing is a major part of this course.

WFT 200 (1) S
Aviation Maintenance Welding

Overview presentation via textbook study, classroom discussion, laboratory demonstration and discussion, and hands-on student exercises in welding operations commonly used for aircraft maintenance and repair. Prereq: Enrollment in AMT program or permission.

WFT 297 (2-12) S
Special Topics in Welding Fabrication

A special topics course for an individual or group in welding fabrication field. Prereq: Permission.

WIRELESS TELECOMMUNICATIONS

WCT 101 (4) C Intro to Wireless Systems

Introduces wireless systems. Topics include: overview of the wireline telephony (PSTN), intro to wireless networks, the advanced mobile phone system (AMPS), wireless network architecture, wireless signaling, IS-41, Global System for Mobile Communications (GSM), personal communication services (PCS), satellite-based systems, and wireless data. Concepts covered in lecture will be applied in laboratory assignments.

WCT 120 (4) C Information Systems

Focuses on information networks and associated communication protocols. Includes network architecture, OSI layers, physical layer, LAN, WAN, wireless networks, fiber, PTSN, ATM, data link layer, UDP, TCP, AAL and application layer. Concepts covered in lecture will be applied in laboratory assignments. Prereq: Current enrollment in program or permission.

WCT 121 (5) C Engineering Electromagnetics I

Intro to electromagnetics. Covers electromagnetic concepts, charges (source) and fields, vector analysis, electrostatics, Gauss' Law and applications, magnetostatics, Biot-Savart Law, Lorentz force, Faraday's Law, Ampere's Law and Maxwell equations. Concepts covered in lecture will be applied in laboratory assignments. Prereq: MAT 116, MAT 177 or permission.

WCT 122 (5) C Engineering Electromagnetics II

Focuses on applied electromagnetics. Covers Maxwell equations, plane waves, transmission lines, practical lines, coaxial, twisted pair, microstrip, copalmar guides, waves on transmission lines, waveguides, antennas and radiation patterns. Includes paraboloid reflectors, antenna coupling, effective area, gain and polarization. Concepts covered in lecture will be applied in laboratory assignments. Prereq: WCT 121 or permission.

WCT 197 (2-8) C Work Experience

Work-based learning experience is provided through paid/non-paid employment in public and private wireless communications companies or vendor sites.

WCT 199 (1-3) C Seminars I-III

Seminars aimed at introducing current technology and practices in wireless communications. Topics are presented by instructors and industry representatives. Field visits and demonstrations may be scheduled during the class. Prereq: Current enrollment in program or permission.

WCT 225 (5) C Signaling

Focuses on signaling protocols. Includes wireless network architecture, channel associated signaling (CAS), common channel signaling (CCS), signal system 7 (SS7), signaling network elements, Message Transfer Part (MTP), network user part (ISUP), ISUP-Call processing, transaction capabilities application part (TCAP), database queries, IS-41-MAP, GSM-MAP. Concepts covered in lecture will be applied in laboratory assignments. Prereq: WCT 101 recommended.

WCT 227 (4) C RF Modulation

Course focuses on various RF modulations and their applications to wireless networks. Covers: analog modulations (AM, FM, and PM); digital modulations; spectral characteristics of digitally modulated signals; bandwidth considerations; optimum receivers; performance of optimum receivers; probability of error and Bit Error Rate; band-limited channels; Intersymbol Interference (ISI); and equalization. Concepts covered in lecture will be applied in laboratory assignments. Recommended: WCT 225.

WCT 230 (4) C Network Transport

Covers various network protocols and related technologies. Includes Fourier Transforms, periodic signals/Fourier series, Nyquist Theorem, Antialiasing filters, Sampling/quantization, reconstruction, PCM, companding, line encoding, spectral characteristics, error performance, digital multiplexing and traffic engineering. Concepts covered in lecture will be applied in laboratory assignments. Recommended: WCT 101.

WCT 231 (5) C Wireless Engineering

Topics covered include basic properties of transmitting and receiving antennas and antenna arrays, cell-site and mobile antennas, bandwidth budget, noise in communication systems, cell-site coverage for signal and traffic, interference, multipath fading, ray bending, and other propagation phenomena. Also covers propagation models, frequency reuse, frequency planning, Co-channel and Adjacent-channel interface, cell-site splitting and traffic engineering. Concepts covered in lecture will be applied in laboratory assignments. Recommended: WCT 101 and WCT 230.

WCT 232 (5) C Air Interface Protocols

Focuses on the IS-136 air interface protocol. Includes IS-136 protocol overview, analog control channel (ACC), analog voice channel (AVC), digital traffic channel (DTC), station call processing and identification/authentication. Concepts covered in lecture will be applied in laboratory assignments.

WOMEN STUDIES

WMN 140 (5) N Women in American History

Focuses on the role of women in American history, with emphasis on frontier women, the industrial revolution and women, women's rights movements and the new feminism.

WMN 200 (5) N Intro to Women Studies: Issues of Gender, Race & Class in Contemporary Women's Lives

Interdisciplinary, multicultural introduction to 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. Readings include both narrative and analytical approaches.

WMN 205/ISP 205 (5) N,C,S Women in the Global Context

Interdisciplinary introduction to the study of women in Asia, Africa, Latin America, the Middle East or indigenous women in some Western societies. Explores commonalities and differences among women in various societies and cultures. Focus on women from specific societies or regions depends on the instructor.

WMN 213/POL 213 (5) N Women & 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) 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 PSY 257.

WMN 298 (1-5) N Special Topics in Women Studies

Independent research and writing on selected women studies topics under faculty supervision.

WOOD CONSTRUCTION**WCO 110 (18) C**
Intro to Professional Woodworking

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
Construction & Maritime First Aid

11-hour first aid 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/quarter) C
Marine Carpentry

Covers employable skills in the boatbuilding trade. Includes instruction in fiberglass, wood construction and repair. Prereq: WCO 110.

WCO 140 (18/quarter) C
Carpentry

Four to five quarters of work dealing with residential construction and remodeling, including technical knowledge and hands-on experience. Prereq: WCO 110.

WCO 141 (18/quarter) C
Residential Remodeling

Covers specific techniques in residential remodeling including but not limited to: bathrooms and kitchens; stairs; scaffolding design and construction; sheetrock demolition, installation and repair; and siding application.

WCO 150 (18/quarter) C
Cabinetmaking & Fine Woodworking

Covers cabinetmaking and millworking, including technical instruction and shop experience. Includes precision work and production of fine furnishings. Prereq: WCO 110.

WCO 160 (3) C
Architectural Blueprint Reading & Cost Estimating for the Building Trades

Focuses on how to read and apply information gained from blueprints for cost estimating and developing cutting lists.

WCO 164 (2) C
Roof Framing & Stair Building

Develop and upgrade efficiency in stair and roof building with new techniques and skills.

WCO 166 (3) C
Furniture Design & Construction

Survey of furniture design trends in traditional and modern furniture.

WCO 167 (4) C
Fine Furniture

Course series designed for students with solid cabinetmaking skills who are interested in learning techniques suited to making gallery-level fine furniture.

WCO 170 (3) C
Boat Lofting

Fundamental course in the development of lofting and fairbody. Relationship of buttocklines, waterlines, sections and diagonals and how to interpret the lines and offsets for fairbody development.

WCO 180 (1) C
Use & Application of the Hand Router

Intro to the types and uses of the hand router. Includes basic operations, selection of router bits and an introduction to jigs and templates.

WCO 181 (2) C
Advanced Router Technique Jig & Template Use

Covers construction of specialty jigs and templates for the hand router; exploration and explanation of its many uses and applications.

WCO 197 (2-15) C
Work Experience - Wood Construction

Allows students to earn work experience credit in the wood construction field. Prereq: Permission.

WCO 299 (3-18) C
Special Projects in Boatbuilding**WORK EXPERIENCE/
COOPERATIVE EDUCATION
PROGRAMS**

See "Work Experience/Cooperative Education" N-67; S-105; C-145

WORLD LANGUAGES

See the "Languages & Literature" section, page 237.

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 recommends that students entering a World Language 101 class have attained eligibility for ENG 101. For information, contact the Humanities Division (N), Languages and Cultures Division (C), or College Transfer Division (S).

ZOOLOGY

See Anatomy & Physiology.