

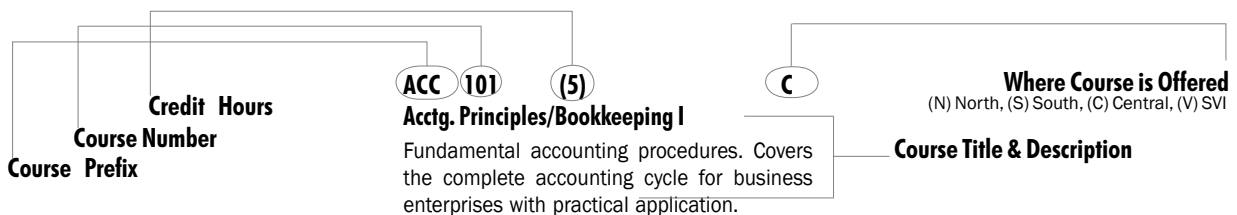
Combined Campus COURSE DESCRIPTIONS



In this section you will find brief descriptions of courses currently offered at the three Seattle Community Colleges and the Seattle Vocational Institute. A guide on pages 329-331 contains a cross-referenced list of course prefixes and names to assist you in locating courses associated with a particular program. Courses are updated on an ongoing basis, and the most current course information is available at:

www.seattlecolleges.edu

How to Read Course Descriptions



FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

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 "STUDY 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 for the associate's 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
Accounting Principles/Bookkeeping I

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

ACC 102 (5) C
Accounting 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
Accounting Principles/Bookkeeping III

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

ACC 108 (4) C
Microcomputer Accounting

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 Accounting/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 Accounting Computer Applications I

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 Accounting/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 Accounting Computer Applications II

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
QuickBooks

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

ACC 197 (2-5) N
Work Experience – Accounting

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

ACC 210 (5) N,C,S
Financial Accounting 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
Accounting 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 Accounting Fundamentals II

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

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

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 Accounting 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 Accounting 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 Accounting 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 Accounting

Basic principles, practices and governmental regulations (federal, Washington state and local) involved in business tax accounting. Includes filing returns, record-keeping, tax planning, registrations and business licenses Prereq: ACC 120 or ACC 220 or permission.

ACC 260 (5) N
Peachtree Accounting

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

ACC 261 (1-5) N
Advanced Computerized Accounting

Simulates real-world business practices and procedures using the latest computerized accounting software. Create a customized chart of accounts, hire employees and issue payroll, sell products and services to customers, buy from a range of vendors, and report to all federal, state, county, and city governmental agencies. Establish and use budgets and make loan applications. Prereq: ACC 131 or ACC 260 and ACC 210 or instructor permission.

ACC 262 (5) N
MAS-90 Accounting

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 263 (5) N
Computer Accounting with Great Plains

Study computerized accounting information systems through use of the Microsoft Great Plains Dynamics software. Learn a popular mid-range accounting application to understand principles and concepts behind computerized accounting. Intro to auditing computerized systems. Prereq: ACC 131 or 260 and permission, and ACC 210 or permission.

ACC 265 (5) C
Governmental Accounting

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 Accounting

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 Accounting

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

ACC 298 (1-5) C
Special Topics – Accounting

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

ACC 299 (1-5) C
Independent Study – Accounting

Independent study of selected accounting topics. Prereq: Permission.

ADULT BASIC EDUCATION**ABE 010 (1-15) 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, 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, intro to percents; intro 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. Practice listening, speaking, writing, and peer monitoring. Identify learning and work styles. Read, comprehend, evaluate and apply information from textbooks, fiction, policies and procedures manuals, purchase agreements. Write resumes, reports, and formal letters. Compute percentages, ratios, proportions, simple formulas and measurements, and interpret graphs and charts to solve problems.

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) N,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. (C,S) Teaches students the Basics of Microsoft Office applications. Self-paced with a high level of student/teacher interaction. (N)

ABE 054 (1-15) C
GED Preparation

Improve basic skills while using personal computers with specialized software designed to teach reading, writing, and math skills. Prepare to take the Asset Test and receive scores high enough to enter developmental education courses in English and math. Take practice tests and work with instructor until ready to take the actual test.

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

Prepares 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

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

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

Prepares 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, including communication and computation. Demonstrate occupational preparedness by completing a sixth individualized project based on employment or other specific experiences. Must complete these projects with 100% accuracy.

ALLIED HEALTH

Includes courses relevant to Emergency Medical Technician (EMT), Medical Assisting, Medical Office Assisting, Medical Transcription, Phlebotomy and Surgical Technician

AHE 101 (8) S
Front Office Medical Assisting Procedures

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

AHE 104 (9) S
**Medical Office Procedures and
Document Processing**

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

AHE 105 (10) S
Medical Terminology, Insurance Billing and Coding

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

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) S
Medical Coding and Insurance Processing

Intro to 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 include documentation, information flow, insurance forms and medical office policies. Must be taken concurrently with Software Applications for Health Care (AHE 124).

AHE 131 (8) S
Medical Coding, Insurance, Medi-Soft

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

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 145 (4) S
Medical Document Processing

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

AHE 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

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

AME 151 (5) 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.

AME 200 (5) N
Leadership & Social Change

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

AME 201 (5) S
Diversity and Social Justice

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

AMERICAN SIGN LANGUAGE

See Languages and Literature

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

Lecture and lab exercises cover fundamental principles and establish a basis for advanced study of anatomy and physiology and clinically related subjects in the paramedical fields. Prereq: BIO 101 or 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

Anatomy and/or Physiology 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

Focuses 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 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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

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 world view 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.

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. 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 focuses 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 there.

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. Focuses on the biocultural stages of evolution to modern hominid. Includes lectures and field sessions on site in East Africa, Kenya.

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

Intro to paleo-anthropological research in East Africa in "digging up" hominid evolutionary past. Approach to and analyses of archaeological 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 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 and samples, learn sewing terms, understand and work with patterns, layout and cutting techniques, industrial sewing machines and more.

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

For the intermediate beginner or those wishing to update their sewing skills. Use industrial sewing and pressing equipment to complete more complex sewing technique samples and a sample garment. Excellent preparation for those considering entry into the Apparel Design and Services Program. Prereq: ADS 096 or prior sewing experience with understanding of patterns, grainline and layout.

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

For the advanced beginner or those wishing to update their sewing skills. Use industrial sewing and pressing equipment to complete a more complex sewing sample and sample garment. Prereq: Completion of ADS 098 and/or intermediate sewing skills including sewing machine handling skills, ability to sew a variety of garments, understand construction terminology and pattern use and experience laying out and cutting garments.

ADS 101 (4) C
Construction Techniques for Professional Applications

Presents professional garment construction skills, 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

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

<p>ADS 103 (4) C Mass Market Production Techniques Application of skills learned in ADS 101 and 102. Using industrial production methods, acquire speed while maintaining accuracy. Make several garments incorporating industrial techniques.</p>	<p>ADS 205 (4) C Contemporary Tailoring An overview of both contemporary and traditional tailoring methods. Emphasis on accurate cutting, marking, assembling in units and precise sewing.</p>	<p>ADS 240 (3) C Computerized Pattern Grading Grade patterns using computer-aided design technology and the principles learned in ADS 215 and 226.</p>
<p>ADS 111 (4) C Design Through Flat Patternmaking I Development of different styles of garments, using flat pattern method. Create patterns by adding design lines, gathers, pleating and pockets. Development of sleeve and color variations.</p>	<p>ADS 207 (4) C Active Sportswear Construction Taken concurrently with ADS 228. Emphasizes construction techniques used in the garment industry. Produce more complex and advanced garments made from patterns developed in ADS 228.</p>	<p>ADS 243 (2) C Textile Technology & Design III Third of 3 courses. Integrate concepts and skills learned in ADS 141/142 and apply them to the development of surface designs for fabrics and garment silhouettes. Focus on design methodology, textile technology and apparel industry practices.</p>
<p>ADS 112 (4) C Pattern Development Through Draping Intro to pattern development using draping and the flat pattern method. Learn techniques for draping fabric to create patterns and basic flat pattern manipulations.</p>	<p>ADS 215 (4) C Intro to Pattern Grading for the Garment Industry Learn to grade patterns up to large sizes, and down to small sizes according to certain specifications and measurements, using the grid and shift method.</p>	<p>ADS 250 (6) C Final Line Design & Development Taking the line of clothing designed in ADS 229, produce garments, patterns and specification packages according to apparel industry standards. Includes presentation and display of final line at a portfolio show the last week of the quarter.</p>
<p>ADS 113 (4) C Design Through Flat Patternmaking II Continuation of ADS 111 and 112. Utilize existing pattern blocks to draft new garment designs.</p>	<p>ADS 221 (2) C Professional Alterations & Fitting II Builds on the basic skills acquired in ADS 122 using methods for altering more complex garments.</p>	<p>ADS 298 (1-5) C Special Topics – Apparel Design & Services Seminar on selected topics 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.</p>
<p>ADS 122 (2) C Professional Alterations & Fitting I First of a two-part series on professional garment alteration techniques as well as methods for evaluating fit and achieving well fitting garments. Employ business management practices, including recordkeeping and client relations.</p>	<p>ADS 226 (4) C Intermediate Pattern Grading Application of knowledge and skills acquired in ADS 215 to more complex and difficult patterns. Intro to computerized pattern grading.</p>	
<p>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.</p>	<p>ADS 227 (4) C Pattern Design for Ready to Wear Design patterns and garments from line drawings. Emphasis on producing patterns with speed and accuracy to apparel industry standards.</p>	
<p>ADS 141 (2) C Textile Technology & Design I First of 3 courses on basic fiber and fabric information for the apparel industry. Research fibers, fabric characteristics and the history of textiles.</p>	<p>ADS 228 (4) C Pattern Design for Active Sportswear Taken concurrently with ADS 207. Design patterns using industry standards from samples and sketches Emphasis on patternmaking for active sportswear and outerwear.</p>	
<p>ADS 142 (2) C Textile Technology & Design II Second of 3 courses on basic color theory, dye and print technology as it applies to the apparel industry.</p>	<p>ADS 229 (2) C Design a Line Explore different elements of designing a line of clothing to industry standards. Intro to illustration and drawing techniques. Develop boards for line presentations. Design a line for production in ADS 250.</p>	
<p>ADS 197 (1-5) C Work Experience – Apparel Design & Services Earn work experience credit in apparel design. Prereq: Permission.</p>	<p>ADS 230 (2) C Portfolio & Resume Development Produce a professional portfolio and resume. Learn job search and interviewing strategies.</p>	
		<p>ART</p> <p>ART 100 (5) N,C,S Intro to Art Historical backgrounds and design fundamentals that have affected art through slide lectures, reading and practical studio applications.</p> <p>ART 101 (5) N,S Design Studio series in the fundamentals of two-dimensional art with problems based on line, space, texture, shape and color theories. Includes practical applications of theories to design. Required for art majors.</p> <p>ART 102 (5) 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</p> <p>ART 103 (5) C,S Design Tutorial in individual problems in design. Prereq: Permission.</p>

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 110 (5) N
Practical Scientific Illustration

Application of illustration, design, and presentation principles and techniques for effective visual communication of science-based information. Both traditional and contemporary (e.g. digital) tools and media will be used to create and distribute scientific data for a variety of target audiences. Basic computer skills and an interest in applied sciences recommended.

ART 111 (5) N,C,S
Drawing

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

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

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

ART 114 (5) N
Intro to Digital Photography I

Intro to digital camera use, photography basics and Photoshop editing. Students must provide their own digital camera with 3 or more mega-pixels, Auto, Auto-P, Aperture Priority, Shutter Priority, and full manual Exposure Modes. Students can expect to have or buy accessories costing approximately \$175-\$599.

ART 115 (5) N
Digital Photography II

Covers more photography basics involving lab, lighting, models and presentation. Camera should have 3 or more megapixels. Auto, Auto-P, Aperture Priority, Shutter Priority, and full manual Exposure Modes. Students can expect to have or buy accessories costing approximately \$175-\$599. Prereq: ART 114 or permission.

ART 121 (5) 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. Recommended: Some drawing background.

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

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

ART 123 (5) N,C
The Painterly Print: Monotype & Monoprint

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

ART 163 (3) S
Intro to Still Photography

Covers basic photographic techniques using 35mm photographic equipment. Includes camera, exposure, lighting, composition, black and white darkroom work, and digital imaging.

ART 166 (5) S
Video Art I

Focuses on the art of digital video editing and shooting using Adobe Premiere. Explore in depth digital video editing, effects, transitions, graphics animation, sound and music integration, selecting format, basic DVD authoring and distribution strategies and options. Create a finished digital video film. Also offered as CTN 166. Recommended: ART 210.

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 (5) 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 (5) N,C,S
Painting

Further development of color and composition. Individual instruction. Prereq: ART 201 or permission.

ART 203 (5) N,C,S
Painting

Further studies in color, composition and subject matter. Individual instruction. Prereq: ART 202 or permission.

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

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

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

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 (5) N,C,S
Water Color Painting

Individual watercolor projects in series. Prereq: ART 206 or permission.

ART 210 (5) 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. (See also ART 214.)

ART 211 (5) 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 (5) 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 (5) 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 (5) N,C,S
Advanced Computer Art

Continuation of ART 210. Explores creative, technical, and aesthetic concepts and problems for comprehensive fine art and commercial projects. Prereq: ART 210.

ART 215 (5) N,C,S
Advanced Computer Art II

Continuation of ART 214. Advanced projects and introduction to advanced programs. Prereq: ART 214.

ART 216 (5) S
Multimedia Art I

Covers the key artistic concepts and practical skills in multimedia design and production. Explore the fundamentals of multimedia design, linear and nonlinear storytelling, and the role of interactivity from aesthetic and technical viewpoints. Includes a survey of industry-standard multimedia production tools with primary development work using Macromedia Flash. Build several interactive projects using Flash. Also offered as CTN 164. Recommended: ART 210.

ART 217 (5) S
Multimedia Art II

Bring individual multimedia design and interaction scripting skills to the next level. Technical focus is on Macromedia Flash development using complex animation, advanced design and action scripting for increased interactivity. Covers event/event handler logic, creating variables, setting values and using Flash to create animation and effects for video. Also offered as CTN 205. Prereq: ART 216 or CTN 164.

ART 221 (5) N,S
Ceramic Art

Beginning 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 (5) N,S
Ceramic Art

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

ART 223 (5) N,S
Ceramic Art

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

ART 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, Daoism, and Confucianism as reflected in the arts, history and culture.

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

Enameling, intermediate stone-setting, surface enrichment techniques, shop business practices, tool-making, and jewelry repair. Make small sample pieces using most techniques. Emphasis on use of techniques to produce a significant project, with instructor approval. Prereq: ART 282.

ART 285 (4) N
Metal Techniques For Small Scale Sculpture

Metalsmithing techniques used to create functional and sculptural objects. Learn the physical properties of metal and create objects that express personal images and creative thoughts. Basic metalworking techniques used to create metal sculpture, hollowware and model making. Field trips to some metal fabrication studios included.

ART 290 (5) N
The Art Business

Fundamentals of the business aspects of art, including designing and packaging the portfolio for A.F.A./C.F.A. degrees, photographic artwork, building a resume, 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 and studio lighting for color, sync-sound recording and editing techniques.

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 101 (5) N
The Solar System

Survey of planets of the solar system with emphases on recent space exploration and the comparative evolution of the Earth and the other planets. Includes light optics, telescopes, and the history and development of astronomy. Night observing sessions required as part of the lab. Prereq: MAT 098 or higher with 2.0 or permission. Recommended: test into ENG 101 or higher.

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. Discuss 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

Covers EPA, state and local environmental laws and regulations and identifies 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

Learn to remove overspray and perform final finishing, clean interior and exterior of vehicle, and apply decals and pinstripes. Prereq: Permission.

ABR 093 (0) S
Preparing for Painting

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

ABR 112 (3) S
Safety & Environmental Practices

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

ABR 113 (8) S
Welding & Cutting

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

ABR 121 (4) S
Panel 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

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

ABR 123 (4) S
Metal Straightening

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

ABR 124 (4) S
Body Fillers

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

ABR 131 (2) S
Understanding Automotive Finishes

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

ABR 132 (6) S
Preparing the Surface for Refinishing

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

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

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

ABR 161 (5) S
Damage Analysis

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

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN **Watch Technology**

NAME TO PREFIX
Watch Technology **HIN**

ABR 151 (2) S
Metal Straightening I

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

ABR 152 (2) S
Body Fillers

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

ABR 153 (2) S
Understanding Auto Finishes

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

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

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

ABR 163 (5) S
Quarter Panel Replacement

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

ABR 164 (2) S
Moveable Glass & Hardware

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

ABR 171 (7) S
Straightening Structural Parts

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

ABR 172 (7) S
Full & Partial Panel Replacement

Understand full or partial panel replacement, uses of various types of joints used in sectioning, repair or replacement of a complete rail section, rocker panel, A and B pillar, floor pan, truck floor and full body section. Prereq: ABR 111, 112, and 113 or permission.

ABR 173 (2) S
Restoring Corrosion Protection

Covers safely working with chemicals, corrosion and its effect 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

Learn to diagnose and repair electrical and mechanical systems problems.

ABR 183 (3) S
Mechanical Systems

Focuses on repairing a vehicle involved in a collision, often involving removing mechanical parts, including suspension, steering, drive train 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

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 instructional link between classroom and on the job experience; reinforces and documents on-the-job learning experiences; and provides opportunities for faculty and student interaction.

ABR 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

Note: Courses include instruction in safety, environmental awareness, human relations and work ethics.

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. Includes battery, starting and charging system operation and testing. Prereq: AUT 100 or equivalent and MVM 100 or permission.

AUT 104 (4) S
Automotive Electronics

Covers electrical accessories on the vehicle including lighting, power windows, door locks, seats, windshield wipers and defogger. Prereq: MVM 100 or equivalent, AUT 100 and 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, 102, and 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. Prereq: MVM 100, basic math skills, at least 9th grade 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. Prereq: MVM 100, AUT 110, basic math skills, at least 9th grade 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. Prereq: MVM 100, AUT 110, basic math skills, at least 9th grade 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. Prereq: MVM 100, basic math skills, at least 9th grade 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. Prereq: MVM 100, basic math skills, at least 9th grade 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. Prereq: MVM 100, basic math skills, at least 9th grade 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, at least 9th grade reading level or permission.

AUT 124 (4) S
Tires and 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, at least 9th grade reading level or permission.

AUT 126 (3) S
Basic Brake Systems

Intro 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, at least 9th grade 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, at least 9th grade reading level or permission.

AUT 128 (4) S
Automotive Engine Diagnose/Remove and Replace

Covers diagnosing engines for compression. Instruction in safety, environmental awareness, human relations and leadership are taught as an integral part of this unit of study. Prereq: MVM 100 or permission.

AUT 130 (8) S
Automotive Engine Rebuild

Covers engine disassembly, cleaning of engine parts, inspection and measuring of engine components, cylinder head rebuilding, overhauling engine blocks and reassembly of an automotive engine. Instruction in safety, environmental awareness, human relations and leadership are taught as an integral part of this unit of study. Prereq: MVM 100 and AUT 128 or permission.

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

Preparation for the automotive technician field. Covers exposure to safely removing and replacing engines and components aimed at newer vehicles. Emphasis on front wheel drive design, preparation, and customer expectations in labor and time management. Prereq: MVM 100, AUT 128 and 130 or permission.

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, 102, 104 and 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, 102, 104, 106 and 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, 102, 104, 106, 136 and 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, 102, 104, 106, 136, 138 and 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

Intro to 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

Covers 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

Covers 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 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 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, including classroom and laboratory practices.

AUT 299 (2-18) S
Special Topics

A special topics automotive course on an individual or group study basis. Prereq: Permission.

AVIATION MAINTENANCE TECHNOLOGY**AMT 111 (17) S**
Basic Science for Aviation

Provides a firm foundation for maintenance on both small and large aircraft. Covers aircraft terminology, practical mathematics, basic physics, aircraft drawing and interpretation of diagrams. Includes 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. Also covers nondestructive inspection, aircraft systems, components, ground handling and servicing procedures, Federal Aviation Regulations, maintenance records, publication, weigh and balance control. Prereq: High School Completion/GED or equivalent.

AMT 112 (17) S
Basic Electricity for Aviation

Introduces basic concepts of electricity and magnetism; the circuit properties of resistance, inductance and capacitance; methods of power generation for alternating and direct current systems and power utilization. Emphasis on principles and practical application, keeping mathematics to a minimum. Learn to repair and adjust generators, alternators, motors and control units, 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. Provides realistic exposure to approved airframe structural repair practices. Includes 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 theory, operation and maintenance of the internal combustion reciprocating engine, including dismantling, inspection, repair or replacement of parts and partial reassembly of an aircraft powerplant. Covers theory, operation and overhaul of gas turbine engines. Intro to current maintenance practices and inspection of the compressor section, burner section and turbine section. Also includes 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

Intro to five basic airframe systems and their components: hydraulic-pneumatic power, landing gear, ice and rain control, cabin environmental control, and fuel systems and management. Prereq: AMT 113 or permission.

AMT 215 (17) S
Advanced Airframe

Refines basic skills and concepts 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. Prepare for the FAA Airframe exam. Prereq: AMT 113 and 214 or permission.

AMT 234 (17) S
Powerplant Systems & Components

Covers six systems: engine fuel system and fuel metering system, carburetion and fuel injection; ignition system for both reciprocating engines and turbine engines; turbine engine electrical starting systems; powerplant lubrication systems; electrical and mechanical indicating systems; and powerplant ice and rain control systems. Prereq: AMT 133 or permission.

AMT 235 (17) S
Advanced Powerplant

Learn about aircraft propellers used with both small and large piston or turbo-prop engines. Includes engine fire detection and extinguishing, engine electrical systems and turbine engine pneumatic starting systems. Covers reciprocating and turbine engine test run and run-in and troubleshooting, powerplant inspection methods and techniques. Reviews carburetion, ignition, basic powerplants, lubrication, propellers, electrical systems and weight/balance control. Emphasis on FAA regulations, airworthiness 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 by arrangement.

AFT 101 (5) S
Private Pilot Ground School

Provides comprehensive instruction in the basics of flight and aircraft operation. Intro to aerodynamic principles and their effects on aircraft operation. Includes flight safety and orientation to airports. Learn how to obtain and interpret weather reports, forecasts, and charts. Prereq: Permission.

AFT 110 (6) S
Private Pilot Flight Instruction

Covers training needed for 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 elements of flight, 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. Prereq: Permission.

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. Includes the air traffic control system; use of charts; regulations of instrument flight; IFR flight planning; departure, in-route, arrival and emergency procedures; and meteorological conditions. Prereq: Permission.

AFT 210 (6) S
Instrument Flight Instruction

Covers flight and ground (simulator) training to qualify to add 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; Air Traffic Control procedures and regulations; instrument approach and missed approach procedures; holding patterns; and IFR cross-country flight. Prereq: Permission.

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. Study advanced systems appropriate to complex airplanes and learn to execute the advanced flight maneuvers required for Commercial Pilot certification. Prereq: Permission.

BAKING

See Hospitality/Food Production/Culinary Arts.

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

Intro to biological principles and concepts; cell biology; application of biological knowledge to problems of society; and development of an awareness of science. Lab included. For biotechnology and non-science majors.

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

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

Central: Survey of basic biological concepts with emphasis on biological molecules, cell structures and processes; diversity, phylogeny and ecology of living organisms; and an exploration of molecular genetics. Lab fee.

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

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. Stresses other physiological differences between animals and plants. 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. Includes 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 107 (5) N,C,S
Intro to Comparative Animal Behavior

Overview of current thinking and research in the science of animal behavior, including a brief history of the development of animal behavior as a science. Focuses on evolutionary principles and how they influence the behavior of animals. Discover how animals learn and how learning and instinct shape behavior. Explore how strategies employed by different species affect survival. Gain insight into human behavior from a new perspective, and understand why and when sociality and apparent altruism can be advantageous to animals.

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

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

BIO 130 (5) N
Northwest Ornithology

Intro to biology and ecology of Northwest bird species. Combines readings, experiments and field study. Local field trip sites available throughout the Pacific Northwest.

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

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 an historical perspective. Includes influences in supermarkets from the Native American population and immigrants from Europe, Asia, Africa, South America and the Pacific Islands. Covers the physiological and metabolic aspects of each culture's nutrition.

BIO 161 (5) N,C
Human Genetics

Intro to genetics. Covers fundamental 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, including cloning, genetic testing, genetically modified plants and animals, gene therapy, forensics and biotechnology. Includes lab.

BIO 195 (1) C
Biotechnology Seminar I

Overview of history, scope, and career opportunities in biotechnology. Prereq: Concurrent enrollment in Biotechnology program.

BIO 196 (1) C
Biotechnology Seminar II

For students in the last quarter of the Biotechnology program. Examination of FDA regulations, patenting, trademarks and copyright law. Review and examination of FDA regulations, patenting, trademarks and copyright law. Prereq: Concurrent enrollment in Biotechnology program. Permission of instructor.

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
College Biology

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
College Biology

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
College Biology

North: Introduces anatomy and morphology of seed plants, survey of the plant kingdom (bacteria through angiosperms including life histories, unique characteristics), survey of and basic plant processes (photosynthesis, transport, hormonal controls, development, and differentiation). Lab fee. Prereq: BIO 201 or a grade of 2.0 or better

Central: Final quarter in series. Emphasis on evolution, ecology and biological principles of monera, fungi, protista and plants, including their physical, anatomy, growth process and diversity. Emphasis on diversity and phylogeny of living organisms, evolutionary principles, and ecology. Also addresses anatomy, physiology, growth, and reproduction of terrestrial plants. Lab fee. Prereq: BIO 201 with a grade of 2.0 or better.

South: Final quarter in series. Emphasis on evolution, ecology, and biological principles of algae, fungi, and plants, including their physiology, anatomy, growth process and diversity. Lab free. Prereq: BIO 202 with a grade of 2.0 or better.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

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.

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

Covers 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. Covers 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. Lab course.

BOTANY

BOT 110 (5) N,C,S
Plants & People

Practical application 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

North: Introduction to botanical diversity, anatomy, morphology, and evolution. Includes discussion on viruses, bacteria, fungi, algae, and seed plants with emphasis on life histories and unique characters used in classification. Lab fee.

Central: Introduction to the diversity and life processes of plants. Emphasizes anatomy, physiology, growth, reproduction, evolution, ecology, diversity and other aspects of green algae and terrestrial plants. Lab fee.

South: 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

North: Introduces the classification system used in identifying seed plants and characteristics of common conifers and flowering plants. Labs emphasize dichotomous keys in plant identification and collection techniques. Lab fee.

Central: Introduction to classification and diversity of terrestrial plants. Emphasizes the use of fresh specimens, laboratory identification, and drawing of the common plant families of the Pacific Northwest. One Saturday field trip. Lab fee.

South: 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, intro to computers (Windows, Word), and intro 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) 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) N
Personnel/Human Resource Management

Covers organizational structure of the modern business office; recruitment and training; management of human resources; employee rights and ethical issues; legal responsibilities; and team-oriented collaboration for human relation dynamics.

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. May be taken for S/NC or decimal grade and may be repeated for credit. Prereq: Recommended keyboarding of 25 wpm. (C) - BUS 104 or BUS 105 (N).

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 essential to survival in today's customer-driven business. Marketers must demonstrate value, quality, and service exceeding customer demands while maintaining channel relationships and meeting company goals and objectives. Prereq: Bus 101 or prior business experience.

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 audit or decimal grade.

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); Placement at MAT 085 level on COMPASS test (C).

BUS 117 (2) N,C,S
Records Management

Gain an understanding of the components of correct document and information management. Learn the rules as established by the Association of Records Managers (ARMA) for correctly applying filing guidelines to manual, alphabetic, numeric, geographic and subject filing systems.

BUS 118 (5) N
Project Management Intro & Overview

Overview project management from a business perspective, including project estimation, feasibility, planning, risk management, contingency planning, scheduling and control. Perform and complete a viability study including alternatives. Prereq: IT 101 or BUS 169; BUS 236.

BUS 119 (3) N
Leadership and Management Skills

Learn to integrate people, projects and sponsors to complete tasks and deliverables on time. Covers effective leadership, leading vs. managing, and styles of each. Includes responsibilities, team development and dynamics, personality types, influence without authority, conflict management, and organizational and cultural influence on a project. Prereq: IT 101 or BUS 169; BUS 236.

BUS 120 (5) S
**Business Communications/
 Writing Improvement II**

Develops business and accounting specific occupational-technical vocabulary usage and pronunciation. 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 123 (5) N
Word for Business

Create and edit business documents such as letters, memos, reports, basic tables and charts, electronic forms, outlines, mail merges and column text. Learn to share work for comments, revisions and merging, and to integrate other Office applications. Prereq: BUS 105 or permission.

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 126 (2) N
PowerPoint for Business

Learn Microsoft PowerPoint to create exciting, dynamic visuals to accompany your business and personal presentations. Create, change, customize and save PowerPoint files. Add and manipulate graphics and apply appropriate design elements to presentations. Prereq: ENG 097/098 placement or ENG 095/096 completion.

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. Intro to oral communication skills essential to successful giving/receiving of information and cultural aspects of the communication process. Prereq: Satisfactory English placement test score (N,C), ASSET: W&R=46, SLEP: combined=65, 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. Complete meeting preparation tasks. Prereq: BUS 131 with 2.0 or higher.

BUS 139 (18) S
Customer Service/Call Center Training

A short-term program designed to provide skills needed for employment in a call center environment. Emphasizes practical skill development and application of policies and procedures within the company guidelines.

BUS 140 (5) N,C,S
Customer Relations

Develops skills to identify and resolve customer complaints, handle difficult customers, and utilize effective verbal and nonverbal communication methods. Learn appropriate professional use of various electronic media and contribute positively to the service culture of an organization. Examines future trends and changes in work environments.

BUS 147 (5) N
Intro to Legal Systems

Learn the legal systems and basic legal forms. Become familiar with courts, their operational structure and the roles of bailiffs, clerks and other support offices. Learn how small claims, trial and appellate courts conduct proceedings and use forms (pleadings).

BUS 152 (5) N
Entrepreneurship I

Intro to product selection, channels of distribution, pricing, marketing and selling strategies. Write the product, pricing and marketing sections of a business plan.

BUS 153 (5) N
Entrepreneurship II

Intro to financial planning, financing, and operations processes. Review forecasting assumptions, prepare financial needs projections, study new business financing and prepare plans for growth and contingencies. Complete the business plan.

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

A sampler course for a new certificate program. Overview of the principles of electronic commerce; the origin and growth of e-commerce; a comparison between e-commerce and traditional commerce; a study of the relationship of e-commerce to the Internet; electronic money; electronic contracts, legal issues, stock trading; catalogs, accounting, auditing and taxation, international aspects and e-marketing. Prereq: 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. Prereq: BUS 156 or concurrent enrollment.

BUS 158 (5) N
e-Research & 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. Prereq: BUS 131 and BUS 156 or concurrent enrollment.

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

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. Prereq: BUS 131 and BUS 158.

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 or concurrent enrollment.

BUS 162 (5) N
e-Architecture & Technologies

Reviews the basic technology architecture requires to deliver e-business applications via the Internet. From a supervisory perspective, 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 or concurrent enrollment. 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 or concurrent enrollment. Computer fee.

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

Focuses 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

Intro to 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) 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 email 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) C,S
**Applied Business Statistics –
A Decision Making Process**

Intro to 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 177 (5) S
Spreadsheets

Prepares students for the Microsoft Office Specialist (MOS, formerly MOUS) Core Professional Certification exam for MS-Excel. Emphasis on using Excel software tools necessary to pass the core exam; however, passing the MOS exam is not required to pass the course. The certification exam is available at a reduced fee through the Testing Center at South campus. Prereq: BUS 169 or equivalent.

BUS 178 (5) C
**Introduction to Web Design /
Development with Dreamweaver**

Focuses on website design, concepts, and processes necessary to develop, maintain and upload a commercial website to a worldwide web server through the use of Dreamweaver software. Covers issues relating to design, color, graphics, sound, and navigation. Prereq: ability to keyboard 25 wpm, plus one of the following: BUS 170, MIC 101, or MIC 150.

BUS 179 (5) S
Word Processing

Prepares students for the Microsoft Office Specialist (MOS, formerly MOUS) Core Professional Certification exam for MS-Word. Emphasis on learning to use the Word software tools necessary to pass the core exam; however, passing the MOS exam is not required to pass the course. The certification exam is available at a reduced fee through the Testing Center at South campus. Prereq: BUS 169 or equivalent.

BUS 180 (5) S
Advanced Microsoft Office

Intro to 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 or permission.

BUS 181 (5) 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 computer practice using a database software simulation. Intro to Microsoft Access database features. Prereq: BUS 104 or equivalent. Prereq: BUS 105 or equivalent at North.

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.

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

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.

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.

BUS 204 (5) N
Office Procedures

Intro to organization, planning and setting priorities. Covers mail handling, travel arrangements, composing and typing correspondence. Emphasis on leadership development. Prereq: BUS 131 BUS 270, and BUS 182 or concurrent enrollment.

BUS 207 (5) N
Intro to Legal Resources & Office Procedures

Study the concepts of law and evidence; the different types of laws (constitutional, statutory, regulatory and case/common); how laws are made; how they impact one another; and which laws prevail in conflicts. Learn to access and use codes, reports, digests, and find needed non-legal information. Covers operation of law firms and legal agencies.

BUS 209 (3) N
Producing Deliverables – Technical Writing

Learn to create written deliverables. Includes writing a Request for Proposal, evaluating RFP responses, writing the Evaluation Report, creating different types of documentation and day-to-day written communication between teams, management and project sponsors. Prereq: IT 101 or BUS 169; BUS 236.

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

Statistical methods and their application to business and economic data. Fulfills QSR requirement for A.A. degree. 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 229 (5) N
Project Management Tools, Techniques and Control

Learn to define and sequence project tasks using MS Project. Develop and complete a project plan and budget that includes resource allocations, critical path, dependencies, estimating, risk management, contingency planning, implementation and evaluation. Prereq: IT 101 or BUS 169; BUS 236.

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. Prereq: BUS 131. Recommended: BUS 104 or BUS 105 (N).

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.

BUS 236 (3 OR 5) N
Interpersonal Communications for the Workplace

3 credits: Covers effective interpersonal communication in the workplace: styles; effective ways to adapt communication to meet the needs of co-workers, bosses and customers; cultural diversity; non-verbal communication; individual influences; and techniques for dealing with negative situations and individuals. Encompasses the American Electronics Association guidelines for the skills most valued by technology employers. 5 credits: also covers business presentations, employment interviews, job search skills, and business meeting techniques.

BUS 239 (5) S
Integrating Office Applications

Utilizes advanced features of MS-Word and MS-Excel to integrate text, data, and graphics in the preparation of business-related projects. Prepares for the Microsoft Office Specialist (MOS, formerly MOUS) Expert Professional Certification exams for MS-Word and MS-Excel; however, passing the MOS exams is not required to pass the course. The certification exam is available at a reduced fee through the Testing Center at South campus. Prereq: BUS 170, 177, and 179.

BUS 240 (5) N,C
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, website development and licensing agreements; employment issues including discrimination and monitoring of employee email; 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.

BUS 245 (5) N
Global Marketing

Examine the many facets of global marketing and its impact on the global consumer in an era of unmatched consumer awareness and heightened cultural identity.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

BUS 249 (3) N
Real World Project Management Experience

Work on a "real world" project in a medical, construction, aerospace or other organization that employs Project Managers. Contact Career Services within 2 weeks and develop a resume and cover letter. Prereq: BUS 118, 119, 209, and 229.

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.

BUS 255 (5) N
Business Ethics

Addresses the fundamental questions of ethical and moral behavior in corporate boardrooms and company meeting rooms, in organizations large and small. Examines corporate culture, corporate governance, stakeholder responsibility, social responsibility, and the importance of business ethics in a global economy.

BUS 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. 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. Use Access to design customized tables and merge to a Word project. Learn finer points of PowerPoint Presentation graphics such as using master slides, customizing and animation. Prereq: BUS 169 or permission.

BUS 270 (5) N
Using Computers in Business III

Develop skills to manage projects effectively using advanced MS Office features and in selecting the right application to do the job. 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 email. Prereq: BUS 269 or permission.

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.

BUSINESS COMPUTERS

See SVI program A+ Certified Service and Network Technician.

CHEMICAL DEPENDENCY

See Social and Human Services.

CHEMISTRY

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

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

CHE 101 (5) N,C
Fundamentals of Inorganic Chemistry

Fundamental inorganic chemistry, including bonding, stoichiometry, gas laws, and acid/base topics. Of particular interest to Health Science and Biotechnology students. Lab included. Prereq: One year of high school algebra or MAT 085.

CHE 101 (5) 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
Fundamentals of Organic Chemistry

Organic chemistry and introduction to biochemistry. Lab included. Prereq: CHE 101.

CHE 102 (5) S
Chemistry

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

CHE 103 (5) N,C
Fundamentals of 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 103 (5) 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 lab experiments 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. Covers 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. Includes chemical mathematics, basic atomic structure, chemical bonding, chemical equation balancing and mole concept, and chemical stoichiometry. Fulfills QSR requirement for A.A. degree. Prereq: MAT 098.

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

A three-quarter sequence introducing basic concepts of chemistry. Lab included each quarter. Covers structure and bonding chemical reactivity: physical measurement, stoichiometry, 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, (pre-medical, pre-dental, pre-engineering) Several pre-engineering and other programs require only CHE 140 and 150.

All 3 courses fulfill QSR requirement for A.A. degree. CHE 140 Prereq: CHE 139 or placement and MAT 122. Passing score on placement exam may substitute for CHE 139. For North: CHE 139 or HS Chemistry and MAT 102. CHE 150 Prereq: CHE 140. CHE 160 Prereq: CHE 150.

CHE 191/192 (9 EA.) 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. Both courses fulfill QSR requirement for A.A. degree. CHE 191 Prereq: CHE 139 or passing score on chemistry placement exam and MAT 102 or 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 221 (5) C
Quantitative Analysis

Theories, principles, and methods of gravimetric and volumetric analysis, application of instrumental methods as applied to qualitative analysis. Lab experience with wet and instrumental chemistry included. Prereq: CHE 160 or CHE 192.

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

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

CHILD & FAMILY STUDIES**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. Addresses guidance and managing difficult behavior. 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 (3) 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 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, education, 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 a program addressing these needs. Use of Portfolio Assessment. Gain understanding of how the needs identified relate to a larger societal context. Covers Participatory Action Research 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 with 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

Includes 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. Focuses 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 (3) 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 (2) C
S.T.A.R.S. Seminar

Meets the new 20-hour State requirement and learning outcomes for Washington State Training and Registry System (S.T.A.R.S.). This course will cover child growth and development, child guidance, health and safety; and professionalism based on the Adult-Size Guide to Child-Sized Environments. The Child Care Licensing Handbook.

COMMUNICATION

NOTE: 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/SPE 100]

Intro to communication as a transactional process, with attention to personal, cultural, group and public communication. Covers verbal and nonverbal messages, listening, self-concept and perception. Prereq: Placement into ENG 101.

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

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

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

Covers 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

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

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

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

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

Interpretation as an artistic process of studying literature and other texts through individual and group performance, and sharing that study with an audience. 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. Practical professional orientation. Prereq: Placement into ENG 101.

CMN 195 (5) N
Media Management & Operations

Explores accepted theories, alternative perspectives and actual practices of organizational communication, administration and decision-making within media institutions. Covers internal and external participants, problems, solutions and choice opportunities shaping corporate and non-profit behavior, performance and change. Prereq: Placement into 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,S
International Communication and Relations

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

CMN 235 (5) N
Media Research, Marketing and Sales

Overview of the needs, opportunities and methods for measuring phenomena within human and media communication, specifically applied to integrated marketing and sales promotion. Includes objectives, designs and processes of inquiry; variables and measures in communication; measuring instruments and problems in sampling; and statistical analyses of data. Prereq: BUS 210 and ENG 101.

CMN 245/HUM 200 (5) N,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,S
Writing for Organizations & the Media

Basics of writing effectively for organizations, print, and electronic media. Communication strategies, formats, and media used by individuals within organizations to convey messages to internal and external audiences. Create individual writing portfolios. Prereq: ENG 101.

CMN 265 (5) N
Media Relations & Ethics

Covers current trends in, and ethical issues about, the generation, maintenance and dissemination of effective communications which define and promote corporate and non-profit media organizations. Study their relationships with internal cultures and external communities, including investors, shareholders, clients, analysts, government organizations, other media and consumers. Prereq: ENG 101, ENG 102 or BUS 131, CMN 195.

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

Survey of communication issues and applications emerging from the ongoing development and utilization of digitized media. Individuals and groups focus on functioning effectively within the frontier environment of cyberspace. Write and prepare material for digital formats. Prereq: ENG 101, ENG 102; or permission; access to the Internet; and basic email 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 290 (5) N
Media Project Management Practicum

Learn guidelines for managing client accounts and techniques for coordinating media productions. Emphasizes critical thinking, problem solving, managerial and creative skills applied within various professional situations and media formats. Prereq: Placement into ENG 101.

CMN 291 (5) N
Internet & Print Practicum

Integrate scholarly and professional analyses of Internet and print media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating online and print media productions. Increase critical thinking, problem solving, managerial and creative skills for developing and presenting online and print material. Prereq: BUS 229 or CMN 130, ENG 101.

CMN 292 (5) N
Radio & Audio Practicum

Integrate scholarly and professional analyses of radio and other audio media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating aural media productions. Increase critical thinking, problem solving, managerial and creative skills for developing and presenting aural material.

CMN 293 (5) N
Television & Video Practicum

Integrate scholarly and professional analyses of television and other video media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating visual media productions. Increase critical thinking, problem solving, managerial and creative skills for developing and presenting visual material.

CMN 294 (5) N
News & Public Information Practicum

Integrate scholarly and professional analyses of news and public information media in various theoretical and practical contexts. Learn guidelines for managing client accounts and techniques for coordinating informational media productions. Increase critical thinking, problem solving, managerial and creative skills for developing and presenting informational material.

CMN 295 (1-5) N,C,S
Studies & 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

See Computing Technology, Information Technology, Network Technologies and Web Development.

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 email and the Internet.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

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

Covers computer topics chosen by the instructor and/or division. Topics may 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 110 (5) N,C,S
Intro to Computer Programming

Overview of computer program design and problem solving with a focus on problem analysis, program development, testing and debugging. Use decision and loop structures to develop a variety of programs to solve scientific and technical problems. Programming language used may vary. Fulfills QSR requirement for A.A. degree. Prereq: MAT 098 or MAT 106.

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

Learn to electronically find, share and access scientific information on the Internet and use applications to collect, analyze and present data. Create a website, handle email, compress and archive files and write simple programs. Includes hardware, software, networks and privacy. Prereq: MAT 098.

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

Covers the general principles of modern programming, including how to design, implement, document, test and debug computer programs. Based on Java. Covers objects, messages, expressions, statements, methods, classes, conditionals, iterations, arrays and collections. Fulfills QSR requirement for A.A. degree. 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. Fulfills QSR requirement for A.A. degree. 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 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

Also see Information Technology, Network Technology and Web Development.

CTN 101 (5) S
Intro to Computing Technology

Intro to computer hardware components, file systems and their administration and network topologies and components. Covers the function and operation of each major PC hardware component and gives an overview of the role of operating systems. Learn file manipulation skills and batch file writing. Covers of basic network topologies and management schema.

CTN 104 (5) S
Technical Applications of Spreadsheets

Intro to electronic spreadsheets and spreadsheet software (Excel). Emphasis on concepts and commands necessary to create a spreadsheet, such as entering, saving and printing data. Understand types of problems and practice with spreadsheet software. 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 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

Learn 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 pseudo coding, elementary searching and sorting algorithms. Prereq: CSC 100 or permission.

CTN 141 (5) S
Intro to Operating Systems

Intro to operating systems' purpose, functions and structure. Learn to use command line for troubleshooting and configuration, and to write batch files. Study operating systems' structures and management concepts that are common to all operating systems. Uses Windows OS. Prerequisite: CSC 100.

CTN 142 (5) S
Operating Systems II

Study the implementation and administration of the most recent Microsoft Windows operating system 2000 Professional to help prepare for the Microsoft Certified Professional (MCP) exams. Covers general operating systems' architectural concepts including file, memory, I/O, and process management methods. Learn Unix and Windows operating systems' intrinsic structure and functionality. Prerequisite: CTN 141 or CTN 101 with C- or higher.

CTN 143 (5) S
Operating Systems III

Intro to the Linux operating system including features and distributions, the X Window System, user commands, installation, administration, basic networking, and shells. Helps prepare the student for the CompTIA Linux+ certification exam. Prerequisite: CTN 142 with C- or higher.

CTN 160 (5) S
Web Production I

Intro to website development using HTML. Learn HTML and the basics of creating a website; incorporate graphics and other elements into a site; set up tables, input forms and frames; and upload websites using FTP and remote file management. Prereq: CTN 160 or permission.

CTN 161 (5) S
Web Production II

Continuation of studies in HTML including complex layouts, advanced frames, forms, tables and Cascading Style Sheets. Intro to JavaScript and XHTML. Produce and design a large final project for the portfolio. 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 website development. Includes variables, functions, objects, and events, data types and operators and debugging JavaScript. Prereq: CTN 161 and CTN 131 or permission.

CTN 163 (5) S
ASP.NET I

Intro to building web applications and web services using the Microsoft.NET development platform. Covers general programming in the ASP.NET environment, reviews of the Common Language Runtime, .NET framework, ADO.NET and XML. Learn application design, the architecture of .NET, ADO.NET, page navigation, simple client data validation, emailing techniques, elementary web control authoring and practical development issues such as debugging, deployment, scalability, performance and availability. Prereq: CTN 231 or permission.

CTN 164 (5) S
Multimedia Art I

Covers the key artistic concepts and practical skills in multimedia design and production. Explore the basics of linear and nonlinear storytelling, and the role of interactivity from aesthetic and technical viewpoints. Includes a survey of industry-standard multimedia production tools with primary development work and several interactive projects using Macromedia Flash. Also offered as ART 216. Recommended: ART 210.

CTN 165 (5) S
Usability Design

Focus on combining design, usability testing and technology. Explore how to include usability testing at the start of the technology project and carry usability through the development cycle. Learn to analyze results and change the interface of a project to reflect testing results. Prereq: CTN 160 and ART 210 with a 1.8 or above.

CTN 166 (5) S
Video Art I

Focuses on the art of digital video editing and shooting using Adobe Premiere. Explore in depth digital video editing, effects, transitions, graphics animation, sound and music integration, selecting format, basic DVD authoring and distribution strategies and options. Create a finished digital video film. Also offered as ART 166. Prereq: ART 210 and CTN 160.

CTN 167 (5) S
Animation on the Web

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

Emphasizes 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. Includes solutions for cross browser and platform graphic development, optimizing images for faster download, digital drawing techniques, typography and logo/icon development. Prereq: CTN or permission.

CTN 170 (5) S
PC Hardware I

Covers computer hardware repair and service. Focus on computer hardware primary peripherals, installation of software, and hardware designs for Windows operating systems recognition. Learn safe and wise work habits, customer interaction techniques, reference materials, and basic linear thinking methods of troubleshooting. Includes choices, installation, configuration and economic guidelines with respect to 'repair or replacement' decisions. Prereq: CSC 100, CTN 101 or equivalent.

CTN 171 (5) S
PC Hardware II

Focus on the A+ certification prep for hardware and software technologies. Covers knowledge and competency in core hardware and operating system technologies including installation, configuration, diagnosing, and preventive maintenance. Includes customer interaction techniques and systematic approaches to troubleshooting. Prereq: CTN 170 with C or higher.

CTN 172 (5) S
PC Hardware III

Study advanced installation, configurations, troubleshooting, preventive maintenance, peripheral devices, network devices, upgrade and repair of IBM and IBM compatible computers. Emphasizes professional development, customer relations, technical work experience and problem solving. Uses the A+ OS Technologies Examination Blueprint. Prereq: CTN 171.

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

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

- CTN 180 (3) S**
Internet Business & Law
 Geared toward the Internet entrepreneur. Learn the steps to starting your own Internet business, including the legal aspects. Includes starting your own business, strategies and pitfalls, copyright and fair use on the Internet, how to protect your own work, and billing and finance. Prereq: CTN 160 or permission.
- CTN 182 (3) S**
Writing for the Web
 Intro to writing and editing techniques tailored for cyber venues. Analyze successful websites, newsletters and online publications. Learn what it takes to write compelling, reader-friendly content. Emphasizes teamwork and building relationships with editors, designers, producers and other professionals involved in generating content that attracts readers. Prereq: CTN 160 or permission.
- CTN 184 (3) S**
e-Marketing Tactics & Strategies
 Marketing with an Internet focus includes e-branding, adding the Internet into an overall marketing strategy; developing brand, price and channel management parameters. Covers strategic message planning through customer analysis; effective promotional ad campaigns through television, radio, print media, 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. Increase skill in dealing with customers: customer expectations, telephone techniques, responses to inquiries 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**
Website Tracking & Research
 Explore techniques and software used to track and disseminate information from server user logs to build better websites and increase and direct traffic. Includes 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
 Intro to web development editors. Streamline workflow as well as gain 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. Includes advanced JavaScript, DHTML, and streamlining large-scale site production through scripting. Prereq: CTN 162 and CTN 231 or permission.
- CTN 204 (5) S**
ASP.NET II
 Continuation of CTN 163. Develop intermediate skills in Microsoft's ASP.NET environment. Covers ADO.NET usage including hierarchical data binding, using cookies to persist data on the client, continuing use of templates to control output, custom client-side scripting, content management techniques, use of web.config and global.asax and authoring web services. Prereq: CTN 163 or permission.
- CTN 205 (5) S**
Multimedia Art II
 Increase skills in individual multimedia design and interaction scripting. Technical focus is on Macromedia Flash development using complex animation, advanced design and action scripting for increased interactivity. Includes event/event handler logic, creating variables, setting values and using Flash to create animation and effects for video. Also offered at ART 217. Prereq: CTN 164 or ART 216.
- CTN 206 (5) S**
ASP.NET III
 Continuation of CTN 204. Advanced projects based on ASP.NET techniques. Covers optimizing performance through data caching techniques, extensibilizing the ASP.NET environment through the use of HTTP Modules, using object-oriented techniques to quicken development, working with various authentication protocols and authoring server controls. Prereq: CTN 204 or permission.
- CTN 224 (5) S**
Web Server Configuration & Management
 Build, maintain, and optimize web servers. Includes security, user management, and authentication and access tracking. Prereq: CTN 160 or 270 or permission.
- CTN 231 (5) S**
Net Programming I
 Continuation of CTN 141. Covers programming and problem-solving practices applicable to nearly any programming environment, but with specific emphasis on the NET programming languages within Windows. Expands on using decisions, array and procedures as well as introducing event drive programming to form more complex Windows- style applications. Prereq: CTN 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
 Intro to an object oriented programming language, Visual Basic. Includes 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. Emphasizes 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
NET Programming II

Continuation of CTN 231. Expands understanding of the NET Framework. Includes multiple document interfaces, creation objects, basic database connectivity using ADO.NET and more in-depth discussion.

CTN 260 (5) S
Visual Basic.NET III – Object-Oriented Programming

Gain 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
NET Programming III

Covers programming and manipulation of databases using ADO.NET in conjunction with the NET programming language. Explores various connection processes as they relate to the Access and SQL Server database environments, creating stored procedures, using datasets, updating data stores and using databases efficiently and effectively. Prereq: CTN 250 or permission.

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
XML I

Comprehensive intro to the XML 1.0 specification and accompanying standards. Covers the basics of XML syntax, DTDs and an overview of XML schemas, XSL transformations, XML namespaces, and an intro to XHTML. Prereq: CTN 131 and 160 or permission.

CTN 269 (5) S
Capstone

Prepare to enter the workplace. Develop comprehensive portfolios of work including digital resumes and cover letters. Work in teams to explore the roles in web development and produce a comprehensive small real world project. Explore job search and interviewing skills. Prereq: CTN 162 and CMN 275.

CTN 270 (5) S
Local Area Networks I

Intro to 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. Prereq: CSC 100 required; CTN 101 recommended.

CTN 272 (5) S
Local Area Networks II

Intro to the Novell NetWare family of network operating systems. Learn to install Novell NetWare on student file servers, and configure the network operating system by creating users and groups, directory structures, login scripts, print services, security policies and performing server maintenance. Install and configure client operating systems and connect clients to file servers. Prerequisite: CTN 270.

CTN 274 (5) S
Local Area Networks III

Covers advanced topics in computer networking, including remotely installing operating systems, implementing network security, setting up directory services, designing and implementing policies, setting up and implementing print services and configuring distributed file systems. Prereq: Grade of C or higher CTN 270.

CTN 276 (5) S
Local Area Networks 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. Prereq: CTN 274 or permission.

CTN 277 (5) S
Network Security I

Intro to 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 278 (5) S
Wireless Communication I

Intro to wireless communication and wireless LAN technologies. Covers WLAN use, design, installation, security and troubleshooting. Studies the 802.11 standards including WiFi, light-based and radio-based WLANs, Bluetooth and cellular technology concepts. Learn how and why wireless communication works, and how to select and setup the correct wireless devices for the best network solution. Prereq: CTN 270 or equivalent.

CTN 279 (5) S
TCP/IP

Examines the TCP/IP protocol stack in detail. Includes TCP/IP protocol services, data formats, DNS, DHCP, IP network management, security basics for TCP/IP environments, and IPv6 & SMTP. Prerequisites: CTN 142 and 282.

CTN 280 (5) S
Software Testing I

Coordinated with CTN 294 Test applications. Covers technical aspects of software testing, verification and validation. Plan and implement a system requirement test, system design test, unit black and white box test, module integration tests, usability tests, user acceptance tests and systems tests. Prereq: CTN 250.

CTN 282 (5) S
Cisco I

CCNA 1: First of 4-course 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. Prereq: CTN 270.

CTN 283 (5) S
Cisco II

CCNA 2: Routers and Routing Basics. Second of 4 CCNA courses leading to the CCNA designation. Focuses on initial router configuration, Cisco IOS Software management, routing protocol configuration, TCP/IP, and access control lists (ACLs). Learn to configure a router, managing Cisco IOS Software, configuring routing protocol on routers, and set the access lists to control the access to routers. Prerequisites: CTN 282 with C or higher and pass Cisco Semester I finals.

CTN 284 (5) S
Cisco III

CCNA 3: Switching Basics and Intermediate Routing. Third of 4 CCNA courses. Focuses on advanced IP addressing techniques VLSM, intermediate routing protocols (RIP v2, single-area OSPF, EIGRP), command-line interface configuration of switches, Ethernet switching, VLANs, Spanning Tree Protocol (STP), and VLAN Trunking Protocol (VTP). Apply lessons from CCNA 1 and 2 to a network and explain how and why a particular strategy is employed. Prerequisites: CTN 283 with C or higher and pass Cisco Semester II finals.

CTN 285 (5) S
Cisco IV

CNA 4: WAN Technologies. Last of 4 courses leading to the CCNA designation. Focuses on advanced IP addressing techniques: NAT, PAT, and DHCP, WAN technology and terminology, PPP, ISDN, DDR, Frame Relay, network management, and introduces optical networking. Apply previous CCNA learning to a network and explain how and why a particular strategy is employed. Prepare to take the CCNA Exam. Prerequisite: CTN 284 with C or higher and pass Cisco Semester III finals.

CTN 290 (5) S
Software Analysis & Design

Develop 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. Includes application design using structured system design methodologies and structured database and GUI design. Prereq: CTN 250.

CTN 292 (5) S
Structured Design

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

CTN 294 (5) S
Software Implementation

Capstone class for the Software Engineering Degree. Work in teams with small-to-medium client businesses in the Seattle area. Teams interview the client, gather specifications and author software requirements, which will be used to create the application and the corresponding documentation. Interact with concurrently run CTN 280 Software Testing class to identify and correct product defects. Prereq: CTN 265 and 290 or permission.

CTN 295 (5) S
Help Desk, Research & Customer Service

Learn efficient methods of research to quickly solve technical computer problems, customer service techniques, help desk techniques and infrastructure. Emphasizes customer service soft skills. Prereq: CSC 100. Recommended: at least one hardware, operating systems, programming or networking course.

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

Special topics in individual or group study based 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 WORK EXPERIENCE

CWE 101 (2) N
Portfolio, Job Search & Interviewing

Develop effective cover letters, resumes, portfolios, job search strategies, interviewing techniques and conduct an informational interview. Videotape and critique a mock interview. Apply skills to job seeking and transferring to other schools. Prereq: ENG 095/096 or higher or Compass placement into ENG 097/098 or permission.

CWE 110 (3) N
Internship

Apply skills and training in the workplace in a field related to student's studies. Use current related employment, develop an opportunity or apply through the Internship Office. Develop learning objectives, complete performance evaluations on the job and develop a capstone portfolio. Prereq: CWE 101 with a 2.0 or higher or permission.

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. Each program is taught by a team of diverse faculty members who conduct lectures and lead student seminars, field trips and group projects.

In Learning Communities, students and faculty work together on local and global issues requiring creative and active participation from all those in the classroom.

Though separate courses are listed on a student's transcript, the program is conducted as one coordinated course, and each program becomes a unique sum, greater than the total of the parts.

This innovative approach to teaching and learning has won national recognition for the Seattle 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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN Watch Technology

NAME TO PREFIX
Watch Technology HIN

COSMETOLOGY

Also see Cosmetology program at SVI.

**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 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 in the necessary skills to be proficient in the areas of haircutting and styling. 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 in the skills to be proficient in the application of chemical services to the public. Prereq: Permission.

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

A practical application course in skills to become proficient in competently performing the services in the Esthetic field. Prereq: Permission.

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

A practical application course in 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.

CULINARY ARTS

*See Hospitality/Food Production/
Culinary Arts.*

DENTAL ASSISTING

See Dental Assisting Program at SVI.

DENTAL HYGIENE

Admission to the Dental Hygiene Program and successful completion of all prerequisite coursework with a 2.8 grade or higher are required.

Note: Use of computers integrated into all DHY courses.

**DHY 100 (3) C
Fundamentals of Dental Hygiene I**

Examines the theory and scientific principles underlying the assessment, planning and implementation of clinical procedures in dental hygiene. Focuses on the scope of practice in Washington State, legal and ethical principles that govern the profession, and professionalism. Learn effective communication, infection control, instrumentation, vital signs assessment, screening examinations, documentation and use of computers.

**DHY 101 (3) C
Clinical Dental Hygiene I**

First in a series of supervised clinical and pre-clinical experiences involving the assessment, planning and implementation of patient care and clinical dental hygiene.

**DHY 102 (2) C
Health Promotion**

Explores the process of health-related behavioral change through planned interventions in patient education and health promotion. Emphasizes theories of change, the effect of cultural norms and values in client-provider interaction, and communication skills to assess the patient's perceptions, needs and motivation to change.

**DHY 103 (4) C
Dental Radiology**

Study radiation hygiene and the fundamentals of radiology relevant to dentistry. Includes demos and practice in exposing, processing, and interpreting intra-oral radiographs. Covers principles and rules for patient and operator safety.

**DHY 104 (2) C
Preventive Dentistry**

Study dental deposits, dental diseases, causes and prevention including the relationship between plaque and oral disease processes, dental caries and gingivitis. Includes use and methods of researching professional literature, and using oral health prevention measures such as patient education, self-care, fluoride and physiotherapies.

<p>DHY 105 (5) C Oral Biology Study oral histology, including the microscopic structures and organization of tissues of the teeth, the embryologic development of the primary and secondary dentitions, and the development of the oral cavity. Covers general pathology, including the mechanisms and characteristics of disease and disease process.</p> <p>DHY 107 (3) C Pharmacology Learn the general pharmacological and therapeutic actions of drugs with emphasis on those used in dentistry. Includes dosage, routes of administration, drug interactions, drug effects on the oral cavity, indications, contra-indications, and factors in patient treatment planning.</p> <p>DHY 108 (2) C Periodontology I Learn the periodontal structures of the mouth and periodontal instrumentation, including types of instruments, names, set-ups, and their proper application to periodontal therapy and treatment. Covers techniques for providing periodontal therapy, using adjunctive periodontal therapeutic agents, patient selection, treatment and post-treatment evaluation.</p> <p>DHY 110 (4) C Head and Neck Anatomy Study the anatomy and function of the head and neck. Learn the location, characteristics and function of the hard and soft tissues of the head, neck and oral cavity, including all anatomic features, the circulatory system, muscular system, cranial nerves and teeth.</p> <p>DHY 113 (1) C Dental Radiology II Continue study of radiation hygiene and radiology relevant to dentistry. Includes laboratory demos and practice in exposing, processing, and interpreting intra-oral radiographs and extra-oral techniques.</p> <p>DHY 114 (3) C Restorative Practice & Materials I First of 6-course sequence in clinical restorative dentistry. Focuses on the chemical, physical and mechanical properties of dental materials commonly used by hygienists, and on their manipulation. Learn to place restorations into prepared cavities.</p>	<p>DHY 117 (1) C Emergency Management Intro to the role of the dental team in the treatment of medical emergencies, prevention of medical emergencies, patient assessment, stress minimization, emergency drugs and equipment. Participate in class simulations of emergency treatment.</p> <p>DHY 118 (4) C Pain Control & Anesthesia for Dental Hygienists Covers theory and practice of pain control in dental hygiene and restorative dentistry, including nitrous oxide administration, topical anesthesia, and nerve block, field and infiltration as local anesthesia applications.</p> <p>DHY 119 (3) C Restorative Practice & Materials II Second of 6-course sequence in clinical restorative dentistry. Deepen learning of chemical, physical and mechanical properties of dental materials, their manipulation, and placing restorations into prepared cavities.</p> <p>DHY 120 (2) C Fundamentals of Dental Hygiene II Examines the theory and scientific principles underlying the assessment, planning and implementation of clinical procedures in dental hygiene. Focuses on the initial assessment of the patient, charting, indices, disease assessment, treatment planning and assessing special cases involving abuse and neglect, and use of computers.</p> <p>DHY 121 (4) C Clinical Dental Hygiene II Second in a series of 7 courses. Continue learning assessment and evaluation of the patient, planning and implementing dental hygiene care, and instrument techniques.</p> <p>DHY 122 (2) C Oral Pathology Study lesions, pathologies, and abnormal conditions of the head, neck and oral cavity.</p> <p>DHY 130 (2) C Fundamentals of Dental Hygiene III Examines the scientific principles underlying the assessment, planning and implementation of clinical procedures. Focuses on the selection of detection and scaling instruments, selection and use of ultrasonic instruments, use and application of desensitization agents, custom trays, margination, area-specific curets, periodontal files, Nabors probe and tooth whitening. Covers risk assessment, presentation and written case documentation in development of individualized treatment plans for clinic patients.</p>	<p>DHY 131 (4) C Clinical Dental Hygiene III Third in a series of supervised clinical experiences with patient care involving assessment, planning and implementation of clinical procedures.</p> <p>DHY 150 (2) C Supported Learning in Dental Hygiene Theory & Practice Individualized study in dental hygiene theory and/or practice personalized to meet the needs of dental assistants who have graduated from an accredited program and are making the transition into dental hygiene.</p> <p>DHY 200 (2) C Fundamentals of Dental Hygiene IV Fourth in a series focusing on the scientific principles underlying the assessment, planning and implementation of clinical procedures. Emphasizes biochemistry of food, nutritional counseling in dental hygiene practice, and personal, professional, and community issues related to HIV/AIDS.</p> <p>DHY 201 (8) C Clinical Dental Hygiene IV Fourth in a series of supervised clinical experiences with patient care involving the assessment, planning and implementation of clinical procedures.</p> <p>DHY 203 (2) C Ethics and Jurisprudence Focuses on the ethical, legal and regulatory issues facing a dental hygienist in a private dental office, community agency or independent practice. Through simulated cases, consider professional traits, theories of moral development, ethical dilemmas and principles, the Washington state dental practice act, the hygienist-patient relationship and risk management in dental hygiene practice.</p> <p>DHY 208 (2) C Periodontology II Deepen study of periodontal diseases, including prevention, cause, prevalence, recognition, patient education, advanced treatment planning, and appropriate treatment. Apply prevention and treatment techniques to patients with moderate to severe disease.</p>
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DHY 215 (2) C
Special Needs

Study the specific care modifications required to effectively deliver oral health services to patients with special mental, emotional and physical challenges or medical problems such as salivary dysfunctions, neurological impairments, immune system dysfunctions, cancer treatments and surgery.

DHY 220 (2) C
Fundamentals of Dental Hygiene V

Fifth in a series focusing on the scientific principles underlying the assessment, planning and implementation of clinical procedures. Emphasizes higher level concepts needed for successful board certification and national examinations.

DHY 221 (8) C
Clinical Dental Hygiene V

Fifth in a series of supervised clinical experiences with patient care involving the assessment, planning and implementation of clinical procedures. Provide care to a broader range of clients in clinic. Emphasizes refining and integrating previously learned concepts and skills into an effective pattern of comprehensive case management. Demonstrate clinical judgment and decision making based on scientific evidence and treatment outcomes.

DHY 222 (1) C
Community Health I

First of 3 courses in public and community health approaches to the prevention and management of dental and oral health needs. Emphasizes identification of community dental health programs with experience in schools, nursing homes, community centers and hospitals.

DHY 223 (3) C
Community Health II

Study community dental health program planning and development focusing on prevention of dental disease and practice through learning projects. Develop a community outreach program and execute it.

DHY 224 (2) C
Community Health III

Covers community dental health program planning and development focusing on prevention of disease. Integrates concepts and techniques regarding the selection and delivery of oral health services and education to underserved populations. Emphasizes program implementation and evaluation.

DHY 230 (2) C
Fundamentals of Dental Hygiene VI

Explores the scientific principles underlying the clinical practice of dental hygiene. Develop high level skills to enhance patient assessment, management, and treatment.

DHY 231 (8) C
Clinical Dental Hygiene VI

Sixth in a series of supervised clinical experiences with patient care involving the assessment, planning and implementation of clinical procedures.

DHY 233 (2) C
Restorative Practice and Materials III

Third laboratory course in restorative dental practice and materials focusing on correct placement of dental restorations on mannequins in the laboratory and patients in the clinic. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington law.

DHY 234 (2) C
Restorative Practice and Materials IV

Fourth laboratory course in restorative dental practice and materials focusing on correct placement of dental restorations on mannequins and patients. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington state law.

DHY 235 (2) C
Restorative Practice and Materials V

Fifth laboratory course in restorative dental practice and materials focusing on correct placement of dental restorations on mannequins and patients. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington state law.

DHY 236 (2) C
Restorative Practice and Materials VI

Final laboratory course in restorative dental practice and materials focusing on correct placement of dental restorations on mannequins and patients. Develop manipulative and carving skills in placement of amalgam and composite restorations as allowed by Washington state law.

DHY 240 (2) C
Fundamentals of Dental Hygiene VII

Focuses on the scientific principles underlying clinical practice dental hygiene. Focuses on inter-professional relations, team building, sharing new knowledge and the responsibilities of a practicing dental hygienist for professional development and life-long learning.

DHY 241 (8) C
Clinical Dental Hygiene VII

Seventh in a series of supervised clinical experiences with patient care involving the assessment, planning and implementation of clinical procedures in dental hygiene.

DHY 245/246/247/248/249/250/251 (1-5) C**Applied Practice in Dental Hygiene**

Applied practice in dental hygiene to meet the individual needs of students who require additional practice and reinforcement of techniques and skills in dental hygiene.

DHY 298 (1-5) C
Special Projects in Dental Hygiene

Individualized study in dental hygiene related subject matter arranged to meet the needs of students with specific levels of skills and background.

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 preventive 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.

<p>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.</p> <p>HDM 104 (6) S Batteries, Generators & Alternators Diagnose and repair charging systems commonly used in heavy-duty truck and equipment maintenance. Prereq: HDM 102.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>HDM 113 (6) S Basic Welding & Cutting – Diesel & Equipment Technician Intro to 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.</p> <p>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.</p> <p>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.</p> <p>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 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.</p> <p>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.</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>HDM 151 (6) S Container & Chassis Repair II Covers inspection of 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.</p> <p>HDM 156 (5) S Air Brakes Basic Covers principles of compressed air and includes study of construction, function and service of air brake systems.</p> <p>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.</p>
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FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN Watch Technology

NAME TO PREFIX
Watch Technology HIN

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 air conditioning and how they apply to transportation and the 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 on 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: Employed in field of mechanics.

HDM 178 (5) S
Diesel Tune-up

Designed to upgrade the apprentice or 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 principles, operations, functions and service of current diesel fuel systems and their components. Designed to upgrade the apprentice or journey level technician. 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 "reefers" in the truck, trailer and container industries, including function, service and repair. Prereq: Permission.

HDM 191 (4) S
Advanced Gasoline Engines

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-134a 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 (6) S
Shop Practices

Apply the knowledge and tasks learned in prior mechanical skills units, including 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 •

Architectural Engineering Drafting & Engineering Design Technology

DSN 151 (11) N
Intro to Engineering Graphics

Addresses engineering drafting and design practices for the mechanical design and manufacturing industries. Emphasis on lettering, line work, reading scales and applied geometry using freehand sketching and manual mechanical drawing techniques. Fundamentals of orthographic projection include blueprint reading, dimensioning techniques, section views, and auxiliary views. Develop visualization skills through isometric drawing and descriptive geometry. Includes ANSI/ASME and ISO drafting standards where appropriate. Take concurrently with DSN 163. Prereq: Computer skills helpful.

DSN 152 (11) N
Engineering Graphics for Mechanical Design

Continuation of DSN 151. Emphasis on advanced mechanical assembly drawing practices and concepts. Produce detailed, sub-assembly and assembly drawings of mechanical designs. Working drawing sets incorporate threaded fastener specifications, dimensioning and tolerancing practices, including ANSI and ISO standard fits and allowances, bills of material, and drawing revision practices. Introduces flat pattern and bend calculations, dimensioning for CNC manufacturing processes, methods of forming and fabrication, and captive fasteners through pattern drafting with an emphasis on documentation requirements for sheet metal fabrication. Take concurrently with DSN 261. Prereq: DSN 151 and 163.

DSN 153 (11) N
Statics & Strengths of Materials in Mechanical Design

Third of 3 courses which address engineering drafting and design practices for the mechanical design and manufacturing industries. Intro to engineering physics through the study of statics and strengths of materials. Study how forces affect mechanical structures at rest or during unaccelerated motion. Examine concurrent-coplanar, non-concurrent-coplanar, and parallel force systems and calculate their resultants, equilibrants or moments. Study frictional forces and strengths of materials commonly used in mechanical design and manufacturing for their ability to withstand mechanical and thermal strength of fasteners, bolted or riveted connections, and welded joints. Take concurrently with MAT 098. Prereq: DSN 152, DSN 261.

DSN 163 (4) N
Intro to AutoCAD for Mechanical Design

Learn the AutoCAD drafting and design software. Focuses on the development of 2-dimensional drawing and editing skills using AutoCAD software to produce engineering drawings. Includes dimensioning, adding text and notes, library symbol (block) and attribute definition, Modelspace and Paperspace drawing setup and hardcopy output (plotting). Uses the most current version of AutoCAD. For degree and certificate students, take concurrently with DSN 151. Computer skills helpful.

DSN 164 (4) N
Intro to PRO/ENGINEER

Encompasses the fundamentals of Pro/Engineer parametric modeling CAD software. Includes system fundamentals, base and construction feature creation, sketching techniques, datum construction, application to design task, drawing creation, and construction of assemblies from created parts.

DSN 165 (4) N
Intro to Solid Works & Parametric Solid Modeling

First of 2 courses in the SolidWorks mechanical design and modeling software. Intro to creating 3D CAD models using a feature-based, parametric solid-modeling design. Includes base, boss and cut feature creation using extruded, revolved, simple swept or simple lofted shapes; sketching techniques for capturing design intent using automatic or user-defined geometric and dimensional constraints; building assemblies from created parts; and detail and assembly drawing creation and bill of material insertion.

DSN 250 (4) N
Schematic CAD Drafting & 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 for schematic creation and PCB design. Design PC boards utilizing standard through-hole technology and surface mount technology. Includes manufacturing methods for PCBs, specifications and standards for electronic schematics and design of PCBs. Prereq: DSN 152 or EET 107 or EET 161.

DSN 255 (7) N
Laboratory Projects for Schematic CAD Drafting & Basic PCB Design

Develop skills in drafting of schematic diagrams for electronic circuits and the design of printed circuit boards (PCB) using CAD software dedicated for schematic creation and PCB design. Prereq: DSN 250 (may be taken concurrently).

DSN 261 (4) N
Advanced AutoCAD for Mechanical Design

Second of 2-course sequence to learn AutoCAD drafting and design software. Presents advanced concepts, including three dimensional (3D) wireframe, surface and solid modeling for the mechanical design process. Covers creation of 2D documentation using 3D models and Paperspace drawing setup techniques. Presents data translation, using DXF, IGES, and SAT file formats to share data between other CAD software programs. Incorporates an overview to highlight changes in commands and functionality for students upgrading from previous releases of AutoCAD. Prereq: DSN 163.

DSN 264 (4) N
Advanced PRO/ENGINEER

The second quarter of Pro/Engineer includes advanced modeling for sheet metal, plastics molding, casting and other processes; drawings and assemblies; tolerance stack-ups and interferences; and advanced engineering topics such as import/export, SLA files, and mass properties. Prereq: DSN 164 or instructor permission.

DSN 266 (4) N
Advanced Solid Works & Parametric Solid Modeling

Second of a 2-course sequence to learn the SolidWorks mechanical design and modeling software. Includes troubleshooting problems with parametric features, advanced data translation, sheet metal design, advanced swept and lofted shapes, generation of parametric surfaces, design table creation of part families, part & assembly configuration management, top-down assembly modeling and advanced detail drawing generation. Prereq: DSN 165 or instructor permission.

DSN 271 (4) N
Drafting and Design for Polymer & Other Materials

Designs and process considerations for plastic, ferrous and non-ferrous metals. Materials definition through chemical and physical properties. Lab, lecture and field trip experiences. Prereq: DSN 153, MAT 098, or instructor permission.

DSN 272 (11) N
Mechanical Design Applications

Intro to practical engineering mechanics and strength of materials. Design applications include casting, design, and drafting; spring design using the computer as a design tool; gear terminology; complex mechanism design. Prereq: DSN 164 or 165, 271, 272 and 274.

DSN 273 (7) N
Mechanical Product Design Applications

Advanced applications include design study, layout and documentation principles for mechanical packaging designs for electronic products; drawing trees; tolerance studies; and interference studies. Integrates DSN 271 and DSN 272. Prereq: DSN 164 or 165, 271, 272 and 274.

DSN 274 (4) N
Geometric Dimensioning & Tolerancing

For those involved in mechanical drafting, design, engineering, manufacturing, and quality control. Involves the principles of dimensioning and tolerancing as defined by ASME Y14.5M-1994 with additional references to the internal standard ISO-1101. Includes detailed comparisons with standard dimensioning practices, symbology application methods, measuring techniques, and the benefits from the use of Geometric Tolerancing. Prereq: DSN 152 or equivalent industry experience.

DSN 275 (7) N
Drafting and Design for Polymer & Other Materials Lab

Design and process considerations for plastic, ferrous and non-ferrous metals. Materials definition through chemical and physical properties. Prereq: DSN 271 (may be taken concurrently), 274, and 264 or 165, or instructor permission.

DSN 281 (4) N
AutoCAD for Mechanical Applications

Panel layouts, auto-dimensioning, formatting and drawing for NC and CNC process operations, library-building, user-defined menu for symbology and primitives, file manipulation, storage retrieval, paper space applications, grouping, revisioning and plotting. Intro to 3-D wire frame and AME. Prereq: DSN 163 or equivalent work experience.

DSN 298 (1-5) N
Special Topics in Engineering Design Technology

A study of selected topics in Engineering Design Technology (electro mechanical drafting) as considered appropriate by the instructor and/or electromechanical drafting faculty. Course content, format, and projects vary depending on topics. Prereq: Permission of instructor and applicable experience. Lab fee varies.

TDR 109 (1) N
Architectural Engineering Drafting Lab

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

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

Intro to 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. 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

Learn the basic fundamentals of hand drafting. Focus on drafting equipment and its use, basic linework, hand lettering, orthographic projections, isometrics and basic sheet layout. Select discipline options including structures for construction/design or basic mechanical drawings. Open lab.

TDR 115 (5) N
Civil & Site Drafting

Develop site plans including basic contours, utility features, simple road layout and storm drainage features. Perform simple calculations.

TDR 124 (5) N
Material & Methods of Construction

Intro to the basic materials used in construction, with discussion of manufacturing, fabrication, design and assembly processes for large and small buildings. Focus on Steel, concrete wood and masonry construction.

TDR 134 (5) N
Systems in Building

Focuses on the major building systems including HVAC, water and waste, fire protection, electrical and structural. Introduces the Uniform Building Code, type of construction and history. Includes heat loss calculation and lateral loads and their resisting elements. Includes Earth work and Foundations.

TDR 144 (5) N
Design & Construction Environment

Covers 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 affect business.

TDR 160 (5) N
Applied Mechanics I

Primarily for the non-engineering students, covering 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.

TDR 161 (5) N
Applied Mechanics II

A continuation of TDR 160. Covers basic wood beam design. Includes allowable stress, loading criteria, shear and deflection. Covers basic truss analysis.

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

Intro to the basic concepts of Computer Aided Drafting (CAD). Uses AutoCAD to produce construction drawings and details. Covers the impact of CAD on productivity and contemporary design practice.

TDR 175 (4) N
Intermediate AutoCAD for Architectural & Engineering Drafting

Covers more advanced AutoCAD commands and features and reinforces basics. Increase productivity and complexity of project assignments. Build the tools necessary to compete for AutoCAD positions in the design community.

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

Advanced concepts of AutoCAD. Develop productivity tools such as macros, templates and system customizing. Begin to work in 3-D.

TDR 258 (5) N
Contract Drawing Preparation I

Preparation of structural, architectural and civil drawings with emphasis on wood frame structures and light commercial buildings. Includes building codes, specifications and building department requirements for obtaining building permit. Uses CAD.

TDR 259 (5) N
Contract Drawing Preparation II

A course similar to DSN 258. Emphasis on structural steel and concrete structures and the inclusion of site work. Uses CAD.

TDR 265 (5) N
Structural Detailing

Prepare shop drawings for both structural and reinforcing steel using guidelines from American Institute of Steel Construction and Concrete Reinforcing Institute. Use local shop detailing procedures. Open lab.

TDR 269 (5) N
Construction Estimating

Intro to quantity take-offs and pricing of materials by working on problems common to the general contractor. Focus on creating an ordered method.

TDR 270 (5) N
Advanced Estimating

A continuation of DSN 269. Covers labor and business costs. Develops a system to prepare estimates for complete jobs from current contract documents.

TDR 297 (2-10) N
Special Topics in Construction & Design Drafting with CAD

Study selected topics in Construction and Design Drafting with CAD as considered appropriate by the instructor and/or CDD w/CAD faculty. Course content, format, and projects vary depending on topics.

TDR 299 (1-3) N
Drafting Design Projects

An independent laboratory course consisting of specially arranged sessions and substantial independent study to explore areas of special interest or expand specific drafting and/or computer skills.

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 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. Includes 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 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

Covers drafting techniques and standard practices used in civil drawings. Emphasis on appropriate presentation of data.

TDR 179 (4) S
CAD – Mechanical

Covers techniques used to prepare mechanical engineering drawings. Includes basic mechanism geometry, detail and assembly drawings, emphasis on appropriate presentation of data.

TDR 228 (4) S
CAD Sheet Metal/HVAC

Understand CAD operation including interactive graphics systems start-up, setup of drawing session, menus and commands, geometry, editing, drawing storage and retrieval using the latest version of AutoCAD. Prereq: TDR 121 or equivalent.

TDR 230 (3) S
Basic CAD – 3-D

Intro to the capabilities of the AutoCAD software to produce both 2-D isometric and basic 3-D graphics including 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 three dimensional graphics and construction capabilities of AutoCAD Release 12. Includes 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 263 (2) S Applied Mechanics I Graphical methods for determining resultants and equilibrants in coplanar, parallel and non-parallel force systems, such as beams and trusses. For drafting majors.	DRA 108, 109, 110 (2-5) N Rehearsal & Performance Participation in rehearsal and performance process culminating in performance. Prereq: Concurrent enrollment in DRA 121, 122, or 123. Audition or instructor permission.
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 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.	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.
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 272 (2) S Applied Mechanics 2 Covers structural material strength and basic calculations involved when loading structural members and joints. For drafting majors.	DRA 114 (5) C Mime and Physical Comedy Learn physical techniques for acting with the whole body, and apply specific mime, movement and acting skills. Explore mime as playwright, creating original mime performances and present them to an invited public audience.
TDR 236 (1) S Design Project Considerations Integration of basic elements of a design project: design process, team-work, project planning and management, and project presentation. Prereq: TDR 233 or 235, TDR 231 and MET 102.	TDR 280 (4) S Geometric Dimensioning & Tolerancing Basic interpretation of geometric tolerances on engineering drawings. All studies are based on ANSI Y14.5M-1982.	DRA 116 (4) N Fundamentals of Acting for the Camera Covers the elements of "electronic drama," essential technological and dramatic vocabulary, and camera acting fundamentals. Create a filmed sequence for presentation. Recommended: DRA 121 and placement in ENG 101.
TDR 237 (2) S Design Project 1 Practical application course utilizing previously acquired skills. Concentration on the civil aspects of a major design project.	TDR 298 (1-10) S Special Topics in Drafting Individual or group study in industrial drafting. Prereq: Permission.	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.
TDR 238 (2) S Design Project 2 Practical application course utilizing previously acquired skills. Concentration on the aspects of a major design project.	DRAMA	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.
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.	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 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.
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.	DRA 103 (5) N Fundamentals of Theatrical Design Project class provides a foundation for all areas of theatrical and entertainment design: costume, scenery, lighting and art direction. Explores the creative process, elements of design, and the relationship between text and visual expression. Intro to various mediums and methods of artistic presentation while learning the elements needed to visually communicate responses to literary and musical sources.	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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

DRA 170 (3) N
Theater Appreciation

For non-majors who wish to know more about the theatrical event, specifically within the Seattle area. 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 Musical Theater

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

Individual student initiated and developed performances/projects under faculty supervision. Prereq: Permission.

DRA 201/202 (1-5) N,C
Special Studies

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 to the world of concert Jazz dance. Includes basic concepts and principles of Jazz technique, muscle strengthening and flexibility exercises, building vocabulary of connective movements, and skills for basic auditioning and memorizing choreography.

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

Special project course in theater management. Content, credit and expectations derived by discussion with students, tailoring projects to student needs, instructor abilities, time frames, 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. 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. Emphasis on longer acting projects and monologue repertoire. Prereq: DRA 222 or permission.

The following courses are variable credit, special projects in different aspects of theater. 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 224 (1-5) N,C
Production & Stage Management

DRA 231 (1-5) N,C
Props & Sound

DRA 241 (1-5) N
Costuming

DRA 251 (1-5) N,C
Stage Scenery

DRA 261 (1-5) N,C
Stage Lighting

DRA 271 (1-5) N,C
Acting

DRA 272 (1-5) N
Acting

DRA 273 (1-5) N
Acting

DRA 281 (1-5) N,C
Directing

DRA 284 (5) N
Playwriting

Develop writing skills for one-act plays by exploring dramatic structure, character development and the author's stylistic voice. Learn the roles of director, dramaturge, actor and other theatrical artists in the writing process. Includes critical analysis of published plays, readings and critiques of student work. Prereq: ENG 101 placement or permission.

DRA 285 (2-5) N
Playwriting 2

Continue to hone playwriting skills in plot, characterization, author's stylistic voice, play structure and dialogue. Further understand the roles of director, dramaturge, actor and others. Prereq: DRA 284 or permission.

DRA 286 (2-5) N
Playwriting 3

Continue to hone the skills of plot, characterization, play structure, dialogue, the author's stylistic voice and theatrical collaboration. Covers the initial development process for a full-length play. May be repeated for credit. Prereq: DRA 285 or 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. Prereq: Permission.

DRA 298 (1-5) N,S
Individual Projects in Theater

Individual projects in set design, lighting, costuming, directing, house management, and acting, as determined by advanced Drama students and the Drama faculty. Prereq: Advanced standing, permission.

EARLY CHILDHOOD EDUCATION

CCE 101 (5) N Human Development

Intro to the field of child development. Using an ages and stages approach, examines physical, cognitive language, social, and emotional development of children from birth through young school age. Study major theorists and the use of research. Learn basic observation skills and apply the information to child development.

CCE 102 (2) N Issues & Trends in Early Childhood Education

Examines the profession of early childhood education and the historical and political perspectives for understanding ECE in a changing society. Addresses current educational problems and trends, underlying values assumptions, and guides for professional action.

CCE 113 (3) N Human Exceptionalities

Emphasizes diversity and a value-based approach to human exceptionality and disability using a lifespan view. An historical perspective covers current trends and practices in early intervention, special and general education, and life-long supports for individuals with disabilities and their families.

CCE 125 (5) N Program Planning

Overview of the components of creating a child-responsive learning environment for 3- to 5-year old children that maximizes each child's social, motor, cognitive, and expressive development through play. Evaluate the physical environment of two ECE programs using accreditation criteria from the National Academy of Early Childhood Programs.

CCE 135 (5) N Foundations of Early Learning

Covers special needs of infants, toddlers and 2-year-olds in care-giving settings. Includes brain research, developmental tasks, environmental components for optimal development, caregiver/teacher roles, working with parents and curriculum planning.

CCE 136 (2) N Signing with Young Children

Intro to American Sign Language (ASL) not only as a second language, but as a valuable tool for enhancing communication with children. Sign language provides a tactile method for children to learn, play, and express themselves.

CCE 145 (4) N Music & Creative Expression

Stimulates both beginning and experienced early childhood teachers to provide a wide variety of musical activities for children's active participation in movement and music making. Develop ease in supporting and leading musical activities while learning a method for selecting and planning a fun, creative and skill-developing music education program for preschool children and older toddlers.

CCE 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 and 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. For behaviorism, learn to manage the difficult child, administer effective rewards, construct cognitive behavior modification interventions, and build desired new behavior through chaining and shaping. For guidance, learn to construct a social learning environment that facilitates social problem solving and personal responsibility.

CCE 160 (2-8) N Connecting to Children

These 4 modules provide an opportunity to demonstrate performances essential to the effective influencing of young children.

CCE 165 (3) N Understanding Literacy

Covers philosophies and definitions of literacy. Explores radical, non-traditional thinking of the concept through readings, guest speakers and research.

CCE 166 (3) N Cultivating Conversation

Learn to facilitate the verbal expression of young children by practicing the techniques of responsive listening and informative talk and applying those skills to everyday conversations with children.

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.

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. Help children 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.

CCE 180 (1-6) N
Professional Development

Covers topics on the care and development of children for early childhood care personnel, educators and parents.

CCE 185 (3) N
Physical Education in Early Childhood 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.

CCE 195 (3) N
Art for Young Children

Provides the experience of art to children 3 to 8 years old. Explores self-expression in painting, drawing, clay and collage. Conduct a series of art classes for children to practice relating in ways that facilitate the children's self-expression in these fundamental media.

CCE 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. Learn to work with nonprofit boards to support programs.

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 expectations parents and teachers have for each other, the tasks parents face in growing up with their children, assertive and supportive help, communicating the aims of school in a democracy, and dealing with difficult issues that affect both school and home, such as abuse, death, and divorce.

CCE 234 (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.

CCE 240 (3) N
Multicultural Dialogues in Early Childhood Education

Examines the concept of multiculturalism and how it relates to the ECE classroom. Through dialogues, readings and projects, students assess their beliefs, teaching environment and style - in order to identify changes and promote respect for differences that accompany children and families.

CCE 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.

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.

CCE 285 (5) N
The Project Approach

For teachers who have been teaching several years. Explore how learning objectives assessment and emergent curriculum combine to foster a creative, personally expressive, co-active, celebratory curriculum for a democratic learning community.

CCE 292 (6-12) N
Classroom Research

Use the work setting as the environment to meet the needs of children through social, motor, cognitive, language and expressive skills. Under faculty supervision and peer interaction, examine quality education. Students will analyze their current knowledge and actions in their Early Childhood Education classroom.

ECONOMICS

ECO 100 (5) N,C,S
Survey of Economics

Examines basic principles of economics, determination of national prosperity, income distribution, the role of government, price determination, allocation of resources, economic systems, and market behavior.

ECO 102 (5) N,C,S
Public Economics & Government

Examines politics, decision making, and current events of American government by basic principles of economics. Emphasis on the role of government related to economic efficiency within the context of diverse political interests.

ECO 200 (5) N,C,S
Principles of 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 QSR requirement for A.A. degree. Prereq: MAT 098; ENG 101 Recommended

ECO 201 (5) N,C,S
Principles of Macroeconomics

Analysis of the aggregate economy: GDP, inflation, business cycles, unemployment, fiscal and monetary policies, federal deficits, and international trade and finance. Fulfills QSR requirement for A.A. Degree. Prereq: MAT 098; ENG 101 recommended.

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 197/198/199 (2-5) N,C
Education Community Service

Volunteer in an educational setting, serving as literacy or ESL tutor 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); Allied Health, Business, Languages & Cultures at Central (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**

Focuses 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**

Studies 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 intro to knowledge and skills needed by paraprofessionals assigned to assist students in the instructional process and the teachers with whom they work. Includes roles and responsibilities of the paraprofessional, team building and behavior management.

**EDU 271 (5) C
ESL Reading & Language Arts**

Learn methods of assessment, placement, and instruction of ESL students in reading and language arts. Focuses on instructional techniques for the literacy level and age of the ESL student; integration of reading and language arts.

**EDU 272 (5) C
Integrating ESL in the Mainstream Classroom**

Specifically for the teacher with bilingual and monolingual students in the same classroom. Overview of current theories of language acquisition with a focus on practical instructional strategies. Covers a wide repertoire of strategies drawn from bilingual, ESL and mainstream methodologies.

**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 course on hydraulic, pneumatic, and mechanical systems commonly found in industrial applications. Study terminology, documentation, symbols and typical devices to achieve a working knowledge of these systems. Covers electro-mechanical and electro-hydraulic systems and associated electronic controls.

**EPT 197 (2-10) N
Special Topics**

Study of selected topics 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 on reading and designing elementary and wiring diagrams. Intro to programmable logic controllers (PLCs) and 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 DC and AC variable speed drives. Review of thyristors used for power control in 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. Includes 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 analog devices, circuits and systems commonly found in industrial applications. Emphasis on the operational amplifier and the thyristor. Includes 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. Orientated toward industrial applications.

EPT 298 (1-5) N
Special Projects

Special problems course 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 of 3-course series 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 of 3-course series. Study sequential control. Covers electromagnetic control devices and circuits for starting, accelerating, stopping, and reversing AC and DC motors. Covers programmable logic controllers. Program basic control circuits 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 of 3-course series. Study fundamentals of power electronics and electric drives, electronic control of direct current and alternating current motors. Includes advanced PLC (Programmable Logic Controller) programming, and the use of a PLC to control an electric drive. Prereq: EEL 202.

ELECTRONICS TECHNOLOGY

Includes courses in Electronic Engineering Technology, Biomedical Equipment Technology, Digital Computer Electronics Technology, Electronics Communication Technology.

EET 097 (3-6) N
Understanding Electricity & Electronics

Practical survey of electricity and electronics with lab projects. Covers DC/AC, semiconductors, and digital concepts and applications. Includes safety issues, house wiring and household electronics.

EET 105 (3) N
Intro to Technology

Survey disciplines within the field of electronics and technologies related to electronic occupations to learn 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

Analyzes series and parallel circuits, measuring circuit values with electronic test instruments, constructing DC circuits, and solving for unknown circuit variables. Covers basic concepts of energy, work, power, current, and voltage, as well as Ohm's and Kirchhoff's laws. Introduces capacitance, transients, and AC theory and circuit analysis. Prereq: High school algebra.

EET 108 (4) N
Principles of Electronics Lab

First in a series studying electronics in depth. Analyze series and parallel circuits, measure circuit values with electronic test instruments, construct 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. Intro to capacitance, transients, and AC theory and circuit analysis. Uses computer models. Prereq: High school algebra. Take concurrently 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

Physics for students in a vocational technical field. Covers the basic laws of physics as applied to mechanics, matter and heat, wave motion and sound, electricity and magnetism, light and modern physics. Includes physical concepts as applied to industrial-technical fields.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

**EET 117 (4) N
Electronics Devices**

Analysis of characteristics of semiconductor devices and their application in common electronic circuits. Covers the theory and practical application of diodes, bipolar junction transistors (BJTs), junction field effect transistors (JFETs), metal-oxide-semiconductor FETs (MOSFETs), and thyristors. Prereq: EET 107 or equivalent.

**EET 118 (4) N
Electronics Devices Lab**

Covers construction and measurement of electronic devices and circuit parameters to verify models and math analysis developed in EET 117. Begins with construction of simple power supplies and moves on to more complex amplifier circuits. Covers diodes, bipolar junction transistors (BJTs), junction field effect transistors (JFETs), metal-oxide-semiconductor FETs (MOSFETs), and thyristors. Coreq: EET 117.

**EET 127 (4) N
Intro to Digital & Analog Circuits**

Third course in an in-depth study of electronics. Covers the fundamentals of analog and digital circuits. Analog topics include differential and operational amplifiers, and comparators, linear and nonlinear op amp applications. Digital topics include digital signals, number systems, Boolean algebra, logic gates, combinational logic, flip-flops and sequential logic. Prereq: EET 117. Coreq: EET 128.

**EET 128 (4) N
Intro to Digital & Analog Circuits Lab**

With EET 127. Includes construction, debugging and adjustments of analog and digital circuits. Evaluate and compare circuit performance with predictions based on circuit models and mathematical analysis. Analog circuits include standard op amp designs plus linear and nonlinear application examples. Digital topics include logic gate and flip-flop operation, the construction of combinational and sequential logic circuits, interfacing between logic families, and a project. Prereq: MAT 106 and EET 117. Coreq: EET 127.

**EET 130 (9) N
Computer Basics – A+ Certification**

Intro to basic computer knowledge and skills necessary for a network specialist. Emphasis on computer component integration and problem solving techniques. Intro to troubleshooting from a hardware and software approach 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 131 (5) N
IT Essentials I – A+ Certification**

Intro to basic computer hardware knowledge and skills, including the knowledge required for the Comptia A+ computer certification. Emphasizes system boards, microprocessors, memory, BIOS, hard drives CDROMs, floppy drives, modems and other common components used by Windows 2000/XP professional. Covers hardware and software troubleshooting. Course may be waived for holders of A+ certificate.

**EET 132 (5) N
IT Essentials II – Network Operating Systems**

Second of 2 courses in IT Essentials. Intro to Network Operating Systems to include Windows 98, Windows 2000 and Linux. Addresses the fundamentals of operating system installation, configuration and maintenance and the basics of the local area network, which lays the foundation required for operating system administration or networking administration. Prereq: EET 131 or Instructor Permission.

**EET 135 (5) N
Intro to Broadband**

Intro to Broadband Cable and DSL technologies. Covers skills required for technicians working in this expanding data delivery industry. Includes Broadband Cable video and telephony. Prereq: EET 131.

**EET 161 (5) N,C
DC Principles of Electronics**

Covers physics as applied to electricity and magnetism, electrical and electronic terms and units. Introduces electronic measuring devices, electrical circuits, magnets, magnetism, meter movements and DC circuit analysis. Prereq: High School algebra.

**EET 162 (5) N
AC Principles of Electronics**

Covers AC theory and principles. Prereq: EET 161 or equivalent, or acceptable score on electronics advanced placement test.

**EET 163 (5) N
Solid State Electronics I**

Analyzes 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**

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.

<p>EET 168 (5) N Electronic Systems & Industrial Applications Continues the applications of digital and analog circuitry to industrial measurement and control problems. Covers transducers, final control elements and interfacing. Emphasis on automated test equipment and programmable controllers. Prereq: EET 167.</p> <p>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.</p> <p>EET 171 (5) N Digital Circuits II Continuation of EET 170. Covers logic fundamentals, logic IC families and their characteristics, logic controls and associated circuitry. Includes construction of logic control circuits and measurement of circuit parameters and functions as well as logic numbering systems, Boolean algebra, detectors, combinational logic minimization techniques, ADA converters, memories and registers. Intro to microcomputers and microprocessors.</p> <p>EET 197 (2-10) N Special Topics in Electronics Study of selected topics considered appropriate by the instructor and/or faculty. Course content, format, and projects vary. Prereq: Permission.</p> <p>EET 198 (1-2) N,C Electronics Workshop Open lab with instructor. Analog and digital course work enhancement. May include proper use of bench equipment, troubleshooting techniques, study skills, and group problem-solving.</p> <p>EET 207 (4) N Advanced Principles of Electronics Reinforcement of DC principles and inclusion of AC concepts of frequency, resonance, inductance, capacitance, and reactance. Emphasis on magnetic circuits and energy. Covers circuit construction and measurement using power supplies, multimeters, oscilloscopes and other test instruments. Prereq: EET 107 or EET 161; and EET 109 or MAT 102 or higher. Coreq: EET 208.</p>	<p>EET 208 (4) N Advanced Principles of Electronics Laboratory Lab course to accompany EET 207. Covers circuit construction and measurement using power supplies, multimeters, oscilloscopes and other test equipment. Coreq: EET 207.</p> <p>EET 217 (4) N Digital & Analog Circuits II Continues the study of analog and digital circuits. Analog studies include active filters, oscillators and voltage regulators. Digital studies include number arithmetic operations and circuits, counters, and shift registers. Emphasis on D/A and A/D converters and data acquisition systems. Coreq: EET 218. Prereq: EET 127, and EET 207.</p> <p>EET 218 (4) N Digital & Analog Circuits II, Lab Covers construction, debugging and adjustment of analog and digital circuits, and data conversion circuits. Analog research includes active filters, oscillators, and voltage regulators. Digital research includes binary and BCD adders, counters, and shift registers. Coreq: EET 217.</p> <p>EET 241 (5) N Principles of Telecommunications I Overview of basic telephony. Covers telephone apparatus and plant design, network design, network traffic planning, private networks, and switched networks, data systems, and testing equipment.</p> <p>EET 242 (5) N Principles of Telecommunications II Intro to telephone apparatus and plant design, network design, network traffic planning, private networks, data systems and distribution of switched networks. Uses the testing equipment used by industry. Prereq: EET 241 or minimum of six months industry exposure.</p> <p>EET 243 (5) N Principles of Telecommunications III Continuation of basic switched telephony: telephone apparatus and plant design, switched network designs, and network traffic planning of switched and private switched networks. Uses the testing equipment used by industry. Prereq: EET 242 or minimum of six months industry exposure.</p>	<p>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.</p> <p>EET 252 (5) N Microprocessor Fundamentals II Continuation of EET 251. Prereq: EET 251 or equivalent.</p> <p>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. Coreq: EET 217 and EET 218; some modules may have additional requirements. Prereq: EET 112, EET 207 and EET 208.</p> <p>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. Coreq: EET 217 and EET 218; some modules may have additional reqs. Prereq: EET 112, EET 207 and EET 208.</p> <p>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. Emphasizes technical knowledge, teamwork and effective project management. Prereq: EET 217, EET 218.</p> <p>EET 286 (5) N Biomedical Equipment I Intro to 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. Permission only.</p>
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**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. Permission only.

**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, equipment manufacturer or laboratory is critical to job placement in the biomedical field. Work site must be approved by the instructor. Highest responsible and ethical behavior is expected. (55 hours of work-related experience equals one credit) Prereq: Completion of an appropriate amount of the designated program and permission only.

**EET 298 (1-5) N
Special Topics in Electronics Technology**

Selected topics in electronics technology. Content and projects vary. 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 Allied Health 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

Note: Engineering students at Central should contact the Engineering Department at North or South.

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; friction; location of centroids; and evaluation of area moments of inertia. Prereq: MAT 113.

**MET 210 (4) S
Technical Strength of Materials**

Studies principles of tension, compression, and shear stress to determine the correct size for structural beams and shafts. Examination of distribution and magnitude of stress in welded and riveted joints, thin-walled cylinders, torsional members, and beams. Prereq: MET 205.

**MET 220 (4) S
Basic Hydraulics**

Intro to the various components used in industrial hydraulic systems. Includes construction, characteristics, schematic symbols, and typical applications. Build a hydraulic circuit with actual components in the fluid power laboratory.

**MET 298 (1-10) S
Special Topics in Mechanical Engineering**

Special topics for an individual or group study basis in the mechanical engineering technology field. Prereq: Permission.

Engineering (Pre-major)**EGR 110 (1) C,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**

Examine the nature of creativity and its process. Intro to analysis and solution of engineering problems, applications of vectors and calculus in statics and dynamics. Group and individual projects.

**EGR 123 (4) N,S
Intro to Engineering & Graphics Design**

Covers principles of orthographic projection, freehand 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
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 141 (5) S
Scientific Engineering**

Covers problem analysis, algorithm design, numerical techniques, and the elements of programming using MATLAB or similar high-level programming language. Emphasis on learning how to write clean, efficient, and well-documented programs for modeling of scientific and engineering problems. Prereq: MAT 123 or higher.

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 on Java. Covers objects, messages, expressions, statements, methods, classes, conditionals, iterations, arrays and collections. Fulfills QSR requirement for A.A. degree. Prereq: CSC 110 and MAT 122 (C).

South: Intro to computer science for scientists and engineers. Emphasizes design, algorithms (variables, expressions, statements), abstraction (data types, functions), and analysis (correctness, efficiency). Fulfills QSR requirement for A.A. degree. Prereq: CSC 110 and MAT 122 (S).

EGR 161 (5) 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 include metals, alloys, semiconductors, polymers, ceramics and composites. Prereq: CHE 140.

EGR 171 (1) S
Material Science Lab

Practical application 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,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,S
Fundamentals of Electrical Engineering

Covers basic circuit and systems concepts. Resistors, sources, capacitors, inductors and operational amplifiers. Includes solution of first and second order linear differential equations associated with basic circuit forms. Prereq: PHY 202 and MAT 125.

EGR 220 (5) N,S
Mechanics of Materials

Covers basic relationships between axial, torsion, bending, and shear loads acting on solid elements such as rods, shafts, columns, and beams and their allowable stress, strains and deformations. Mohr's circle of stress. Prereq: EGR 210 and MAT 125.

EGR 230 (5) N,S
Engineering Dynamics

Studies motion and the forces which affect the motion, including rectilinear motion, curvilinear motion, plane motion, dynamic force analysis, work and energy, impulse and momentum. Prereq: EGR 210 with 2.5 or higher and MAT 126.

EGR 231 (3) N,S
Technical Writing

Presents formats and mechanics of writing demands in occupational areas related to engineering technologies. Emphasis on project types; layout and design; use of illustrations, schematics, and mathematics; writing for specific audiences; research and documentation; resume writing. (Not recommended for first-year transfer students.) Prereq: ENG 101 for most degree and all EGR transfer students. Appropriate test scores as designated by certificate programs. Fulfills portion of transfer requirements for UW Engineering Programs.

EGR 260 (5) N
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,S
Special Topics

A seminar of selected topics and/or activities in engineering. Prereq: Variable, dependent on topic.

EGR 299 (1-5) N,S
Independent Study

Independent study of approved engineering topics. Prereq: Permission.

ENGLISH

See Languages & Literature.

ENGLISH AS A SECOND LANGUAGE

See Languages and Literature

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) N
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. Includes energy and resource alternatives.

ENV 201 (5) N,S
General Ecology

Covers the nature of ecosystems, energy flow, bio-geochemical cycles, population dynamics, organization and dynamics of communities, and identification of environmental problems.

ENV 203 (5) N
Environmental Issues & Problems II

Encompasses the role of technological humans in the global ecosystem. Covers current environmental topics with a view toward solutions. Includes urban growth, air and water pollution, and siting of nuclear power plants. Prereq: An environmental science, geology or geography class, or permission.

ENV 205 (3) N
East African Bio-Cultural Ecology

Designed for educators interested in developing classroom materials based on topics and areas covered by the East Africa Study and Travel Program. Classroom work and a field trip.

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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

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

Interdisciplinary course. Intro to mass communications, TV production, TV equipment, and the power of teamwork. Learn production techniques for TV and cable through the duties and responsibilities of the producer, director, writer, and field camera operator. Develop scripts, storyboards, treatments and work in groups to produce projects emphasizing camera composition, visualization, continuity, lighting, and camera movement.

COM 102 (5) C
Television Production & Post-Production

Continuation of COM 101. Build on the fundamentals of single-camera video production. Emphasis on a production team and working through each stage of the process. Stresses importance of pre-production and more detail in writing, casting, blocking, designing, shooting and editing. Explores more fully the post-production process and its role in shaping a final video piece. In addition to team projects, requires full participation in an in-studio class project designed to maximize each student's contribution and achieve a high technical standard under professional conditions.

COM 103 (5) C
TV Production Crew & Team Projects

Intro to TV production facilities and equipment. Describes the duties and responsibilities of a professional TV production crew: Producer-Director, Writer, Art Director, Audio, Camera, Lighting Technician, Set Designer, and Production Manager. Industry representatives participate in teaching. Stresses communication skills and teamwork.

COM 130 (3) C
Television Production Design

Intro to the tools and processes of design construction of flats, risers and sets, using various formats needed for video and theatre productions. Covers principles of design, (color theory, lighting, pigment, and line), their interactions in developing two-dimensional and three-dimensional imagery, and integration into production techniques. Develop and construct generic modules for sets, theatre sets and a versatile video set.

COM 140 (3) C
Intro to Media Images

Combines analysis, criticism and writing to develop critical viewing skills using live and recorded media presentations. Explores the origin, impact and meanings of images from personal and cultural perspectives as purveyors of personal and social points of view. Examines images as the text of messages to develop a visual vocabulary. Participation required.

COM 197 (1-5) C
Film & Video Communications

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 3/4 inch and S-VHS video cameras and editing systems. Concentrates on team production that includes 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

Studies the visual language and its history as it has evolved in film and video. Increases visual vocabulary and visual literacy skills by examining a variety of multi-cultural themes, through cinematic forms from both foreign and domestic filmmakers and videographers. Analyze effective film and video production.

COM 215 (3) C
Media Law & Ethics

Intro to the basic legal concepts applicable to the film and video industries.

COM 225 (5) C
Advanced Television Productions & Applied Communications

Explores single camera and multiple camera techniques and visual style in television production. Produce and post-produce material for professional reels and Spring Showcase. Covers staging and blocking in both single and multiple camera environments. Experience a variety of crew positions.

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.

COM 235 (3) C
Production/Management

Overview of the duties and responsibilities of a production-manager. Includes script breakdown, location selection, casting requirements, adhering to union requirements, preparations of a production board, contracts and negotiations and fiscal management. Rotate in the role of supervisor of a production crew for television and stage productions. Explore interpersonal interactions.

COM 236 (3) C
Audio Production

Learn the basics of sound theory, capture, creation, manipulation and duplication in video production.

COM 240 (3) C
Production Operations

Covers the theory and business practices of Video/Theater Film industry. Participate in the development of a thirty (30) minute production. Production teams submit proposals for a five (5) minute segment for a thirty (30) minute pilot for a major Network. Participate in a story conference with the Executive Producer to evaluate how the plan fits into the theme of the pilot. Selected teams will produce one segment of the Pilot program.

COM 250 (2) C
Portfolio Preparation

Explores careers in video, film, broadcast, corporate TV and digital media. Focuses on career goals, job searching and professional portfolios. Prereq: 2.0 or higher in all previous 200 level courses or permission from division Dean.

COM 260 (3) C
Directing

Studies the Director's role in the art of film and video productions.

COM 270 (3-5) C
In-House Productions

Covers Video/Theatre/Film Industry theory and business practices. Produce at least one 3-5 minute project. First phase of an In-House Production unit which provides production services for in school and outside projects. Also provides outside employment for second year students and graduates, and can be used for the internship credits or advanced placement credits. Projects produce work which can be used for recruitment purposes by the institution.

FIRE SCIENCE**FCA 105 (3) S**
Hydraulics

Study fluid mechanics dealing with the mechanical properties of water at rest and in motion, and the applications of these properties to fire suppression operations and fire stream development. Includes municipal water supply systems, as well as urban and rural water supply operations.

FCA 110 (19) S
Basic Fire Investigation

The firefighter I course is the equivalent of the Washington State Patrol Fire Training Academy. Provides the firefighter candidate with information and skills to meet the fire-related performance objective of NFPA 1001 (National Fire Protection Association), Levels I and II. Learn to function safely and effectively as a member of a fire fighting team under direct supervision. By training to IFSTA standards, acquire a baseline of professionalism in international fire service. Prepares fire personnel to meet the objectives of IFSTA standards and promote professionalism. Prereq: Sponsorship by a Fire Department.

FCA 120 (3) S
Basic Fire Investigation

Provides personnel who are responsible for fire and arson investigation with additional knowledge and skills in the technique and procedure of fire and arson investigations.

FCA 137 (3) S
Fire Protection Systems I

Study fire protection and detection systems with a focus on sprinkler systems: basic system design; types of systems including wet, dry, deluge and pre-action; various sprinkler heads; system parts including connections and valves; and system operations including water supply. Encompasses system locations, basic design, maintenance, and inspection; comparison of foam and foam water systems including fire extinguishers, fire detection and alarm systems, plus inspection and testing of fire alarm systems.

FCA 152 (3) S
Building Construction

Overview of the engineering principles of building construction, characteristics of building classifications, fire and life safety devices and assemblies, fire loading, fire resistance and flame spread ratings.

FCA 155 (3) S
Fire Services Instructor

Basic study of elements that influence teaching and learning. Gives special attention to the Fire Service Training Instructor's relationship to student safety as well as the legal liabilities involved.

FCA 161 (3) S
Incident Management I

Studies the Emergency Incident Management process as it applies to the fire service at the fire company level. Includes basic command structure and components, incident safety considerations, personnel accountability and application of the management process to a variety of emergency situations.

FCA 170 (3) S
Hazardous Materials I

Establishes a base whereby a person can identify the hazardous material, evaluate it from shipping papers and know where assistance can be obtained.

FCA 181 (3) S
Fire Services Safety

Studies Fire Service Safety in Washington State. Includes both emergency and non-emergency scenes and the day to day health and safety of department members. Apply the current issues of the Washington State Safety Standards for Firefighters (WAC 296-305) to a Fire Department.

FCA 190 (4) S
Fire Inspection & Codes

Studies the Uniform Fire Code on fire prevention inspections at the fire company level. Includes the fire codes relationship to the Uniform Building Code, and other recognized standards.

FCA 231 (4) S
Fire Service Supervision

Covers roles and responsibilities of shift commanders and staff officers. Includes goal setting, delegating, and counseling, coaching, problem solving, decision making, communications and labor relations.

FCA 232 (4) S
Fire Service Management

Covers management theory and practice in relation to roles and responsibilities of shift commanders and staff officers. Includes evolution of management, decision making, planning, organizing, leading, and controlling.

FCA 233 (4) S
Fire Service Administration

Concepts, examples and practice of political and legal issues, hiring practices, forms of local government and revenue sources, intergovernmental relations, information management, planning and budgeting.

FCA 261 (3) S
Incident Management II

Covers planning, implementing and evaluating of basic and advanced fire tactics at the command officer level.

FCA 270 (3) S
Hazardous Materials II

Provides the knowledge, skill and abilities to meet the goals identified in the requirements for Hazardous Material IC. Covers the goals identified in NFPA Standard for Fire Officers who deal with Hazardous Material Incident tactics.

FCA 299 (1-5) S
Fire Service Seminar
 Includes various advanced fire services skills incorporating critical thinking and problem solving. Explores other professional areas of interest in fire protection.

FOOD PRODUCTION

*See Hospitality/Food Production/
Culinary Arts.*

FOREIGN LANGUAGES

See Languages and Literature.

FRENCH

See Languages and Literature.

GENERAL EDUCATIONAL DEVELOPMENT

To take 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

Prepares learners to pass successfully any two of the five GED subject-area tests.

GED 051 (1-15) N,C,S
Basic GED Preparation Math Level 5

Prepares learners to pass successfully the GED Math test.

GED 052 (1-15) C,S
Basic GED Preparation Comm Level 5

Prepares learners to improve their general reading, writing and test taking skills with special emphasis on reading for the GED Social Studies, Science and Language Arts tests.

GED 054 (1-15) C,S
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 micro-computers and relevant basic skills software.

GED 060 (1-15) N,C
Advanced GED Preparation Level 6

Prepares learners to pass successfully the three remaining GED tests needed to complete the Official GED certificate.

GED 061 (1-15) N,C
Advanced GED Preparation Math Level 6

Prepares learners to use the necessary math concepts and applications needed to pass successfully the math portion of the official GED test.

GED 062 (1-15) C
Advanced GED Preparation Comm Level 6

Improves general reading, writing and test taking skills with special emphasis on reading for the GED Social Studies, Science and Art and Literature tests.

GED 064 (1-15) C
Advanced Computer-Assisted GED Preparation Level 6

Improves general reading, writing, math and test taking skills for the GED tests through the use of micro-computers and relevant basic skills software.

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 155 (5) C
Global Political Geography

Survey of political geography and scientific theory, offering students an analytical understanding of forces affecting the territorial and functional role of the state in today's world. Examines contemporary cases of territorial and functional change among states.

GEG 200 (5) N,C,S
Intro to Human Geography

Intro to human patterns on the Earth's surface, distribution, political divisions and economic activities. Emphasis on the role of geography in understanding the developments and diffusion of value systems and cultural differences in the 20th century.

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.

GEG 207 (5) N,C,S
Economic Geography

Focus on human survival. Examines resource scarcity and uneven distribution and use of technology to extract natural resources. Emphasis on competition for resources and major world conflicts, past and present, stemming from this competition.

GEG 230 (5) N,C,S
Urbanization in Developing Nations

Focus on cities in their cultural and economic contexts, geographical patterns, internal structure, current problems in rapidly growing cities and selected policy solutions.

GEG 260 (5) N
Geopolitics of the Middle East

Geopolitics is the "game" nations "play" to extend influence and control over nations. Focuses on the "game" as it relates to the Middle East, Arabs, Afghans, Persians, Egyptians, Israelis, Palestinians, and current events, and the geopolitics of petroleum. Course material is controversial.

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. Intro to 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

Studies the formation and development through time of the solid Earth, atmosphere, and biosphere. Covers past movements and locations of the continents and interpretation of past environments as recorded in rock and fossil records. Lab included. 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 physical geology, including the Earth's interior and exterior. Covers the origin and evolution of the Earth, rocks and minerals, surface processes such as glaciation, river erosion and transport and mass movement. Field exercises involve data collection and analysis. Course requires extended overnight stays. Lab included.

GEL 108 (5) N
Minerals, Gems & Fossils

Intro to the nature of earth materials, including minerals, with an emphasis on gem minerals and fossils. Covers mineral composition, structure, physical properties, and origins, along with gemology, color mechanisms, history and lore of gems, and uses of gems. Covers fossil identification, preservation and interpretation. Lab class.

GEL 115 (1) N,C
Geology Field Trip

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. Also offered as SCI 115.

GEL 118 (1) N,C
Volcano Field Trip

Intro 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. Also offered as SCI 118.

GEL 200 (5) N
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 202 (3) N
Geology and the Human Environment of East Africa

Cenozoic geologic evolution of East Africa with specific emphasis on the origin of the East African Rift Valleys and their relation to the evolution of early hominids.

GEL 207 (5) N
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.

GERMAN

See Languages and Literature.

GRAPHIC DESIGN & ILLUSTRATION**DES 101 (3) C**
Drawing I

Provides the fundamentals and principles of drawing, especially as applied to graphic design. Emphasis on spatial perception, composition, accuracy and the ability to develop an idea or visual story with drawings.

DES 102 (3) C
Drawing II

Draw the human figure from live models. Use various media and techniques 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 using fundamental 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

Explore the business fundamentals of graphic design and illustration. Intro to professional issues, ethical standards, pricing, salaries, business management and contractual arrangements.. Explore opportunities in the industry, both staff and freelance, using exercises, informational interviews and guest speakers.

DES 110 (2) C
History of Graphic Design

Examines 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.

<p>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 in which typography is major. Emphasis on combination of typography and image, as well as the correct and skillful use of typographic functions in page layout software.</p> <p>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, as well as mastery of all necessary typographic elements in page layout software.</p> <p>DES 131 (3) C Graphic Design I Intro to the social context and process of graphic design.</p> <p>DES 132 (3) C Graphic Design II Intro to layout and advertising design. Practice the design process and principles of perceptions studied in Graphic Design I.</p> <p>DES 133 (3) C Graphic Design III Apply concepts from Graphic Design I and II to three-dimensional graphic design.</p> <p>DES 145 (3) C Graphic Production I Learn the Macintosh operating system, and basic hardware and software issues as they pertain to graphic production. Develop proficiency with illustration and page layout applications in support of Graphic Design I.</p> <p>DES 146 (3) C Graphic Production II Study terminology and practical procedures used in various kinds of graphic production, including computer illustrations, design and digital prepress.</p> <p>DES 147 (3) C Graphic Production III Learn 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.</p>	<p>DES 197 (2-5) C Work Experience – Graphic Design Earn work experience credit in Graphic Design and Illustration. Prereq: Permission.</p> <p>DES 231 (4) C Graphic Design IV Emphasize expressive, creative and conceptual problem-solving in graphic design and continue to develop research skills.</p> <p>DES 232 (4) C Graphic Design V Emphasize conceptual approaches to information design, charts and graphs, and the design of text-heavy documents such as annual reports.</p> <p>DES 233 (4) C Graphic Design VI Design a complete visual identity program for a greater Seattle restaurant.</p> <p>DES 234 (4) C Graphic Design VII Design and produce a corporate identity system including trademark or logotype and applied graphics to a mix of visual business applications.</p> <p>DES 235 (4) C Graphic Design VIII Create a self-promotional piece or series in a review of portfolio work conducted by professionals from outside the program. Study basic concepts of exhibit design, and design and install the program final portfolio exhibit.</p> <p>DES 241 (3) C Illustration I Intro to illustration media and techniques of various media through examinations of the work and process of contemporary illustrators.</p> <p>DES 242 (3) C Illustration II Explore humor in illustration in various media and examine the work and process of contemporary illustrators.</p> <p>DES 243 (3) C Illustration III Explore the use of the human figure in illustration in various media and examine the work and process of artists as illustrators.</p> <p>DES 244 (3) C Illustration IV Explore illustration through digital media including vectors and bitmap programs.</p>	<p>DES 245 (3) C Illustration V Explore scientific illustration through various media.</p> <p>DES 251 (3) C Multimedia I Intro to the practice of web page design as a graphic designer.</p> <p>DES 252 (3) C Multimedia II Intro to and practice of two-dimensional animation from the graphic design perspective.</p> <p>DES 253 (3) C Multimedia III Further develop skills learned in Multimedia I & II in an independent project of the student's choosing.</p> <p>DES 260 (3) C Portfolio Prep Develop, design and prepare a portfolio that represents the student's individual creativity and demonstrates skills for seeking employment in the Graphic Design and Illustration field.</p> <p>DES 299 (1-5) C Independent Study Independent study on selected graphic design and illustration topics. Prereq: Permission.</p> <hr/> <p style="text-align: center;">GRAPHIC IMAGING AND PRINTING TECHNOLOGY <i>This program is now Publishing Arts.</i></p> <hr/> <p>HEALTH</p> <p>HEA 025 (5) S Health Covers physiology for understanding body functioning; includes organic and functional disease and disease prevention. Prereq: Appropriate placement on English and Basic Skills tests.</p> <p>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.</p>
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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 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. Covers HVAC physical laws, fuels and combustion, and heating equipment, including parts, operation, controls and system operation.

ECT 102 (12) N
Basic Refrigeration & Air Conditioning

Covers basic refrigeration system operation, including refrigerants, components, controls and operating cycle for comfort air conditioning and process refrigeration. Prereq: ECT 103 or permission.

ECT 103 (12) N
Residential Applications

Calculation of heating and cooling loads to properly size residential heating and air conditioning systems. Includes application of equipment, design of residential distribution systems, balancing air distribution systems and troubleshooting. Prereq: ECT 102.

ECT 106 (2) N
Electrical Fundamentals

Covers basic electricity as used in HVAC equipment for power and for control purposes. Covers the electron theory, generation of electricity, Ohms Law, circuitry and electrical devices. Prereq: Concurrent enrollment in ECT 101.

ECT 110 (2) N
Blueprint Reading & Building Construction

Includes types of drawings, plan formats, terminology, scale, symbols and specifications with emphasis on mechanical parts; residential and commercial building construction with emphasis on HVAC systems. Prereq: ECT 106 or permission.

ECT 111 (2) N
Hydronic System Design

Intro to hydronic system design. Includes equipment piping layouts, sizing, and control systems. Prereq: ECT 110.

ECT 197 (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. 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

Part 1 of 3 in HVAC Design Technology. Covers HVAC industry organization, business ethics, plans and specifications, codes, quotations, bidding, subcontracts 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 2 of 3 in HVAC 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 associated systems.

ECT 213 (12) N
System Design & Application III

Part 3 of 3 in HVAC Design Technology. Covers "wet side" design, including heat generation, heat transfer, hydronic pumping loops, pump performance and selection, hydronic system design and pipe sizing, refrigeration systems and line sizing and chilled water systems.

ECT 271 (5) N
Refrigeration Systems, Components & Operation

Covers refrigeration for commercial applications. Provides description of various systems, controls and operations of each. Includes theory and application.

ECT 272 (5) N
Refrigeration – Application

Covers load calculations, system design and operation. Includes theory and application. 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.

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. 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) 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) 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) 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

Studies the purpose and methods of historical research including choosing a topic, gathering data, taking notes, writing a research paper, footnoting and developing a bibliography.

HIS 095 (3) S
History of Asian Immigration to the West Coast

Covers the major Asian populations who have come to the U.S. and particularly to the Northwest.

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. Intro 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
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 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 became 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
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

Covers 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 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 lectures 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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN **Watch Technology**

NAME TO PREFIX
Watch Technology **HIN**

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 White/Native American affairs from pre-Colonial America to the present. Probes White attitudes, values and misconceptions as well as Native American values, spiritual beliefs and the continuing struggle for sovereignty.

HIS 138 (5) C,N
Survey of Chicano History

Surveys 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

Surveys 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. Examines the experience of women in their own words, with emphasis on women of color. Examines "her story" to help in understanding the conflict facing the 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 current global issues from global perspectives, using materials from diverse history sources and the research tools of the historian.

HIS 201 (5) N
Medieval European History

Covers the decline of the Roman Empire and Germanic aspects of medieval society contributing to feudalism and manorialism; the medieval church; rise of town, commerce, and the middle class; Western Europe at the eve of the Renaissance.

HIS 202 (5) N
Renaissance & Reformation

Development of Europe from the intellectual achievements of the Renaissance to the Protestant Revolution: an epic of endings and beginnings in all aspects of life, society, religion, arts, letters, and politics. Rapid change, then as now, produced a new civilization and unique challenges for the future.

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. Analyzes 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. Explores the civil rights movement, the cold war, the role of media, the rise of the "counter-culture," and the development of suburbia.

HIS 218 (5) N,C
Field Trip: Europe

Take a field trip to Europe to visit historic monuments, cities, castles, museums, churches and other areas relative to studies in the classroom. Average length of experience is three weeks.

HIS 221 (5) N
Sports & Social Change in the 20th Century

Examines the development of sports and its importance for United States culture and society. Focuses on the struggles of athletes who resisted social restrictions, prejudices, gender and racial segregation and the role of sports in creating the diverse American society of the 20th century. Also explores the interplay between sports and immigration, technology, and globalization.

HIS 241 (5) S
History of Southeast Asia

An historical survey from pre-history to the present of the countries of contemporary Southeast Asia: Brunei, Burma, Indonesia, Kampuchea, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam.

HIS 242 (5) S
The Vietnamese-American War

Examines the war in Southeast Asia, 1945-1975, from multiple angles. Organized around narratives, perspectives, and interpretations of the war. Focuses on themes such as protagonists and victims, concepts of winning and losing, popular re-imagining and memorializing the war.

HIS 251 (5) N,S
History of China

Surveys the development of Chinese society from ancient times to the present, including fine arts, literature, religion, and thought. Emphasis on the modern period.

HIS 264 (5) N,C,S
Pacific Northwest History

Surveys 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. Focuses on social, economic, cultural and political development.

HIS 273 (5) N
Women of the American West

Examines women of diverse communities in the Trans-Mississippi West in all their different roles from before European contact to the end of the twentieth century. Explores race, ethnicity, class, labor, family, suffrage, politics, social reform, women's groups, arts and entertainment, religion, cultural values, and gender identity.

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****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 and creams, pastries, pies and tarts, cake mixing and 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; butter-creams; soufflés 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 previous theory and practicum, 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)

Utilize the theory gained in previous courses to design and develop a line of bakery goods. Learn how to purchase goods, inventory goods, calculate cost analysis and develop a bakery line for presentation. Prereq: BAK 103 or permission.

BAK 124 (8) C
Advanced Buffet Desserts & Wedding Cakes (Practicum)

Utilize theory and experience to develop and design a line of wedding cakes, show pieces, petits-four and decorative breads using the latest industry techniques. Prereq: Completion of BAK 125 or permission.

BAK 125 (8) C
Advanced Desserts & Breads: (Practicum)

Using theory and experience, 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. Choose externship sites 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. Rotate into a different kitchen each day, preparing a variety of dishes.

HOS 106 (1) C
Advanced Bakery Counter Service (Practicum)

Explains advanced 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 (2) C
Functions of Management

Covers management and communication theories and practices within the culinary arts and baking industries. Seminars on current issues: introduction to hospital-ity, 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 105 (1.5) C**
Restaurant Baking (Theory)

For culinary arts students. Expands on science and principles of baking, including yeast doughs and formulas, icing techniques, basic cake types, and characteristics of desserts. Prereq: CUL 101.

BAK 114 (.5) C
Intro to Baking (Practicum)

For culinary arts students. Intro to 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 (6) 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)

Continuation of 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
International Cooking (Theory)

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 (6) 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
International Cooking (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 120 (2) C
Intro to Wine

Covers the fundamentals of grape growing and winemaking, including table, sparkling and fortified wines. Includes sensory evaluation of classic grape varieties and their growing regions with emphasis on Washington state wines. Learn strategies for food and wine pairing. Prereq: Satisfactory completion of four quarters of courses or permission.

CUL 150 (2) C
Sustainable Food Systems Practices

Intro to the current ecological, economical and political issues relating to the food system. Raises awareness of issues of the food system from producer to consumer, exploring agriculture, fisheries, dairy, meat and poultry production, water and waste. Includes trade, health and social justice issues within the food system. Prereq: Satisfactory completion of 1st quarter culinary or pastry classes or permission.

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 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 •**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)

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)

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. Assume responsibility for opening/closing, sales, organization and merchandising of product and training of first-quarter students at a retail pastry case. Pass/fail grade. 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 assists in training first and second quarter students. Pass/fail grade. Prereq: satisfactory completion of first three quarters of program.

HOS 108 (2) C
Dining Room & Kitchen Management

For Culinary Arts students. Covers management and supervision practices in both front and back of the house. Students rotate into dining rooms and all quarter kitchens working with instructors to learn and apply management skills. Prereq: satisfactory completion of first four quarters in Culinary Arts.

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. Pass/fail grade. 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 122 (1) C
Purchasing & Inventory (Theory)

Intro to 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. 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

Learn 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.

HOS 201 (2) C
Functions of Management

Covers management and communication theories and practices within the culinary arts and baking industries. Includes 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 1-4 of Specialty Desserts and Breads or Culinary Arts program.

Food Production
• SOUTH •

FSD 100 (3) S
Food Safety & Sanitation

Intro survey 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; table-side 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

Survey of 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

Survey of 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. Includes sanitation and safety principles and practices. Prereq: FSD 102 and 103 or permission.

FSD 105 (5) S
Theory 2

Survey of the principles of food and beverage control procedures for the Culinary Arts industry. Includes 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

Covers theory and application of cold food preparation and display techniques. Includes the art of garde manger; forcemeats, use of gelatin and aspic, pâtés, terrines, galantines, and mousse. Covers hors d'oeuvres: finger food, canapés and more. Studies charcuterie: sausage making and the curing of meats. Includes a performance test which requires the application of ACF (American Culinary Federation) standards in order to plan, prepare, assemble and display a culinary salon show platter. Prereq: FSD 102, 103, 104 and 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. Use practical dining room laboratory to emphasize tray and arm service, Continental and French service. Stresses terminology, trade terms, sanitation and safety. 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. Prereq: Current enrollment in Hospitality Production Program.

FSD 112 (5) S
Food Preparation 1

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.

FSD 113 (5) S
Purchasing

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.

FSD 114 (5) S
Food Server 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 or permission.

FSD 115 (5) S
Inventory

Covers skills and responsibilities in storeroom controls: 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.

FSD 120 (5) S
Short-Order Cookery

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.

FSD 121 (5) S
Food Preparation 2

Intermediate 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.

FSD 122 (5) S
Food Server 2

For Intermediate Food Servers. Covers flambé and tableside techniques, industry performance and opportunities, and continued emphasis on terminology and theory. Uses a luncheon-oriented menu. Prereq: FSD 110 or permission.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

FSD 124 (5) S
Food Preparation 3

Advanced quantity cookery. Intro to Continental and Classic French culinary methods. Covers organizational and management skills with advanced terminology and production techniques. Prereq: FSD 121 or permission.

FSD 130 (5) S
Pantry 2

Advanced pantry and deli preparation and organization. Emphasis on speed skills, quantity production, plate presentation and seasonal production. Practice dining room pantry production. Covers industry guidelines for sanitation and safety. Prereq: FSD 111 or permission.

FSD 131 (5) S
Restaurant Baking 1

Intro to a variety of puff doughs, including the assorted methods of mixing, enrobing and folding by hand and machine. Intro to paté a choux, pastry creams, commercial puddings, basic plated desserts, sauces, and plate presentations. Prereq: Permission.

FSD 133 (5) S
Sauce 1

Basic sauce station production and organization. Intro to basic stocks, foundation sauces, sauce variations and soup formulas. Includes exposure to herb and spice combinations and industry standards for sanitation. Prereq: Permission.

FSD 134 (5) S
Sauté 1

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.

FSD 135 (5) S
Restaurant Baking 2

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, finishing methods, and safety and sanitation procedures. Prereq: Completion of Culinary Production Certificate Program (GPA 2.75 or higher) or permission.

FSD 136 (5) S
Meat Cutting 1

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.

FSD 137 (5) S
Meat Cutting 2

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 138 (5) S
Garde Manger 1

Exposes the student to cold food preparation and cold food display techniques. Covers pates, terrines, galantines, meat curing and platter presentation.

FSD 140 (5) S
Food Preparation 4

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 or permission.

FSD 141 (5) S
Sauté 2

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 143 (5) S
Food Server 3

Development of professionalism and management skills. Emphasis on dining room supervision, special techniques in reception and related duties. Prereq: FSD 122 or permission.

FSD 145 (5) S
Garde Manger 2

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 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 150 (5) S
Sauce 2

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. Uses industry standards for sanitation and safety. Prereq: FSD 133 or permission.

FSD 151 (5) S
Sauté 3

Advanced 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

Practical supervisory courses that coordinate student workers in a quantity food preparation environment with specific emphasis on institutional cooking. Demonstrates scheduling, requisitioning of product, purchasing skills, portion control and production skills. Covers supervision of subordinate personnel and training techniques. Prereq: FSD 104 or permission.

FSD 152 (5) S
Prep Lead**FSD 153 (5) S**
Student Lunch Lead**FSD 154 (5) S**
Pantry Lead**FSD 155 (5) S**
Short Order Lead**FSD 156 (5) S**
Sauté Lead**HOS 180 (1-8) S**
Field Application

Provides experience in an occupational setting. Individualized lab hours meet student needs. Credits vary in proportion to the total clock hours. A stipend may be given.

**HOS 203 (3) N,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. Includes 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. Includes the art of garde manger, forcemeats, use of gelatin and aspic, patés, terrines, galantines and mousse. Covers hors d'oeuvres, finger food, canapés and more. Studies charcuterie, sausage-making and the curing of meats. Includes a performance test which requires the application of ACF (American Culinary Federation) standards in order to plan, prepare, assemble and display a culinary salon show platter. Prereq: FSD 102, 103, 104 and 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.

**Pastry & Specialty Baking
• SOUTH •****FSD 139 (5) S
Cooking I**

Commercial food preparation for pastry and specialty baking students only. Covers vegetable and starch preparations, main course protein cookery, and a la minute preparations. Applies sanitation and safety guidelines. 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, plus metric and U.S. measurement conversions and calculations. Learn hands-on knife skills and observe demonstration of mixing skills. Prereq: Permission.

**FSD 166 (5) S
Bread I**

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 I**

First of two modules (two weeks each). Intro to basic mixing methods. Prepare 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. Emphasizes selection, care and handling of equipment. Prereq: FSD 160 or permission.

**FSD 168 (5) S
Cakes I**

First of two modules (two weeks each). Intro to mixing: two stage, flour batter, sponge, high ration, chiffon, angel food and modified sponge methods. Prepare 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. Covers leadership, organization, scheduling and evaluation of team members and product. Reinforces mixing methods. Intro to advanced preparation of cookies and savory items and piping and dipping skills with assorted mediums. Assist junior team members with ingredients, scaling, baking methods, and equipment. Reinforces safety and sanitation practices. 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. Prepare assorted rolls, breads, muffins, croissants, breakfast pastries and savory items. Includes understanding of ingredient functions and characteristics, correct scaling, baking, finishing methods, and 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. Assist in the preparation of the three enrobed doughs from start to finish, including uniform shaping; assist in preparation of assorted rolls, breads, muffins, croissants, breakfast pastries, and savory items while exercising quality and quantity control. Reinforces ingredients, scaling, baking, finishing methods, safety and sanitation procedures. Prereq: FSD 171 or permission.

**FSD 175 (5) S
French Pastry I**

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 I**

Apply, develop and design basic individual plated desserts. Emphasizes planning, organization, portion control and plate presentation. Prereq: FSD 160 or permission.

<p>FSD 177 (5) S French Pastry 2 Advanced course in basic French pastries. Emphasizes application of different batters and fillings. Develop skills in assembling, producing and decorating classic French pastries. Prereq: FSD 160 or permission.</p> <p>FSD 178 (5) S Decorating 1 Intro to the 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.</p> <p>FSD 179 (5) S Dessert 2 Practice in designing desserts from basic products to classical dessert variations. Develop skill in the production of complex desserts. Covers numerous plate presentations and an understanding of portion control and practicality. Prereq: FSD 176 or permission.</p> <p>FSD 180 (5) S Cakes 2 Second module. Covers leadership, organization, scheduling, and evaluation of team members and product. Reinforces mixing methods, ingredients, scaling and baking methods by assisting/teaching junior classmates. Intro to advanced methods in preparation of cakes, quick breads and assembled cake products, including masking and pouring with assorted mediums. Prereq: FSD 168 or permission.</p> <p>FSD 183 (5) S Chocolate 1 First of three practical chocolate courses. Provides basic knowledge and application of types of couvertures used in the making of assorted "chocolates." Develop skill in basic chocolate decorations and tempering with different methods and learn the cooking of ganaches, fudges and "candy centers." Prereq: FSD 160 or permission.</p> <p>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. Develop greater skills in design composition and pastry bag techniques. Prereq: FSD 178 or permission.</p>	<p>FSD 185 (5) S Petits Fours Advanced course in creation of petits fours: classic petits fours glaze 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.</p> <p>FSD 186 (5) S Bread 4 Last of four modules. 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, safety and sanitation procedures. Prereq: FSD 172 or permission.</p> <p>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.</p> <p>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.</p> <p>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.</p>	<p>FSD 191 (5) S Decorating 4 Intro to 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.</p> <p>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.</p> <p>FSD 193 (5) S Head Pastry 1 Organization and running of a basic bakery production lab area with 18-25 junior students. Inventory, order, receive store fresh and dry goods, maintain a par level of ingredients, and develop leadership by delegating, supervising, evaluating tasks, and solving problems. Emphasis on supervision in production quality and quantity. Reinforces ingredients, scaling, baking, finishing, and safety and sanitation. Prereq: FSD 186 or permission.</p> <p>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. Supervise subordinate personnel overseeing the practice of safety and sanitation. Prereq: FSD 193 or permission.</p> <p>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.</p> <p>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.</p>
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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. Individualized lab hours meet student need, supportive to the field experience. Credit varies in proportion to total clock hours. Stipend for services possible. Prereq: Permission.

HOS 299 (5) S
Individual Projects Hospitality & Culinary Arts

Covers general projects related to culinary training as developed by faculty. Prereq: Enrollment in South's 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 (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) 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. Based on the Wednesday noon Women's Center lecture series. Explores barriers to, and sources of, women's power.

HDC 105 (3) 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 resume-writing or informational interviewing skills.

HDC 106 (1-2) 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) 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) C
Math Study Strategies

Provides an opportunity for students to learn and adopt skills and strategies for a successful math experience. Covers knowledge needed to study math, how to discover math learning strengths, how to improve memory, listening, note-taking, reading and test-taking techniques.

HDC 112 (1) 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) 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) C
Listening & Lecture Note Taking Strategies

Increase listening and lecture note taking skills.

HDC 115 (1) 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. Includes time management, cognitive restructuring, health and wellness, and relaxation training.

HDC 120 (3-5) C,S
Intro to Leadership Theory & Practice

Theory behind various leadership styles such as situational, multicultural, and servant leadership. 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 190 (1-2) N,C
Women in Society

(N) Issues related to women in society and in college. Covers college entry/re-entry, balancing responsibilities, assertiveness and self confidence, overcoming barriers. (C) Lecture and discussion on issues related to women's changing roles in society. Includes speakers from college and community.

HDC 197 (2-3) C
Leadership Practice & Application

Combines students' experiences such as serving on a college off-campus committee, or active involvement with student organizations or student government with workshops/seminars on leadership and career skills.

HDC 199 (1-3) C,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. 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 develop goals by developing awareness of their own patterns of aptitudes, interests, and personality traits. Career counseling session, writing assignments, career research and assessment help develop self-awareness through self-evaluation. Independent study with a counselor. Prereq: Counselor's signature.

HUMANITIES**HUM 101 (5) 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. From historical and political writings, learn of the forces affecting the humanities, from the beginning of civilization to the fall of the Roman Empire.

HUM 102 (5) C,S
Humanities in Thought & Action

Continuation of HUM 101. Covers the age of Charlemagne to the Enlightenment.

HUM 103 (5) 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 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 film making as an art form, a business, and a shaper of culture. View, discuss and critically analyze classics, features and documentaries for increased understanding of literary and artistic elements. 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. Relates 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 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. Explores concepts of quality, beauty, good design, and a good work environment from a variety of viewpoints including philosophical, multicultural, psychological, economic and technological.

HUM 114 (5) S
Life Cycles of Technology

Provides insights into the nature of the life cycles of businesses, products, materials and processes by 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 120 (5) S
Intro to Asian Cinema

An interactive course using Asian Cinema as a looking glass to understand different aspects of the "Human Condition" in Asia. Themes arranged by topical categories. View and discuss movies from Japan, China, Korea, Taiwan and Hong Kong.

HUM 125 (5) C
Hip-Hop Theory and Culture

Identifies and critically examines the theoretical foundations of hip-hop culture and rap music. Studies the evolution of hip-hop philosophy and the community from which it originated. Analyzes the influences that the background, music, and style of the hip-hop generation have upon a multicultural nation and world. Prereq: ENG 101.

HUM 149 (2) C
Ways of Learning

Students study and write about their learning and learning styles. Keep journals, describe and analyze their past, present and planned education. Assess their education in other classes, and prepare exit assessment projects.

HUM 150 (5) C,S
Ways of Knowing

Students study self-assessment or self-evaluation by writing and talking about their own education. Includes a study of learning styles and an exploration of individual learning styles.

HUM 160/ISP 160 (5) N,C,S
Asian Written Traditions

Intro to written traditions in philosophy, religion, history and literature of East and South Asia. Emphasis on original texts in translation in relation to social and cultural background. Recommended: 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 evaluating 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

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

Intro to 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. Uses fiction, poetry, autobiography, history, essays, and plays. Looks at representations of gays and lesbians in film. Prereq: Placement into ENG 101.

HUM 234/ISP 234 (5) N
Chinese Society & Thought

Covers concepts of Chinese civilization 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/ENG 235 (5) C
**Holocaust Literature:
 Voices From the Holocaust**

Examines literature written by survivors of the Holocaust or the Shoah. Read accounts by people who survived to write and publish their memories. Meet one of the authors. Develop an historical context for World War II and the rise of Nazi Germany. Use the context of events to understand the literature.

HUM 250 (5) C
Issues in the Humanities

Critical thinking follows readings, video discussions, writings and discussions. Emphasizes writing assignments. HUM 250/251 may be taken out of sequence. Prereq: ENG 101 or permission.

HUM 261/ISP 261 (5) N
Japanese Civilization

Covers the development of Japan as a society and nation including its origins, history, government, literature, economic institutions, material culture, social organizations and religions.

HUM 270 (5) C
**Sequential Art: History & Criticism of
 Comic Book and Graphic Novels**

Graphic, sequential storytelling offers an attractive and convenient opportunity to study visual language. Surveys the history of comic books and graphic novels, using several theories of visual communication to enhance visual literacy. Study cartoonists' works as channels of human expression, and as evidence of changing and differing cultural conditions.

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

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 MANUFACTURING TECHNOLOGY

INT 100 (3) S
Overview of Manufacturing Processes

Study how machined parts are fabricated. Includes limited hands-on experience on both lathe and milling machines. For Engineering, Drafting and Quality Assurance majors.

INT 125 (5) S
Electrical Safety

Covers Federal OSHA and the State of Washington (WISHA) electrical safety standards as they apply to general industry. Includes types of hazards associated with electricity, single and three-phase systems, cord and plug connected equipment, hazardous locations and safety related work practices, as well as understanding the government regulations. Emphasis on electrical hazard recognition and OSHA inspection procedures.

INT 130 (5) S
Cranes & Material Handling

Intro to various types of overhead cranes, hoists and powered industrial trucks used in general industry. Covers basic information concerning overhead and gantry cranes, wire rope, slings, crane inspection and maintenance, and operations and maintenance of industrial trucks. Discusses appropriate OSHA and ANSI standards and related requirements.

INT 155 (5) S
Pipe Fitting & Plumbing

Intro to the selection and use of pipe and tubing for purpose of supplying air, water, oil and electrical wiring to machinery.

INT 160 (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. Learn the hazards associated with the manufacturing industry and how to apply industry standards to ensure compliance with the occupational Health and Safety Act of 1970.

INT 161 (5) S
Applied Industrial Hygiene

Intro to general concepts of industrial hygiene and sampling techniques. Includes 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. Learn 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 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. 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. 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. Gain understanding of the proper techniques to conduct a complete and accurate investigation.

INT 220 (5) S
Ergonomics

Application of ergonomics principles for the reduction of stresses and strains to the employee's body. Includes work physiology, vibrations, anthropometry, cumulative trauma disorders, video display terminals, manual lifting, and temperature stress. Includes industrial case studies covering analysis and design of work stations and equipment, laboratory sessions in manual lifting, and demonstrations of instrumentation and equipment used in the field of ergonomics.

INFORMATION TECHNOLOGY

Also see Computer Science, Computing Technology, Network Technologies and Web Development.

NOTE: Eligibility for English 101 is recommended.

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

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN Watch Technology

NAME TO PREFIX
Watch Technology HIN

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

Covers the organization of UNIX-based hardware components and software tools used by the host administrator to control access, tune the system, and account for system resources used. Covers advanced concepts with multi-user, multi-tasking, time-sharing networked communications, UNIX tools, network schedulers, security, remote access, performance monitoring, and networking aspects of UNIX. Examines operational considerations including host initialization, suspension and termination, and the system's physical environment. Prereq: ITC 136.

CIS 162 (5) C
Java I

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

CIS 244 (5) 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 and ITC 115 or permission (C).

CIS 290 (1-6) 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) C
Work Experience I

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

IT 100 (5) N
Intro to Computer Systems & Networks

Covers the basics of computers and networks.

IT 101 (5) N
Software Applications

Focuses on spreadsheets, database applications, web security and publishing information on the web.

IT 102 (5) N
Intro to Programming

Gain a basic understanding of the programming field. Learn to solve problems through programming logic and design and use efficient troubleshooting techniques to find and correct errors.

IT 103 (5) N
Intro to Database Use and Design

Learn SQL, the design, creation and use of databases and strategies for keeping data current, accurate and secure. Prereq: IT 100, 101, 102.

IT 104 (1) N
Using Computers

Provides current computer and software instruction to enhance the use of technology in a variety of fields. Topics may be chosen to supplement content in another course (e.g. creating research papers for English courses, spreadsheets for Accounting and Economics, using databases for Allied Health, etc.) or to advance the student's own personal technology skills. May be repeated for a total of 5 credits.

IT 106 (5) N
Intro to Programming

Intro to problem solving and programming using the Visual Basic programming language. Covers language syntax, control structures, arrays, file I/O and select GUI objects.

IT 111 (5) N
Internet & Web Authoring Using XHTML

Survey of basic Internet services and protocols including HTTP, FTP, email, information searching and security. A comprehensive introduction to HTML (and XHTML) including text formatting, tables, frames, forms, and Cascading Stylesheets with an emphasis on well-formed valid code. Emphasizes setup and maintenance of websites and file and directory structure.

IT 115 (5) N
Intro to Object Oriented Programming

Intro to problem-solving and object-oriented programming techniques using the Java programming language. Prereq: IT 106 and IT 111.

IT 120 (5) N
Network Essentials CompTIA Network +

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 131 or permission.

IT 122 (5) N
Network OS 1 – Win2K Professional

Provides 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. Prereq: EET 131, or IT 120, or IT 142 or ITC 140 or permission.

IT 124 (5) N
Network OS 2– Win2K Server

Continuation of IT 122. Provides support professionals with skills to install, configure, customize, optimize, network, integrate and troubleshoot Windows 2000 Pro. Prereq: EET 131 or IT 122 (IT 122 may be taken concurrently) or permission.

IT 125 (5) N
Using Structured Query Language & SQL Server

Provides instruction in techniques for creating, modifying, deleting, and querying databases using SQL. Focuses on designing and understanding SQL queries using Microsoft SQL Server, although techniques can also be used with other relational DBMS like MySQL, Oracle, and Access. Recommended: Work or class (such as IT 101) experience using a DBMS.

IT 126 (5) N
Network OS 3 – Win2K Network Infrastructure

Continuation of IT 124. Covers capacity planning, multiple domain management, trust relationships, implementing RAS, interoperating with Novell Netware and Windows 2000 Pro troubleshooting. Prereq: IT 124.

IT 128 (5) N
Network OS 4 – Win2K Active Directory

Continuation of IT 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: IT 124 or permission.

IT 134 (5) N
Network Communications – TCP/IP

Learn 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: (IT 124 may be taken concurrently) or permission.

IT 135 (5) N
Unix Operating System

Intro to the Unix operating system using Linux. Includes the fundamental Unix Commands, the Unix file system, vi editor, Unix shells and shell programming. Prereq: Computer and Windows Operating System experience strongly recommended.

IT 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. Emphasizes the design and implementation of Netware based on client/user applications and need. Prereq: IT 124 or permission.

IT 138 (5) N
UNIX for Network Administration

Intermediate course. Covers the organization of UNIX-based hardware components and software tools used by the host administrator to control access, tune the system, and account for system resources used. Focuses on UNIX tools, network schedulers, security, remote access, performance monitoring, and networking aspects of UNIX. Includes multi-user, multi-tasking, time-sharing networked communications, and set-up and maintenance of an Internet server. Prereq: IT 190 or permission.

IT 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: IT 138 or permission.

IT 142 (5) N
Network Management – CISCO I

Examines 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 131, IT 122 (may be taken concurrently) or permission.

IT 144 (5) N
Network Management – CISCO II

Continuation of IT 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: IT 142.

IT 146 (5) N
Network Management – CISCO III

Continuation of IT 144. Covers configuring LANs, Novell Networks, Internet-work Packet Exchange (IPX) routing, Interior Gateway Routing Protocol (IGRP), Wide Area Networks (WANs) and network troubleshooting. Covers Integrated Services Data Networks (ISDN), Point-to-Point Protocols (PPP) and frame relay design, configuration and maintenance. Prereq: IT 142, IT 144 or permission.

IT 149 (5) N
Operating System Security

Learn to secure critical network systems properly and audit a network to determine where network weaknesses are before an attacker finds them. Study operating system security concepts and techniques and examine theoretical concepts that make the world of security unique. Prereq: IT 124 or IT 138.

IT 150 (5) N
Network Security Fundamentals

Provides both Windows 2000 and Unix Network Administrators an awareness of security-related issues and the essential skills needed to implement security in such networks. Prepares for the Security Certified Network Professional Exam. Prereq: IT 122 and IT 138 or permission.

IT 151 (5) N
Network Defense

Second course of the first-level certification for the Security Certified Network Professional focused on understanding the architecture for Network Defense. Also examines the technologies of defending the network, which include firewalls, intrusion detection systems, analysis of the intrusion signatures, virtual private networking, and performing risk analysis. Learn how these technologies may be used to create a layered defense for the network. Prereq: IT 150 or permission.

IT 154 (5) N
Internet Security Acceleration Server

Provide Information Technology professionals with the knowledge and skills to deploy and manage Microsoft Internet Security and Acceleration (ISA) Server 2000 in an enterprise environment. Prereq: IT 124 or permission.

IT 156 (5) N
Designing a Secure Network for a WIN2K Network

Using Microsoft Windows 2000 technologies to design a security framework for small, medium and enterprise networks. Four units describe securing specific areas: for local network users, remote users and offices, between private and public networks, and to partners. Prereq: IT 124.

IT 160 (5) N
Wireless LAN Fundamentals

For IT professionals in organizations concerned with introducing wireless local area network to their Internet. Addresses the needs of IT program students who require insight into the wireless local area network on existing networks, applications and security.

IT 162 (5) N
Java I

Master the fundamentals of object-oriented programming using Java. Write stand-alone console and Swing applications. Translate object-oriented designs into applications. Prereq: IT 115.

IT 168 (5) N
Graphics for the Web

Uses computer graphics applications to create and optimize images for the web, develop composites for websites and implement complex web layouts. Introduces web graphic file formats, compression, typography and web-safe colors. Covers basic elements and principles of design and uses several industry standard graphics applications, emphasizing basic to intermediate level tools and techniques. Prereq: IT 106, IT 111.

IT 172 (5) N
Visual Basic I

Introduction to object-oriented, event-driven programming using Visual Basic.Net. Learn to create stand-alone Windows applications and front ends to databases. Includes effective interface design, VB classes, objects and events, functions and sub procedures, creating multiple form applications, data validation and error handling, and debugging techniques. Prereq: IT 115 or permission.

IT 190 (5) N
DOS for Technicians

Detailed study of MS-DOS for students in the Network Technology program. Examines computer concepts including operating systems. Intro of most common DOS commands used for disk and file operations. Covers 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. Attain fluency in DOS in order to use, install, upgrade, and troubleshoot DOS computers. Study Windows as a graphical extension of DOS.

IT 211 (5) N
JavaScript & DHTML for Web Development

Learn the use of JavaScript and Dynamic HTML for creating websites. Learn to manipulate and control XHTML pages with JavaScript and Cascading Stylesheets. Build web pages for independent and team assignments. Work cooperatively on team projects using effective communication and interpersonal skills. Prereq: IT 106, 111 and 168 (IT 168 may be taken concurrently).

IT 212 (5) N
Web Server Programming Using Databases

Basic concepts, standards and technologies of web programming. Use server-side scripting for web development. Includes ASP.NET and access to various server side resources, such as databases, via ADO.NET, and the server file system. Prereq: IT 115 and IT 211.

IT 213 (5) N
Advanced Web Development

Covers development and analysis techniques appropriate for web professionals. Work with clients, end-users, and information processing professionals to establish user specifications and develop a comprehensive website or add functionality to an existing site. Learn client-side scripting with an emphasis on JavaScript, CSS, and DHTML. Explores project management, teamwork site usability, security, administration, and maintenance. Includes new technologies required for website implementation. Complete a personal portfolio project and a group project. Prereq: IT 140, 162, 211 and 212 (IT 212 may be taken concurrently).

IT 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, WML. Emphasizes development and use of Web Services, which are data centric. Learn techniques for manipulating database and XML data. Uses Microsoft's .NET framework. Prereq: IT 172 or IT 212.

IT 218 (5) N
Managing a Windows 2000 Network

Knowledge for system administrators, network administrators and IT professionals who implement, manage and troubleshoot existing network and server environments based on the Microsoft Windows 2000 platform. Prereq: 122 or permission.

IT 224 (5) N
Exchange Server

Intro to Microsoft Exchange ServerConfigure, an Exchange server; develop an infrastructure for Exchange server; choose a client installation and integration strategy; develop long-term administration and security strategies; configure message recipients; import directory data; install and configure Exchange Server clients; configure address lists and accounts 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; back up and restore; configure a link monitor and server monitor. Prereq: IT 124 or permission.

IT 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. Prereq: IT 124 or permission.

IT 236 (5) N
Database Management

Includes database concepts, database environment, advantages and limitations of the database approach. Includes data modeling, database design, the relational model, SQL, accessing databases programmatically, and implementation of a database design using a relational DBMS. Work in teams, prepare documentation, user manuals, and presentations. Prereq: IT 115 and advanced standing in IT program.

IT 242 (5) N
CISCO CCNP I

Covers advanced networking skills to empower students to enter the workforce. Content 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. Select and implement the appropriate services required to build a scalable routed network. Prereq: IT 142, 144 and 146 or permission.

IT 252 (5) N
C#

C# is an object-oriented language built on Microsoft's .net platform and extended from C++. Learn to implement object models and gain in depth understanding of capabilities, such as operator overloading, that sets C# apart from other object-oriented languages. Prereq: IT 102 or CSC 110 or previous programming experience strongly recommended.

IT 256 (5) N
Object-oriented Analysis & Design

Provides a core set of skills for analyzing and developing object-oriented business systems. Get practical experience in planning, analysis, design, test planning, documentation, and project management. Become familiar with installation and maintenance issues. Develop object-oriented designs and use the diagramming techniques of the Unified Modeling Language (UML) to document their work. Learn team skills. Prereq: IT 125, and (IT 162, 244, 245 or 272).

IT 262 (5) N
Java II

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

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

Supervised information systems development. Increase competency and hands-on skill using appropriate software. May be repeated. Coreq: Enrollment in another IT course.

IT 272 (5) N
Visual Basic II

Advanced object-oriented, event-driven programming using Visual Basic.Net. Covers using built-in utility classes and using custom classes and interfaces, inheritance, polymorphism, error handling, database programming, multiple-document interfaces, and additional graphical components. Prereq: IT 115 and IT 172 or permission.

IT 290 (1-6) N
Independent Studies or Internship

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

IT 296 (1-5) N
Network Technology Internship

Provides on the job training. No compensation is expected. The student is placed with a manufacturer, service company or other work site upon the approval of the instructor, although the student may state a preference and/or look for a placement him/herself.

IT 298 (2-5) N
Special Projects for LAN

Study of topics considered appropriate by the instructor and/or faculty. Course content, format, and projects vary. Could include Microsoft Back Office - IIS, Proxy Server, Site Server, Transaction Server, SNA server and SQL server Prereq: IT 126 and permission.

ITC 102 (3) C
Information Systems Concepts

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

ITC 136 (5) C
Unix Operating System

Intro to the Unix operating system. Includes the fundamental Unix Commands, the Unix file system, vi editor, Unix shells and shell programming. Prereq: MIC 101.

ITC 110 (5) C
Programming Concepts & Fundamentals

Intro to 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 and eligibility for MAT 098.

ITC 115 (5) C
Introduction to C++ Programming

Intro to the C++ language, emphasizing the use of C++, not just as a "better C", but also as a way of creating less buggy, more maintainable, better-designed programs. Covers the basic object-oriented programming concepts by creating objects and understanding how they relate to classes. Develop C++ code that illustrates practical applications of these concepts. Prereq: ITC 110 or CSC 110 or permission.

ITC 122 (4) C
Supporting Microsoft Excel

Covers the common tasks for supporting and troubleshooting Microsoft Excel: organizing a spreadsheet, troubleshooting formulas, creating charts, creating templates, automating common tasks, using database functions, linking spreadsheets and workbooks, making Excel work with other office programs. Focuses on supporting office staff who use Excel. Prereq: MIC 101 or familiarity with MS Windows and MS Office.

ITC 134 (5) C
Computer Operating Systems

Intro to concepts of processes, file systems and structures, software and hardware management, security and user authentication, resource allocation, and memory management. Uses WINDOWS, DOS, and LINUX operating systems to introduce these concepts. Prereq: MIC 101, ITC 140 as a prerequisite or corequisite, or permission.

ITC 140 (5) C
Intro to Computer Hardware

Provides basic understanding of various hardware components, including installation and configuration. Learn how software interacts with and controls the computer's hardware elements. Emphasizes analytical logic and troubleshooting skills. Introduces basic networking concepts. Prereq: MIC 101 or ITC 102 or equivalent.

ITC 150 (5) C
Intro to Information Security

Learn the foundations of information security and how to protect personal information. Covers laws, ethics, physical security, security policies and social engineering. Includes hands-on experience with firewalls, virus scanners, encryption and diagnostic tools. Covers digital certificates, authentication and network vulnerabilities. Work with local, Internet and wireless networks. Prereq: WEB 110 or NET 120 or NET 140 with 2.0 or higher or permission.

ITC 151 (5) C
Intro to Network Security

Intro to network security, building and administering secure network architectures. Covers firewalls, vulnerability scanners, encryption, risk monitoring and assessment tools, digital certificates, authentication and network vulnerabilities. Security Lab uses wired desktop systems and wireless PDAs to Linux, Macintosh and Windows systems used by small and medium businesses. Prereq: NET 120 and ITC 150 with 2.0 or higher or permission.

ITC 160 (4) C
PowerPoint Presentations

Learn to develop effective and professional PowerPoint presentations. Obtain the skills necessary for the Microsoft Office Specialist (MOS) 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 to help employees with tasks ranging from simple how-to questions to complex specialized requests. Prepares students for the Microsoft Office Specialist (MOS) exam. Prereq: MIC 101.

ITC 172 (5) 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: ITC 115 or permission (N); ITC 110 or MIC 110 (C).

ITC 197 (3-5) C
Work Experience

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

ITC 180 (5) C
Use Project Management for Information Technology

Provides a broad introduction to project management particularly for websites. Prereq: WEB 110.

ITC 200 (5) C
User Interface Design

Explores the boundary that exists where man meets machine. Examines the principles of design for understanding and usability, and the tension between aesthetics and usability. Learn 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. Prereq: WEB 110.

ITC 216 (5) C
Programming for the Web

Provides hands-on intro to web programming using PERL. 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

Provides programmers with an overview of database theory and systems. Provides 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
SQL

Intro to the use of Structured Query language (SQL) to access and summarize database information, create and alter database objects, set constraints and create views. Introduces SQL embedded in programming environments such as ASP or CGI, or Net. Learn to use SQL to create and manage databases on a relational database management system. Prereq: ITC 220 or permission.

ITC 224 (5) C
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 offered by the Relational Database Management System. Prereq: ITC 222.

ITC 255 (5) C
Systems Analysis

Explores the process of identifying when a system needs to be upgraded or replaced. Uses a set of tools and techniques for analyzing system components and requirements, charting process flow and data structures, determining feasibilities and providing alternate solutions. Prereq: MIC 101 or knowledge of MS Windows and MS Office; ITC 110 or CSC 110 recommended.

ITC 280 (5) C
Web Database

Intro to the skills, tools, and techniques needed to create database driven websites and practical experience. The languages and methods used for database access will remain flexible to account for the most current industry standards. Prereq: WEB 110 or ITC 110 w/ 2.0 GPA or higher.

ITC 285 (5) C
Capstone Project Class

Apply skills/knowledge to a major project. Produce work that responds to a client problem or request. Work in teams or carry out an individual project as an intern/extern. Select and work closely with industry mentors. Emphasis on research, accuracy, technology skills, timeliness, teamwork, quality, client/customer satisfaction and usability. Prereq: Completion of first year toward A.A.S.-T. degree.

MIC 101 (4) C
Intro to Microcomputer Applications

Intro to microcomputer applications for Windows. Includes an overview of Windows, the Microsoft Office System featuring Word, Excel, Access, PowerPoint, Internet Browsers, email, along with emerging software application topics and concepts.

MIC 102 (1) C
Using Computers

MIC 102 courses are a series of one-credit short classes. Each provides a brief hands-on introduction to one type of commonly used industry software using both PC and Macintosh. Attendance mandatory and additional 2-4 hours per week required during Computer Center hours. Computer lab fee required.

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 considered appropriate by the instructor and/or division. May be chosen to supplement content in another course. Class format may vary.

MIC 105 (2) C
Using Computers

Intro to Windows-based computers. Covers the operating system, email, word processing, spreadsheets, and Internet browsing programs.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

MIC 106 (5) C
Introduction to Software Applications for K-12 Educators

Covers the use of essential software applications necessary for teaching in a K-12 classroom. Prepares future educators with a practical understanding of the computer, the Internet, and varied software applications to successfully teach and manage instruction in varied environments. Provides a strong technology foundation.

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. Prereq: MIC 101 or equivalent or programming experience.

MIC 115 (5) C
Intro to Programming Using Microsoft Visual Basic

Intro to basic programming design and techniques via online instruction and online interaction with instructor. Prereq: MIC 101 or equivalent experience

MIC 120 (4) C
Database, Applications & Design with MS Access

Develop database application and design skills through use of MS Access. Emphasizes planning, creating and revising a database system. Prereq: MIC 101 or equivalent experience.

MIC 122 (5) C
Spreadsheet Applications & Design with MS Excel

Covers industry standard microcomputer spreadsheet packages, such as Lotus 1-2-3 and Microsoft Excel to study and interpret financial data. Prereq: Familiarity with microcomputers.

MIC 130 (3) C
Digital Imaging

Learn the use of digital imaging and illustration software on the Macintosh. Emphasis will be on creating and editing images for use in video and exporting to animation and nonlinear software packages.

MIC 131 (3) C
Nonlinear Editing

Learn to use a nonlinear editing system. 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. Complete fundamental tasks and learn basic and selected advanced skills in each program.

MIC 142 (3) C
Computer Applications for Apparel Design II

Build on skills using Macintosh and/or PC computers to develop an understanding of computer procedures, terminology and practical skills related to Apparel Design.

MIC 150 (4) C
Internet & The World Wide Web

Intro to the global information network. Provides experience using browsers, email, search engines, and other Internet and web tools. Focuses on using the tools to find valuable information and resources on the Internet. Understand the process of creating a web presence including basic HTML and web page editing tools.

MIC 151 (5) C
HTML & Web Page Development

Intro to Hypertext Markup Language (HTML) and web page development. Includes implementing HTML tags and files; learning common web page formats and functions; and developing and installing comprehensive websites. Prereq: MIC 101 or MIC 150, or equivalent experience.

MIC 160 (4) C
Supporting Microsoft Applications

Provides essential technical support skills to end users of essential Microsoft applications in both technical and non-technical environments. Prepare to take Microsoft Office Systems (MOS) exam at proficient level. This certification is often a job requirement. Prereq: MIC 101 or permission.

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. Prereq: MIC 101 or equivalent experience.

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

Intro to computer-aided drafting and design on the personal computer. Learn to use the 2-D tools in MiniCad for basic technical drawing to 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 mechanisms. Prereq: MIC 203 or permission.

MIC 215 (4) C
Intro to Dreamweaver

Online course with information and instruction from the course website. Access online discussion board, lecture board, quiz, and file sharing tools. Introduces Macromedia Dreamweaver, the most widely used software for web page development used by professionals and hobbyists. Learn to create simple web pages as well as dynamic and comprehensive websites. Prereq: MIC 101 or equivalent.

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

Learn to create animations. Covers 2D animations in depth and introduces 3D animation concepts. Prereq: MIC 130.

MIC 260 (4) C
Microsoft Office Systems (MOS): Expert Level

Provides preparation and practice for students planning to take the Microsoft Office Systems (MOS) Certification Expert Level test. Graded Pass/Fail. Prereq: MIC 101 or permission.

MIC 298 (3-5) C
Advanced Applications Project

Apply skills and knowledge to a major programming project. Produce work that responds to a client problem or request. May work in teams or carry out an individual project as an intern/extern. Select and work closely with industry mentors. Emphasis on research, accuracy, programming skills, timeliness, teamwork, quality, client/customer satisfaction and usability. Prereq: Completion of first year toward A.A.S. degree in Programming.

WEB 105 (2) C
Working on a Web Team

Provides an overview of different web-related careers focusing on the structure and function of the players in a web team. Covers the skills and daily responsibilities associated with each position, as well as the training and background needed. Prereq: MIC 101, 150 or equivalent.

WEB 110 (4) C
Web Authoring I

Covers 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/XHTML validation. Prereq: MIC 101 or computer experience.

WEB 112 (2) C
Typography for the Web

Intro to the elements of typography as applied to the Web. Prereq: WEB 110 or equivalent.

WEB 114 (3) C
Photoshop for the Web

Gain insight and skill with Adobe Photoshop for Macintosh. Covers the basic concepts of pixel-based image editing, and making graphics for the web. Prereq: WEB 110.

WEB 120 (4) C
Web Authoring II

Covers more advanced elements of web page development and production. Includes style sheets, designing and coding "oof" forms, XHTML and an introduction to XML. Code elements by hand and create content compatible with all major browsers. Prereq: WEB 110 or permission.

WEB 130 (3) C
Web Design with Dreamweaver

Covers basic to advanced features of Dreamweaver. Plan, build, upload and maintain a professional website using Macromedia's Dreamweaver. Prereq: WEB 120 and knowledge of writing JavaScript is helpful.

WEB 150 (3) C
Intro to JavaScript

An in-depth look at programming concepts and techniques affecting web page design. Examines theoretical concepts that make the world of JavaScript programming unique. Uses a hands-on approach when examining programming styles. Examines different coding, the advancement of programming and problem solving strategies. Prereq: WEB 110 or permission.

WEB 160 (4) C
Writing for the Web

Covers the solid writing skills essential for successful electronic media. Intro to writing and editing techniques with emphasis on the Web. Analyze successful websites, newsletters and online publications; learn to create compelling, reader-friendly content. Emphasizes teamwork with editors, designers, producers and other content creators. Prereq: WEB 120 or permission.

WEB 170 (3) C
Web Animation Using Flash

Learn and practice digital 2-D animation to increase skills as a web designer. Prereq: WEB 120 and knowledge of writing JavaScript is helpful.

WEB 200 (3) C
Theory of Web Design

Overview of basic principles and practices of professional website design, including navigation, color and typography. Prereq: WEB 110 or permission.

WEB 205 (2) C
Web Career Strategies

Presents various tools and skills needed to transition into the web industry. Learn about web careers, presenting skills, and finding appropriate positions. Prereq: ITC 200 and WEB 210 or permission.

WEB 210 (5) C
Advanced Web Design

Focuses on using HTML for website design including principles of graphic and information design and effective website navigation, as well as advanced HTML features like cascading style sheets and JavaScript (DHTML). Develop a website in teams, and practice web production workflow. Prereq: WEB 120 and WEB 150 or permission.

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

Covers fundamentals of basic design and creative problem-solving, exploration and application of design principles.

IMC 297, 298, 299 (6 EA) C
Integrated Media Communications

Project-based three-quarter course. Includes the design and production of a magazine, and provides beginning students with design and business principles, writing, computational and teamwork skills. For students in the disciplines of Apparel Design & Services, Graphic Design & Illustration, Commercial Photography, and Publishing Arts.

INTERNATIONAL STUDIES**ISC 197/198/199 (2-5) C**
Intercultural Studies Internship

Requires the intern to develop knowledge about the country being visited; may cover a brief history, major political institutions, major celebrations/holidays, including social and political institutions. Describe the initial internship experience as it relates to an education career. Could include exploration through informational interviewing, observations, readings, and special topic research.

ISP 101/SOC 101 (5) N
The Global Society

Intro to the globalization of cultures and societies in producing the world system. Includes human interaction, social institutions, social stratification, socialization, deviance, social control, social and cultural change within the context of international inequality.

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. Includes 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 120 (5) S
Intro to Scandinavian Culture

Intro to Scandinavian culture, with 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. Also covers Estonia.

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. Recommended: ENG 101 placement.

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. No prior knowledge of Chinese civilization or language is required.

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 and/or indigenous women in some Western societies. Explores commonalities and differences among women in various societies and cultures. Specific societies or regions depend 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 acute, chronic, and hidden hunger and evaluates proposed strategies using scientific measures as well as the voices of people.

ISP 234/HUM 234 (5) N
Chinese Society & Thought

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. Studies influences brought about through invasion, assimilation and transformation of Hinduism, Buddhism, Daoism and Confucianism as reflected in the arts, history and culture.

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. Studies recent trends in return migration among the Peruvian Japanese, Caribbean and Irish Americans and others.

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 270 (5) S
Contemporary Scandinavian Society

Examines the distinctive policies, institutions and social norms of contemporary Scandinavian or Nordic societies: Denmark, the Faeroe Islands, Finland, Greenland, Iceland, Norway, Sweden, and Aland. Also covers Estonia.

ISP 293/HUM 293/SOC 293 (5) N
Global Studies Projects & Practicum (Pacific Asia)

Intro to and experiential 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.

INTERNATIONAL TRADE**IBN 203 (3) N**
International Trade: Export

Learn to conduct a successful exporting operation. Study research and planning, market strategy, finance, legal considerations, and logistics of entering foreign markets. Develop skills and knowledge in practical aspects of exporting products and services.

IBN 205 (3) N
International Trade: Import

Learn to conduct a successful importing operation. Study financing, pricing, logistics and U.S. customs regulations. Develop skills and knowledge in practical aspects of importing products through case study analysis.

IBN 225 (5) N
Global Logistics

Emphasizes the stature of and decision making process in international business operations, including: logistics; sourcing materials and manufacturing; product distribution and alternatives; inventory/warehousing; transportation; financial and organizational considerations; and government-imposed laws, treaties and policies. Recommended: BUS 101 or 215 or prior business experience.

INTERPRETER TRAINING**ITP 115 (3) C**
Survey of Interpreting

Overview of the field of interpretation. Includes history, terminology, competencies, professional ethics and environmental factors. Prereq: Acceptance into the ITP program or permission.

ITP 119 (4) C
Deaf-Blind Interpreting

Covers specialist skills necessary for Deaf-Blind interpreting. Emphasizes cultural norms and etiquette, tactile modifications of ASL, commonly used communication modes, interpreting visual information, and environmental considerations for the interpreter through interactive instruction, simulations, guided practice, blindfold experiences and guest presentations by Deaf-Blind people. Includes field work/lab.. Prereq: ASL 203 or permission.

ITP 145 (3) C
Ethics of Interpreting

Exploration of how values, character, and skills in interpersonal relations are developed. Includes discussion of the applications of the RID Code of Ethics to different interpreting situations. Prereq: Acceptance into ITP, or permission.

ITP 160 (4) C
ASL-to-English Interpretation I

Intro to interpretation from ASL to English in the consecutive mode. Application of the Gish approach to information processing. Studies dual task performance, short-term memory building, paraphrasing skills, shadowing techniques and other pre-interpretive skills. Prereq: ASL 203 with a 2.5 GPA or higher. Coreq: ITP 161.

ITP 161 (4) C
English-to-ASL Interpretation I

Taken concurrently with ITP 160. Intro to interpretation from English to ASL in the consecutive mode. Emphasis on vocabulary development and ASL expressions. Prereq: ASL 203 with a 2.5 GPA or higher. Coreq: 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 GPA or higher or permission. Coreq: 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 GPA or higher, or permission. Coreq: 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. Demonstrate proficiency in interpreting ASL to English. Prereq: ITP 162 passed with 2.5 GPA or higher, or permission. Coreq: ITP 165.

ITP 165 (4) C
English-to-ASL Interpretation III

Continuation of ITP 163. Prereq: ITP 163 passed with a 2.5 GPA or higher, or permission. Coreq: 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, including 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. Includes 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. Coreq: ITP 255.

ITP 245 (4) C
Applied Interpreting Experience I

Accumulate 80 hours of experience in four areas: Supervised Experience - 10 hours; Mock Experience - 30 hours; Tutorial Experience - 20 hours; and Unclassified Experience - 20 hours. Prereq: ITP 164 and 165 or permission.

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 245 (Applied Interpreting Experience I) with a 2.0 GPA or higher or equivalent with permission.

ITP 250 (4) C
Applied Interpreting Experience II

Continuation of ITP 245. Apply interpreter knowledge and skills to real-life situations. Prereq: ITP 260 and 245 (with 2.5 GPA 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: Completion of ITP 250 with a 2.0 GPA or higher or equivalent with permission.

ITP 260 (4) C
Interpreting IV

Build further interpreting skills by using increasingly challenging material. Continue to increase stamina and duration of interpreting, facility with receptive and expressive finger spelling, and use of idioms. Learn appropriate feedback and self-assessment techniques. Prereq: ITP 164 and ITP 165, with a 2.5 GPA 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 GPA or higher, or permission.

ITP 262 (4) C
Transliteration

Intro to transliteration. Covers contact varieties of ASL used in transliteration. Establish a foundation for transliteration. Pass/Fail grade. Prereq: ITP 261 or permission.

ITP 299 (1-5) C
Independent Study

Selected topics in interpreter training. Complete a mutually-agreed-upon research project assigned by the appropriate supervising faculty. Prereq: Permission.

ITALIAN

See Languages and Literature.

JAPANESE

See Languages and Literature.

JOURNALISM**JRN 100 (5) 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) 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) C,S
College Publications

Intro to newspaper production. Includes writing, editing and layout. Examine current newspapers and produce news and feature articles. Prereq: JRN 102, or another news-writing course, or permission (S); ENG 101 eligibility (C).

JRN 105 (3) C,S
College Publications

Covers college publishing. Includes 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) 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 and 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 them to a residential or commercial setting. Develop skills in drafting and drawing, plant placement and aesthetics. Present the finished product to your peers. For both landscape professionals and home owners.

LHO 108 (2) S
Weed Identification and 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. Helps prepare for the weed section of the WSDA pesticide license exam.

LHO 109 (3) S
Integrated Pest Management (IPM)

Learn the basic principles of integrated pest management (IPM). Covers pesticide laws, pesticide health and environmental concerns, and development of an IPM plan. Prepares students for the Washington State Department of Agriculture pesticide license exam.

LHO 111 (3) S
Greenhouse Operations

Intro to greenhouse operations and management, including production practices, maintenance methods and environmental control systems. Involves propagation and maintenance in the school greenhouse. Includes industry overview through field trips to local production greenhouses.

LHO 112 (3) S
Nursery Operations

Examine the world of retail and wholesale nursery operations through field trips to local nurseries. Learn the basic methods of business operations and apply them in the 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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

LHO 117 (3) S
Spring Plant Identification

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, 116, 117 and 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

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

Intro to drafting skills and working knowledge in residential landscape design. Includes 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 their application 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. Includes study of the complete design program from client interview to final working drawings. Prereq: LHO 121.

LHO 135 (3) S
Intro to Drainage & Irrigation Systems

Study basic principles of hydraulics, drainage and irrigation systems, irrigation fixtures and apparatus.

LHO 137 (3) S
Landscape Management

For designers, contractors, and maintenance personnel who must understand landscape management operations. 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

Intro to the current science and practice of managing trees in urban landscapes. Prepares 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. 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. Emphasizes 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

Covers the art and science of pruning in theory and practice. Develop skill at pruning broadleaf trees and shrubs, conifers, fruit trees, vines and roses.

LHO 160 (2) S
Garden Renovations

Practical instruction in the renovation process by renovating an existing garden. Includes site assessment, developing a timeline, removal and handling of materials, sourcing new plant material, installation and final evaluation of the process.

LHO 161 (1) S
Equipment Troubleshooting

Reliable equipment saves time and money! Practice preventative maintenance and basic repair on power equipment used in the landscape horticulture industry.

LHO 162 (2) S
Irrigation Troubleshooting and Repair

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. Intro to riding lawn mowers, skid steer loaders and wheel loaders. Steel-toed boots required. Hardhats provided.

LHO 164 (2) S
Water Features

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. For landscape professionals and homeowners.

LHO 166 (1) S
Color Theory

Learn the basic vocabulary of color to enhance garden design. Develop skills in plant combinations and aesthetics focusing on color theory. Create planting combinations by using color theory information presented. Prereq: LHO 121, 125 or permission.

<p>LHO 180 (1-8) S Field Applications Applied experience in an occupational setting, individualized to meet the needs of the student. Credit varies. Stipend may be received for fieldwork. Prereq: Third-quarter standing; permission.</p>	<p>LHO 236 (4) S Advanced Irrigation An in-depth study of systems and their relationship to our environment focusing on irrigation technology and theory and their practical application. Prereq: LHO 135 or permission.</p>	<p>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.</p>
<p>LHO 189 (3) S Intro to Landscape Construction Intro to the standards and procedures of the industry. Covers the proper and accepted methods of a multitude of landscape installations. Includes construction specifications, project sequencing and safety practices.</p>	<p>LHO 238 (3) S Maintenance Estimating & Bidding Covers 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.</p>	<p>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 use, ropes, knots, rigging and safe work practices. Participation in supervised tree climbing optional. Prereq: LHO 155 and 246 or permission.</p>
<p>LHO 197 (VARIABLE) S Internship Provides practical work experience and employment contacts by integrating academic studies with on-the-job training. Orientation to internships required prior to registration. Prereq: Permission.</p>	<p>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.</p>	<p>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.</p>
<p>LHO 201 (1) S Career Coaching Successfully transition from school into a career. Work with an industry professional on portfolios, job-hunting strategies, and presentation/interviewing skills. Prereq: LHO 100.</p>	<p>LHO 242 (4) S Tree Selection Covers correcting pathological or non-pathological tree failure and knowledge of the anatomy and physiology of a tree. Prereq: LHO 240 or permission.</p>	<p>LHO 262 (4) S Landscape Design III Refines 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 125 or permission.</p>
<p>LHO 210 (3) S Plant Problem Diagnostics Diagnose and manage plant problems: insect, disease, cultural, and environmental maladies. Stresses a total plant health care approach that utilizes cultural, biological, and chemical strategies. Prereq: LHO 109 or permission.</p>	<p>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.</p>	<p>LHO 264 (4) S Landscape Design IV Covers elevation, sectional, and perspective drawing. Prereq: LHO 125 or permission.</p>
<p>LHO 215 (3) S Plant Propagation Covers the art and science of plant propagation by seed, cuttings, division and grafting. Includes field trips to plant production facilities. Recommended: LHO 111.</p>	<p>LHO 246 (4) S Urban Tree Management Covers ability to determine proper chemical and natural control of insects and diseases as well as fertilizing and plant nutrition requirements. Prereq: LHO 152.</p>	<p>LHO 265 (3) S Landscape Contracts & Specifications Covers practical application of bidding and estimating procedures and techniques within the landscape industry, as well as industry opportunities and standards.</p>
<p>LHO 217 (2) S Plant Propagation Workshop Continue 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.</p>	<p>LHO 248 (4) S Urban Tree Problems Diagnosis and treatment of environmental tree problems, insects, diseases and wounds. Prereq: LHO 246 or permission.</p>	<p>LHO 266 (4) S Landscape Design V Refines 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, 125, 262, and 264 or permission.</p>
<p>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. Includes pest identification, prevention and control. Prereq: LHO 112 or permission.</p>	<p>LHO 250 (3) S Small Business Management for Horticulture Covers organization and 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.</p>	

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 and professional software. Prereq: Read and write English, PC operation, file management and Windows.

LHO 268 (3) S
CAD for Landscape II

Continuation of LHO 267 to enhance 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, PC operation, file management and Windows.

LHO 272 (4) S
Landscape Construction Project – Fall

Practical application of standard landscape contractor's trade procedures and techniques to enhance the residential landscape. Covers 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 completion of skills addressed in two quarters in LHO 272 and LHO 273. Prereq: LHO 189 or permission.

LHO 275 (2) S
Landscape Horticulture History

Explore the historical and current relationship of plants, ecology and humans. Focus on the history of landscape horticulture. Prereq: Permission.

LHO 276 (1) S
Designing with Native Plants

Create garden vignettes using a native plant palate for different effects and types of cultural conditions. Some knowledge of Northwest plants is helpful; this is a design class, not a plant identification class. Prereq: LHO 119 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 results can be evaluated, expanded and/or implemented. Prereq: Second-year standing or permission.

LHO 295 (2-8) S
Externship

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

NOTE: All listed world languages transfer to four-year colleges and universities. Students intending to transfer should be aware of differing world language requirements and consult with an advisor regarding requirements at specific colleges and universities. The faculty recommend that students entering a world language 101 class have attained eligibility for ENG 101. For information, contact the Humanities Division (N), Humanities & Social Sciences Division or Health & Human Services Division (ASL only) (C), or College Transfer Division (S).

American Sign Language

ASL 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. Recommended: 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 with a 2.0 GPA or higher 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 with a 2.0 GPA or higher or permission.

ASL 104 (5) C
ASL Skills Enhancement

Maintain or increase skills learned in ASL 101 - 103. Performance will be videotaped for critique. Gain exposure to a variety of signing styles. Prereq: ASL 103 with a 2.0 GPA or higher or permission.

ASL 120 (5) C
Intro to Deaf Studies

Overview of the treatment and psychological aspects of Deafness; history and education of Deaf people; and deaf culture.

ASL 125 (5) C
American Deaf Culture

Covers discussion of Deaf people as a culture, a group of people held together by strength of culture rather than disability. Examines deaf minorities and current issues in the field.

ASL 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 and proficiency in ASL grammar. Prereq: ASL 103 with a 2.0 GPA or higher or permission.

ASL 202 (5) C
ASL V

Continued development of receptive and expressive skills. Produce/receive narratives at a near-native level and decrease dependency on English syntax structures. Prereq: ASL 201 with a 2.0 GPA or higher or permission.

ASL 203 (5) C
ASL VI

Continue vocabulary development and participate in most formal and informal conversations on general topics. At this level signing errors seldom interfere with understanding and rarely disturb native signers. Prereq: ASL 202 with a 2.0 GPA or higher 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

Intro to the standard language, emphasizing correct pronunciation and basic structure, with oral practice and structure skills. Emphasis on systematic study of the phonetics (Pinyin) and basic grammar. Covers everyday expressions and vocabulary, and background on history, culture and customs. Intended for students who have not previously studied Chinese. Recommended: Eligibility for 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 201 (5) C
Second-Year Chinese

Emphasizes using Chinese language in speaking, listening, reading, writing and translation. Prereq: CHI 103 or permission.

**English:
High School Completion****ENG 040 (5) 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) 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 various formats and 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. Studies author's purpose, style and point of view.

ENG 046 (5) S
Literature III – American Literature

Survey of the American heritage through its literature. Includes reading and analysis of fiction, poetry and drama. Write book reviews, biographical sketches, and interpretations of characters or verse.

English: Pre-College

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. Take concurrently with ICT 098.

ENG 080 (1-5) 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 an 090-level classes.

ENG 081 (1-5) C,S
Learning Center

Continuation of ENG 080. Prereq: ENG 080.

ENG 082 (1-5) 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.

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: placement into ESL 096/7 or above or placement on English placement test or teacher recommendation. Open to native and non-native speakers of English.

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:

Appropriate placement on English placement test or permission. (N)

Appropriate placement; Contact the Testing Office. (S,C)

ENG 091 (3-5) C,S
Basic Reading & Study Skills I

Covers essential reading and study skills. Includes techniques for developing good reading skills and habits, vocabulary, 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. Includes study strategies for test-taking, note-taking, and outlining. Prereq: See above.

ENG 096 (3-5) N,C,S
College Preparatory Writing III

Build 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.

English: College Transfer**ENG 101 (5) N,C,S**
Composition

Intro to the writing process. Writing assignments focus on 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) 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) 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 (1-5) S
The Art of Reading

Offers a variety of experiences in college-level reading. Emphasizes the critical analysis of works selected from several disciplines. Develops 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. 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

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 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).

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

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 focus on development of character and voice, and 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 proofreading 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. Coreq: 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.

ENG 202 (5) C
Research & Writing

Library research using old and new technologies, and on writing research papers. Topics vary by instructor. Prereq: ENG 102 (N).

ENG 203 (3) C
**Writing for the Media:
 Advanced Script Writing**

Emphasizes writing for film and videotape productions utilizing exterior and interior settings. Develop scripts for 3-7 minute small group production pieces which will be shot, edited and produced in COM 225.

ENG 205 (5) C
Creative Nonfiction

Focuses on nonfiction and its disciplines but draws from the other literary genres in terms of creative techniques. Learn to combine imaginative strength with literary techniques borrowed from fiction, poetry and drama to create art in a nonfiction form. Goes well beyond the typical undergraduate composition essay. Prereq: ENG 101.

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

Covers Donne through the early Romantics. Prereq: Placement into ENG 101.

ENG 213 (5) N,C
Major British Writers

British Literature from the French Revolution through the Romantic and Victorian periods and concluding with World War I (1785-1919). The course covers a wide variety of authors and genres with an emphasis on the historical forces, social shifts and cultural differences that form the context for this literature. Prereq: Placement into ENG 101.

ENG 214 (5) C
Major British Writers

Covers 1920 to the present. Read a wide variety of authors and genres with attention to the multi-cultural forces that shape British literature today. Study the historical and social forces surrounding the literature to achieve a complete context. Prereq: Placement into ENG 101.

ENG 221 (5) C
Survey of American Literature

Surveys 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

Covers 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

Covers late 19th and 20th century writers with emphasis on modern fiction, drama, poetry and trends in literature. Practice critical techniques. Prereq: ENG 101 placement.

ENG 224 (5) N,C,S
**Survey of Literary Masterpieces
 of the United States**

Illustrates the richness and variety of writing and represents enduring concerns and questions of American literature through selected works. Prereq: 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, South-east Asian and the recent groups from Asia and the Pacific Islands. Prereq: ENG 101 placement.

ENG 226 (5) C,S
Literature of Emerging Nations – Third World Literature

Surveys traditional and contemporary literature from Africa, Asia and South America.

ENG 227 (5) N,C
The Literature of the American West

Covers 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

Surveys literature 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

Surveys 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 from the 1960s to the present.

ENG 231 (3-5) N,S
Children's Literature

Studies 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

Studies "coming of age" literature in two or more countries.

ENG/HUM 235 (5) C
Holocaust Literature: Voices From the Holocaust

Examines literature written by survivors of the Holocaust or the Shoah. Read accounts written by people who survived to write and publish their memories. Meet one of the authors. Develop an historical context for World War II and the rise of Nazi Germany. Use the context of events to understand the literature.

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 this art by 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. Usually covers 5 novels per quarter. 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 the time. Prereq: Placement into ENG 101 (N).

ENG 253 (5) N
Studies in the Novel

Continuation of ENG 252. Prereq: Placement into ENG 101 (N).

ENG 263 (5) N,C
The Bible as Literature

Studies the Bible as an anthology of literary texts expressing the religious ideas of ancient Israel. Emphasizes reading the Old Testament and New Testament with literary and historical understanding. Prereq: Placement into ENG 101.

ENG 265 (5) N,C
Literature & Society

Studies patterns of literary expression as a guide to social attitudes and value systems, the part society plays in shaping literature and the degree to which literature reflects society.

ENG 291 (5) N,C,S
Literature by Women

Surveys the 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) N,C,S
Literature by Women: Global Perspectives

Surveys 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

Examines 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

Apply 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 of two 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

Create an individual project, syllabus and outcomes with instructor. Prereq: Permission.

ENG 299 (1-5) N,C,S
Special Topics in English

Create an individual project, syllabus and outcomes with instructor. Prereq: Permission.

LIT 236/SPA 236 (5) C
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 relation to the period. Tracks the origins of multicultural and transcultural interdependence among ethnic groups since colonial times.

**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

Practice in speaking and listening skills needed for job and/or daily situations. Prereq: Placement into ESL 011 or 012.

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, 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) N,C,S
Level 2, Reading, Writing & Grammar Skills**ESL 026 (1-15) N,C,S**
Level 2, Speaking & Listening Skills

Practice in speaking and listening skills needed for job and/or daily situations. Prereq: ESL 012, 016, or placement at ESL Level 2.

ESL 027 (1-15) 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 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). North students with less than a 75% average may return to other ESL classes as determined by their instructor. Prereq: Instructor recommendation only.

ESL 035 (1-15) N,C,S
Focus on Writing

For students who want to improve their writing skills. In depth study of English word order, spelling problems, sentence boundaries, some persistent grammatical problems, and simple paragraph writing. Prereq: Placement at Level 3 or teacher recommendation.

ESL 036 (1-15) N,C,S
Level 3, Speaking & Listening Skills

Practice in speaking and listening skills needed for job and/or daily situations. Prereq: ESL 022, or placement at ESL Level 3.

ESL 037 (1-15) N,C,S
Level 3, Multiple Skills Lab Beginning Computer Literacy (N)

Tutoring in specific areas for students in ESL Level 3. Prereq: Permission. (C, S)

Beginning course in using personal computers. Emphasis on keyboarding, beginning word processing, and other basic computer skills. Prereq: Placement at ESL Level 3 or above. (N)

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).

ESL 041 (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
Focus on Writing

For students who want to improve their writing skills. In depth study of English word order, spelling problems, sentence boundaries, some persistent grammatical problems, and simple paragraph writing. Prereq: Placement at Level 4 or teacher recommendation.

ESL 046 (1-5) N,C,S
ESL Level 4, Listening & Speaking

Practice, develop, and improve speaking and listening skills needed for daily life, jobs, and student educational goals. Emphasis on communication skills, not specific pronunciation.

ESL 047 (1-15) N,C,S
ESL Level 4, Computer Assisted

For ESL students who already use one or more of the following: email, the Internet, and/or Word. Prereq: Placement at Level 3 or above. (N)

Tutoring in specific areas for students in ESL Level 4. Prereq: Permission. (C, S)

ESL 048 (1-6) C,S
ESL Test Preparation & College Readiness

Focuses on development of skills necessary to transition successfully into an American college. Extensive practice in taking standardized English proficiency and placement tests commonly used in higher education in the United States. Provides information about the application process for financial aid and support services. Explores issues of time management, students' own current abilities and styles of learning, barriers, learning deficiencies or skills gaps; and covers strategies and/or recommendation for improvement. Prereq: None.

ESL 049 (1-15) N,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, 044 or placement on the ESL Placement Test. (C, S) Placement in ESL 051 or 052. (N)

ESL 051 (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. Prereq: ESL 042, 044 or placement.

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. Prereq: ESL 051 or placement.

ESL 055 (1-15) N,C,S
Focus on Writing

For students who want to improve their writing skills. Students will study in depth: English word order, spelling problems, sentence boundaries, some persistent grammatical problems, and simple paragraph writing. Prereq: Placement at Level 5 or teacher recommendation.

ESL 056 (1-15) N,C,S
ESL Level 5, Speaking & 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) N,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 059 (1-2.5) N,C,S
Vocational ESL 5

Pre-academic course designed to help non-native speakers of English explore allied health career options and pathways. In addition to identifying their interests and planning their health care career goals, students will develop study skills, computer skills, and cultural awareness that will help them to attain these goals. Prereq: Instructor permission.

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. Prereq: Placement in ESL 061 or 062.

ESL 061 (1-15) N,C,S
ESL Level 6A Integrated Skills, Advanced ESL

Emphasis on writing multi-paragraph compositions and reading a variety of texts. Continued work on grammar. Prereq: ESL 052 or placement.

ESL 062 (1-15) N,C,S
ESL Level 6B

Emphasis on compositions, reading a variety of texts, grammar, and vocabulary expansion. Prereq: ESL 061 or placement

ESL 065 (1-13) N,C,S
Focus on Writing

For students who want to improve their writing skills. Students will study in depth: English word order, spelling problems, sentence boundaries, some persistent grammatical problems, and simple paragraph writing. Prereq: Placement at Level 6 or teacher recommendation.

ESL 066 (1-15) N,C,S
ESL Level 6, Speaking & 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 6 students to build on English skills learned in core ESL classes.

ESL 068 (1-3) N,C,S
Educational Interviewing for ESL Students

Helps ESL students at all competency levels identify their current abilities, characteristics, styles and readiness to learn and introduces them to campus resources.

ESL 069 (1-2.5) N,C,S
Vocational ESL 6

Pre-academic course designed to help non-native speakers of English explore allied health career options and pathways. In addition to identifying their interests and planning their health care career goals, students will develop study skills, computer skills, and cultural awareness that will help them to attain these goals. Prereq: Instructor permission.

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. Prereq: ESL Level 3 or higher.

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. Prereq: ESL 071 or permission.

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. Prereq: ESL 072 or permission.

ESL 075 (1-15) N
ESL English Pronunciation

Introduction to the basics of accurate English pronunciation such as vowel and consonant sounds and sentence intonation. Prereq: Placement in Level 3, 4, or permission.

ESL 076 (1-15) 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.

ESL 077 (1-15) N,C,S
ESL Pronunciation

Central, South: 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.

North: Advanced course on accurate English pronunciation: troublesome vowel and consonant sounds, word stress, and sentence intonation. Prereq: placement into ESL 061 or 092/093 or instructor permission.

ESL 078 (1-15) N,C,S
ESL Pronunciation

Central, South: 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.

North: Advanced course on accurate English pronunciation: troublesome vowel and consonant sounds, word stress, and sentence intonation. Prereq: placement into ESL 061 or 092/093 or instructor permission.

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. Required attendance for 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. Uses vocabulary from vocational courses in the grammar lessons. Prereq: Placement on the English placement test.

ESL 087 (1-5) S
ESL Support Lab

Students work out an individualized program with the instructor, which could include the use of computer software/Internet resources. Focus is on content area, grammar, reading, writing, punctuation, spelling and vocabulary building.

ESL 088 (3) N
Advanced English Pronunciation I

Advanced course on accurate English pronunciation. Covers features such as certain vowel and consonant sounds, word and sentence stress. Prereq: Placement in ESL 092/093 or 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. (C)

Advanced class on accurate English pronunciation: troublesome vowel and consonant sounds and sentence intonation. Prereq: Placement into ESL 094/095 or instructor permission. (N)

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

ESL 090 (3-5) N,C,S
Oral Communication: Standard Pronunciation for Non-Native Speakers

Improve oral expression and listening comprehension. Emphasis on oral communication in small groups and informal presentations. Prereq: ESL 051, 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

Improve 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). Coreq: 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 051 placement on ESL Placement Test (N); ESL 051 or placement on English placement test (S). Coreq: 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, 051 or placement on ESL Placement Test (N); ESL 092 or placement on English placement test or permission (S). Coreq: 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, 052 or placement on ESL placement test (N). Coreq: 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 061, ESL 094/095 or placement on ESL test (N); ESL 094, placement on English placement test, or permission (S). Coreq: 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. Strengthen writing skills. Prereq: ESL 095, placement on English placement test or permission (S); ESL 061, ESL 094/095 or placement on ESL Placement Test (N). Coreq: 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

Develop coherent paragraphs and short essays. Emphasis on complex paragraphs using appropriate style, and techniques of paraphrasing and summarizing. Includes library research skills. Preparation for college-level writing. Prereq: ESL 097, placement on the English placement test, or permission. Recommended Coreq: ESL 091 or ESL 098.

French

FRE 101 (5) N,C,S
Elementary French

Covers fundamentals of grammar and syntax, pronunciation, oral and written exercises, reading and conversation, and cultural aspects of the countries in which French is spoken. Oral practice with tapes required outside of class. 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. Develop 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) C,S
Advanced French Language & Literature

Advanced study of core literature and grammar. 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) C
Advanced French Language & Literature

Continuation of FRE 204. Prereq: FRE 204 or permission.

FRE 206 (2-5) C
Advanced French Language & 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 212 (5) C
Intermediate French Language & Culture

For those who have previously had four quarters of French or equivalent. Focuses equally on the four skills of language learning: speaking, comprehension, writing and reading.

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 with 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 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. Requires oral practice with tapes outside of class. 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, pronunciation and culture. 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. Practice in speaking and listening through classroom discussion of the readings and group discussions. 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 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. Prereq: GER 202 or permission.

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.

Italian**ITA 101 (5) C**
Elementary Italian

Learn to communicate with others at an elementary level. Uses a combination of communicative and grammatical teaching methods. Intended for those with little or no Italian language experience.

Japanese**JPN 101 (5) N,C,S**
Elementary Japanese

Intro to Japanese conversation, grammar, culture, and the Japanese hiragana writing system. For students who have not previously studied Japanese. Recommended: ENG 101 eligibility. (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 30 basic characters. Prereq: JPN 101 or permission.

JPN 103 (5) N,C,S
Elementary Japanese

Continues the development of language skills in all areas. Presents another 60 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. Acquire 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. Introduces new kanji. 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. Achieve intermediate level of speaking, reading, and writing. Introduces new kanji and the use of the Japanese dictionary. Prereq: JPN 202 or 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

Intro to the study of natural language. Presents the similarities in the basics of language as an instrument of thought and communication. Covers the sources for cultural differentiation between all linguistic materials.

LAN 110 (5) 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 with a 2.0 GPA or higher.

Russian

RUS 101 (5) 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. For students who have previously studied Russian. Prereq: Eligibility of ENG 101 (C).

RUS 102 (5) 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) 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 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

Covers fundamentals of grammar and syntax, oral and written exercises, pronunciation, reading and conversation, and cultural aspects of the countries in which Spanish is spoken. Requires oral practice with tapes outside of class. 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, oral and written communication. Prereq: SPA 101 or permission.

SPA 103 (5) N,C,S
Elementary Spanish

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

SPA 110 (4.5) C
Basic Spanish Conversation

Emphasis on developing speaking skills. Augments skills developed in Elementary Spanish. May repeat the course once to earn up to 9 credits.

SPA 201 (5) N,C
Second-Year Spanish

Continuation of SPA 103. Review of grammatical structures, intensive practice in writing, conversations and reading on a variety of topics. Intro to Hispanic culture, literature, art, and business terminology. 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, and guest speakers. Prereq: SPA 201 or permission.

SPA 203 (5) N,C
Second-Year Spanish

Continuation of SPA 202. Prereq: SPA 202 or permission.

SPA 210 (4.5) C
Intermediate Conversation

Emphasis on developing speaking skills. Augments skills developed in SPA 210. May repeat once to earn up to 9 credits. Prereq: SPA 103 or SPA 110.

SPA 236/LIT 236 (5) C
Latin American Colonial Literature

Surveys literary expressions of Colonial times through 18th century in Spanish America and Peninsular Spain. Covers representative and outstanding prose works of 16th and 17th centuries.

SPA 238/LIT 238 (5) C
Chicano Narrative

Introduces significant works in Chicano literature. Study of genre development. Understand 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 and completion of first and second year or equivalent.

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. Recommended: 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: TAG 101 or permission.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN **Watch Technology**

NAME TO PREFIX

Watch Technology HIN

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 in 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 & 102, SLEP/ASSET scores indicating ENG 101 readiness or permission.

VTN 201 (5) S
Intermediate Vietnamese

Vietnamese for second-year students. Increase ability to communicate and interact through speaking, listening, reading and writing. Prereq: SLEP/ASSET placement scores indicating ENG 101 readiness, VTN 103 or equivalent and/or permission.

LIBRARY RESEARCH

LIB 101 (1-5) N,C,S
Intro to Information Resources

Develops critical-thinking as it is applied to the research process by examining strategies for locating and using information resources. Students explore information policy issues such as copyright, censorship, and freedom of information. Emphasis is on proficiency using electronic resources, including those available through the Library's website, as well as other research tools and retrieval techniques.

LIB 140 (3) N,S
Internet Information Resources

Develops skills for locating and evaluating information resources on the Internet. Employs a graphical browser, Netscape and various search techniques for 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.

LIB 150 (1-2) 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 email.

LIB 180 (5) N,C
Research for the 21st Century

Develop a framework for research in the online environment and build skills and techniques for success as an online learner. Through a quarter-long research project on a global issue, examine various strategies for locating, evaluating and applying information resources in the research process with attention to information issues like intellectual property, 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.

LINGUISTICS

See Languages and Literature.

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, boat-swains' 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 ship handling for small vessels based on single-screw theory. Applied instruction in ship handling techniques includes: backing and filling; "Y-backing"; emergency stopping; flanking; and docking and undocking. Uses a small training vessel.

MGO 133 (6) C
Seamanship Practicum

Introductory underway practicum. Receive indoctrination to both watchstanding duties and shipboard responsibilities of an able seaman. Perform all deck-related tasks one might expect to encounter when actually at sea. Involves 12-hour voyages weekly aboard SMA's training vessels.

MGO 137 (2) C
Electronic Navigation

Introduces standard electronic equipment and systems used to aid navigation and communication. Covers 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 supervision, assume role of mate aboard ship and be responsible for navigating the training vessel and operating all related navigational equipment as well as directing the deck crew while it is underway. Requires demonstration in competency, proficiency and confidence in navigating a vessel without guidance. Includes 12-hour voyages weekly aboard SMA's training vessels. Prereq: MGO 133.

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. Includes 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. Includes physical laws affecting a floating body, effects of cargo operations, loose water, fuel consumption, grounding and flooding on vessel stability. Includes analyses of case studies involving loss of stability and how to perform trim and stability calculations.

MTS 210 (2) C
Marine Meteorology

A non-mathematical 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. Includes 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

Intro to auxiliary machinery and naval architecture. Includes heat exchangers, pumps, air ejectors, steering gear, distilling plants, pressure vessels, piping systems, cargo handling equipment, vessel design, vessel structure and stability.

MTS 217 (4) C
Marine Diesel Engine Maintenance & Operation

Theory, operation, troubleshooting and repair of marine diesel engines. Study of fundamental operating procedures for marine diesel engines. Lecture and applied training in diesel engine labs.

MTS 221 (4) C
Applied Marine Electricity

Applied course in AC and DC motors and generator applications. Apply AC and DC electrical theory to typical marine equipment. Covers 3-phase circuits and transformers. Receive 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

Emphasizes routine maintenance, troubleshooting and repair of marine hydraulic equipment. Disassemble, analyze and reassemble various hydraulic components. Includes lectures, laboratory experiments and demonstrations with simulation models.

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 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

Focuses on the principles, operation, maintenance and repair of select propulsion systems. Includes design and application of engines and related systems such as fuel, lubricating, cooling, exhaust and heat recovery. Includes 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. Receive an indoctrination to both watchstanding duties and shipboard responsibilities of a marine engineer. Covers how to read vessel blueprints, trace machinery systems and troubleshoot simulated malfunctions. Involves 12-hour voyages weekly aboard SMA's training vessels.

MGO 177 (6) C
Advanced Engineering Practicum

Advanced underway practicum. Under supervision, assume the role of Designated Duty Engineer aboard ship and be responsible for all facets of the operation of the engine room and related equipment while the training vessel is underway. Requires demonstration in competency, proficiency and confidence in running an engine room without guidance. Involves weekly 12-hour voyages aboard SMA's 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) C
Principles of Marine Mechanics

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, etiquette, and regulatory considerations. Includes fastenings, bearings, seals, gasketing methods and other relevant materials and equipment.

MGO 103 (3) C
Survival Craft

A study of survival craft commonly found aboard ships today. Training in lifeboat operation and handling congruous to that required for the U.S. Coast Guard rating of Lifeboatman. Includes lifeboat nomenclature and equipment, launching procedures, handling by oars, inflatables and other types of lifesaving equipment.

MGO 105 (3) C
Leadership & Management

Examines relevant concepts and principles in management, leadership and organizational communication as they apply aboard ship. Emphasis on instilling an attitude and work ethic required to realize the objectives of "Social Responsibility" advocated by the STCW Code. Satisfies the General Education Requirement in human relations.

MGO 111 (3) C
Seamanship

Study in seamanship to prepare for employment aboard ship. Includes training in seamanship congruous to that required for the U.S. Coast Guard rating of Able Seaman (AB). Includes nomenclature, ship structure, vessel equipment, deck fittings, knots and splices, rigging and watchstanding duties.

MGO 113 (3) C
Marine Safety

Covers basic damage control, marine fire-fighting and other safety topics to prepare for employment in the marine industry. Includes stability changes to a damaged vessel, emergency repairs to hull and vessel systems, proper use of marine fire-fighting equipment, vessel safety equipment, shipboard emergency procedures and survival at sea.

MGO 119 (3) C
Marine Mathematics

Reviews algebraic and trigonometric methods. Includes the basics of signed numbers, linear equations, fractions, percentages, plane geometry, measurement, and variables which represent additional aspects of mathematics required to solve shipboard problems. Satisfies the General Education Requirement in computation. Prereq: Math placement exam or permission.

MGO 200 (4-5) C
At-Sea Internship

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) C
Shipboard Pollution Prevention

Using a non-technical format, review issues in pollution prevention and control as they impact on the duties and tasks performed by deck and/or engineering personnel on-board ship.

MTS 294 (2) C
License Seminar

Seminar on licensure knowledge requirements for deck/engineering candidates preparing to take the U.S. Coast Guard deck/engineering exams. Learn to consult and reference the Code of Federal Regulations, Title 46 and other publications.

MARKETING**MKT 100 (1) S**
Marketing Keystone

Online intro to marketing and business. Provides a review of terminology, communication basics, and information needed to enter the professional field.

MKT 110 (5) S
Customer Service

Develop skills in all aspects of dealing with customers: expectations, telephone techniques, responding to inquiries and complaints and follow-up. Learn how to attend to the needs and expectations of both internal and external customers. Emphasis on empathy, active listening and honesty in communication.

MKT 115 (2-16) S
Marketing Careers Seminars/DEC

Ongoing exploration of the elements of leadership and accountability in the workplace through various group activities on and off campus. Join Delta Epsilon Chi, a national association for marketing and business students established specifically for the encouragement and development of leadership for the workplace. This organization serves as a vital link between class work and the practical application of skills. Prereq: Permission.

MKT 197 (2-15) S
**Internship – Cooperative Education
Field Experience**

Spend time in the field under the guidance of an instructor and on-site mentor. Learn about operations, policies, procedures, culture and behavioral standards in a given business, industry, shop, lab, store or other setting directly related to the student's course, program, certificate or degree. May be taken during program coursework or upon completion or both. Prereq: Permission.

MKT 201 (3) S
Principles of Selling

Explores nature and scope of selling and understanding buying motives with strong emphasis on the selling process: prospecting, pre-approach work, demonstration of products and services and closing. Develop selling skills through role-play, case studies and simulations. Recommended: SMG 265.

MKT 205 (5) S
Applied Advertising

Investigates various advertising strategies used in media communication. Covers various types of advertising, planning, copy writing, and production. Plan and develop an advertising campaign and produce related advertising material. Recommended: SMG 265.

MKT 210 (5) S
Entrepreneurship

Study major steps, formation and growth for setting up a new small business or department, project, or contract within a large organization. Covers the characteristics of the entrepreneurial personality and the task of moving from concept to commercialization. Emphasis on leadership, time management and planning. Recommended: BUS 101 and SMG 265.

MKT 215 (5) S
Market Research

Study the purpose, methods and techniques of marketing research and the principles on which they are based. Includes elements in the research process: questionnaires, secondary and primary data, sampling, processing and interpreting data, and the evaluation and effective presentation of findings. Prereq: BUS 101 or permission. Recommended: SMG 265.

MKT 298 (1-10) S
Independent Study

Provides students, or a group of students, with opportunity for research, advanced study, or special projects in their field and the option to work independently under instructor guidance. Credits vary. Prereq: Permission.

MKT 299 (2) S
Marketing Capstone/Special Topics

A study of an approved topic directly related to the students' course/program, certificate or degree. May be a portfolio, an in-depth project or an activity to demonstrate competencies, with an oral presentation evaluated by faculty and industry representatives. Possible topics include marketing, sales, advertising, retail management, promotion, customer service, consumer behavior, marketing research, entrepreneurship and business communication. Prereq: Permission.

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 070 (5) N
**Basic Math Skills for
Health Care Professionals**

Designed for advanced ESL (level 5 and above) and ABE students who plan to enter Allied Health programs at North Seattle. Includes math and critical thinking skills needed for success in health care courses at North. Covers whole numbers, fractions, decimals, ratios, percents, metrics, graphs, basic accounting, and medicinal calculations. Particular attention is given to the healthcare context. Prereq: Instructor permission.

**Math Laboratory Courses
• NORTH •****MAT 080 (5 EA.) N**
Lab Classes

Individualized instruction in the following subjects 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. May need to enroll in MAT 080 for more than one quarter in order to achieve individual objectives. Faculty and tutors assist in this laboratory format.

MAT 080 A	Arithmetic I
MAT 080 B	Arithmetic II
MAT 080 C	Algebra I
MAT 080 D	Algebra II
MAT 080 E	Algebra III
MAT 080 F	Algebra IV
MAT 080 G	Geometry I
MAT 080 H	Geometry II
MAT 080 I	Trigonometry
MAT 080 J	Independent Study

**Math Laboratory Courses
• SOUTH •****MAT 086 (5) S**
Geometry I

Covers points, lines and angles, triangles, parallel lines, polygons, proofs on congruence and similarity of triangles. Calculator required. Prereq: MAT 085 with a 2.0 or higher.

MAT 087 (5) S
Geometry II

Continuation of MAT 086. Covers perimeter and area of polygon, circles, three-dimensional (solid) geometry and an introduction to right triangle trigonometry. Calculator required. Prereq: MAT 086 with a 2.0 or higher.

**Math Lecture Courses
• N,C,S •**

**Indicates courses which are also offered as laboratory courses at South Seattle Community College.*

MAT 080 (5) S
Arithmetic Skills**MAT 081 (5) N,C**
Basic Math Skills

Covers whole numbers, fractions, decimals, percent, ratio and proportion, geometry and measurements and introduction to algebra. Prereq: Math Placement Test.

MAT 083* (5) S
Arithmetic

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* (5) C,S
Algebra I

Basic operations with algebraic expressions; solving and graphing linear equations and inequalities; word problems; systems of equations. Prereq: MAT 081 or higher or placement exam (C).

MAT 085* (5) C,S
Algebra II

Factoring polynomials; rules of exponents; solving quadratic equations and graphs; roots and radicals; solving rational equations; problem solving. Prereq: MAT 084 for higher or placement exam (C).

MAT 084/085 SEQUENCE (5 EA.) N,C,S
Algebra I & II, Express

Real numbers, linear equations, linear inequalities, systems of linear equations in two variables, polynomials and factoring, rational expressions and equations, radical expressions and equations, quadratic equations, and problems solving. Different campuses may cover these topics in different orders. Prereq: MAT 081 or placement.

MAT 089 (1-5) N,C,S
Independent Study**MAT 097 (5) N,S**
Elementary Algebra

Covers linear equations, linear inequalities, factorization, operations with polynomials, rational and radical expressions, and the quadratic formula. Prereq: MAT 081 (N) or a math placement exam.

MAT 098 (5) N,C,S
Intermediate Algebra

Covers linear, quadratic, exponential and logarithmic models with applications and other intermediate algebra skills. Prereq: MAT 085 or MAT 097 or placement test.

MAT 100 (3) N,C
Math for Health Careers

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 (5) N,C,S
College Algebra

Bridges the gap between Intermediate Algebra and Pre-Calculus functions and is for students in Math and Science. Fulfills QSR requirement for A.A. degree. Strongly recommended in preparation for MAT 122 (S). Required for entry into MAT 120 (N). Prereq: MAT 098.

MAT 103 (5) N,C
Geometry & Visualization

Uses physical and computer constructions to investigate Euclidian and some non-Euclidian geometry in 2 and 3 dimensions. Covers point, line, and plane symmetry with examples from tilings, rosette groups, wall-paper patterns and symmetries of Polyhedra. Includes Platonic and Archimedean solids and the geometry of perspective drawing. Fulfills QSR requirement for A.A. degree. Prereq: MAT 098 or placement test.

MAT 104 (3) N
Trigonometry

For students with no high school trigonometry or who need a review. Elementary plane geometry, right triangle trigonometry, general angles, identities, equations and selected topics. Prereq: MAT 098 or placement exam.

MAT 106 (5) N
Applied Algebra & Trigonometry I

Focuses on mathematical models and their applications. Includes study of right triangle trigonometry, introductory vector applications, linear functions, systems of equations and inequalities, quadratic functions, rational expressions and models, integral and rational exponents, and radical and complex numbers. Equivalent in skill level to MAT 098. Prereq: MAT 097 or equivalent or placement test.

MAT 107 (5) N,C,S
Math For Liberal Arts

Primarily for liberal arts majors. Designed to enhance mathematics literacy. Instructors choose college-level topics centered around a theme such as Environmental Math, History of Math, or General Topics in Math. Fulfills QSR requirement for A.A. degree. Minimum 2.0 required to meet Intermediate Algebra proficiency and QSR. Prereq: MAT 098 or placement test.

MAT 109 (5) N,C,S
Elementary Statistics

Covers descriptive methods, probability and probability distributions, samples, decisions, hypothesis testing and statistical inferences. Formerly MAT 240. Fulfills QSR requirement for A.A. degree. Prereq: MAT 098 or placement test.

MAT 110 (3) C,S
Applied Math for Technicians

Emphasis on applications of mathematics to vocational and technical courses. Prereq: Satisfactory performance on Math placement test.

MAT 111 (5) S
Applied Mathematics I

Intro to applied algebra, geometry and trigonometry. Includes algebraic operations, integral exponents, scientific notation, dimensional analysis, metric system, radicals, calculator fundamentals, first-degree equations, plane and solid geometry, solution of right triangles, systems of equations, graphs, determinants and applications. Prereq: Satisfactory performance on Math placement test.

MAT 112 (5) S
Applied Mathematics II

Includes factoring, algebraic fractions, fractional and quadratic equations, rational exponents, operations with radicals, oblique triangles, law of sines and cosines and trigonometric graphs. Prereq: MAT 111 or permission.

MAT 113 (5) S
Applied Mathematics III

Covers vector analysis, resolution of vectors, properties of logarithms, exponential and logarithmic equations, radical equations, analytic geometry, statistics, inequalities and applications. Prereq: MAT 112 or permission.

MAT 114 (5) C
Mathematical Applications for Technicians

Focuses on 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 (3) S
Solutions to Word Problems in Algebra

Helpful in business, technical, physics, and college transfer courses. Covers systematic techniques for solution of algebraic word problems. Prereq: MAT 085 or concurrent enrollment.

MAT 116 (5) N,C,S
Applications of Mathematics to Management, Life & Social Sciences

Emphasizes applications to business, finance, management, or life & social sciences. Covers mathematical models, graphs, and exponential and logarithmic functions. May include ideas from statistics and probability. Fulfills QSR requirement for A.A. degree. Prereq: MAT 098 or placement test.

MAT 117 (5) N,C,S
Elements of Calculus

An intuitive and elementary treatment of differential and integral calculus. May include ideas from statistics and probability. Uses applications from business, finance, or life & social sciences. Fulfills QSR requirement for A.A. degree. Prereq: MAT 116 or placement test, or MAT 102 (N,S).

MAT 118 (5) N
Applied Algebra & Trigonometry II

Activity-based math course focuses on mathematical models and their applications. Includes the study of operations on functions, mathematical variation, exponential and logarithmic functions, numbers of other bases, trigonometric representation of complex numbers, polar coordinates and the trigonometry of oblique triangles. Prereq: MAT 098 or MAT 106.

MAT 119 (3) C
Mathematics Behind Information Technology

Learn basic aspects of discrete mathematics common to information technology: scientific notation; binary and hexadecimal number systems; logical operations and the design of logical networks; set theory; relations and functions; combinatorics; graphs and directed graphs; regular expressions; and finite-state machines.

MAT 120 (5) N
Elementary Functions

Studies the general nature of functions: polynomial, rational, exponential, logarithmic, and trigonometric. Fulfills the QSR requirement for A.A. degree, except does not meet QSR at UW. Prereq: MAT 102, or MAT 098 (with grade of 3.5 or better) and high school trigonometry, or placement.

MAT 122 (5) N,C,S
Pre-Calculus I, General Functions

Examines the general nature of polynomial, rational, exponential and logarithmic functions, and related functional and algebraic topics. Fulfills the QSR requirement for A.A. degree. Prereq: MAT 098 or placement test.

MAT 123 (5) N,C,S
Pre-Calculus II, Trig Functions, Etc.

A study of right triangle trigonometry, trigonometric functions, related trig applications, and topics in analytic geometry. Fulfills the QSR requirement for A.A. degree. Prereq: MAT122 or Placement test.

MAT 124/125/126 (5 EA) N,C,S
Calculus with Analytic Geometry

Covers limits, differentiation of algebraic and transcendental functions, definite and indefinite integrals, techniques of integration, vectors, vector-valued functions, multivariable-calculus, partial differentiation, multiple integrals 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 should consult an advisor. Each course fulfills the QSR requirement for A.A. degree. Prereq for MAT 124: MAT 123 (C) or placement test or MAT 120 (N). Prereq for MAT 125: MAT 124. Prereq for MAT 126: MAT 125.

MAT 170 (5) N,C
Math for Elementary School Teachers

Develop a repertoire of problem solving tools with emphasis on non-routine and multi-step problems. Presents a variety of perspectives to address the broad range of learning styles encountered in elementary school students. Gain an understanding of the underlying concepts of elementary mathematics. Fulfills the QSR requirement for A.A. degree.

MAT 198 (1-5) N
Mathematics Workshop

A problem-solving workshop using math topics considered appropriate by the instructor. May include study skills, note-taking systems, test-taking strategies and group problem-solving approaches.

MAT 215 (2) N,S
Word Problems for MAT 124 – Calculus

Covers word problems. Develops critical thinking skills to transition between applied and theoretical calculus. May use new technologies for problem-solving. Enhances skills necessary to compete more successfully in math/science programs at four-year schools. Coreq: MAT 124.

MAT 216 (2) S
Word Problems for MAT 125

Covers word problems. Develops critical thinking skills and bridges the gap between applied and theoretical calculus. May use new technologies for problem-solving. Enhances skills necessary to compete more successfully in math/science programs at four-year schools. Coreq: MAT 125.

MAT 220 (5) N,C,S
Linear Algebra

Intro to linear algebra and its implications. Includes systems of linear equations, matrices, determinants, vector spaces, inner product spaces, eigenvalue problems, and the Jordan form. Fulfills QSR requirement for A.A. degree. Prereq: MAT 126 or higher or permission or concurrent enrollment.

MAT 224 (5) N,C,S
Vector Calculus

Continuation of MAT 126. Includes vector-valued functions, vector fields, line and surface integrals and the theorems of Green, Gauss, and Stokes. Learn vector operators and the extension of the calculus to the vectors in 2-D and 3-D space. Fulfills the QSR requirement for A.A. degree. Prereq: MAT 126 or higher or permission or concurrent enrollment.

MAT 238 (5) N,C,S
Differential Equations

Learn linear differential equations, second order differential equations, their applications, Leplace transforms and series solutions. Covers the elementary theory of differential equations and the interrelationship between pure mathematics and applied mathematics. Fulfills the QSR requirement for A.A. degree. Prereq: MAT 125 or higher; MAT 126 strongly recommended.

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

Also see Medical Assistant program at SVI.

The Medical Assisting Program includes short options in Medical Office Administration, Medical Reception, Medical Transcription and Clinical Lab Assisting.

AHM 101 – 105 (1 EACH) N

This is a series of 5 one-unit courses (to total 5 credits of Pathology) which cover a basic review of terminology, structure and basic anatomy, including cavities, regions, anatomical planes and directional terms for various systems and their related tests and procedures.

AHM 101 (1) N
Pathology 1 – Digestive System**AHM 102 (1) N**
Pathology 2 – Urinary & Reproductive Systems**AHM 103 (1) N**
Pathology 3 – Nervous, Musculoskeletal & Endocrine Systems**AHM 104 (1) N**
Pathology 4 – Cardiovascular, Respiratory, Blood, Lymph & Immune Systems**AHM 105 (1) N****Pathology 5 – Skin & Senses Systems, Oncology & Radiology****AHM 117 (1) N**
Introduction to Lab & Clinical Safety

Covers safety, state and federal laws, regulations, organization, personnel and testing procedures of a laboratory. Includes requisitions, reports, specimen collection, infection, inflammatory and immune responses, infectious disease, standard precautions, and quality control.

AHM 118 (1) N
Intro to Patient History, Medical Records & Documentation

Covers medical records: starting a chart; entering data; charting methods; legal aspects; confidentiality; types of filing systems; and types of reports. Includes patient history and important information, and components of a physical examination.

AHM 124 (1) N
Introduction to Medical Transcription

Intro to the career of medical transcription and the American Association for Medical Transcription. Covers transcription equipment and tools, basic guidelines, various medical reports that are transcribed, turnaround time and correcting work. Presents the laws and ethics pertaining to medical transcription. Prereq: Successful completion of medical terminology or instructor permission.

AHM 140 (1) N
Phlebotomy 2

Presents more advanced techniques in phlebotomy and difficult blood draws. Builds on skills learned in AMA 252 and provides more practice time to gain ability, skill and confidence in blood drawing techniques. Prereq: AMA 252. Completion of program health requirements.

AHM 141 (1) N
Lab Equipment & Measurements

Intro to lab equipment, as well as the measurements and calculations related to lab specimen collection, processing and testing. Learn how math is used in collecting and preparing specimens, as well as the use of military time, preparing reagents, dilution of specimens and calculating amount of preservative needed. Prereq: Assessment test score of placement into MAT 084/085 or 097 or above. Completion of program health requirements.

AHM 142 (1) N
Non-Blood Specimen Collection

Covers knowledge and skills required to obtain specimens of body fluids or tissues other than blood. Includes techniques for collecting stool, sputum, urine, wound cultures and a variety of other specimens, as well as the preparation and testing of such specimens. Practice with other students. Prereq: Completion of program health requirements.

AHM 151 (1) N
OB/GYN/Pediatric Theory

Learn theory of typical OB/GYN and pediatric office visits and procedures. Includes prenatal visits, pregnancy complications, parturition and postpartum, GYN exam and related conditions and procedures, measuring an infant or child, taking vital signs, collecting specimens, screening hearing and vision, and common disorders of childhood.

AHM 152 (1) N
Theory of Exams by Body Systems

Covers theory in various examinations and procedures grouped by body system, such as urinary catheterization, spirometry, visual acuity, irrigations, casting and removal, sputum collection and oxygen administration. Also includes symptoms of diseases in each system and intro to pathology.

AHM 153 (1) N
Theory of Medication Calculation & Administration

Learn theory of calculating dosages and administering medications. Includes legal and ethical factors, medication order or prescriptions, dosages, drug labels, the six rights of drug administration, and various routes to deliver medications.

AHM 154 (1) N
EKG Theory

Covers theory and practicum of a standard electrocardiogram, including equipment, lead placement, basic interpretation of emergency conditions, the cardiac cycle and its relation to the tracing, and artifacts. Covers basic theory of a stress EKG and Holter monitor.

AHM 155 (1) N
Phlebotomy Theory

Learn theory for blood collection by venipuncture and capillary puncture, anatomy and physiology of the cardiovascular system, equipment needed for venipuncture, and techniques.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

AHM 160 (1) N
Proofreading & Editing

Provides the basic skills for proofreading and editing medical documents, including language mechanics, steps of editing, proofreading guidelines and standard notations. Addresses legal and ethical considerations, such as editing that will not alter meaning and context. Prereq: Completion of medical terminology course or instructor permission. Type 25 wpm and know MS Word.

AHM 161 (1) N
Medical Transcription Practice 1

Provides practical experience in medical transcription and completing medical reports using recorded dictation. Utilize word processing skills and skills gained in AMA 124 to produce accurate documents with increasing speed. Prereq: AMA 124 or instructor permission.

AHM 162 (1) N
Medical Transcription Practice 2

Gain complex practical experience in transcribing various medical reports using recorded dictation. Prereq: AHM 161 or instructor permission.

AHM 163 (1) N
Medical Transcription Practice 3

Gain complex practical experience in transcribing various medical reports using recorded dictation. Further build speed and accuracy transcribing a wide variety of documents. Prereq: AHM 162.

AHM 244 (1) N
Introduction to Imaging

Intro to diagnostic imaging with an emphasis on radiology. Includes ultrasound, PET and CT scans, as well as MRI, radiation therapy and nuclear medicine. Radiology includes safety, contrast media, patient preparation and positioning.

AMA 100 (1) N
Introduction to Healthcare

Overview of the various medical specialties, types of practices and the members of the healthcare team. Explores personal characteristics, certifications, professional organizations, career opportunities and the role of managed care. Presents a brief history of medicine, as well as the effects of attitudes and culture on the delivery of healthcare. Prereq: Placement into English 101 or completion of college English Composition within the last 5 years.

AMA 101 (2) N
Communications in Healthcare

Intro to various methods of effective communication, both oral and written. Addresses basic psychology related to communication in healthcare and includes cultural perspectives on illness, life-threatening illness, stress and burnout. Focuses on effective communication skills required in a medical setting in order to recognize individual needs and insure accuracy and quality of information exchanged.

AMA 102 (1) N
Legal Concepts

Intro to legal terms and concepts related to ambulatory healthcare. Includes risk management, confidentiality, medical records, documentation, the physician's public duties and the principles of medical law terms and issues.

AMA 103 (1) N
Ethical Concepts

Intro to ethical terms and concepts related to ambulatory healthcare. Includes a medical ethical and bioethical issues, AAMA Code of Ethics, AMA Ethical Guidelines, allocation of scarce resources, abortion and fetal tissue research, genetic engineering, artificial insemination and surrogacy, and dying and death.

AMA 104 (1) N
Office Emergencies

Provides knowledge of various emergency situations that may occur in a medical office or clinic and the related equipment and actions required of the healthcare team. Does not qualify for first aid certification, nor does it include practice in CPR.

AMA 105 (1) N
Asepsis & Infection Control

Provides the information vital to all health-care workers in infection control in the ambulatory care setting. Includes the process and chain of infection, inflammatory and immune responses, stages of infectious disease, standard (and other) precautions, state and federal laws and regulations, medical and surgical asepsis, sterilization of instruments and equipment. Prereq: Complete program health requirements.

AMA 106 (1) N
Patient History, Documentation & Physical Exam

Covers first patient contact, including the patient history and important information, and initiating the patient medical record and charting methods. Presents the components of a physical examination from the assistant's and physician's perspectives. Prereq: Complete program health requirements.

AMA 107 (1) N
Vital Signs & Measurements

Take a patient's temperature, pulse and respirations, blood pressure, height and weight. Practice in a simulated ambulatory care setting. Includes normal ranges and abnormalities, factors that affect the vital signs, the physiology of the vital signs and related material. Prereq: Complete program health requirements.

AMA 108 (1) N
Nutrition & Developmental Basics

Intro to nutrition and digestion through studying types of nutrients, how to read food labels, various life stages and nutrition, therapeutic diets and culture in relation to diet and nutrition.

AMA 109 (1) N
Pharmacology

Explores the principles of pharmacology, including history, origin, sources, properties, uses and effects of drugs on living organisms. Covers uses and names of drugs, regulations and legal classifications, the PDR and other drug reference sources. Examines drug actions, routes of administration and forms of drugs, as well as the storage and handling of medications (including controlled substances) and emergency medications.

<p>AMA 110 (1) N Introduction to Lab Safety Focuses on the safety, laws and regulations concerning the physician's office laboratory as well as an intro to the lab's departments, personnel and testing procedures. Covers quality control, lab requisitions and reports, specimen collection and the use of the microscope.</p> <p>AMA 112 (1) N Credentials & Employment Prepares students for obtaining appropriate credentials, and discusses certification, registration and preparation for the examination. Focuses on the medical assistant, and offers information on credentialing of various allied health professionals such as limited x-ray technician, lab assistant, medical transcriptionist, medical office manager and EKG technician. Develop a job search strategy, prepare a resume and cover letter, complete an employment application, and learn about interviews.</p> <p>AMA 114 (1) N Basic Psychology Principles Covers principles of psychology as well as the various theories of Jung, Erickson, and others. Presents a variety of influences on behavior including heredity, culture and environment. Prereq: 2.0 GPA and permission.</p> <p>AMA 115 (1) N HIV/AIDS Includes the curriculum topics for a 7-hour HIV/AIDS education program as outlined by the Washington State Department of Health. Includes the etiology and epidemiology of HIV, transmission and infection control, testing and counseling, clinical manifestations and treatment, legal and ethical issues, and psychosocial issues.</p> <p>AMA 116 (1) N Principles of IV Therapy Presents the theory of intravenous (IV) therapy and its application in ambulatory care. Includes related anatomy and site selection, equipment and supplies, ongoing maintenance, calculations, risks and complications. Also covers professional standards, national and state laws, and the role of the medical assistant. Prereq: 2.0 GPA and permission.</p> <p>AMA 120 (1) N Front Office Basics Intro to the medical front office responsibilities and functions. Covers the office environment, as well as computer basics and their medical applications, telephone techniques and basic triage.</p>	<p>AMA 121 (1) N Patient Scheduling Learn patient scheduling in an ambulatory care setting. Includes basic triage skills in gathering patient information verbally.</p> <p>AMA 122 (1) N Medical Records & Correspondence Addresses the scope of medical records procedures, from how to initiate a new patient chart to entering data in the chart. Covers legal aspects, various types of filing systems and types of reports filed in a medical record. Intro to types of business correspondence, computer applications, USPS rates and regulations and faxing.</p> <p>AMA 123 (1) N Daily Financial Management Learn the various aspects of a medical practice's daily financial tasks including both manual and computerized bookkeeping, banking documents and functions. Covers common tasks such as using petty cash and purchasing, accounts receivable and working with credit procedures.</p> <p>AMA 125 (2) N Intro to Medical Insurance & Coding Provides knowledge of the history and evolution of medical insurance in this country and the terminology necessary to understand and submit claims. Compares various types of medical insurance, as well as DRGs and MCO models, and addresses legal and ethical issues.</p> <p>AMA 161 (1) N Medical Transcription Practice 1 Beginning practical experience in transcribing various medical reports using prepared dictation.</p> <p>AMA 162 (1) N Medical Transcription Practice 2 Continuation of practical experience in transcribing various medical reports using prepared dictation. More advanced material is used.</p> <p>AMA 163 (1) N Medical Transcription Practice 3 Continuation of practical experience in transcribing various medical reports using prepared dictation. Uses more advanced and specialized materials.</p>	<p>AMA 170 – 181 (1) N AP/Terminology/Pathology 1 – 12 AMA 170-181 is a series of individual 1-unit courses which introduce anatomy, physiology, pathology, tests, and treatments.. Study basic medical word structure and language and practice spelling and pronunciation in each course.</p> <p>AMA 170 (1) N AP/Terminology/Pathology 1 Introduction Cavities and regions of the body, anatomical planes and directional terms and divisions of the spine.</p> <p>AMA 171 (1) N AP/Terminology/Pathology 2 Skin and Senses</p> <p>AMA 172 (1) N AP/Terminology/Pathology 3 Digestive System</p> <p>AMA 173 (1) N AP/Terminology/Pathology 4 Male Reproductive / Urinary Systems</p> <p>AMA 174 (1) N AP/Terminology/Pathology 5 Female Reproductive System</p> <p>AMA 175 (1) N AP/Terminology/Pathology 6</p> <p>AMA 176 (1) N AP/Terminology/Pathology 7 Endocrine System</p> <p>AMA 177 (1) N AP/Terminology/Pathology 8 Musculoskeletal System</p> <p>AMA 178 (1) N AP/Terminology/Pathology 9 Cardiovascular System</p> <p>AMA 179 (1) N AP/Terminology/Pathology 10 Respiratory System</p> <p>AMA 180 (1) N AP/Terminology/Pathology 11 Blood / Lymph System</p> <p>AMA 181 (1) N AP/Terminology/Pathology 12 Specialties: Cancer, Radiation, Pharmacology and Psychiatry</p>
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AMA 226 (1) N
Medical Insurance Coding I

Provides practice in performing various medical insurance coding projects utilizing knowledge and skills obtained in AMA 125. Practice performing primarily ICD-9 and CPT coding, but includes all aspects of coding to simulate the process in an ambulatory healthcare setting. Prereq: AMA 125.

AMA 227 (2) N
Medical Insurance Billing

Provides advanced practice in performing medical insurance billing using skills obtained in module AMA 125. Practice performing various aspects of medical insurance billing with increasing complexity to build coding skill and accuracy. Prereq: AMA 125 and AMA 226 (AMA 226 may be taken concurrently) or instructor permission.

AMA 228 (1) N
Basic Accounting/Bookkeeping

Presents bookkeeping and accounting practices, both single and double entry, manual and computerized. Includes accounting functions, cost analysis, financial records, useful ratios and medical office expenses. Prereq: Math 084 or 097 or above. Coreq: AMA 125, AMA 226, and AMA 227.

AMA 230 (1) N
Medical Office Management

Intro to managing a medical office. Explore management styles, teamwork concepts, supervising personnel and students, making travel arrangements, time management, marketing, financial management, facility management, and liability coverage. Create a procedure manual and a marketing brochure. Covers human resources: office policies, recruiting and hiring, new employee orientation and training, employee evaluation and salary review, dismissing an employee, conflict resolution and personnel records and laws.

AMA 240 (1) N
GYN/Pediatrics

Learn the theory and practice of assisting with typical OB/GYN and pediatric office visits and procedures. Includes prenatal visits, pregnancy complications, parturition and the postpartum period, the GYN exam and related conditions and procedures, measuring an infant or child and taking vital signs, collecting specimens, screening hearing and vision, and common childhood disorders.

AMA 241 (1) N
Male Reproductive System/Gerontology

Presents various disorders and examinations/procedures of the Nervous System male reproductive system. Covers the field of gerontology, including biases of society and facts about aging, physiological and psychological changes in each body system. Addresses memory or visually-impaired elderly patients and the issue of elder abuse. Prereq: Complete program health requirements.

AMA 242 (2) N
Exams by Body Systems

Offers theory and practice in various examinations and procedures grouped by body system. Includes urinary catheterization, spirometry, visual acuity, irrigations, casting and cast removal, sputum collection and oxygen administration. Presents signs and symptoms of diseases in each system for an introduction to pathology. Prereq: Complete program health requirements.

AMA 243 (1) N
Rehabilitation

Intro to using physical and mechanical agents to aid patients. Covers the principles of body mechanics for the healthcare worker, as well as transferring patients, assisting with ambulation and using assistive devices, therapeutic exercises and modalities. Emphasizes safety. Prereq: Complete program health requirements.

AMA 245 (2) N
Minor Surgery

Learn theory and procedures for assisting a physician with minor surgery. Includes asepsis and sterile principles, surgical methods and common procedures, instruments, equipment, supplies, sterile field set-up, and the process. Focuses on the vital areas of patient education and consent, preparation and post-procedure follow-up care. Prereq: Complete program health requirements.

AMA 246 (1) N
Patient Prioritizing & Instruction

Presents two major responsibilities: accurate prioritizing of patients and good patient instruction. Using effective oral and written communication, learn to prioritize a patient's needs by phone or in-person and to interview them. Learn to explain general office policies and provide general information, instruct in health maintenance, teach about disease prevention and locate community resources. Prereq: 2.0 GPA and permission.

AMA 250 (2) N
Medication Calculations & Administration

Learn theory and practical procedures in calculating medication dosages and administering medications. Includes legal and ethical factors, the medication order or prescription, dosages, drug labels, calculating dosages, the six rights of drug administration, and various routes to deliver medications. Practice giving oral medications, various parenteral routes and injections intradermally, subcutaneously and intramuscularly. Prereq: Complete program health requirements.

AMA 251 (1) N
EKG

Learn theory and practical procedures for performing a standard electrocardiogram. Includes the equipment, lead placement, basic interpretation of emergency conditions, the cardiac cycle and its relation to the tracing, and artifacts. Includes the basic theory of a stress EKG and Holter monitor, although not practiced. Prereq: Complete program health requirements.

AMA 252 (2) N
Phlebotomy

Learn theory and practical procedures for blood collection by venipuncture and capillary puncture. Covers the anatomy and physiology of the cardiovascular system, equipment needed and technique. Includes patient interaction, site selection, safety, evacuated tube vs. syringe method, use of a butterfly collection system, capillary puncture and troubleshooting the unsuccessful venipuncture. Gain practical experience. Prereq: Complete program health requirements.

AMA 253 (2) N
Hematology

Learn the theory and practical procedures in hematology testing for the physician's office laboratory. Tests include white and red blood cell counts, white cell differential, erythrocyte indices, erythrocyte sedimentation rate, and automated hematology. Also covers specimen preparation, testing, quality assurance, normal ranges of results and documentation. Prereq: Complete program health requirements.

AMA 254 (2) N
Urinalysis

Covers the importance of urinalysis in the diagnosis and treatment of various diseases and how to correctly perform a urinalysis. Includes safety and quality control as well as the equipment and supplies necessary, collection methods and the examination of urine physically, chemically and microscopically. Prereq: Complete program health requirements.

AMA 255 (2) N
Basic Microbiology

Intro to the basics of microbiology as related to the medical assistant in a physician's office laboratory. Includes classification and cell structure, equipment needed, safety when handling microbiology specimens, collection procedures, and the microscopic examination of bacteria. Covers culture media and the microbiological culture, biochemical tests, identification systems, sensitivity testing, parasitology and mycology. Prereq: Complete program health requirements.

AMA 256 (2) N
Lab Tests & Chemistry

Includes a variety of lab tests not covered in other modules including pregnancy testing, infectious mononucleosis, blood typing, semen analysis, phenylketonuria, tuberculosis, blood glucose, cholesterol, triglycerides and blood urea nitrogen (BUN) testing. Learn about the theory, procedure, equipment and supplies, values, and safety. Perform the tests in the classroom laboratory. Prereq: Complete program health requirements.

AMA 290 (7) N
Medical Assisting Externship

Provides the opportunity to practice (unpaid) Medical Assisting skills and gain valuable experience in the ambulatory healthcare setting. Share experiences and information. On the site, the student is guided by the extern site supervisor in performing various administrative and clinical tasks as expected of an entry-level medical assistant. Requires 198 unpaid hours in the clinical setting. Prereq: Permission.

AHE 290 (7) N
Medical Assistant Externship

232 hours of unpaid experience in a medical office.

MEDICAL OFFICE CLERK

See *Business Program at South*.

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. Provides 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 & Ear Training

Covers rudiments of music notation, scales, intervals, and triads, rhythmic and melodic sight-reading and dictation. Increases simple four-part writing and analysis and correlated keyboard exercises. For music majors and minors.

MUS 102 (5) N,C,S
First-Year Theory

Continuation of MUS 101. Elementary harmony and ear training including 4-part harmony. 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. 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, using live performances, videotapes and recordings. 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. Emphasizes the early rock music development. Fulfills the Integrated Studies requirement.

MUS 117 (5) S
Rock Music II

Examines rock music as a musical, social, cultural, economic, and political force in the United States. Emphasis on the later decades of rock music development.

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 Piano – 1st Quarter

Laboratory course for the general student to develop technical proficiency and sight-reading skills.

MUS 122 (2) N,C,S
Beginning Group Piano – 2nd Quarter

Class piano for students with previous keyboard experience. Prereq: MUS 121 or permission.

MUS 123 (2) N,C,S
Beginning Group Piano – 3rd Quarter

Continuation of MUS 122. Prereq: MUS 122 or permission.

MUS 125 (5) N,C,S
Fundamentals of Music

Intro to reading and writing music for non-majors. Builds musical knowledge and skills to complement student's natural music ability.

MUS 130-139 (1-2 EA) N,C,S
Individual Instruction Series: Voice, Piano, Strings, Brass, Woodwinds, Percussion, Organ, Guitar, Harp, Harpsichord, Arranging, Composing/Improvising

Credit hours vary. May be repeated. An additional fee is charged for all individual instruction in this series. 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. Present one concert per 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) 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 is the Jazz performance group for Seattle Central. Participate in both Jazz Combo—duo, trio, quartet, and big band settings. Music drawn 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. Covers style and performance techniques. Prereq: Performance ability.

MUS 151 (2-3) C,S
The Performance Experience

Instruction on presenting a public performance—the skills beyond the notes. 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. 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.

MUS 154 (1-2) N,S
Symphonic Band

Features the finest in Wind band literature, both contemporary and traditional. 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. 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. Learn techniques associated within the style and receive instruction on the fundamentals, repertoire and technical studies introduced in MUS 156 and 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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

MUS 160 (5) S
The Blues and its Influence

Explores the development of the blues and its influence on jazz, rock, classical music and literature. Covers the social, economic, and political forces that shaped African-American experiences in the U.S. as chronicled in blues music.

MUS 163 (5) C
Musical Theater Stage Performance

Covers principles of voice production, resonance and projection. Learn effective presentation of varied materials. Fills the gap between the teacher's studio and professional performance.

MUS 182 (4) N
Intro to Musical 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. 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 205 (5) N
Jazz Masters of the Twentieth Century

A music literature course for the general student who wishes to study jazz music in more depth. Lectures, selected readings, and major recordings by each artist. Prereq: MUS 204 or 113. Recommended: ENG 101.

MUS 221 (2) N,C,S
Group Piano – 1st Quarter

Continuation of MUS 123. Technique, repertoire, and theory, with emphasis on classical compositions. Prereq: MUS 123 or permission.

MUS 222 (2) N,C,S
Group Piano – 2nd Quarter

Continuation of MUS 221. Prereq: MUS 221 or permission.

MUS 223 (2) N,C,S
Group Piano – 3rd Quarter

Continuation of MUS 222. Prereq: MUS 222 or permission.

MUS 298 (1-5) C
Practicum in Music

Practicum in various skills in music, such as tutorial assistant in piano theory, coaching vocal students or apprenticeship in use of electronic equipment (Broadway Performance Hall).

MUS 299 (1-5) N,C,S
Practicum in Music

Do research performance in an area of interest. Course structure determined by student and instructor. Prereq: Permission.

NANO 101 (5) N
Intro to Nanotechnology

Intro to nanotechnology principles, applications, industry, ethics and careers. Includes basic concepts of nano/microelectronics-mechanical materials and their properties; applications of these materials to electronics, magnetics, mechanics, fluidics, optics, photonics and smart biological materials. Covers micro and nano sensors and actuators and processing, fabrication, modeling and testing. Prereq: MAT 098.

NANO 150 (5) N
Internship/Practicum

Hands-on training in nano/micro-fabrication facility. Students will complete a design and fabrication project related to nano/micro-device and document and report on the project at the end of course. Prereq: NANO 101, CHE 101, PHY 101 or permission.

NETWORK TECHNOLOGIES

Also See Network Technician at SVI.

North courses formerly listed as NET are now listed under Information Technology (IT).

NET 120 (5) C
Network Essentials CompTIA Network +

Covers Microsoft courses on workstations and networking. Introduces current networking technology for local area networks (LANs), wide area networks (WANs), and the Internet. Prereq: MIC 101 or ability to use MS Office.

NET 122 (5) C
Network OS 1 – Windows XP

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. Prereq: NET 120 or 142 or permission and eligible for MAT 098.

NET 124 (5) C
Network OS 2 – Windows 2003 Server

Continuation of NET 122. Provides support professionals with skills to install, configure, customize, optimize, network, integrate and troubleshoot Windows 2000 Pro. Prereq: NET 122 (may be taken concurrently) or permission.

NANOTECHNOLOGY

This new program is under development. See www.seattlecolleges.edu for the most up-to-date information or call the division.

NET 126 (5) C
Network OS 3 – Win2K Network Infrastructure

Continuation of NET 124. Covers capacity planning, multiple domain management, trust relationships, implementing RAS, inter-operating with Novell Netware and Windows XP troubleshooting. Prereq: NET 124.

NET 134 (5) C
Network Communications – TCP/IP

Learn 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, 124 (124 may be taken concurrently) or permission.

NET 138 (5) C
UNIX for Network Administration

Covers the organization of UNIX-based hardware components and software tools used by the host administrator to control access, tune the system, and account for system resources used. Focuses on UNIX tools, network schedulers, security, remote access, performance monitoring, and networking aspects of UNIX. Includes multi-user, multi-tasking, time-sharing networked communications, and set-up and maintenance of an Internet server. Prereq: CIS 136 or permission.

NET 142 (5) C
Network Management – CISCO I

Provides experience in current and emerging networking technology for future employment and/or further education. Content standards based on current industry standards. Examines safety, networking, network terminology and protocols, LANs, OSI model, cabling, cabling tools, IP addressing, and network standards. Emphasis on decision-making and problem-solving techniques. Prereq: NET 122 (may be taken concurrently) or permission.

NET 144 (5) C
Network Management – CISCO II

Continuation of NET 142. Covers safety, networking, network protocols, LANs, WANs, Ethernet, LAN switching, router IOS, TCP/IP addressing, router configuration, dynamic routing, static routing and the network administrator's role and function. Emphasis on techniques to solve networking problems. Prereq: NET 142.

NET 146 (5) C
Network Management – CISCO III

Continuation of NET 144. Extends 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, 144 or permission.

NET 298 (2-5) C
Special Projects for LAN

Study of selected topics considered appropriate by the instructor and/or faculty. Content and format vary. Could include Microsoft Back Office – IIS, Proxy Server, Site Server, Transaction Server, SNA server and SQL server Prereq: NET 126 (C) and permission.

NURSING

Also see Acute Care Hospital Nursing Assisting Program and Certified Nursing Assisting Program at SVI.

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 Laboratory

Intro to nursing skills and procedures. Includes demonstration, laboratory practice and supervised clinical experience. Covers beginning communication skills.

NUR 118 (2) N
Clinical Nursing Skills I

Covers theory and laboratory work associated with NUR 131. Intermediate level nursing practice.

NUR 119 (1) N
Clinical Nursing Skills II

Continuation of NUR 118; theory and labs associated with NUR 141.

NUR 124 (5) N
Fundamentals of Anatomy & Physiology

Intro to structure and function (anatomy and physiology) of human body. Provides foundation for clinically-related subjects including nutrition and pathological body conditions. Prereq: Permission.

NUR 125 (2) N
Community Resources

Identifies community social and health services on federal, state and local levels. Addresses health issues impacting the community at large. Prereq: Permission.

NUR 126 (1) N
Legal Aspects & Career Opportunities

Covers role of the practical nurse on the health team. Examines legal responsibilities, licensure, career opportunities, nursing organizations and trends. Prereq: Permission.

NUR 127 (6) N
Medical/Surgical Nursing – Child/Adult I

Covers common conditions of illness throughout the life span. Prereq: All first-quarter NUR courses. Coreq: NUR 131 and permission.

NUR 128 (6) N
Medical/Surgical Nursing – Child/Adult II

Continuation of NUR 127. Prereq: NUR 127 and permission.

NUR 130 (3) N
Critical Thinking in Nursing Practice

Intro to critical thinking skills in the practice of nursing. Builds on the theory and skills presented in NUR 116 and 117. Coreq: NUR 116 and 117.

NUR 131 (3.5) N
Clinical Nursing Practice I

Supervised hospital and nursing home practice in medical/surgical care of the child/adult and chronic and convalescent patients. 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
Family Nursing Theory

Study care of the mother and the newborn including prenatal, labor and delivery, and postnatal nursing. Prereq: Fourth-quarter standing.

**NUR 134 (2) N
Family Nursing 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 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 (3.5) 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. Provides the student with methods of assessing, planning, implementing, and evaluating nursing practice. Intro to strategies for the delivery of culturally competent nursing care. Covers methods of modifying care for specialized populations. Prereq: Permission.

**NUR 151 (2.5) 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 (2.5) N
Basic Pharmacology II**

Continuation of NUR 151. Prereq: Permission.

**NUR 153 (.5) N
Administration of Medications**

Application of NUR 151 and 152 to clinical setting. Prereq: NUR 151, NUR 152, and third-quarter of practical nursing program.

**NUR 154 (1) 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**

Assists foreign students, pre-nursing, and advanced placement students to meet special needs for licensure, or other student interests. Tailored to meet State Board (LPN) or faculty recommendations to accomplish student/program objectives. Prereq: Permission.

**NUR 170 (10) S
CNA—Basic Health Care**

Covers basic health care concepts needed to provide nursing care to adults, including maintaining and monitoring patient's health status, clinical AIDS training and CPR. Covers the nurse's role in aspects of aging and disability. Provides clinical experience in a variety of long term care settings. Prereq: CASAS score of 220 or above in reading and math.

**NUR 171 (12) S
LPN I Fundamentals of Nursing**

Covers the origin, history, present and future of nursing and the current treatment and promotion of health through the stages of man. Intro to patient cultural and legal ethical concepts; pathophysiological concepts of medical surgical nursing; causation of illness and response of the body to the current treatment and healing; and the classification of drugs and the nursing principles of administration and monitoring of medication. Practice clinical skills in the laboratory. Prereq: C.N.A. Certificate, ANP 213, ANP 214, MAT 102, or MAT 107, BIO 280, PSY 206, and ENG 101.

**NUR 172 (12) S
LPN I Medical Surgical Nursing I**

Builds on NUR 171. Analyze and integrate cross-cultural nursing concepts; pathophysiological concepts of medical surgical nursing; causation of illness, treatments and response of the body to many common illnesses; and the pharmacological and nutritional concepts of the aging patient. Clinical rotations in long term care facilities. Prereq: NUR 171.

**NUR 173 (12) S
LPN II Medical Surgical Nursing II**

Builds on NUR 172. Continue study of the body systems, cross cultural and aging concepts, and pharmacology. Practice in the lab and in an acute setting. Prereq: NUR 172.

**NUR 174 (12) S
Maternal, Child & Pediatric Nursing**

Covers the current health care system and the role of the nurse in pediatric, maternal and infant care. Clinical experience focuses on pediatrics, labor and delivery and post partum experience in appropriate facilities. Prereq: NUR 173.

**NUR 175 (3) S
LPN V – PN-NCLEX Review & Exam Preparation**

Final course in the LPN preparation. Provides an opportunity to review the roles and responsibilities and State Regulations for practicing as a LPN in the State of Washington. Provides preparation for the PN-NCLEX exam. Focus on areas of special interest and complete an individual or group project. Prereq: NUR 172 and 173. Coreq: NUR 174 and ENG 101.

**NUR 176 (1) S
NCLEX Review & Exam Preparation I**

NCLEX review course in LPN program. Reviews the roles and responsibilities and State Regulations for practicing as a Licensed Practical Nurse in the State of Washington. Reviews the concurrent course material and provides preparation for the NCLEX-PN exam. Prereq: NUR 171. Coreq: NUR 172.

**NUR 177 (1) S
NCLEX Review & Exam Preparation II**

Continues to review the roles and responsibilities and State Regulations for practicing as a Licensed Practical Nurse in the State of Washington. Provides preparation for the NCLEX-PN exam. Prereq: NUR 176. Coreq: NUR 173.

**NUR 178 (1) S
NCLEX Review & Exam Preparation III**

Continues to review the roles and responsibilities and State Regulations for practicing as a Licensed Practical Nurse in the State of Washington. Provides preparation for the NCLEX-PN exam. Prereq: NUR 177. Coreq: NUR 174.

**NUR 179 (1) S
LPN Preparatory Course**

Introduces medical terminology which will apply to the entering LPN student. Reviews ANP, study skills, and CNA skills. Prereq: Permission.

NUR 221 (2) N
Health Promotion & Wellness Maintenance

In conjunction with NUR 228 and 231, intro to theoretical foundations of health promotion and wellness maintenance across the lifespan in a variety of healthcare settings. Prereq: LPN license in WA State. Coreq: NUR 224, 225, 231 and 232.

NUR 222 (1.5) N
Nursing Process III

Plan and implement care related to various complex conditions of illness throughout the life span. Covers how specific cultural practices and beliefs may impact treatment modalities. Prereq: LPN license in WA State. Coreq: NUR 223, 227, 228 and 235.

NUR 223 (1) N
Advanced Nursing Skills III

In conjunction with NUR 227 and NUR 228, provides theoretical knowledge and laboratory practice of advanced nursing skills. Prereq: LPN license in WA State. Coreq: NUR 227 and 228.

NUR 224 (1.5) N
Foundations of Education I

Provides theoretical knowledge related to planning and implementing educational processes in a health care setting. Prereq: LPN license in WA State. Coreq: Concurrent enrollment required in NUR 221, 225, 231 and 232.

NUR 225 (2) N
Psychosocial Nursing

Focuses on theoretical knowledge related to care of persons with a variety of psychiatric disorders. Addresses psychosocial assessment and therapeutic interventions for various psychiatric disorders. Prereq: Successful completion of first quarter of RN program. Coreq: NUR 221, 224, 231, and 232.

NUR 226 (1.5) N
Care Management & Leadership

Intro to theoretical foundations of leadership in nursing. Emphasizes leadership theory, change theory, motivational theory, conflict management, problem solving processes, and group dynamics. Addresses principles of time management and delegation. Prereq: Successful completion of first quarter of RN program. Coreq: NUR 233, 234, 237, 238 and 239.

NUR 227 (3) N
Medical-Surgical Nursing Child/Adult III

In conjunction with NUR 223 and 228, provides the student with the knowledge necessary to plan and implement care related to various complex conditions of illness throughout the life span. Prereq: LPN license in WA State. Coreq: NUR 222, 223, 228 and 235.

NUR 228 (3) N
Clinical Nursing Practice III

RN preparation program. Covers supervised ambulatory care, community-based care, acute care, or long-term-care practice (medical-surgical) which permits the student to develop nursing skills in order to plan and implement care for clients through the life span. Prereq: LPN license in WA State. Coreq: NUR 222, 223, 227 and 235.

NUR 231 (3) N
Clinical Nursing Practice IV

a) Apply the concepts in NUR 223 and NUR 227. Focuses on promoting normal growth and development and adaptation of children and families to illness. Experience pediatric assessment, planning and implementing care in a supervised pediatric setting.

b) Apply the concepts in NUR 225. Focuses on psychosocial assessment and therapeutic interventions in psychiatric disorders. Gain experience in a supervised psychiatric care setting. Prereq: LPN license in WA State. Successful completion of the first quarter of the RN program. Coreq: NUR 221, 224, 225 and 232.

NUR 232 (1.5) N
Nursing Process IV

Learn to plan and implement care of various complex illnesses. Covers how specific cultural practices and beliefs may impact treatment modalities. Prereq: Successful completion of the first quarter of the RN program. Coreq: NUR 221, 224, 225 and 231.

NUR 233 (1) N
Advanced Nursing Skills IV

With NUR 237, provides theoretical knowledge of various methods of monitoring clients with complex illnesses. Prereq: Successful completion of the first two quarters of the RN program. Coreq: NUR 226, 234, 237, 238 and 239.

NUR 234 (1.5) N
Foundations of Education II

Apply principles of NUR 224 to implement teaching plans and evaluate educational processes. Includes teaching and education of clients and their families or health care staff. Prereq: Successful completion of the first two quarters of the RN program. Coreq: NUR 226, 233, 237, 238 and 239.

NUR 235 (1.5) N
Legal Aspects/Care Systems

Understand the role of a Registered Nurse in health care, the community, and other health organizations. Explore the history of nursing, current health care, nursing and job market trends. Work with case studies involving legal and ethical nursing issues. Includes Washington State Nurse Practice laws, licensing laws, uniform disciplinary laws and OBRA regulations. Intro to health care systems, funding, organization, and function. Prereq: Successful completion of the first two quarters of the RN program with a grade of 2.0 or greater in all required courses. Coreq: NUR 222, 223, 227 and 228.

NUR 237 (3.5) N
Medical-Surgical Nursing Child/Adult IV

With NUR 233, plan and implement care related to various complex illnesses, including obstetrical clients. Prereq: Successful completion of the first two quarters of the RN program with a grade of 2.0 or greater in all required courses. Coreq: NUR 226, 233, 234, 238 and 239.

NUR 238 (1) N
Selective Services/Obstetrics

Provides a choice of clinical observation opportunities which serve to expand knowledge in clinical nursing practice. Experience caring for obstetrical clients. Prereq: Successful completion of the first two quarters of the RN program with a grade of 2.0 or greater in all required courses. Coreq: NUR 226, 233, 234, 237 and 239.

NUR 239 (1.5) N
Senior Experience

A 4-day full-time acute care experience. Provides an opportunity to carry out full-shift nursing care and advance capabilities in a medical-surgical setting. Focuses on continuity of care for clients with complex illnesses. Prereq: Successful completion of the first two quarters of the RN program with a grade of 2.0 or greater in all required courses. Coreq: NUR 226, 233, 234, 237 and 238.

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. Individualized instruction based on initial diagnostic assessment. Coreq: NUR 120, 140, and 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. Coreq: NUR 106, 140, and 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. Covers roles and responsibilities of the nurse in drug therapy. Major classifications of drugs include autonomic nervous system agents, parenteral fluids, electrolytes, vitamins and minerals, endocrine agents, neurologic agents, respiratory agents, and selected cardiovascular agents. Coreq: NUR 106, 120 and 162.

NUR 162 (2) C
Pathophysiology for LPN/RN Transition

Develops comprehensive understanding of pathophysiological processes occurring in selected major organ systems of the body. Serves as a basis for the scientific rationale in providing health care. Discusses key concepts related to regulation of homeostasis, movement and cognition, and oxygenation and circulation. Coreq: NUR 106, 120, and 140.

Nursing – Associate Degree**NUR 101 (5) C**
Nursing I: Fundamentals of Nursing

Intro to core nursing concepts, organized around the individual as a biopsychosocial being, constantly interacting with and adapting to a changing environment. Covers principles of critical thinking in nursing, the nursing process, the role of the nurse in health care, cultural views of health, and principles of growth and development with emphasis on the aging process. Addresses images and impressions of nursing, current trends in health care delivery and legal/ethical issues in nursing. Coreq: NUR 111,122 & MAT 107.

NUR 102 (5) C
Nursing II: Medical-Surgical Nursing

First of 4 medical-surgical theory courses. Develop a comprehensive understanding of homeostasis and the adaptation of clients to the complex processes of the physiologic mode. Emphasis on alterations in fluid and electrolyte balance, acid-base balance, endocrine functions, compromise in wound healing and peripheral vascular circulation. Prereq: Completion of all first quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 112, 123 & NTR 150.

NUR 103 (4) C
Nursing III – Medical-Surgical Nursing

Second of 4 medical-surgical theory courses. Develop a comprehensive understanding of homeostasis and adaptation with emphasis on alterations in neurologic, musculoskeletal, chronic respiratory, and chronic cardiovascular systems. Covers key concepts of adaptation to the complex processes of movement and cognition, oxygenation and circulation. Prereq: Completion of all second quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 113, 185 & PSY 206.

NUR 111 (3) C
Nursing Practice I

Apply nursing concepts from NUR 101. Assess four adaptive modes in the clinical setting: physiologic-physical, self-concept-group identity, role function, and interdependence. Experience basic assessment, care planning, and principled application of nursing skills in practice lab and clinical setting. Coreq: NUR 101, 122 & MAT 107.

NUR 112 (3) C
Nursing Practice II

Builds on NUR 111. Apply concepts relevant to adaptation in the basic physiological and psychosocial modes, the manner in which the client responds and administration of medications. Assess the four adaptive modes in the clinical setting. Gain experience in complete assessment, care planning and principled application of nursing skills in practice lab and clinical setting. Prereq: Completion of all first quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 102, 123 & NTR 150.

NUR 113 (4) C
Nursing Practice III

Builds on NUR 112. Emphasizes integrating nursing theory, clinical data, skills in providing nursing care and developing priorities. Assess the four adaptive modes, gain experience in individualized assessment and care planning, and apply nursing skills in practice lab and clinical setting. Prereq: Successful completion of all second quarter Nursing program courses. Coreq: NUR 103, 185 & PSY 206.

NUR 122 (2) C
Psychosocial Nursing I

First of 2 psychosocial nursing courses. Coordinates with NUR 101. Focuses on communication pertinent to the care of clients in various health care settings throughout the lifespan. Practice therapeutic and professional communication techniques. Focuses on assessment of adaptation in self concept, role function and independence applied to clients who are coping with acute and chronic illness. Gain understanding of group process. Coreq: NUR 101, 111 & MAT 107.

NUR 123 (4) C
Pharmacology for Nursing

Intro to basic concepts of drug therapy, including roles and responsibilities of nurses. Focuses on applying critical thinking and the nursing process for safe medication administration. Includes terminology, resources and regulations related to drug therapy, and principles of pharmacokinetics, pharmacodynamics and pharmacotherapeutics. Major classifications of drugs include autonomic nervous system agents; parenteral fluids; electrolytes; vitamins and minerals; endocrine, neurologic, respiratory and selected cardiovascular agents; anesthetic, immune system and gastrointestinal agents. Coreq: NUR 102, 112 & NTR 150.

NUR 185 (2) C
Gerontology for Nurses

Study adaptations of normal aging, differentiating these adaptations from disease, and learn the implications for nursing care. Covers psychosocial issues faced in aging and legal and ethical issues common in gerontological nursing practice. Prereq: Completion of all second quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 103, 113 & PSY 206.

NUR 201 (2) C
Nursing IVA: Psychosocial Nursing II

Second of 2 psychosocial nursing courses. Builds on NUR 122 (or NUR 106). Focuses on caring for clients with mental illness using a system with cognator and regulator subsystems to maintain adaptation in the four adaptive modes. Covers psychosocial assessment and therapeutic interventions in psychiatric disorders at three levels: integrated, compensatory, and compromised. Prereq: Completion of all third quarter Nursing program courses OR LPN/RN Transition courses with a 2.5 GPA or higher. Coreq: NUR 211, 206, 216 & ENG 102.

NUR 206 (3) C
Nursing IVB: Medical-Surgical Nursing

Third of 4 medical-surgical courses. Builds on NUR 101, 102 & 103. Develop a comprehensive understanding of homeostasis and the adaptation of clients to the complex processes of the physiologic mode. Emphasizes alterations in select integumentary and immune or protective responses, and surgical therapies. Prereq: Completion of all third quarter Nursing program courses OR LPN/RN Transition courses with a 2.5 GPA or higher. Coreq: NUR 201, 211, 216 & ENG 102.

NUR 207 (4) C
Nursing V: Medical/Surgical Nursing

Fourth of 4 medical surgical courses. Builds on NUR 101, 102, 103 & 206. Develop a comprehensive understanding of homeostasis and the adaptation of clients to the complex processes of the physiologic mode. Emphasizes acute respiratory, acute cardiovascular, gastrointestinal, and renal alterations. Prereq: Completion of all fourth quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 217 & 220.

NUR 208 (6) C
Nursing VI: Developing Family Nursing

Develop a comprehensive understanding of homeostasis and the adaptation of maternal, newborn and pediatric clients to the complex processes of the physiologic mode. Emphasizes learning and promoting normal family development and understanding adaptive and maladaptive physiologic and psychosocial responses to childbearing, childrearing and illness in childhood. Prereq: Completion of all fifth quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 218 & 230.

NUR 211 (3) C
Nursing Practice IVA

In a psychiatric setting focus on adaptation in the basic physiological and psychosocial modes and client response. Integrates nursing theory, clinical data, and skills in nursing care and developing priorities. Assess the four adaptive modes in clinical setting, gain experience in individualized assessment and care planning and apply therapeutic skills in practice lab and clinical setting. Prereq: Completion of all third quarter LPN/RN Transition courses with a 2.5 GPA or higher. Coreq: NUR 201, 206, 216 & ENG j102.

NUR 216 (3) C
Nursing Practice IVB

Focuses on concepts relevant to adaptation in the basic physiological and psychosocial modes and client response. Emphasizes comprehensive care and the relationships of the various components of client data and health care interventions. Assess the four adaptive modes, gain experience in individualized assessment and care planning and apply nursing skills in practice lab and clinical setting. Prereq: Completion of all third quarter Nursing program courses or LPN/RN Transition with a 2.5 GPA or higher. Coreq: NUR 201, 206, 211 & ENG 102.

NUR 217 (5) C
Nursing Practice V

Study adaptation in the basic physiological and psychosocial modes and client response. Emphasizes analysis of client data and health care interventions, initiating nursing assessments and interventions, health promotions and education, and developing leadership skills. Assess the four adaptive modes, gain experience in individualized assessment and care planning and apply nursing skills in a variety of clinical settings. Prereq: Completion of all fourth quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 207 & 220.

NUR 218 (5) C
Nursing Practice VI

Apply concepts from NUR 204. Emphasizes adaptation in the developing family. Study concepts of adaptation in the basic physiological and psychosocial modes and client response. Assess the four adaptive modes, gain experience in individualized assessment and care planning and apply nursing skills in a variety of clinical settings. Prereq: Completion of all fifth quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 208 & 230.

NUR 220 (2) C
Health Promotions and Managing Care in Nursing

Intro to theoretical foundations of health promotion, education and wellness maintenance across the lifespan, and the leadership role in Nursing. Emphasizes planning health promotions and managing care in a variety of settings. Addresses issues of leadership in nursing: traits and styles, problem-solving, change, team communication, conflict management, principles of delegation and time management and the implications of health care trends. Linked to final medical-surgical rotation. Prereq: Completion of all fourth quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 207 & 217.

NUR 230 (2) C
Transition to Professional Nursing Role

Covers the transition from the role of student to Registered Nurse. Focuses on the role of the RN in health care, the community and organizations. Emphasizes professional and legal obligations, obtaining and maintaining licensure, professional organizations, continuing education and job searching. Includes preparation for the NCLEX/RN exam. Prereq: Completion of all fifth quarter Nursing program courses with a 2.5 GPA or higher. Coreq: NUR 208 & 218.

NUR 299 (1-5) C
Independent Study in Nursing

Independent study in selected nursing topics under faculty supervision. Prereq: Permission.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN Watch Technology

NAME TO PREFIX
Watch Technology HIN

NUTRITION

NTR 105 (5) N
Intro to Food Science

Studies biological and chemical consequences of food preparation. Explores 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.

OCEANOGRAPHY

OCE 100 (5) N,C,S
Survey of Oceanography

Survey of the ocean in terms of physical, chemical, geological and biological processes and the human influence upon the ocean's natural equilibrium processes.

OCE 299 (1-5) C
Independent Study

Study of selected topics in oceanography. Prereq: OCE 100 and permission.

OFFICE ASSISTANT

See Business Computers programs at SVI.

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, MAT 110 and permission.

OPH 101 (5) C
Optical Theory I

Focuses on ophthalmic lens optics and eyeglass fabrication process. Intro to 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

Covers 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. Includes practical projects, role-playing and demonstrations.

OPH 108 (5) C
Ophthalmic Dispensing II

Covers ophthalmic dispensing procedures relating to complex prescriptions: fitting, adjusting and ordering procedures with emphasis on multi-focal and absorptive lenses. Includes low-vision aids. Refines communication skills.

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 110.

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, with 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. Studies American National Standards Institute guidelines. Intro to lens toughening procedures and stress testing.

OPH 197/198/199 (2-5) C
Work Experience – Opticianry

Earn work experience credit in the field of opticianry. Prereq: Permission.

OPH 203 (5) C
Contact Lens Technology II

Covers basic fitting techniques of hard and soft lenses. Includes patient instruction and contact lens adjustments. Examines 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

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 administered by student teams, over three academic quarters. Fully develop salesmanship, business plans, and implementation. Prereq: Completion of first-year requirements.

OPH 298 (1) C
Opticianry Workshops

Incorporate advanced ophthalmic skills with new technology, critical thinking and problem-solving. Provides students with the opportunity to pursue professional areas of interest.

OPH 299 (7) C
Comprehensive

Typical workshops include advanced ophthalmic skills incorporating new technology, critical thinking and problem-solving. Pursue professional areas of interest.

PARENT EDUCATION**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 040, 041, 042 (2.5) C**FAM 047, 048, 049 (3) S****FAM 050, 051, 052 (2.5) C****FAM 053, 054, 055 (3) S****FAM 060, 061, 062 (2.5) C****FAM 063, 064, 065 (3) S****FAM 070, 071, 072 (2.5) C****FAM 073, 074, 075, 079 (3) S****FAM 080, 081, 082 (2.5) C****FAM 083, 084, 085 S****FAM 090, 091, 092 (2.5) C****FAM 093, 094, 095 S****FAM 146, 147, 148 (1-3) N****FAM 149 (1-3) N****FAM 156, 157, 158 (1-3) N****FAM 166, 167, 168 (1-3) N****FAM 176, 177, 178 (1-3) N****FAM 186, 187, 189 (1-3) N****FAM 196, 197, 198 (1-3) N****FAM 180 (1-5) N****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 (2-6) N**STAR Parenting**

Online class. The STAR process (Stop, Think, Act, Review) encourages those who work with children to investigate children's temperament and development and to focus on long range goals. Use the child's current behavior to teach skills/values the adult wants. Guide by avoiding problems, responding to cooperation, acknowledging feelings, setting limits and teaching new skills. May be repeated for credit.

FAM 182 (1-5) N**FAM 183 (1-5) N****Special Topics**

Special topics for childcare providers focusing on working with parents, special needs children, multi-cultural curriculum, dealing with stress and burnout, and management and personnel issues.

FAM 190 (1-5) N,C
Foster Parent Training**PASTRY**

See Hospitality/Food Production/Culinary Arts.

PHARMACY TECHNICIAN**AHI 100 (3) N**
Intro to Medical Vocabulary

General survey of medical terminology introducing health service workers to the basic rules and fundamentals in medical vocabulary-building.

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. Visit job to observe typical job tasks.

PHA 120 (3) N
Pharmacy Calculations

Covers mathematics review with an introduction to calculations encountered in pharmacy practice.

PHA 130 (2) N
OTC Drugs

Covers an overview and uses of drugs 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. Learn laminar flow hood usage, preparation of intravenous fluids and hyperalimentation fluids. Practice filling unit dose carts and preparing IV fluid labels using hospital based software.

PHA 141 (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. Includes lab.

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

Covers 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 resume and interviewing. Prereq: Permission.

PHA 160 (3) N
Pharmacy Technology I

Covers many uses of computers in pharmacy practice. Gain proficiency using two different pharmacy prescription-filling software programs. Fill real prescriptions in pharmacy lab.

PHA 161 (2) N
Pharmacy Technology II

Continuation of PHA 160. Intro to the top 200 drugs. Use pharmacy software to process real prescriptions in the pharmacy lab. Study computerized insurance billing and report generation. Intro to hospital and nursing home application software.

PHA 170 (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. Covers inventory control, third party insurance billing, and pharmacy record keeping.

PHA 190 (3-13) N
Pharmacy Technician Externship

Gain pharmacy technician experience in participating agencies, classroom guidance in assimilating experience, and classroom assistance with problems. (13 credits generally provided over two-quarters, 5 + 8 credits).

PHA 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 strategies to adopt to encourage healthier lifestyle habits. Also addresses the rationale behind conventional and alternative, complementary therapies.

PHLEBOTOMY

See Phlebotomy Program at SVI.

See Medical Assisting Program at North.

PHILOSOPHY**PHI 100 (5) N,C,S**
Intro to Philosophy

Intro to philosophical thought and issues, intellectual systems and writings of the great philosophers. Covers the nature of philosophy, the meaning of knowledge, values, reality, and related subjects.

PHI 102 (5) N,C
Contemporary Moral Problems

Covers philosophical consideration of some of the major moral problems of modern society and civilization, such as discrimination, abortion, euthanasia, animal rights, world hunger and homelessness. Examines the issue of what means are justified in trying to bring about social change.

PHI 110 (5) N,C,S
Intro to Social Ethics

Includes philosophical analysis of current or perennial issues in public affairs, such as the nature and scope of freedom in society, the justification of democratic government, and the nature of social justice.

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 and global levels. Focuses on newly emerging infectious diseases (AIDS, drug resistant tuberculosis) and on environmentally induced diseases, such as asthma, cancers, chemical sensitivity and reproductive disorders.

PHI 118 (5) N,C,S
Practical Reasoning & Decision-Making

Emphasizes 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

Examines the principles of Aristotelian and symbolic logic, deductive argument and proof. Covers the meaning of language and its place in the reasoning process. Includes the application of logic to other fields. Fulfills QSR requirement for A.A. degree.

PHI 160 (5) C
Historical Intro to the Philosophy of Science

Covers the 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 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

Focuses on questions and topics of race. What is race? Do/should races exist? What is the nature of racism? What is the relationship between racism and other forms of oppression? 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? Prereq: Eligibility for ENG 101.

PHI 250 (5) C
Feminist Philosophical Perspectives

Focuses on questions such as the nature of sexism and feminism; "sisterhood" as an empowering, unifying truth or an oppressive, difference-stifling myth; the relationship between sexism and other forms of oppression; and between sex and gender. Is celebrating feminism a uniquely female way of knowing or is it being morally judgmental, sexist or feminist? Prereq: Eligibility for ENG 100.

PHI 255 (5) C
Marxist Philosophy Examined

Examines Marxist philosophy: What is the nature of capitalism? What is exploitation? What are some Marxist criticisms of capitalism? Does Marxism clarify or distort the phenomenon of racism? What reasons, if any, are there why lesbians, gays, or bisexuals should support Marxism? Is Marxism Eurocentric? Can a person consistently support both Marxism and feminism? Must a Marxist be opposed to religion? What is political freedom? Prereq: Eligibility for 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 by instructor and student agreement.

**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 instruction in the function and operation of the large format 4x5 view camera, 210 mm and 90mm lenses, tripod, exposure meter, 4x5 film holders and other equipment. Covers the function and operation of camera controls, types and functions of light and exposure meters and techniques of determining exposures.

PHO 112 (3) C
Advanced Camera Techniques

Continuation of PHO 111 with emphasis on basic architectural photography using the large format 4x5 view camera. Develop skills in handling view camera controls, adjustments and lenses with emphasis on perspective and distortion control. Also covers development control (water-bath) necessary to hold an extreme contrast range. Corresponds with PHO 121 and PHO 122. Prereq: PHO 111 and second-quarter standing.

PHO 121 (4) C
Basic Science/Photo Lab Procedures I

Basic introduction to darkroom procedures and equipment operation: processing facilities, chemicals, developers, stop baths and fixers. Includes films and film development, contact printing (proofs), enlarging, black and white printing techniques, working with variable contrast photographic papers, print finishing, dry mounting and presentation techniques. Prereq: Entry in photography program.

PHO 122 (3) C
Photo Lab Procedures

Provides a practical quantitative model for the application of exposure and development presented in PHO 121. Increase experience with materials. Develop photographic intuition. Explore optical and aerial perspective and light theory. Prereq: PHO 121 and second-quarter standing.

PHO 125 (3) C
Photo Lab Workshop I

Semi-supervised and non-supervised laboratory sessions. Students work on individual and class assignments, and on experimental projects of special interest. Prereq: Second-quarter standing.

PHO 126 (3) C
Photo Lab Workshop II

A semi-supervised, non-instructional day. Work on class assignments and projects or independent course study and research. Prereq: PHO 125 and third-quarter standing.

PHO 131 (4) C
Basic Photo Lighting

Covers the law, principles, and physical properties of light; the qualities of direct and indirect sunlight; and tungsten light sources. Learn lighting for form, texture, and separation using basic 3-dimensional forms. Study basic portrait and product lighting products. Prereq: Entry in photo program.

PHO 132 (3) C
Advanced Photo Lighting

Covers lighting techniques for specific subjects, consumer items, glassware and other products. Examines planning and lighting difficult objects, specular surfaces, and complex shapes. Prereq: PHO 131 and second-quarter standing.

PHO 197 (2-5) C
Work Experience: Photography

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

PHO 210 (3) C
Digital Imaging

Intro to the creative and technical requirements of digital imaging using PhotoShop. Covers photographic retouching, enhancement and image composition including color prepress requirements. Learn to enhance, color correct, and create special effects. Explore the use of boundary and soft edge for precise control.

PHO 211 (4) C
Basic Commercial Photography

Intro to food, product, catalog, and merchandise photography. Incorporate lighting and design expertise and apply these skills to fit simulated design, advertising and editorial situations.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

PHO 213 (4) C
Photographic Illustration II

Emphasizes student problem-solving under a variety of difficult design, conceptual and deadline situations. Produce industry standard quality work from class assignments which are designed to be used by parties outside the classroom. Prereq: Fifth-quarter standing.

PHO 214 (3) C
Advanced Photo Illustration II

Covers advanced composition, lighting and set design, selecting models and model direction, advanced assignments in editorial, advertising and fashion illustration. Prereq: PHO 213.

PHO 215 (3) C
Editorial Photography

Covers the basic elements and professional methods and practices of commercial photojournalism. Emphasis on organizing an event for concise visual presentation. Use small format cameras. Learn to capture the critical moment while establishing rapport. Prereq: Third-quarter standing.

PHO 221 (3) C
Advanced Photography Techniques

Covers darkroom and shooting in b/w and color for publicity, promotion and public relations. Stresses the portable strobe light. Refines b/w 35mm and medium format techniques. May cover multiple printing, montage, sandwich printing, texture screens, vignetting, and diffusion. Prereq: Fourth-quarter standing.

PHO 225 (3) C
Photo Lab Workshop III

Semi-supervised and non-supervised lab. Work on individual class assignments and experimental projects. Prereq: Fourth-quarter standing.

PHO 226 (3) C
Photo Lab Workshop IV

A semi-supervised, non-instructional day. Work on class assignments and projects or independent study and research. Prereq: Fifth-quarter standing.

PHO 231 (3) C
Basic Color Photography

Intro to basic concepts of color theory and color photography, E-6 (positive) films and E-6 chemistry. Learn the Norman 200 and 400 electronic flash units and the theory of electronic flash. Includes in-studio assignments. Prereq: Third-quarter standing.

PHO 232 (3) C
Color Photography II

Continuation of PHO 231. Intro to Vericolor and Kodacolor negative films, C41 (negative color) films and processing chemicals, and Ektacolor printing, chemicals and papers. Includes "Chromazones," a lighting technique using controlled color filters; photographing through textured glass; photographing a precise layout; and catalog and product illustrative techniques. Prereq: PHO 231 and fourth-quarter standing.

PHO 233 (3) C
Advanced Color Photography I

Explores specific problems in the application of color materials. Prereq: PHO 232 and fifth-quarter standing.

PHO 234 (3) C
Advanced Color Photography II

Continuation of PHO 233. Includes perfecting color printing and processing skills for positive and negative color materials used in advertising illustration, editorial illustration, industrial and general commercial photography. Prereq: PHO 233 and sixth-quarter standing.

PHO 243 (3) C
Studio Management

Covers management techniques used in the operation of a professional imaging facility. Emphasizes developing business, marketing, and merchandising plans. Visit local imaging facilities to see management and operations. Establish and operate a working business model. Prereq: Fourth-quarter standing.

PHO 244 (3) C
Portraiture II

Covers advanced studio portrait techniques including lighting, subject direction, printing and finishing techniques, portrait studio management and operation procedures. Prereq: PHO 243 and fifth-quarter standing.

PHO 245 (3) C
Portraiture III

Continuation of PHO 244. Covers the use of single- and multiple-light sources, chimera, reflectors, gobos, front projection, telemarketing and computer use in the studio. Visit commercial portrait studios to learn photograph film groups, studio bridal portraits, and high volume portrait photography. Create special effects in the studio, do location wedding photography and environmental portraiture. Prereq: PHO 244 and sixth-quarter standing.

PHO 281 (4) C
Portfolio Preparation

Covers basic methods used to present a photographic portfolio to a prospective employer or client. Includes types of portfolios, content, presentation variations, print mounting techniques, and formatting methods for color transparencies and slides. Produce one photograph per week of portfolio quality. Prereq: Fifth-quarter standing.

PHO 291 (4) C
Individual Projects

Continuation of PHO 281. Produce a weekly project to be used in the final portfolio. Reviews ASMP Professional Business Guide, including assignment photography, stock pictures, form agreements, the photographer /agent relationship, copyright protection, insurance protection, book publishing contracts, settling of disputes and trade definitions and ad cost data. Prereq: PHO 281 and sixth-quarter standing.

PHYSICAL EDUCATION

NOTE: All physical education courses are co-ed.

PEC 104 (2) N
Beginning Martial Arts

Learn the practical self-defense techniques and philosophies of Goju Ryu Karate-do, including fundamentals of stances, blocks, strikes, kicks, movement, and offensive and defensive strategies.

PEC 105 (2) N
Intermediate Martial Arts

For individuals at all skill levels. Adjust to the type of self-discipline and interaction required in the Goju Ryu Karate. Prereq: PEC 104, or formal rank up to and including green belt.

PEC 106 (2) N
Advanced Martial Arts

For all skill levels. Foster self-improvement and appreciation of Karate as an art, sport, physical conditioning and self-defense tool. Prereq: Intermediate skills, successful completion of PEC 105 or formal rank of brown belt or above.

PEC 110 (2) N
Aerobics

Improve cardiorespiratory fitness through rhythmic, dynamic, large-muscle exercise performed to music. Workouts consist of warm-up, workout, cool-down, strengthening and flexibility. Current fitness-related issues, trends and topics included.

PEC 113 (2) N
Badminton

Intro to basic skills of badminton: clears, serves and drives. Covers rules of play and basic singles and doubles strategies. Opportunity for gameplay and tournament play.

PEC 115 (2) N
Beginning Volleyball

Learn basic volleyball skills: forearm and overhead passing, serving and spiking. Includes basic offensive and defensive strategies for 6-on-6 team play. Opportunities for modified gameplay and tournament play.

PEC 129 (2) N
Intermediate Volleyball

Covers intermediate level attacking, passing and serving techniques, and multiple offensive systems and defensive patterning practice. Assumes basic volleyball skills. Prereq: PEC 115 or permission.

PEC 130 (2) N
Beginning Basketball

Covers basic individual skills of dribbling, passing and shooting, team skills and strategies. Includes in-class drills, modified gameplay, structured scrimmage and tournament play.

PEC 131 (2) N
Beginning Weight Training

Using a variety of resistance equipment, includes both individualized and instructor-driven programs: super-set, pyramid and circuit training. Includes safety, nutrition, supplementation, muscle anatomy and physiology, steroids and other ergogenic aids.

PEC 132 (2) N
Intermediate Weight Training

Continuation of PEC 131. Includes both individualized and instructor-driven intermediate programs. Prereq: Prior experience and a working knowledge of weight training (N); PEC 131 or permission (C).

PEC 133 (2) S
Soccer

Intro to basics, including offense and defense, current strategies, techniques, rules and trends. Practice basic skills in game situations. Emphasizes practical, skill-based training, technique and equipment.

PEC 136 (2) N
Yoga

Covers postures or asanas, breathing, meditation exercises for physical and mental fitness. Presents yoga as a philosophy and an art form, introducing a number of poses with their purposes.

PEC 143 (2) N
Walking for Fitness

Develops cardiorespiratory fitness through progressive workouts including warm-ups, walking sessions and cool-downs. Covers safety, walking technique, and issues and trends related to walking and physical fitness.

PEC 145 (2) N
Jogging

Develop cardiorespiratory fitness through progressive workouts including warm-ups, walking sessions and cool-downs. Covers safety, jogging technique, and issues and trends in jogging and physical fitness.

PEC 150 (1-3) N,S
Physical Fitness

Instruction in developing, executing and maintaining individualized fitness programs. Emphasis on cardiorespiratory fitness, muscular strength and endurance and flexibility. Discussion includes fitness, nutrition and wellness.

PEC 151 (1-3) N
Intermediate Physical Fitness

Instruction in manipulating existing individualized fitness programs to meet personal goals, emphasizing health-related fitness. Includes fitness, nutrition and wellness.

PEC 155 (3) N
First Aid & Personal Safety

American Red Cross First Aid Basics 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, rhythmical movements performed on a bench or step. Discussions include current fitness-related issues and trends.

PEC 165 (2) N
Body Conditioning

Improve muscular strength, muscular endurance and flexibility of the upper body, abdominals, back and lower body by using lightweight resistance equipment. Workouts consist of resistance exercise performed to music, stretching and fitness-related discussions.

PEC 170 (2) N
Intro to Jazz Dance

Covers fundamentals of dance technique while improving strength, flexibility and anaerobic capacity. Builds postural awareness and develops motor skills through jazz style, which borrows from ballet and contemporary street dance. Includes safety, injury prevention, spinal health and nutrition.

PEC 175 (2) N
Ballet Basics

Covers fundamentals of ballet style. Stresses proper technique and body mechanics to avoid dance-related injury. Emphasis on flexibility and strength, focusing on basic movements (plie, tendu, developpe, and battement), joint stability and range of motion. Includes "kinesthetic memory", basic nutrition, rest and the application of ballet to other dance and movement styles.

PEC 298 (1-5) N,S
Special Topics

Seminar on selected topics and/or activities in physical education. Prereq: Variable, depends on topic.

PEC 299 (1-5) N
Independent Study

Independent study of approved topics in physical education. Prereq: Permission.

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 field of physics. Includes kinematics, vectors, forces, dynamics, work, energy, momentum, torque and gravitation. Lab included. Fulfills QSR requirement for A.A. degree. Prereq: MAT 098 (with 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. Fulfills QSR requirement for A.A. degree. 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. Fulfills QSR requirement for A.A. degree. Prereq: PHY 101 (N); PHY 102 or permission (C,S).

PHY 111 (5) S
Technical Physics I

Includes force, linear and angular motion; work, energy, and power; rotation, torque, and power transmission; friction and the analysis of basic machines; structure of materials and the properties of solids. Prereq: MAT 111.

PHY 112 (5) S
Technical Physics II

Explores properties of solids, liquids, and gases; temperature and the effects of heat; specific heat, heat transfer, basic thermodynamics, heat engines; wave motion; illumination; refractions, resonance and interference. Prereq: Basic algebra and PHY 111.

PHY 113 (5) S
Technical Physics III

Covers electrostatics, direct current circuits, magnetism, electromagnetic induction, alternating current, capacitance, inductance, resonance, vacuum tubes and transistors. Prereq: Basic algebra and 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, electrostatics 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 and Newton's Laws of Motion. Lab included. Fulfills QSR requirement for A.A. degree. Prereq: MAT 124 with 2.2 or higher (C); with 2.0 or higher (N,S) and one year of high school physics.

PHY 202 (5) N,C,S
Engineering Physics II

Covers Maxwell's classical laws of electricity and magnetism which developed from the study of the Laws of Coulomb, Ampere, Gauss and Faraday. Lab included. Fulfills QSR requirement for A.A. degree. Prereq: PHY 201 and MAT 125.

PHY 203 (5) N,C,S
Engineering Physics III

Intro to waves and oscillations and the study of sound, geometric and physical optics. Covers the dualistic particle-wave nature of microscopic phenomena as an introduction to modern physics. Lab included. Fulfills QSR requirement for A.A. degree. 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) S**
Contemporary World Problems

Provides a study of critical issues and areas in the world today. Covers historical background and perspective 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/ISP112 (5) N,C
The Contemporary World

Intro to the nation-state system, elements of power and 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

Focuses on socio-political developments leading to current status of minorities in America. Covers 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. Covers 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 and regions politically and economically. Study how nations and regions economically compete with one another. Includes study of human and non-human resources, the international monetary system, government business activity, development and international law.

POL 213/WMN 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. Studies women's diverse roles in relation to family, economics, labor, government and law.

POL 217 (3-7) N
Internship in Politics

Intern as a participant-observer in a political campaign, political party or special interest group. Increase political sophistication 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 issues which foster or frustrate 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 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 120 (5) C
Psychology of Adjustment

Covers the study of personality within the framework of the social system, and the application of proven psychological principles to problems of adjustment and conflict as faced in day-to-day living.

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 209 (5) N
Fundamentals of Psychological Research

Includes the examination of the scientific method, hypothesis testing, and designs of qualitative and quantitative research. Covers the search and evaluation of research literature in psychology, descriptive statistical analysis, fundamentals of scientific writing, ethical issues and cross-cultural considerations in psychological research. Includes a research project. Pre-req: PSY 110 or equivalent.

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, and correlation. Fulfills QSR requirement for A.A. degree. Prereq: Intermediate algebra.

PSY 220 (3) C,S
Psychology of Human Relations

Covers dynamics of organizations and human resources in the workplace: motivational theory, leadership, group processes, organizational theory, participatory management, conflict management and counseling. Primarily for vocational students. Prereq: Satisfactory performance on placement test (S).

PSY 222 (5) N
Survey of Physiological Psychology

Covers the workings of the nervous system. Explores the brain's capacity in language, hunger and thirst, learning and memory, emotions, sexual behavior, depression, schizophrenia, and repair after injury. Recommended: PSY 110 or a biological science course.

PSY 230/SOC 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

Examines 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 from two of the following groups provides 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

Provides an in-depth look at contemporary psychological research and issues involving African Americans. Includes Black personality, institutional racism and the educational system, counseling African Americans, and methods of dealing with racism in daily life.

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 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 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.

PUBLISHING ARTS

Current enrollment in the Publishing Arts program required.

PUB 101 (3) C
History of Publishing

Covers a history of the major printing processes plus graphic design, typesetting, photography and basic reproduction principles of the industry. Study traditional image preparation, film, other historical prepress materials and equipment, and the advent of the computer, operating systems and desktop applications. Explore career options and employment skills.

PUB 110 (5) C
Intro to Graphic Publishing

Intro to digital prepress, imaging and finishing processes. Learn concepts of color (CMYK, RGB, spot colors) by mixing printing inks, using loupes and densitometers. Study resolution, RIP and imaging devices and "follow the path of the dot." Learn maintenance, calibration and safety of production equipment.

PUB 111 (3) C
Intro to Digital Input

Focuses on basic terminology (PPI, DPI, SPI), scanning and digital camera operation. Use the most current software to evaluate originals, make adjustments during scanning and manipulate. Learn object-oriented (vector) graphics and bitmapped (pixel-based) images through illustration and layout applications.

PUB 112 (3) C
Intro to Digital Output

Learn preflight software, fonts and font management. Create files with the most current layout applications. Learn to generate output ready files, output files to various devices and understand their purpose in the digital workflow.

PUB 120 (3) C
Graphic Production

Experience "real world" production by reviewing tickets, creating preflight files and assessing needs. 2nd-year students write up production projects, manage and mentor as students "fix" provided files, keep an open communication and produce jobs from imposition to proof to final output. Learn PDF workflow.

PUB 121 (3) C
Digital Workflow

Study both design and production aspects of the most current software layout applications, with emphasis on final output. Learn imposition and trapping of digital files. Create and output multi-color files. Gain experience with resolution, layout applications, proofing and overall digital workflow.

PUB 122 (3) C
Intro to Imaging

Learn operation, maintenance, cleaning and safety of small offset presses, concepts of a press sheet (gripper, guide, work and turn), printing inks, press chemistry, plate types and paper, using 1 and 2 colors. Study basic principles of offset lithography: dot gain, densitometry, ink/water balance and ink traps.

PUB 123 (3) C
Intro to Finishing

Intro to basic paper handling and terminology, calculating paper cuts and safe operation of bindery equipment (cutting, simple folding, drilling, stitching and mechanical binding). Intro to imaging companies and careers through visits and guest speakers.

PUB 130 (3) C
Graphic Production II

Work with 2nd-year students to create live product, including press-related production: prepress, proofing/plating, imaging and finishing. Also work independently with production projects and PDF workflow.

PUB 131 (3) C
Digital Workflow II

Work with state-of-the-art applications on multi-page documents, working with style sheets, templates and libraries. Focus on font usage, utilities and file storage organization; delve further into resolution and output, links, fonts and packing files for output. Proof files to a variety of devices before final output.

PUB 132 (3) C
Imaging II

Work with 2-color, 2-sided printing projects using accurate positioning and registration. Emphasis on safe operation and equipment maintenance. Study printing screen tints and halftones, working with different paper stocks, practicing press work styles, and ink mixing using Pantone Matching System (PMS).

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

PUB 133 (3) C
Finishing II

Builds on PUB 123. Includes more complex mechanical binding, folding, and programming and practicing paper cuts. Learn about specialized bindery/finishing techniques: scoring, perforating, die cutting, embossing, foil stamping, and book binding. Explore letterpress printing. Emphasis on safety and effective communications, including record keeping and interpreting instructions. Includes guest speakers and field trips.

PUB 197 (2-5) C
Work Experience: Publishing Arts

Cooperative Education offers on-the-job learning for college credit. Gain practical experience and explore publishing arts occupations. Credits based on hours worked per week in conjunction with assessment by an on-the-job supervisor. Minimum 2 credits work experience required during 2nd year. Prereq: Program faculty or Co-op office approval.

PUB 210 (4) C
Intro to Project Management

Explore “real world” job workflows and develop customer service skills. Compare estimates to actual job files, write-up job tickets and follow jobs through typical print production processes. Use software to pre-flight customer files, modify job parameters and produce actual jobs. Learn to manage projects, vendors, clients and production personnel.

PUB 211 (4) C
Advanced Digital Workflow

Review graphics applications and learn advanced aspects of digital workflow, including scanning, image manipulation, imposition and trapping. Intro to more complex documents, including multi-color, multi-side and signature work.

PUB 212 (4) C
Production Imaging & Finishing

Study advanced multi-color imaging and finishing, including various work styles and signatures. Learn the ramifications of press-work on bindery functions (scoring, perfin, folding). Emphasis on mechanical, chemical and electrical safety.

PUB 214 (2) C
Advanced Digital Processes

Learn networking and client/server based applications, including those that simplify getting files from point A to B (file compression, FTP, email, Internet). Create PDF files for proof and for print. Includes online applications for digital asset management and proofing.

PUB 215 (2), C
Intro to Estimating & Engineering

Learn the basics of planning print production projects: job cost estimating, planning and scheduling production equipment. Use paper specification books, equipment manuals, the latest software and consult with industry professionals. Begin to engineer jobs, specify paper, schedule printing and bindery equipment.

PUB 220 (4) C
Advanced Graphic Production

Focus on leadership of production personnel and project management. Handle production requirements in groups. Complete simple job estimates, job tickets and billing requests. Contact clients directly for specs and proofing. Mentor 1st year students on preflight, imposition, file manipulation, output, imaging, finishing and delivery.

PUB 221 (4) C
Advanced Digital Workflow II

Builds on PUB 211. Focus on advanced use of graphics applications for all aspects of digital workflow, including scanning, image manipulation, imposition and trapping. Emphasis on more complex documents, including multi-color, multi-side, process color and signature work.

PUB 222 (4) C
Production Imaging & Finishing II

Produce process-color imaging and finishing projects. Learn accurate color using densitometry and spectrodensitometry along with proper ink traps and gray balance. Apply advanced and specialized finishing processes (die cutting, foil stamping, embossing). May include letterpress. Field trips examine challenging imaging and binding work.

PUB 224 (2) C
Advanced Digital Processes II

Covers more advanced digital workflow and highly technical prepress issues. Build hot folders, learn about UCR/GCR, tone reproduction curves and how to set up network volumes. Emphasis on color management principles.

PUB 225 (2) C
Project Management

Builds on PUB 215. Learn the “real job costs,” relationships with vendors and scheduling jobs using both a manual job board and software.

PUB 230 (4) C
Advanced Graphic Production II

Builds on PUB 220 with more complex projects. Work directly with production manager in creating estimates and engineering layouts for actual campus jobs. Manage jobs with both a manual job board and software. Work directly with clients for file, costs and scheduling.

PUB 232 (4) C
Production Practicum

Produce a variety of advanced projects, including work in prepress, imaging, finishing and specialized processes (foil, emboss, digital letterpress, screen). Focus on mastering skills and working efficiently. May work on projects of students from Graphic Design or other related programs.

PUB 234 (2) C
Advanced Digital Processes III

Covers the most recent trends in the graphics industry. Explore emerging technologies through field trips, guest presenters and media. Gather recent products from local industry and identify the processes used. Explore unfamiliar procedures.

PUB 235 (2) C
Portfolio

Plan the year-end portfolio show, including choosing the venue, preparing marketing materials and coordinating all event activities cooperatively with 2nd year Graphic Design students. Finalize projects and select the best for display.

PUB 236 (2) C
Career Builder

Prepare for successful entry into the workforce. Prepare for job seeking by building comprehensive, flexible resumes and cover letters. Develop and practice interview skills in class and mock interviews with industry representatives.

RADIOLOGIC TECHNOLOGY

Note: This program is offered through an agreement between North Seattle Community College and Bellingham Technical College. Call the Allied Health Division for more information.

**RT 101 (1-3) N
Radiographic Positioning & Anatomy I**

Intro to the basic positioning techniques used in the radiography of the respiratory system, upper and lower extremities. Lab sections include peer positioning, film critique, anatomical identification, and an energized and non-energized section using phantoms. Prereq: IT 101, ANP 128, MAT 098, PSY 110 and AHI 100.

**RT 102 (3) N
Radiographic Positioning & Anatomy II**

Intro to the basic positioning techniques used in the radiography of the lower extremities, abdomen, pelvis, ribs and spine. Lab sections include peer positioning, film critique, anatomical identification, and an energized and non-energized section using phantoms. Prereq: Bellingham Technical College - Permission only - RT 101, RT 120, RT 110, HLTH 110, and HLTH 133.

**RT 103 (1-3) N
Radiographic Positioning & Anatomy III**

Introduces basic positioning techniques used in the radiography of the respiratory system, abdomen and upper extremity. Labs include peer positioning, film critique, anatomical identification and an energized section using phantoms. Prereq: 2.0 GPA and permission.

**RT 110 (4) N
Intro to Radiographic Technology**

Overview of foundations in radiography and the technologist's role and professional responsibilities in the health care delivery system. Covers principles, practices and policies of the health care organization. Examines a variety of clinical ethical issues and dilemmas, including ethical behavior, legal terminology, conduct and principles. Prereq: 2.0 GPA and permission.

**RT 112 (1-2) N
Patient Care In Radiology**

Covers basic concepts of patient care, including physical and psychological needs of the patient and family. Includes routine care, infection control techniques, vital signs, safety and transfer positioning, medical emergencies, barium studies, oxygen therapy, catheters, patient education and documentation. Prereq: ENG 101, IT 101, ANP 128, MAT 098, PSY 110 and AHI 100.

**RT 114 (1) N
Leadership in Imaging**

Learn leadership principles and improve communication and presentation skills. Study selected leaders to see leadership characteristics and the impact individuals can have on professional and global populations. Prereq: 2.0 GPA and permission.

**RT 120 (2) N
Imaging & Processing**

Study factors that govern and influence the production and recording of radiologic images, emphasizing filming and electronic imaging with related accessories. Includes basic radiographic production, imaging standards, radiographic density and contrast, recorded detail, distortion, exposure latitude, beam-limiting devices, beam filtration, technique formulation, exposure calculations, image receptors and processing. Lab uses energized and non-energized equipment and test tools. Prereq: Bellingham Technical College - Permission only - RT 101, RT 110, RT 112, HLTH 110, and HLTH 133.

**RT 121 (1-3) N
Radiographic Physics I**

Learn atomic structure and terminology, including the nature and characteristics of radiation, x-ray production and the basics of photon interactions with matter. Intro to the principles of radiation protection. Lab. Prereq: 2.0 and permission.

**RT 122 (1-2) N
Quality Assurance**

Intro to basic concepts of quality management in imaging, including developing, implementing and managing a quality assurance program within an Imaging Department. Covers quality control and improvement for the darkroom, film processing, radiographic and digital imaging equipment. Conduct image outcome assessments, solve commonly seen quality control issues affecting images and outcomes. Prereq: RT 101, 102, 110, 112, 114, 120 and 131 and a 2.0 GPA.

**RT 131 (6) N
Radiographic Clinic I**

Perform two clinical assignments of eight-hour work shifts per week in a radiology department to complete first quarter clinical competencies correlating with academic coursework. Prereq: Bellingham Technical College - Permission only - RT 101, RT 110, RT 112, HLTH 110, and HLTH 133.

**RT 132 (6) N
Radiographic Clinic II**

Complete two radiology department clinical assignments of 8-hours work plus a 4-hour class each week. Develop clinical competencies correlating to class work, including image review and critique via ITV and online assignments. Prereq: RT 101, 102, 110, 112, 114, 120, and 131 and 2.0 GPA.

**RT 133 (1-10) N
Radiographic Clinic III**

Complete clinical competencies through three clinical assignments per week, two 8-hour shifts and one 4-hour shift, in a radiology department correlating with academic coursework. Prereq: 2.0 GPA and permission.

**RT 210 (3) N
Radiation Protection and Biology**

Overview of the principles of the interaction of radiation with living systems; factors affecting biological response, including acute and chronic effects of radiation; and standards, measurements and requirements set by government guidelines. Prereq: RT 101, 102, 110, 112, 114, 120 and 131 and 2.0 GPA.

**RT 232 (1-12) N
Radiographic Clinic V**

Three clinical assignments of eight-hour shifts per week in a radiology department to complete fifth quarter clinical competencies.

**RT 233 (1-12) N
Radiographic Clinic VI**

Five clinical assignments of six-hour shifts per week in a radiology department to complete clinical competencies and select specialized rotations.

REAL ESTATE

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. Prepares for the Washington State Real Estate Salesperson License exam. Intro to sales and listing practices, financing, appraising, title, escrow and property management. Approved for Department of Licensing Sales/Broker Licensing Test. (60 clock hours)

RES 101 (5) N
Technology for Real Estate

Designed to "power up" Real Estate professionals with the use of technology. Learn MS Word, Excel, Outlook, Publisher and the Internet to create marketing materials, letters, spreadsheets for data, to manage time and contacts, to use email and Internet resources specific to the Real Estate industry. (50 clock hours)

RES 106 (1) N
Real Estate Fraud

Learn the extent of real estate fraud in sales, finance and appraisals. Study fraud cases, the local and national extent of the problem, and the impact on the marketplace. Learn to avoid potential fraudulent acts. Recommend RES 100 or concurrent enrollment in RES 100. (10 clock hours)

RES 110 (3) N
Intro to Commercial Real Estate

Learn to list, sell and lease commercial real estate investment properties. Use finance as a tool to increase profits. Learn to establish market value and return for investments in office buildings, industrial properties, apartments, shopping centers and retail stores. (30 clock hours)

RES 125 (2) N
Applications of Real Estate Math

Develop skills in basic real estate mathematics using the HP12C programmable calculator. Apply a variety of principles for real estate transactions, valuation, finance, and other investment analysis. Bring to first class a HP12C or borrow one from RES program if available. (20 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 110 or 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

Covers Washington real estate broker and agent practices, emphasizing agency law, contracts, torts and Multiple Listing forms. Prereq: RES 100, 110 or 130, or 6 months' experience in the real estate industry. (15 clock hours)

RES 165 (3) N
Real Estate Loan Officer

Examines the loan process, typical mortgage loan products, and loan merchandising skills. Includes relevant laws and regulations and business development techniques. Prereq: RES 100 or 130 or employed in the mortgage field. (30 clock hours)

RES 166 (4) N
Real Estate Loan Process

Learn to process loans for conventional, FHA, VA and jumbo loan programs. Complete the steps for residential loans, including verification of employment, down payments, and qualifying documents. Recommended: RES 100 or 130. (40 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, 110 or 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
Basic Appraisal Principles

Intro to the appraisal process. Investigate the influences on types of real estate values. Overview of real estate markets and analysis. Meets Jan. 1, 2008 Real Property Appraisal Qualification Criteria. Recommend concurrent enrollment in RES 100. (30 clock hours)

RES 181 (1.5) N
Standards of Professional Practice in Appraisal

Focuses on requirements for ethical behavior and competent performance set forth in the Uniform Standards of Professional Appraisal Practice and Washington State Regulations. Prereq: RES 180 or appraisal experience. (15 clock hours)

RES 183 (3) N
Basic Appraisal Procedures

Presents methods used in valuation procedures. Understand property descriptions for appraisal reporting and apply to residential and commercial appraisals. Meets the Jan. 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 180, or appraisal experience or permission. (30 clock hours)

RES 184 (1.5) N
Residential Market Analysis & Highest & Best Use

Research residential markets by using supply and demand analysis. Learn and apply highest and best use analysis through case studies. Meets the Jan. 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 180 or real estate or appraisal experience or permission. (30 clock hours)

RES 185 (1.5) N
Residential Appraiser Site Valuation & Cost Approach

Learn advanced methods for site valuation and the cost approach in determining value of real property. Meets the Jan. 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 183 or real estate or appraisal experience or permission. (15 clock hours)

RES 186 (3) N
Residential Sales Comparison & Income Approaches

Learn to estimate value using cost and sales comparison approaches. Learn to compute Capitalization Rates, Gross Rent Multipliers, finance and cash equivalency on the HP12C financial calculator. Bring your HP12C or borrow one from RES program if available. Meets the Jan. 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 125 and RES 183 or real estate or appraisal experience or permission. (30 clock hours)

RES 187 (1.5) N
Residential Report Writing & Case Studies

Gain writing and reasoning skills to complete the standard residential appraisal report. Overcome common report writing problems and learn options. Meets the January 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 186 (or concurrently) or appraisal experience or permission. (15 clock hours)

RES 188 (1.5) N
Statistics, Modeling & Finance

Study elementary statistical concepts and their application to real estate issues. Covers measures of central tendency, linear and non-linear trend analysis, complex multivariate automated valuation models (AVMs) and their application to mass appraisal and real estate finance. Meets the January 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 125, RES 186 (or concurrently) or appraisal experience or permission. (15 clock hours)

RES 189 (1.5) N
Advanced Residential Applications & Case Studies

Discover the property and design elements and other factors that create complexities in residential real estate and how market conditions and other external issues can impact valuation. Learn to measure supply and demand factors and their impact. Case studies include market analysis and feasibility determinations. Meets the January 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 187 (or concurrently) or appraisal experience. (15 clock hours)

RES 190 (3) N
Real Estate Escrow I

Provides entry-level course in escrow principles and procedures covering laws, real estate and escrow documents, escrow closings and title exceptions. Prereq: RES 100, 105 or 130 or taken concurrently, or real estate experience.

RES 191 (2) N
Advanced Escrow Closing System

Covers computerized escrow closing: information entry, trust accounting, producing documents, letters and closing statements through the use of Advanced Escrow Closing software. Prereq: RES 190 or six months' escrow closing experience. (20 clock hours.)

RES 195 (3) N
Real Estate Escrow II

Includes extensive work in real estate contracts, assumptions, mortgages (FHA, VA, and conventional) and wraparounds. Prereq: RES 190 or 6 months' current experience in escrow.

RES 200 (5) N
Seminar in Current Real Estate Issues

Covers the latest information and laws on appraisal, sales, land development, title, finance, and current issues. Assists with career development through discussions with professionals and work-related research projects. (50 clock hours.)

RES 201 (3) N
Principles of Real Estate Management

Covers basic principles of commercial and residential property management including property analysis, management and planning, marketing, staffing, and maintenance of real estate. (30 clock hours.)

RES 202 (3) N
Multi-family Property Management

Covers important functions in residential property management, property analysis, rental policies, rental surveys, lease provisions, inspection, building codes, tenant relations, operating policies and financial result analysis.. (30 clock hours.)

RES 203 (3) N
Commercial Property Management

Covers commercial property management, including personnel policies, marketing, tenant management, property maintenance, security, collection, lease provisions and record-keeping systems. (30 clock hours.)

RES 210 (3) N
Residential Property Investments

Learn to invest in different types of residential properties. Study principles and techniques used to determine the advantages and disadvantages of buying, selling and renting investments and the financing options available. (30 clock hours)

RES 220 (3) N
Real Estate Economics

Analysis of impact of national, regional, community, and neighborhood trends (money market, community growth patterns, land use controls, taxation) on real estate values. Prereq: RES 100 or 130 or a real estate license. (30 clock hours)

RES 230 (5) N
Professional Business Practices of Brokerage Management

Focuses on practical knowledge of real estate brokerage operations: general business concepts, management practices, and the responsibility of a broker. Satisfies 30 hours of Brokerage Management and 30 hours of Business Management for the state. Prereq: RES 100 or 130 or real estate sales license. (60 clock hours)

RES 241 (3) N
Appraising Small Residential Income Properties

Focuses on providing a foundation in the principles, concepts, and methods applicable to appraising 2-4 unit small residential income properties.

RES 260 (1.5) N
Real Estate Finance – Commercial

Review sources and methods for financing commercial and investment properties, including alternative financing and the secondary market. Prereq: RES 100 or 110 or taken concurrently or real estate experience or permission.(15 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, 165 or 166, or experience in real estate financing. (30 clock hours)

RES 280 (3) N
Commercial Real Estate: Analyzing Markets & Income

Learn research and analysis techniques in the appraisal of income property: property characteristics, sources of data, analysis of supply and demand, and forecast of performance. Uses case studies in the multifamily, retail and lodging markets. Prereq: RES 125, and RES 183 (may be taken concurrently) or real estate experience. (30 clock hours)

RES 281 (1.5) N
National USPAP Course

Focus on requirements for ethical behavior and competent performance set forth in the Uniform Standards of Professional Appraisal Practice and Washington State Regulations. Meets the Jan. 1, 2008 Real Property Appraiser Qualification Criteria. Prereq: RES 183 or six months appraisal experience or permission. (15 clock hours)

RES 282 (3) N
General Appraisal Applications

Increase ability to apply appraisal methods, techniques, and procedures. Review and synthesize the knowledge previously acquired through exercises and case studies. Prereq: RES 125 and RES 281, or appraisal experience or approval.; HP12C or similar financial calculator. (30 clock hours.)

RES 290 (2) N
Commercial Sales & Leasing

Learn to list, sell and lease various commercial properties. Explore basic evaluation and marketing tools. Learn to complete a market survey, commercial listing, sales and leasing agreements. (20 clock hours.) Prereq: RES 110, 125 and 290 which may be taken concurrently or real estate experience or permission.

RES 295 (2) N
Commercial Real Estate Investment Analysis

Learn commercial real estate investment analysis: fundamentals of commercial leases, proforma analysis, use and selection of discount and capitalization rates, tax laws, and applications of decision-making tools. Bring programmable financial calculator. (20 clock hours.) Prereq: RES 100, 125 and 290 which may be taken concurrently or real estate experience or permission.

RELIGION**REL 150 (5) S**
Intro to Western Religions

A social-historical survey of religions that have developed west of the Indus river. Promotes a better understanding of those traditions and their cultural influences on history.

REL 151 (1) C
Intro to Eastern Religions

A social-historical survey of religions that have developed east of the Indus river. Promotes a better understanding of those traditions and their cultural influences on history.

RESPIRATORY CARE**RCP 101 (1) C**
Respiratory Care Orientation

Intro to concepts and principles of the Respiratory Care program. Emphasizes preparation for school, college resources, financial assistance, classroom, study and communication skills, strategies for taking exams, time management, 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 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, 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

Covers 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 to safely and effectively care for patients with artificial airways. Apply 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 sterile technique, 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, surfactant agents in RCPs, aerosolized anti-infective agents, and chemical mediators.

RCP 137 (4) C
Cardiopulmonary Anatomy & Physiology

Covers functional characteristics of the human cardiopulmonary system and methods of measuring pulmonary component function. Includes lab practice of basic pulmonary function tests.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN **Watch Technology**

NAME TO PREFIX
Watch Technology **HIN**

RCP 139 (2) C
Skills Review III

Required for students returning to the program and requesting advanced standing. High motivation level required. Combines independent study and lab demonstrations. Course not required for program degree.

RCP 196, 197, 198, 199 (2-5) C
Work Experience – Respiratory Care

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. Apply clarity, accuracy, precision, relevance, depth, breadth, logic and significance through laboratory and physical means to provide safe and effective care.

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, 124 and 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, 125 and 135. Covers advanced concepts including identification of drugs and mediators involved in airway inflammation 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. Focuses 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 emphysema, 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

Covers 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 RCP 260. Focuses on determining ventilator discontinuance, transporting ventilator-dependent patients, and setting up and monitoring various auxiliary airway pressure devices.

RCP 272 (4) C
Comprehensive Review of Respiratory Care

Introduces computer use in health care. Emphasizes both resume and computerized board examination preparation. Covers 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.

RCP 276 (3) C
Advanced Patient Assessment

Covers 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

Independent study in selected respiratory care topics under the supervision of the program director. Topics coincide with the quarter's curriculum.

RUSSIAN

See Languages and Literature.

SCIENCE**MSC 101 (5) N**
Intro to Material Science

Intro to the molecular structure of different materials and the resulting effects in tensile strength and heat transmission. Emphasis on semiconductors and applications to electronic devices. Prereq: PHY 102 and 118, CHE 101, or equivalent; and MAT 118 and 120 or equivalent; or permission.

SCI 090 (5) N,S
Basic Scientific Ideas

Covers major concepts and ideas in science, exploring biology, physics, chemistry, geology, astronomy and ecology. Lab included. Satisfies science requirement of the high school completion program.

SCI 100 (5) N,C
Intro to Science

Covers 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.

SCI 101 (5) N, C, S
Intro to Physical Science

Intro to the process of science through selected topics in the physical sciences. The process: Question, Observe, Organize/Analyze and Report. At each stage ask the question: Which aspects of this step of the process are culturally dependant and which are not? Hands-on explorations guided by inquiry-based material.

SCI 104 (5) C,S
Physical Science

Intro to the physical world through everyday applications of physical science principles. Examines fundamentals of physics and chemistry in light of the scientific method.

SCI 110 (5) S
Intro to Robotics

Intro to the design, construction and programming of autonomous mobile robots. Using complete robot kits (micro-controller, sensors, motors, building parts), work in teams to study design issues of mechanics, sensors, motors and control. Then design and construct a robot that will accomplish a particular task.

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. Requires varying transportation fees.

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 the field. Lab credit.

SCI 114 (1) N
Field Astronomy

Covers astronomy from a hands-on perspective in the field.

SCI 115 (1) N,C
Geology Field Trip

Covers the best of the region's geology, including the Seattle Fault, ancient glaciers, fossil forests, landslides, Cascade Mountains and northeastern Oregon. Lab credit. Equivalent to GEL 115.

SCI 116 (1) N,C
Edible Plants of the Northwest

Focuses 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. Lab Credit.

SCI 118 (1) N,C
Volcanoes Field Trip

Intro to the origin and destruction of Cascade volcanoes. May cover Mt. St. Helens, Mt. Rainier and Glacier Peak. 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 required.

SCI 121 (5) N
Natural Disasters

Natural disasters strike all over the world each year. Study how various sciences like geology and meteorology are used to identify, prepare for and possibly mitigate various natural disasters. Satisfies lab requirement for the A.A. degree. Placement into ENG 101 strongly recommended.

SCI 296 (5-10) C
Natural History: Tropical Ecosystems in Costa Rica

Opportunity to earn experiential learning credit for studying tropical ecosystems. Includes supplemental written assignments.

SCI 297 (5-10) C
Natural History: Tropical Ecosystems**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

Covers information, resources and skills helping seniors to live healthy, independent lives. Includes topics in health, nutrition, consumer education, community resources, exercise, crime prevention, lip-reading, and memory improvement.

FAM 014 (1-3) N,C,S
Positive Growth for Seniors

Includes classes in self-image, writing your life story, decision-making, widowhood, interpersonal communication and similar topics.

SEN 001 (0) N
Avocational Explorations for Seniors

No credit course. Provides opportunities for learning avocational skills and developing personal talents, hobbies and interests.

SERVICE LEARNING**SLN 101 (2-3) N**
Service Learning & Leadership

Serve the campus and/or local community in conjunction with class seminars that require reading, writing, and observation related to the work. Prereq: Instructor permission.

SLN 102 (2-3) N
Service Learning & Leadership

Continuation of SLN 101. Prereq: Instructor permission.

SLN 103 (2-3) N
Service Learning & Leadership

Continuation of SLN 102. Prereq: Instructor permission.

SOCIAL & HUMAN SERVICES**SHS 100 (5) C**
Intro to the Human Services

Overview of the human service field with emphasis on the role of the professional. Includes career development, attitudes and values, behavioral and cultural differences, individual and group intervention techniques and community awareness. Prereq: Eligible 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. Emphasis on social systems set up to solve these problems. Use critical thinking skills in analysis of issues, presentation of quantitative information and interpretations of statistics on local community issues and concerns. Prereq: Eligible 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: Eligible 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. Includes group participation, role-playing and simulations. Prereq: Eligible 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
Theories of Counseling

Intro to psychopathology and assessment and counseling theories. Covers ethics, personality theory, counseling techniques and issues, and development of a personal style of assessment and counseling. Prereq: SHS 106.

SHS 205 (3) C
Crisis Management & Intervention

Intro to crisis theory and techniques for beginning mental health/human services professional. 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: Eligible for ENG 101 and MAT 084.

SHS 207 (3) C
Behavior Management

For human service professionals working with children, adolescents and adults with behavioral problems. Covers learning theory and its application to clients in a variety of settings. Includes knowledge and skills needed to effectively help clients manage their behavior. Understand and practice concepts basic to behavior modification and behavior management. Prereq: ENG 101 and eligible for MAT 084.

SHS 210 (3) C
Multicultural Counseling

Covers effective counseling approaches which take into account client differences in culture, gender, sexual orientation, physical abilities and ethnicity. Learn to interview client group representatives and assess community resources. Prereq: Eligible for ENG 101 and MAT 084.

SHS 215 (5) C
Adolescent Development & Treatment

Focuses on adolescent development and concurrent social, cultural and sexual problems. Includes theory of normal and deviant behavior development, treatment theory and practice, and effective use of community resources. Prereq: Eligible for ENG 101 and MAT 084.

SHS 231 (3) C
Physiology/Pharmacology of Chemical Dependency

Studies effects of chemical dependency on the body, including basic biochemical action, organ/system effects, poly drug interactions and physiological management of the disease. Prereq: Eligible for ENG 101 and MAT 084.

SHS 232 (3) C
Chemical Dependency & the Family

Examines chemical dependency problems in the family, including family roles and dynamics, adult children of alcoholics, interventions and family work as focus of treatment. Prereq: Eligible for ENG 101 and MAT 084.

SHS 233 (5) C
Chemical Dependency Counseling

Provides an overview of specialized recovery techniques, including individual, group and family approaches. Prereq: Eligible for ENG 101 and MAT 084.

SHS 235 (5) C
Intro to Chemical Dependency

Surveys use and abuse of legal and illegal drugs. Analyzes patterns of dependency and addiction associated with prescription, over-the-counter, and illegal substances. Explores methods of prevention, control and treatment. Prereq: Eligible 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: Eligible for ENG 101 and MAT 084.

SHS 245 (3) C
Mental Health Overview

Covers the relationship between mental functioning and body physiology; behavioral and physical dysfunctions; reactions to prolonged stress; theories of pain, holistic health, nutrition, cross-cultural perspectives on healing, biofeedback, meditation, psychosomatic diseases and stress reduction. Prereq: Eligible for ENG 101 and MAT 084.

SHS 250 (4) C
Client & Community Advocacy

Covers the role of the advocate in a helping situation, use of community advocacy resources, and effective use of the media, law, negotiation, and political process to achieve needed services for people. Prereq: Eligible 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; and local services and case management available for the mentally ill chemically abusing (MICA) client. Prereq: Eligible for ENG 101 and MAT 084.

SHS 265 (5) C
Management & Supervision

Covers management skills for first-line supervisors in alcohol, drug, mental health, correctional, youth, and other human service programs. Includes supervision, time management, motivation, leadership, discipline, personnel management, performance appraisals, communications, training and self-development. Prereq: Eligible for ENG 101 and MAT 084.

SHS 270 (3) C
Law & Ethics in Chemical Dependency

Studies the role of law and professional ethical standards in the delivery of chemical dependency services. Covers theoretical and practical applications using Washington Administrative Code requirements as case examples. Prereq: Eligible 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 with their interactions with family members. Study of treatment goals for domestic violence to foster client understanding of anger, making anger a useful tool, and using healthy and appropriate modes of communication. Prereq: Eligible for ENG 101 and MAT 084.

SHS 280 (3) C
Chemical Dependency Case Management

Emphasis on oral and written communication skills. Formulate up-to-date, accurate and understandable case files and records. Become familiar with federal and state confidentiality regulations in handling chemical dependent client records. Formulate concise treatment plans in accordance with legal requirements. Prereq: Eligible for ENG 101 and MAT 084.

SHS 296 (1) C

SHS 297 (2) C

SHS 298 (3) C
Human Services Workshops

Receive credit for participation in approved human services professional workshops on topics such as stress management, welfare rights, aging, alcoholism, family therapy, depression, law and mental health. Prereq: Eligible 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. Requires learning contract.

SOCIAL SCIENCES

SSC 101 (3) N
**Intro to Information Resources
 for the Social Sciences**

Develops critical thinking as applied to the research process by examining strategies for locating, evaluating, and applying information resources in the social sciences. Explores information policy issues such as copyright, censorship, and freedom of information. Emphasis on proficiency using research tools, retrieval techniques and various electronic resources, including the library's information networks, the library catalog and the Web. Placement into ENG 101 highly recommended.

SSC 103 (5) N
Human Dimensions of Work

Covers human relations issues in the modern workplace. Includes contextual approach to understanding human relations, scientific research methods and theories of worker motivation and satisfaction. Examines work in relation to the economy, social institutions, diversity, prejudice and discrimination, interpersonal dynamics, leadership, conflict resolution, stress, and ethics. Focuses on practical understanding of human relations issues and effective ways of dealing with them.

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 (5) C
Information, Knowledge & Power

Explores theories of mainstream and alternative cultures and their impact on information in a democratic society. Addresses concerns about the political and economic aspects of information related to the ongoing struggle for equality and human rights. Examines various research strategies for identifying, locating, evaluating, and applying information resources for social justice.

SSC 197 (1-12) C
Work Experience – Social Sciences

Earn work experience credit in the social science field. Prereq: Permission.

SSC 220 (3) N
Global Issues

Provides vocational technical students with insight into topics of an international nature.

SSC 290 (2) N,C
Curriculum Practicum

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. Create an individual contract by arrangement.

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 opportunities. Includes historic sites, geographical locations, geological formations, museums, art centers, regional customs and foods, language enhancement, specialized research libraries, local universities, and legislatures.

SSC 295, 298, 299 (2-5) N,C,S
Practicum in the Social Sciences

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,C**
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.

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

Focuses on unique American values, behavior and world view. Compares others' values and world views, and studies the implications and consequences of these differences. Gain insight from the perspectives of anthropology and sociology. Includes field trips. 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. Analyzes 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 110 (5) N,C,S
Survey of Sociology

Covers human social interaction with emphasis on group aspects of human behavior. Includes 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 how American identity shapes and is shaped by the media. Covers 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. Examines the resources and skills needed to work with the dying. Emphasizes a realistic look at death to reduce denial and increase preparation.

SOC 150 (5) N,C,S
Race & Ethnic Relations in the United States

Examines 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

Covers basic knowledge of the people, history, culture and Socio-economic political systems of Chinese society. No prior knowledge of Chinese civilization or language is required.

SOC 200 (5) C
Contemporary Issues in Sociology

Analyzes current research on a particular topic in sociology. Topic varies by quarter.

SOC 220 (5) C
Sex Roles & 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 historical, biological, economical, psychological and anthropological perspectives, identifying and discussing the discernible recurring sex role patterns.

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 areas such 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 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. Analyzes personal adjustment, parent-child relationships, marital and alternative structures, and contemporary issues facing today's family systems.

SOC 265 (5) C
Sociology of Food

Using sociological theories and concepts, study the social status and role of food in societies and the production, distribution and working conditions in various food industries. Examine the socio-cultural, economic, and political migrations of people and ideas through foods. Consider foods in relation to global economies, governments, the dynamics of power and societal ways.

SOC 270 (5) N,C
Social Problems

Covers 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.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME
HIN **Watch Technology**

NAME TO PREFIX
Watch Technology **HIN**

SOC 275 (5) C
Law & Society

Covers 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 280 (5) C
Exploring Contemporary SE Asia

Explores the internal diversity and complexity of SE Asia to gain a clearer sense of this region and its connection to the social, political and economic global system. Examines the diversity of perspectives existing within localities, regions and societies.

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.

SPANISH

See Languages and Literature.

SPEECH

See Communication.

SUPERVISION & MANAGEMENT

SMG 100 (3) S
Leadership & Supervision

Intro to management. Covers leadership theories and styles; using leadership skills in various organizational settings; developing techniques for productive work groups; managing a diverse work force; motivating employees; handling difficult people and situations; running effective meetings; and handling the challenging role and responsibilities of being a leader, manager and supervisor. May be taken concurrently with other SMG courses.

SMG 103 (3) S
Supervising a Diverse Workforce

Examines perceptions held by supervisors and employees in connection with culturally and behaviorally diverse workers. Examines working with and supervising diverse population groups. Explores current legislation and challenges of an evolving workforce.

SMG 110 (3) S
Financial Management

Covers budget preparation at the organizational level using both private sector and public organization formats and formulas. Emphasis on budget development, presentation and justification of proposed allocations. Prereq: Basic understanding of business computations.

SMG 120 (3) S
Hiring Personnel

Examines supervisor's role in staffing. Covers job analysis, descriptions and classifications, recruiting, selection, EEO and new employee orientation.

SMG 131 (3) S
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

For students starting employee 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

Spend time in the field as an intern or cooperative education student under guidance of instructor and on-site mentor. Learn about operations, policies, procedures, culture and behavior standards in a business, industry, shop or other setting related to the student's course, certificate or degree program. May be used as an internship during or after coursework. 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 entrepreneurial characteristics and the task of moving from concept to commercialization. Emphasis on time management, planning and projections, securing capital and marketing plans. Prereq: SMG 100.

SMG 210 (3) S
Project Management

Covers project planning basics: timelines, evaluation, implementing budgeting concepts and formulating a budget request strategy with specific and measurable outcomes. Focuses on the team concept used in business and government; includes computer lab applications.

SMG 213 (2) S
Fund-raising & Grant Writing

Especially for nonprofits. Explores fund-raising and grant writing including: identifying fund-raising needs and goals; designing a viable fund-raising program (campaign); creative fund-raising activities; writing grants; understanding grant requirements and their relationship to the nonprofit.

SMG 217 (3) S
Organizational Behavior

Intro to strategies for developing an effective organization. Provides history of the field, overview of areas in which organizational behavior interventions can be of use, and the types of interventions used in work environments.

SMG 220 (3) S
Personnel Performance Management

Covers principles and techniques for employee performance programs, appraisals, coaching and counseling, disciplinary process, and wage surveys. Explores reward systems, common disciplinary practice and employment law. Covers assessment of training needs, planning, development and evaluation of training programs.

SMG 222 (3) S
Management & Labor Relations

Covers the supervisory role in employee and labor relations. Includes history of management thought, labor negotiations, laws affecting labor agreements, union contracts and the supervisor's role in the negotiating process.

SMG 223 (2) S
Marketing, Meetings & Presentational Skills

Explores the dynamics of the marketing process. Includes the relevance of marketing a nonprofit and communicating to its numerous constituencies. Covers the development of productive meetings and presentational skills and techniques for nonprofit leadership.

SMG 233 (2) S
Nonprofit Staff, Board & Volunteer Development

Covers the development of staff, board and volunteers. Explores issues related to selection of staff and board members, developing and capitalizing on their talents and skills, effective use of staff, drawing on the expertise of board members, and expanding programs through the cultivation of volunteer/member development.

SMG 243 (2) S
It's the Law: Contracts & Liabilities

Covers the law as it relates to contracts and liabilities in nonprofit. Focuses on legal issues that nonprofit staff and boards need to be aware of, including personnel contracts, grant contracts, personal service contracts, fund-raising contracts, service provider contracts, antitrust and related liabilities. Includes employment laws, officer/director liabilities, and indemnification.

SMG 253 (2) S
Executive Development & Leadership

Focuses on the role of executives in a nonprofit. Explores dynamic and practical leadership skills including leadership characteristics and styles; team-building; organizational leadership and board relations; constituent leadership; fund-raising; crisis management; and political leadership. Covers self-nurturing and expansion of professional competencies.

SMG 263 (2) S
Nonprofit Strategic Planning

Focuses on nonprofit planning including: sharing vision through a mission statement; articulating program goals and objectives; writing the annual plan; undertaking a long range strategic plan. Covers membership development, fundraising plans and board, staff and constituent development.

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

Earn college credit for supervisory work experience in the City of Seattle PREP program and other similar programs. Requires documentation and supporting data, work experience and possible examination. Credit varies. Prereq: SMG 100.

SMG 298 (1-10) S
Independent Study

Provides opportunity for research, advanced study, or special projects. Work independently with an instructor. Credits vary. Prereq: Permission.

SMG 299 (1-10) S
Special Topics

Study an approved topic such as marketing, sales, advertising, retail management, promotion, customer service, consumer behavior, marketing research, entrepreneurship and business communication. May include a portfolio, an in-depth project or an activity to demonstrate competencies, with an oral presentation evaluated by faculty and industry representatives. Prereq: Permission.

SURGICAL TECHNOLOGY**STT 111 (5) C**
Surgical Technology Lab

Covers 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, including 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. Covers 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

Examines 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. Covers general, orthopedic, gynecological, genitourinary-reproductive and ophthalmic specialties.

STT 125 (5) C
Clinical Practice I

Provides 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. Provides 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. Examines physical and psychological concepts of patient care, and procedures required to scrub and/or circulate in the operating room. Prereq: Washington state RN licensure.

TAGALOG

See Languages and Literature.

TECHNICAL COMMUNICATIONS**TEC 110 (4) C**
General Editing

Develop skills in critical thinking and analysis of written material. Read and edit a variety of print and electronic technical writing of varied length and complexity. Study consistency, appropriateness, and impact. Analyze writing samples, apply decoding guidelines to proofreading tasks and processes, and apply decoding techniques to deconstructing, 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. Explore various editing techniques, using both technical and expository writing samples. Emphasis on reading critically and communication on critical comments. Prereq: ENG 101/102.

TEC 130 (4) C
Style Guides & Visual Design

Focuses on principles of physical design. Reviews various industry models for documentation. Presents production eyeball, visual design, GUI, Gestalt layout techniques, packaging, chunking and web page layout. Coreq: TEC 120.

TEC 140 (4) C
Information Architecture for Web Based Media

Models the design process as it occurs in the marketplace. Students assume the varied roles required in information planning and design and create detailed design documents of their sites. Provides realistic resources and tools to create informative, well-structured and elegant websites and skills in managing the longevity of documents.

TEC 150 (4) C
Specialization

Explores the impact of localization and globalization in producing, editing and analyzing communication. Create clear, meaningful and culturally appropriate communication for the customer. Includes writing documentation that is easily translated; multiple "languages"; simple sentences to fit differing language structures; comparative linguistics; and the art of condensing documentation. Analyze and critique each others' work using computers and role-playing. Prereq: MIC 101 or equivalent.

TEC 200 (5) C
Senior Seminar I

First of 2 linked seminars. Apply skills and knowledge to planning and implementing a major writing/editing project. May work independently in teams or as an intern. Assigned industry mentors critique and advise on work produced, emphasizing research, fact checking, project management, teamwork, work quality and work standards. Receive a "Y" grade for first quarter and final grade in the second quarter based on work over the two quarters. Prereq: Completion of Technical Communication program's first year, or permission.

TEC 220 (5) C
Senior Seminar II

Continuation of TEC 200. Continue using skills and knowledge to plan and implement a major writing/editing project. Industry mentors continue to critique and advise on work produced, emphasizing research, fact checking, project management, teamwork, work quality and work standards. Final grade in the second quarter based on work over the two quarters. Prereq: TEC 200. Completion of Technical Communication program's first year, or permission.

TEC 230 (1-4) C
Technical Communications Seminar

Explores the social, political, economic and professional dimensions of the technical communications field. Covers human qualities, the nature of the work environment and future direction of the occupation. May cover triage, industry-technology trends, ethical and environmental issues, professional responsibility, global issues, and dynamics of the workplace. Guest speakers from industry and labor. Prereq: Program enrollment or permission.

TEC 294 (5) C
Copy Editing/Writing I

First of 2 sequential advanced writing courses. Engage in intensive writing/editing projects. Includes rhetoric, deconstructing a writing sample, theoretical basis of structure, style standards, constructive use of language, syllogism, neologism, colloquialism and standard English, syntax, coherence and grammatical style. Uses print resources and electronic data search/retrieval resources. Prereq: ENG 101/102 or equivalent, proficiency in Office Suite.

TEC 295 (5) C
Copy Editing/Writing II

Second of 2 sequential advanced writing courses. Engage in intensive writing/editing projects. Presents writing and editing techniques, style standards, editing for meaning, editing comprehensive/print and electronic text and data graphics, and style standards. Focuses on utilizing the Aldum format for documentation. 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.

TRADES

See Multiple Trades Pre-Apprentice Program at SVI.

See Duwamish Apprentice Programs at South.

TRUCK DRIVING – COMMERCIAL**CTD 131 (18) S**
Fundamentals of Truck Driving

Provides 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 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 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 employer. Prereq: CTD 132.

CTD 136 (10) S
Heavy Duty Mechanics Basic Driver Training

Provides 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

Provides 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

Provides short-term individual training for those who currently have or have had a CDL License.

VIDEO COMMUNICATIONS

See Film & Video Communications.

VIETNAMESE

See Languages and Literature.

WATCH & CLOCK TECHNOLOGY**HIN 111 (6) N**
Watch Technology I – Introduction

Surveys the history of time measurement and the watch and clock trade. Develop safe practices including lab hazards, accident prevention and first aid. Intro to trade terminology of tools, equipment, technical drawing, measuring devices, applications appropriate to the trade, and chemical and physical properties of materials. Coreq: HIN 112 and 113.

HIN 112 (6) N
Watch Technology I: Tools, Equipment/Measurement

Use and maintain tools and equipment in a lab setting. Learn the types and appropriate uses of jeweler's saw, tweezers, screwdrivers, files and the watchmaker's lathe. Covers the fundamentals of hardening, tempering and annealing steel. Includes measuring techniques and applying the metric system in the use of instruments and gauges. Coreq: HIN 111 and 113.

HIN 113 (10) N
Watch Technology I: Practicum

Apply information and knowledge from HIN 111 and HIN 112 in a lab environment. Practice making tools and develop basic skills to manufacture and repair watch and/or clock parts. Identify and apply tools, equipment use, and safety precautions. Practice measuring techniques and apply problem-solving skills to manufacturing. Coreq: HIN 111 and 112.

HIN 121 (6) N
Watch Technology II: Professional Knowledge

Learn or review the math necessary to calculate formulas used in manufacturing and watch repair. Use formulas to find the length of mainsprings, calculate running time and beats per hour. Apply various polishing materials and techniques to master the manufacture of small parts.

HIN 122 (6) N
Watch Technology II: The Watchmakers' Lathes

Intro to use, care and maintenance of specialty lathes using the watchmakers' turns, the Jacot tool, and pivot polishing machine.

HIN 123 (10) N
Watch Technology II: Practicum

Apply knowledge from HIN 121 and HIN 122. Practice manufacturing watch stems and pivoting. Take the first WOSTEP intermediate exams. Identify and apply the appropriate tools, equipment and safety precautions in a horological repair shop.

HIN 131 (6) N
Watch Technology III: Winding & Setting Mechanisms

Learn to correct common errors in the mainspring barrel, the barrel bridge and mainplate. Learn common types of setting mechanisms. Practice correct disassembly, assessment and adjustment, re-assembly and lubrication procedures. Learn the mathematical formulas for determining correct size of mainsprings. Prereq: HIN 121, 122 and 123. Coreq: HIN 132 and 133.

HIN 132 (6) N
Watch Technology III: Watch Gear Trains

Intro to the mathematics involved in working with the gear train and tooth form, module, pitch and distance between centers, including calculations to determine running time and vibrations per hour for mechanical watches and ratios. Learn to dismantle, assemble, maintain and repair the gear train of a watch. Prereq: HIN 121, 122 and 123. Coreq: HIN 131 and 133.

HIN 133 (10) N
Watch Technology III: Practicum

Apply knowledge from HIN 131 and 132. Practice jewel setting and adjusting. Complete the third WOSTEP intermediate exam (winding, setting, gear train). Identify and apply the appropriate tools, equipment and safety precautions in a horological repair shop. Prereq: HIN 121, 122 and 123. Coreq: HIN 131 and 132.

HIN 141 (4) N
Watch Technology IV: Escapements

Intro to the role of escapement in the watch. Explores the history and development of different escapements and their influence on timekeeping. Prereq: HIN 131, 132, and 133. Coreq: HIN 142 and 143.

HIN 142 (4) N
Watch Technology IV: External Parts

Learn about the different case styles and the parts that complete the case, including crystals, crowns, push buttons, dials, hands, and gaskets. Prereq: HIN 131, 132, and 133. Coreq: HIN 141 and 143.

HIN 143 (48) N
Watch Technology IV: Practicum

Apply knowledge gained in HIN 141 and 142. Prereq: HIN 131, 132 and 133. Coreq: HIN 141 and 142.

HIN 211 (6) N
**Watch Technology V:
 Intro to Precision Timing**

Learn concepts of precision timing with emphasis on the eight influences of isochronisms (friction, external influence, regulating pins, escapement, magnetism, temperature, poising of balance wheel, poising of hairspring). Apply theoretical concepts of precision timing to practice watches: analyze errors and make corrections to improve the timekeeping of the watches. Prereq: Instructor permission, HIN 141, 142 and 143 and a minimum GPA of 2.0 in those courses. Coreq: HIN 212 and 214.

HIN 212 (6) N
**Watch Technology V:
 Intro to Electronic Watches**

Learn fundamentals of electronics to understand how quartz watches work: tension, current, capacity, power, consumption, electric field, magnetic field, functioning of stepping motors, energy source, and functioning of the transistors in switching (e.g. in integrated circuit). Intro to equipment designed specifically for testing quartz watches, and practice using the equipment to analyze the various components of electronic watches. Prereq: Instructor permission, HIN 141, 142 and 143 and a minimum GPA of 2.0 in those courses. Coreq: HIN 211 and 213.

HIN 213 (10) N
Watch Technology V: Practicum

Intro to the repair of pocket watches and/or wristwatches, and service, repair and replacement of external parts of watches. Work on precision timing, quartz watches, customer repairs including short jobs (battery, crystal, crown and stem replacement) and movement repairs. Prereq: Instructor permission, HIN 141, 142 and 143 and a minimum GPA of 2.0 in those courses. Coreq: HIN 211 and 212.

HIN 221 (6) N
Watch Technology VI: Precision Timing 2

Continue study of the theory and practical application of the principles of precision timing. Prereq: HIN 211, 212 and 213. Coreq: HIN 222 and 223.

HIN 222 (6) N
Watch Technology VI: Automatic Watches

Intro to the various self-winding (automatic) mechanisms for watches. Practice testing, adjusting, disassembly and assembly of automatic mechanisms and study the history and development of these mechanisms. Prereq: HIN 211, 212 and 213. Coreq: HIN 221 and 223.

HIN 223 (10) N
Watch Technology VI: Practicum

Apply knowledge from HIN 221 and 222. Practice repairing automatic watches and continue working on precision timing. Further develop skills to identify and apply the appropriate tools, equipment and safety precautions in a horological repair shop. Prereq: HIN 211, 212 and 213. Coreq: HIN 221 and 222.

HIN 231 (6) N
**Watch Technology VII:
 Advanced Precision Timing**

Refine and synthesize the art of precision timing. The precision of a watch is dependent upon each unit of the watch being clean and well adjusted. Use all the skills developed throughout the program, checking each unit systematically so that repairs are made in a timely fashion. Prereq: HIN 221, 222 and 223. Coreq: HIN 232 and 233.

HIN 232 (6) N
Watch Technology VII: Chronographs

Learn to repair the main types of chronographs: column wheels and cams. Learn the function and the components of chronographs and methods of checking the general condition and correct fitting of all the components. Understand and correctly apply lubrication, identify errors and carry out required corrections. Prereq: HIN 221, 222 and 223. Coreq: HIN 231 and 233.

HIN 233 (10) N
Watch Technology VII: Practicum

Apply knowledge from HIN 231 and 232. Practice repairing chronograph watches and continue working on precision timing. Further develop skills to identify and apply appropriate tools, equipment and safety precautions in a horological repair shop. Prereq: HIN 221, 222 and 223. Coreq: HIN 231 and 232.

HIN 241 (4) N
**Watch Technology VIII: After Sales &
 Service**

Learn the range of skills necessary to manage a watch repair shop. Prereq: HIN 231, 232 and 233. Coreq: HIN 242 and 243.

HIN 242 (4) N
Watch Technology VIII: Review of Courses

Review highlights of the two-year Watch Technology Program in preparation for final exams. Prereq: HIN 231, 232 and 233. Coreq: HIN 241 and 243.

HIN 243 (8) N
Watch Technology VIII: Practicum

Apply knowledge from HIN 241 and 242. In laboratory environment, practice repairing all types of watches and review the theory of watch making. Prereq: HIN 231, 232 and 233. Coreq: HIN 241 and 242.

WEB DEVELOPMENT

Web Development courses at North are now listed under Information Technology (IT).

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

WELDING FABRICATION TECHNOLOGY**WFT 100 (2) S
Welding Processes & Applications**

Explores applications and criteria for selecting the most widely used welding and weld-related metal joining processes: 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**

Covers knowledge and practical uses of both air-powered 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. Investigates 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**

Cover the practical transfer of blueprint information onto metal using a variety of techniques and applications of geometric shape constructions and divisions in the shop environment. Presents 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**

Covers class and lab work 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. Involves field trip to on-campus or local industry CAD station. Prereq: WFT 106, basic math skills, ability to read blueprints, or permission.

**WFT 108 (3) S
Fabrication Estimating & Layout**

Explores 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**

Explore and experiment in more depth 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 helpful. Fabricate projects. Individually paced class. Demonstrably capable students are encouraged to do more advanced projects. Prereq: Enrollment in the Motor Vehicle Maintenance program or permission.

**WFT 119 (2) S
Use of Press Brake in Welding Fabrication**

Study the operating principles of press brake and practice fabrications. Explores the advantages, disadvantages, and limitations of the press brake through construction of sample projects. Involves industry visitation(s) to observe CNC production press brakes. Prereq: Basic math skills, ability to read blueprints, (prior fabrication experience is helpful), ability to lift 50 lbs., or permission.

**WFT 120 (5) S
Shielded Metal Arc Welding**

Incorporates 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 also called "Stick Welding." Weld mild steel and stainless steel with this process in a variety of industrial applications particularly for maintenance and repair. 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 lab exercises in the popular, safe, and incredibly efficient use of carbon Arc Cutting with Compressed Air (CAC-A), also called "arclair," "gouging," or "scarfing." Prepare weld joints and efficient disassemble 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. Learn interpretation of welding symbols on blueprints. Prereq: WFT 105, ability to read blueprints, or permission.

**WFT 124 (5) S
Gas Metal & Flux Core Arc Welding**

Learn knowledge of equipment and theory of operation and applications of the popular Gas Metal & Flux Core Arc Welding (GMAW & FCAW) processes, also called "MIG," "Dual-shield," and "Innershield." Weld mild steel, aluminum, and stainless steel 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**

Study effects of heat upon welded fabrications, treating effects both as a problem for correction and as a tool used to form material. Learn and apply various methods to avoid and control distortion. Prereq: WFT 121 or permission.

WFT 126 (3) S
Punching & Shearing

Set up and use the power shear and punch to make weldment parts in a fabrication setting. Explores alternative methods of cutting. Includes industry visits to learn numeric control and production cutting devices and systems. Prereq: WFT 101, 105, and 106 or permission.

WFT 127 (5) S
Gas Tungsten Arc Welding

Learn equipment, theory of operation and applications of the Gas Tungsten Arc Welding (GTAW) process, also called "TIG" and "Heliarc." GTAW high quality welds are used in pressure piping systems, aerospace products, and with heat-sensitive metals. Prereq: Experience with OAW ("gas welding") and at least one arc welding process or permission.

WFT 128 (5) S
Fabrication of Aluminum Weldments

Learn to fabricate 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. Reviews 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.

WFT 130 (3) S
Welding Certifications

Explore the nature and purpose of welding performance certifications and examine popular certifications and tests. Study standards for performance that ensure consistent product quality. Develop proper performance techniques. Prereq: Fourth-quarter standing or permission.

WFT 131 (3) S
Material Handling

Examines safe and efficient methods for handling, transporting and tracking materials, supplies, and structures found in a welding fabrication shop. Includes using rigging devices, leverage, and cranes. Covers methods of protective transport. Prereq: WFT 100, 101 or permission.

WFT 132 (5) S
Maintenance & Repair Welding Techniques

Explores 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. 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

Recommended sequel to WFT 132. Covers methods and techniques for the safe and efficient disassembly of welded fabrications and other mechanical structures. Emphasizes determining the causes for material failure 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

Recommended sequel to WFT 132. Examines the uses of heat in fabrication for other than parts joining. Presents common heat treat operations and their applications, which can enhance the usefulness and reliability of weld fabrications. Requires industry visits. 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

Learn 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. Includes individual industry site visits. Prereq: Experience with arc welding processes, especially GMAW and/or FCAW; ability to lift 50 lbs.; or permission.

WFT 136 (4) S
Plasma Arc Welding

Learn the equipment, 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, but important applications. Prereq: Experience with and a firm understanding of arc welding processes, especially GTAW; ability to lift 50 lbs.; or permission.

WFT 137 (4) S
Construction of Welding Location Jigs & Fixtures

Incorporates the use of fabrication locating jigs and fixturing devices for welding, as well as for drilling, punching, forming, and to gauging 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 lbs.; or permission.

WFT 138 (2) S
Advanced Fabrication of Weldments

Gain experience with all major fabrication areas including design and development, estimating, layout, cutting, forming, fit up, tack welding and product assessment. Encourages fabrication of an approved project of the student's own design. 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 to establish and maintain a time and effort commitment. Emphasizes record-keeping and marketing of fabrication skills with a frequently updated impact resume. Includes significant report writing. Prereq: WFT 100, 101, 109, 129, 130, 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. Develop confidence and technical and job-keeping skills. Includes significant report writing. Prereq: All 100 WFT courses, ability to lift 50 lbs., and permission.

WFT 180 (10) S
Beginning & 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. Develop confidence and technical and job-keeping skills. Includes significant report writing.

WFT 200 (1) S
Aviation Maintenance Welding

Overview of welding operations commonly used for aircraft maintenance and repair. Class and lab work. 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.

WINE INDUSTRY

Students must be 21 to participate in wine-tasting.

WIN 101 (3) S
Intro to Enology

Intro to the science of winemaking, including history and geographical distribution; grape varieties and wine types; influence of climate and soil; wine fermentation, handling, storage and bottling methods; wine disorders; winery sanitation; and legal compliance. Lab fee.

WIN 102 (3) S
Enology Laboratory Analysis

Intro to vineyard and winery laboratory practices including basic chemistry principles, laboratory techniques and commonly used analysis methods for musts and wines. Lab fee. Prereq: Intro to Chemistry, WIN 101 or permission.

WIN 103 (3) S
Elements of Wine Production

Intro to production of wines including considerations that take place during the harvesting of grapes, transportation, stemming and crushing. May include field trip. Lab fee. Prereq: WIN 101 or permission. Coreq: WIN 107.

WIN 104 (3) S
Elements of Wine Production II

Intermediate course in winemaking. Emphasizes the theories and practices of various fermentation processes, theories of racking, topping and preservation methods. Lab fee. Prereq: WIN 103, 107 or permission. Coreq: WIN 108.

WIN 105 (3) S
Elements of Wine Production III

Advanced course in winemaking. Emphasizes the final stages of wine production including the philosophy of usage and maintenance of barrels, elements of mixing wine varieties, and the final stages of finishing wine production. Lab fee. Prereq: WIN 121 (or concurrent enrollment), 104, 108 or permission. Coreq: WIN 109.

WIN 107 (1) S
Winery Production I

Covers a practical application of theories and principles from WIN 108. Lab fee. Prereq: WIN 101 or permission. Coreq: WIN 103.

WIN 108 (1) S
Winery Production II

Covers a practical application of theories and principles from WIN 104. Lab fee. Prereq: WIN 103, 107 or permission. Coreq: WIN 105.

WIN 109 (1) S
Winery Production III

Covers a practical application of the theories and principles of WIN 105. Advanced studies in winemaking. Lab fee. Prereq: WIN 121, 104, 108 or permission. Coreq: WIN 105.

WIN 121 (3) S
Intro to Viticulture

Intro to the theory of grape growing including botany and anatomy, history and distribution, propagation, varieties and wine type, climate, production practices, and common diseases and pests.

WIN 122 (3) S
Wine Chemistry & Microbiology

Covers wine chemistry and microbiology including wine acidity, sulfur dioxide, protein and phenolic equilibria and other concerns. Learn to make informed decisions on style, crush options, cellar practices, fining, stabilization and quality assurance. Prereq: Intro to Chemistry, WIN 101, 102 or permission.

WIN 123 (3) S
Sensory Evaluation

Intro to wine sensory evaluation methods including statistical analysis of trials, philosophy of wine styles and the common evaluation methods used in sensory testing. Lab fee. Prereq: WIN 101 and 121.

WIN 131 (3) S
Intro to Washington Wines

Intro to wines produced in Washington, including history, viticulture practices and winemaking styles. Includes sensory evaluation of representative Washington wines. Lab fee.

WIN 132 (3) S
Wine History & Appreciation

A survey of wine and its role in history, religion, art, culture and society from pre-history to the modern day. Includes sensory evaluation of representative wines. Lab fee.

WIN 133 (3) S
Intro to Wines of the World

Intro to the world's wine-producing regions, including history, viticulture practices and winemaking styles. Includes sensory evaluation of representative wines. Lab fee.

WIN 141 (3) S
Wine Marketing & Sales

Intro to wine marketing and sales methods, basic approaches to packaging, advertising, promotion, retail and wholesale selling of wine. Prereq: Intro to Business, Intro to Marketing or permission.

WIN 151 (2) S
Intro to Food & Wine Pairing

Learn the basic elements of the character and key components of wines. Includes the five primary taste sensations present in everyday food (salty, sweet, bitter and savory) and how these affect the taste of wine. Lab fee. Prereq: WIN 101.

WIN 152 (3) S
Advanced Food & Wine Pairing

Continuation of WIN 151. Evaluate the elements of the character and key components of wines. Covers the different philosophies of classes and traditional pairs and opens the books on a new and emerging partnership between food and wine. Lab fee. Prereq: WIN 151.

WIN 153–157 (4 EA.) S
Food & Wine Pairing Series

This lecture/laboratory class series introduces the philosophies and techniques involved in bringing food and wine together in a cohesive pairing. Each class focuses on a specific group of wines (see below). In each class, participate in team demonstrations of food and wine pairings. Lab fee.

WIN 153 (4) S
Food & Wine Pairing – Varietals I

Focuses on Cabernet Sauvignon, Merlot, Pinot Noir, Chardonnay and Sauvignon Blanc. Prereq: WIN 101, 151, 152 (or concurrent enrollment) or permission.

WIN 154 (4) S
Food & Wine Pairing – Varietals II

Focuses on Zinfandel, Rhone style Syrah, Viognier, Pinot Grigio and others. Prereq: WIN 101, 151, 152 (or concurrent enrollment) or permission.

WIN 155 (4) S
Food & Wine Pairing – Varietals III

Focuses on Italian reds and whites, Rieslings and/or other specific varietals. Prereq: WIN 153 or 154 or permission.

WIN 156 (2) S
Food & Wine Pairing – Fortified Wines

Focuses on Sherry, Port, Madeira, Marsala and others. Prereq: WIN 153 or 154 or permission.

WIN 157 (2) S
Food & Wine Pairing – Desserts

Focuses on dessert wines: sweet wines, sparkling wines, red varietals and others. Prereq: WIN 153 or 154 or permission.

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 intro 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 intro to the study of women in Asia, Africa, Latin America, the Middle East and/or indigenous women in some Western societies. Explores commonalities and differences among women in various societies and cultures. Focuses on women from specific societies or regions depending 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 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 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

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. Covers the relationship of buttocklines, waterlines, sections and diagonals and how to interpret the lines and offsets for fairbody development.

FINDING COURSES

Course names and course prefixes are cross-referenced in an index beginning on page 329. For example:

PREFIX TO NAME

HIN Watch Technology

NAME TO PREFIX

Watch Technology HIN

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 intro 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, including exploration and explanation of multiple uses and applications.

WCO 197 (2-15) C**Work Experience – Wood Construction**

Earn work experience credit in the wood construction field. Prereq: Permission.

WCO 299 (3-18) C**Special Projects in Boatbuilding****WORLD LANGUAGES**

See Languages and Literature.

ZOOLOGY

See Anatomy & Physiology.