Introduction to Personal Financial Planning (1.0 Lecture)

Advisory: MAT 903 or High School Algebra I, or equivalent. This course introduces the major areas of personal financial planning (insurance, investment, tax, retirement, and estate). Income statements, balance sheets, and budgets are introduced, and students prepare their own personal budgets and statements of net worth. The time value of money and its importance in the financial planning process is stressed.

ACC 041 Insurance Planning (1.0 Lecture)

Advisory: MAT 903 or High School Algebra I, or equivalent. This course introduces fundamental concepts, then uses these concepts to determine insurance needs. Life, health, disability, property and liability insurance are studied. Students prepare their own personal insurance plans.

ACC 042 Investment Planning (1.0 Lecture)

Advisory: MAT 903 or High School Algebra I, or equivalent. This course introduces fundamental investment concepts such as risk, return, diversification, and how financial markets work. The course covers common stock, fixed-income securities, mutual funds and other investments. Students prepare their own personal statement of net worth and use asset allocation to design an investment portfolio.

ACC 043 Tax Planning (1.0 Lecture)

Advisory: MAT 903 or High School Algebra I, or equivalent. This course covers calculation of the federal income tax and strategies to help save or defer taxes. Students calculate their own federal income tax liability, then use at least one method to plan a reduction in taxes for next year.

ACC 044 Retirement Planning (1.0 Lecture)

Advisory: MAT 903 or High School Algebra I, or equivalent. This course covers company pension plans, other company retirement plans, individual retirement plans and social security benefits. Students use a retirement savings worksheet to estimate their own savings needs for retirement using data from their personal budget and personal statement of net worth.

ACC 045 Estate Planning (1.0 Lecture)

Advisory: MAT 903 or High School Algebra I, or equivalent. This course covers estate planning techniques and terminology such as wills, probate, trusts, contractual transfers, gift tax and estate tax. Methods of holding title to property, e.g., joint tenancy with right of survivorship, are also discussed.

ACC 051A Taxation of Individuals (4.0 Lecture)

Prerequisite: ACC 053A Advisory: MAT 903 or High School Algebra I, or equivalent. This is the second course in a sequence of three courses designed for students who want to be a part of the Volunteer Income Tax Assistance (VITA) program at Mission College. This course offers a thorough study of payroll preparation and payroll control, as well as the basics of individual income tax returns within the scope of the VITA program. Students also learn how to work within a cooperative and quality controlled environment and develop their communication skills through taxpayer interviews and explanation of tax return results.

ACC 051B Taxation of Business Entities (3.0 Lecture)

Prerequisite: ACC 051A Advisory: MAT 903 or High School Algebra I, or equivalent. This course covers federal and state income tax returns within the scope of the VITA program. The course offers a thorough study of payroll preparation and payroll control, as well as the basics of corporate, partnership, and estate tax returns.

ACC 052 Payroll and Business Tax Accounting (3.0 Lecture)

Prerequisite: ACC 001A Advisory: MAT 903 or High School Algebra I, or equivalent. This course covers federal and California tax theories and laws appropriate for the current tax year. Students apply their knowledge by taking the IRS exams for VITA volunteers. Upon successful completion of the IRS VITA Basic and Intermediate exams, the students are able to assist low-income individuals in business and personal income tax returns within the scope of the VITA program.
and families with tax return preparation through the VITA program for the current year.

ACC 053B Volunteer Income Tax Assistance (VITA) II (0.5 Lecture/0.5 Lab) 1.0 UNIT
Prerequisite: ACC 053A Advisory: ACC 051A Advisory: MAT 903 or High School Algebra I, or equivalent. This is the second course in a sequence of three courses designed for students who want to be a part of the Volunteer Income Tax Assistance (VITA) program at Mission College. This course allows students who have successfully passed ACC 053A to apply their tax knowledge by assisting low-income individuals and families with their tax preparation through the VITA program for the current year. In this course, students learn to research current tax issues, use the TaxWise software to accurately prepare individual federal and state income tax returns within the scope of the VITA program. Students also learn how to work within a cooperative and quality controlled environment and develop their communication skills through taxpayer interviews and explanation of tax return results.

ACC 053C Volunteer Income Tax Assistance (VITA) III (0.5 Lecture/0.5 Lab) 1.0 UNIT
Prerequisite: ACC 053B Advisory: MAT 903 or High School Algebra I, or equivalent. This is the third course in a sequence of three courses designed for students who want to be a part of the Volunteer Income Tax Assistance (VITA) program at Mission College. This course allows students who have successfully passed ACC 053B to work on advanced tax situations and take part in running the tax center for the current year. In this course, students cover advanced tax topics and develop the skills necessary in running a tax center including site organization, quality control procedures, and providing guidance to both taxpayers and tax preparers.

ACC 057A Cost Accounting (4.0 Lecture) 4.0 UNITS
Advisory: ACC 001B Advisory: MAT 903 or High School Algebra I, or equivalent. The course provides a thorough presentation of cost accounting terminology and concepts, and develops a basic facility in cost accounting techniques and systems. Emphasis is placed on the use of cost accounting data rather than data accumulation. The course covers job order costing, process costing, standard costing, activity-based costing, budgeting, flexible budgeting, cost volume profit analysis, incremental and relevant costing, product pricing, the balanced scorecard, capital budgeting, and management accounting ethics.

ACC 058A Intermediate Accounting I (4.0 Lecture) 4.0 UNITS
Prerequisite: ACC 001A. Advisory: MAT 903 or High School Algebra I, or equivalent. This course is a review of fundamental accounting processes, techniques and principles including control and theory of accounting for assets, correction of prior years' earnings, and measurement and determination of income. Current standards and pronouncements are presented.

ACC 058B Intermediate Accounting II (4.0 Lecture) 4.0 UNITS
Prerequisite: ACC 001A Advisory: ACC 058A Advisory: MAT 903 or High School Algebra I, or equivalent. This course provides a comprehensive study of liabilities, formation and changes in stockholders' equity, statement of cash flows, pension plans, leases, earnings per share, accounting for income taxes, and accounting changes and corrections. Current standards and pronouncements are presented. Financial statement analysis also is reviewed.

ACC 059A Financial Auditing (4.0 Lecture) 4.0 UNITS
Prerequisite: ACC 001A Advisory: ACC 058A and ACC 058B. This course introduces the student to the audit process and how to render an opinion on published financial statements and related financial reports. The course emphasizes the application of generally accepted auditing standards and procedures, fraud exposure, professional ethics, the legal environment, work paper preparation and report writing.

ACC 060 Computerized Accounting: QuickBooks (3.0 Lecture) 3.0 UNITS
Advisory: ACC 001A Students use QuickBooks accounting software to set up, enter transactions, and produce reports using general ledger, accounts receivable, accounts payable, financial statement analysis, depreciation, inventory and payroll modules. It is recommended that students have either completed, or are concurrently enrolled in, ACC 001A or have practical accounting experience. Students use QuickBooks accounting software to set up, enter transactions, and produce reports using general ledger, accounts receivable, accounts payable, financial statement analysis, depreciation, inventory and payroll modules. It is recommended that students have either completed, or are concurrently enrolled in, ACCTG 001A or have practical accounting experience.

ACC 065 Computerized Accounting: Sage 50 (3.0 Lecture) 3.0 UNITS
Advisory: ACC 001A; It is recommended that students have completed, or be concurrently enrolled in, ACC 001A or have previous accounting experience. Students use Sage 50 software to set up, enter transactions, and produce reports. It is recommended that students have completed, or are concurrently enrolled in, ACC 001A or have previous accounting experience.

ACC 070 Ethics in Accounting (3.0 Lecture) 3.0 UNITS
Advisory: ACC 001A This course involves the study of ethical problems which arise within the contexts of accounting and corporate management. Topics include major ethical theories and the professional code of conduct for accountants, auditors, and tax preparers. The focus is on ethical issues in corporate case studies such as Enron, WorldCom, Sunbeam, and Madoff.

ACC 071 Advanced Accounting (4.0 Lecture) 4.0 UNITS
Prerequisite: ACC 058B or equivalent. This course covers the following advanced accounting topics: preparation of consolidated financial statements using the equity method of accounting and accounting for foreign transactions and operations. In addition, the following topics may be covered: current standards for state and local governmental entities and accounting for not for profit non governmental entities. The course requires access to the Internet and knowledge of how to use spreadsheets. Grade Only.

ACC 073 Accounting Information Systems (4.0 Lecture) 4.0 UNITS
Prerequisite ACC 001A Using SAP, an enterprise resource system (ERP) adopted by the majority of Fortune 1000 companies, students will gain valuable and practical skills in Accounting Information Systems, common business processes, basic database designs, and systems controls. The skills built will be useful for individuals planning to take additional higher level business, accounting, and/or information systems classes; seeking careers in the accounting / finance department of organizations; or interested in becoming an auditor, analyst, or consultant.

ACC 075 Cloud Computing and Analytics in Accounting (4.0 Lecture) 4.0 UNITS
Prerequisite: ACC 001A Students will learn cloud accounting and analytics theory through hands-on exercises using SAP Business ByDesign. SAP (Systems, Applications, & Products in Data Processing) is the number one Enterprise Resource Planning (ERP) software vendor in the world. Its ByDesign system is a cloud-based ERP solution for small-to-medium enterprises. Students will also use Excel and Power BI for data analytics and visualization capabilities. This course is useful as preparation for higher level business, accounting, and/or analytics courses, for careers in accounting and finance, or for work as an analyst, data scientist, or consultant.

ALLIED HEALTH (AHL)

AHV 001A Health Occupations Bootcamp (2.0 Lecture) 2.0 UNITS
This course is designed to prepare the potential Health Occupations student for entry into and success in a Health Occupations program. The course content focuses on competencies expected upon entry, study skills, test-taking strategies, stress management, mathematics for dosage calculation, critical thinking, critical reasoning, and introduction to the nursing process. Advisory: Students should have basic arithmetic skills.

ANTHROPOLOGY (ANT)

ANT 001 Physical Anthropology (3.0 Lecture) 3.0 UNITS
The study of human origins, including evolution, genetics, variability, fossil evidence for human evolution, comparative primate anatomy and behavior. Transfers as a Biological Science.

ANT 003 Introduction to Cultural Anthropology (3.0 Lecture) 3.0 UNITS
This course is the study of cultural and social behavior as developed through the anthropological study of contemporary peoples. It includes a comparative study of the range of cultures of the world with emphasis on
social organization, economics, religion, kinship systems, cultural patterns, values and ethics, and ecology.

**ANT 055 Magic, Witchcraft and Religion** (3.0 Lecture) 3.0 UNITS
This course is a cross-cultural study of beliefs and practices dealing with the supernatural pantheon. Practices that invite or demand individual experiences, such as altered states of consciousness, development of a “belief” system, and revitalization are explored. Advisory: ANT 003

**ARABIC (ARB)**

**ARB 001 First Semester Arab And Culture (5.0 Lecture)** 5.0 UNITS
This course is an introduction to Modern Standard Arabic. All four basic language skills (listening, speaking, reading, and writing) are introduced within a cultural context.

**ARB 002 Second Semester Arabic (5.0 Lecture)** 5.0 UNITS
Prerequisite: ARB 001 This course is a continuation of the introduction to Modern Standard Arabic. All four basic language skills (listening, speaking, reading, and writing) are reinforced and further built upon within a cultural context.

**ART (ART)**

**ART 001A Survey of Western Art I** (3.0 Lecture) 3.0 UNITS
Survey of painting, sculpture, and architecture in Western world from Prehistoric times through Medieval period.

**ART 001B Survey of Western Art II** (3.0 Lecture) 3.0 UNITS
A survey of painting, sculpture and architecture in Western world from Renaissance to the 20th century.

**ART 001D Art of the 20th Century** (3.0 Lecture) 3.0 UNITS
A general survey of painting, sculpture, and architecture in the Western world from the Impressionists to the present day.

**ART 004 Art Appreciation** (3.0 Lecture) 3.0 UNITS
A study of the themes and purposes and media and techniques of the visual arts. Works of art from many different periods and cultures will be discussed.

**ART 007 Survey of Asian Art** (3.0 Lecture) 3.0 UNITS
This course is a general survey of painting, sculpture, architecture and the minor arts from prehistoric times to the present day in India, China, Korea, Japan, Indonesia and Southeast Asia, emphasizing aesthetic, cultural and historical values.

**ART 011 The History of Modern Design** (3.0 Lecture) 3.0 UNITS
This introductory survey course focuses on the history, perception and development of design as an art form during the Twentieth Century. The students will also learn about the evaluation criteria of two-dimensional and three dimensional design objects, while examining examples of architecture, industrial design, graphic design and interior design.

**ART 020C Museum/Gallery Internship** 3.0 UNITS
Students will participate actively in the operation of a local museum/gallery as an intern under the direction of museum/gallery professionals. Interview required. Limited enrollment. Pass/No Pass Option.

**ART 031A Drawing** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Beginning drawing course for students with no former drawing experience. Drawing of natural and man-made forms from observation, directed toward realistic rendering of objects and an introduction to color drawing media; colored pencil, pen and ink, watercolor, pastels and chalk.

**ART 031B Intermediate Drawing** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 031A This intermediate course is for students with previous college-level drawing experience and focuses on drawing from natural and human-made forms from observation. It is directed toward realistic rendering

**ART 033A Basic Design: Two-Dimensional** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Basic introductory course to principles & elements of 2-dimensional design.

**ART 033B Basic Design: Three-Dimensional** (2.0 Lecture/1.0 Lab) 3.0 UNITS
This course introduces students to the elements and principles of design of three-dimensional forms.

**ART 033C Basic Design: Color** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 033A This course is an introduction to the principles and elements of color.

**ART 034A Introduction to Digital Art** (2.0 Lecture/1.0 Lab) 3.0 UNITS
This course is an introductory computer art course. The course introduces students to microcomputers(Macintosh and PCs), their operating systems and graphic software(Adobe Photoshop) for creating and manipulating images. This course will introduce the student to basic Design Elements and Principles. Specific projects will be executed relating to visual awareness, line, shape, form, space, and color. Students will learn drawing skills on a computer and how to work with peripheral devices.

**ART 034B Advanced Digital Art** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 034A This is an advanced design course combining computer graphics and fine arts image processing.

**ART 035A Life Drawing** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 031A This course is a fundamental study of the human figure as the main subject matter of drawings.

**ART 035B Life Drawing** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 035A This course is a low intermediate study of the human form and structure rendered in realistic terms.

**ART 035C Life Drawing** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 035B This course is a high intermediate study of the human form and structure. It emphasizes creative interpretation and use of the human form for artistic expression. It focuses on drawing the live model in a variety of styles and media.

**ART 035D Life Drawing** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 035C This course is an advanced study of the human form and structure. It emphasizes creative interpretation and use of the human form for artistic expression. It focuses on drawing the live model in a variety of styles and media.

**ART 039A Survey of Printmaking** (2.0 Lecture/1.0 Lab) 3.0 UNITS
A beginning course in printmaking media and techniques with an emphasis on monotype and the intaglio press.

**ART 047A Watercolor** (2.0 Lecture/1.0 Lab) 3.0 UNITS
This course is an introduction to painting using various water base media with a focus on color mixing, composition, and content.

**ART 047B Watercolor** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 047A This course provides continuing instruction in watercolor techniques, exploration of watercolor styles, and personal development of the student’s artistic direction.

**ART 047C Watercolor** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 047B This is a high intermediate level painting course with various water base media.

**ART 047D Watercolor** (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 047C This course is advanced level painting with various water base media.
ART 048A Airbrush Painting (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 031A or Prerequisite: ART 033C This course is an introduction to the airbrush as a painting tool. Students explore water-based media, principles of color, transparency, masking techniques, and composition.

ART 048B Airbrush Painting (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 048A This course is low intermediate studio practice which focuses on strengthening the basic skills learned in ART 048A.

ART 048C Airbrush Painting (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 048B This course is high intermediate studio practice which focuses on mixed media, self-expression, composition, and content.

ART 049A Painting (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Basic introduction to traditional & current painting techniques & media.

ART 049B Painting (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 049A This course is low intermediate studio practice which focuses on strengthening the basic skills learned in ART 049A. Emphasis is placed upon self-expression, composition, and color theory.

ART 049C Painting (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 049B This course is low intermediate studio practice which focuses on mixed media, self-expression, composition, and content.

ART 049D Painting (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 049C This course is advanced studio practice which focuses on developing individual style and direction in painting.

ART 056A Ceramics-Handbuilding: Introduction (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Introductory course in ceramics emphasizing hand-building techniques.

ART 056B Ceramics-Handbuilding: Beginning (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 065A ART 065B is an advanced course in ceramics/hand-building techniques, firing kilns, clay body construction, and the creation of projects directed toward individualized self-expression.

ART 056C Ceramics-Handbuilding: Intermediate (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 065B ART 065C focuses on different aspects of ceramics providing students with supervised participatory experience in which artistic skills are enhanced by repetition and practice.

ART 056D Ceramics-Handbuilding: Advanced (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 065C ART 065D focuses on different aspects of ceramics, providing students with supervised participatory experience in which artistic skills are enhanced by repetition and practice.

ART 067A Ceramics-Potter's Wheel: Introduction (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Covers basic skills & techniques using potter's wheel. Pass/No Pass Option.

ART 067B Ceramics-Potter's Wheel: Beginning (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 067A This is an advanced course on the potter's wheel directed toward refinement of throwing skills and ceramic design.

ART 067C Ceramics-Potter's Wheel: Intermediate (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 067B This course focuses on advanced aspects of working with the potter's wheel.

ART 067D Ceramics-Potter's Wheel: Advanced (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Focus on advanced aspects of working with potter's wheel. Pass/No Pass Option.

ART 075A Metalsmithing (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Advisory ART 033A and/or Advisory ART 033B This course is an introduction to the elements of design and metalsmith techniques.

ART 075B Metalsmithing (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 075A This course continues to apply the elements of design to metal and introduces new metalsmith techniques.

ART 075C Metalsmithing (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 075B This is an advanced course in metalsmithing that provides students with an opportunity to build on skills learned in previous course levels and explore new techniques. Topics may include advanced techniques in jewelry casting, metal sculpture construction, and color on metal.

ART 075D Metalsmithing (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 075C This is an advanced course in metalsmithing which focuses on different aspects of course content from previous levels. Students are provided with supervised participatory experience.

ART 078A Furniture Design and Woodworking: Introduction (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Advisory: ART 033B ART 078A develops basic, introductory technical skills in furniture design, construction and finishing. The emphasis is on individual design and innovative use of materials in the construction.

ART 078B Furniture Design and Woodworking: Beginning (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 078A ART 078B introduces beginning to low-intermediate techniques and design skills in furniture construction. The students develop individual and/or group projects under the direction of the instructor, focusing on special aspects of furniture and woodworking.

ART 078C Furniture Design and Woodworking: Intermediate (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 078B ART 078C is an intermediate-to-advanced level course in woodworking and furniture design which involves furniture construction techniques and equipment not covered in previous levels. Topics include advanced cabinetry techniques and complex joinery.

ART 078D Furniture Design and Woodworking: Advanced (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 078C ART 078D is an advanced course in woodworking and furniture design. Fourth in the series, this course allows students to work independently to continue to refine previously mastered design and technical skills, and to prepare for careers in the industry.

ART 085A Sculpture: Introduction (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Advisory: ART 031A, ART 033B ART 085A is an introductory course in sculpture emphasizing individual expression. Subtractive, additive and fabrication techniques including modeling, casting and carving are covered. Utilizing clay, wood, plaster and metal in construction are covered as well.

ART 085B Sculpture: Beginning (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite: ART 085A ART 085B builds on skills and concepts learned in ART 085A, and introduces new techniques. Students explore the development of a personal style of sculpture design.

ART 085C Sculpture: Intermediate (2.0 Lecture/1.0 Lab) 3.0 UNITS  
Prerequisite ART 085B This is an advanced sculpture course which provides students with an opportunity to build on previous experience and explore new techniques. It focuses on different aspects of course content with supervised participatory experience.
ART 085D Sculpture: Advanced (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite ART 085C This is an advanced course which focuses on different aspects of sculpture with supervised participatory experience.

ART 088A Metal Sculpture Casting: Introduction (2.0 Lecture/1.0 Lab) 3.0 UNITS
Advisory: ART 085A or ART 033B This is a basic course in metal sculpture casting.

ART 088B Metal Sculpture Casting: Beginning (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: ART 088A This course is a study of the metal casting process which introduces new techniques and skill-building assignments, as well as development of a personal form.

ART 088C Metal Sculpture Casting: Intermediate (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite ART 088B This course covers different aspects of metal sculpture casting along with supervised participatory experience.

ART 088D Metal Sculpture Casting: Advanced (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite ART 088C This course focuses on different aspects of metal sculpture casting along with supervised participatory experience.

ART 091 Directed Studies (1.0 Lab) 1.0 UNIT
Prerequisite: An interview to determine objectives & a written contract must be made by the instructor.

ASTRONOMY (AST)

AST 001 Astronomy (3.0 Lecture) 3.0 UNITS
This course covers the entire panorama of the universe including early human observations, the solar system, stars, galaxies and cosmology. Grade Only.

AST 002 Astronomy Laboratory 1.0 UNIT
Advisory: Eligibility for ENGL 001A and READ 053 Prerequisite/Corequisite ASTRO 001 This course covers astronomical projects using lab equipment and computers, reinforcing the concepts introduced in ASTRO 001. Grade Only.

AST 003 Astronomy With Lab (3.0 Lecture/1.0 Lab) 4.0 UNITS
This course covers the entire panorama of the universe including the observations of the night sky, the solar system, stars, galaxies and cosmology. Grade Only.

AST 003H Astronomy With Lab - Honors (3.0 Lecture/1.0 Lab) 4.0 UNITS
This course covers the entire panorama of the universe including the observations of the night sky, the solar system, stars, galaxies and cosmology. Students cannot get credit for both ASTRO 003 and ASTRO 003H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

AST 004 Astrobiology - Life in the Universe (3.0 Lecture) 3.0 UNITS
This course examines the astronomical influences on life on Earth and the possibility of life other places in the Universe. We study the chemical basis for life, the origin, evolution, and constraints of life on Earth, and the markers of life that may be seen in the Universe.

BIOLOGICAL SCIENCES (BIO)

BIO 001A General Biology: Cells (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite CHM 001A or CHM 001AH Prerequisite: MAT 000C or High School Algebra II, or equivalent Prerequisite: BIO 010 or BIO 011 This course is a comprehensive introduction to cell and molecular biology, and is designed for students pursuing degrees in biology or professional programs such as medicine or pharmacy. Topics addressed in lecture and lab include biochemistry, the structure and function of prokaryotic and eukaryotic cells, cellular metabolism, prokaryotic and eukaryotic gene expression and regulation, and selected topics in human physiology.

BIO 001AH General Biology: Cells-Honors (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHM 001A or CHM 001AH Prerequisite: MAT 000C or High School Algebra II, or equivalent Prerequisite: BIO 010 or BIO 011 Anti-Requisite: BIO 001A Advisory: CHM 01B or CHM 001BH This honors course is a comprehensive introduction to cell and molecular biology, and is designed for students intending to transfer to majors in the biological sciences as well as for those seeking to enter professional programs such as medicine or pharmacy. Students may not receive credit for both BIO 001A and BIO 001AH. Enrollment in the Honors Transfer Project is required.

BIO 001B General Biology: Organisms (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: BIO 001A or BIO 001AH This course examines the unity and diversity of multicellular life, ecological and evolutionary principles, and form/ function relationships in plants and animals. The course is designed for students majoring in the biological sciences or seeking entry to professional programs such as Medicine, Pharmacy, and Dentistry.

BIO 004 Microbiology (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: BIO 011 and CHM 030A OR Prerequisite: CHM 001A or CHM 001AH and BIO 011 or Prerequisite: BIO 011 and CHM 060 OR Prerequisite: CHM 001A or CHM 001AH and BIO 011 OR Prerequisite: CHM 060 and BIO 011 OR Prerequisite: CHM 001A and BIO 001AH OR Prerequisite: BIO 010 and BIO 010L and CHM 001A OR CHM 001AH OR Prerequisite: BIO 010 and BIO 010L and CHM 030A OR Prerequisite: BIO 010 and BIO 010L and CHM 060 OR Prerequisite: BIO 022 and BIO 011A or CHM 001AH OR Prerequisite: BIO 022 and CHM 030A OR Prerequisite: BIO 022 and CHM 060 This course is intended for nursing and other health-science majors. Lecture topics include the morphology and physiology of the major groups of microorganisms, microbial genetics, mechanisms of infection and disease, and the human immune response to infection. Laboratory activities focus on the culture and identification of bacteria of medical importance.

BIO 010 Introduction to Biology (3.0 Lecture) 3.0 UNITS
BIO 010 is an introductory course in biology designed for the non-biological sciences major. Topics include cell structure and function, energy exchange and life processes, taxonomy, ecology, heredity, diversification and evolution. This lecture course may be taken with or without BIOSC 010L, Introduction to Biology Lab.

BIO 010L Introduction to Biology Lab (1.0 Lab) 1.0 UNIT
Corequisite: BIO 010 or Prerequisite: BIO 010 This is an introductory general biology laboratory course designed for non-science majors. All students who enroll in this lab course must also enroll in a BIO 010 lecture.

BIO 011 Human Biology (3.0 Lecture/1.0 Lab) 4.0 UNITS
This course is an introduction to biology concepts and principles, using humans as a model. BIOSC 011 satisfies the same general education requirement as BIOSC 010.

BIO 012 Emerging Infectious Diseases (3.0 Lecture) 3.0 UNITS
In this introductory biology course, learn how infectious agents cause disease, and what factors are leading to the emergence of new diseases such as mad cow, SARS, and drug-resistant tuberculosis.

BIO 014 Introductory Neuroscience (3.0 Lecture) 3.0 UNITS
This course is an introduction to the organization and functions of the nervous system. The physiology of the brain and senses are discussed. Emotions, sleep, language, attention, memory, and a survey of nervous system disorders are explored.

BIO 014H Introductory Neuroscience - Honors (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001A and REA 054 OR Advisory: ENG 001AX and REA 054 This honors course is an introduction to the organization and functions of the nervous system. The physiology of the brain and senses are discussed. Emotions, sleep, language, attention, memory and a survey of nervous system disorders are explored.

BIO 016 Marine Biology (3.0 Lecture/1.0 Lab) 4.0 UNITS
This four unit course introduces students of all disciplines to ocean ecology and marine life. Topics are explored through classroom learning and seven required field trips to local marine habitats and research facilities in the San Francisco and Monterey Bays. Some field trips may extend beyond regularly
scheduled class meeting time. Students arrange their own transportation to the field sites.

**BIO 017** Genetics and Society (3.0 Lecture) 3.0 UNITS
This course is a broad survey of genetics, with a focus on the societal impacts of topics in genetics such as human genetic disease, biotechnology, reproductive technologies, and evolution. This course is a broad survey of genetics, with a focus on the societal impacts of topics in genetics such as human genetic disease, biotechnology, reproductive technologies, and evolution. It is designed for the general education student.

**BIO 017H** Genetics and Society - Honors (3.0 Lecture) 3.0 UNITS
This course is a broad survey of genetics, with a focus on the societal impacts of topics in genetics such as human genetic disease, biotechnology, reproductive technologies, and evolution. The honors component involves an in-depth analysis of specific topics, using current information from research journals. Students cannot get credit for both BIOSC 017 and BIOSC 017H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

**BIO 019** Oceans: Life in the Sea (3.0 Lecture) 3.0 UNITS
This non-majors course surveys the biological principles of marine science. It provides an overview of the ocean environment, diversity of marine life, basic ecological principles and types of marine ecosystems. The relationship between humans and the ocean is emphasized, focusing on conservation biology and sustainability.

**BIO 022** Anatomy & Physiology for Allied Health Workers (3.0 Lecture/1.0 Lab) 4.0 UNITS
Advisory: MAT 903 or High School Algebra I, or equivalent. This course is an overview of the normal structure and function of the human body and is designed to provide a foundation for the study of disease and dysfunction in the clinical setting. Laboratory work includes dissection of preserved materials. BIO-022 is designed to meet the state board requirements for the vocational nursing and psychiatric technician programs.

**BIO 025** Environmental Biology (3.0 Lecture) 3.0 UNITS
This course is designed for students of all disciplines to introduce a wide range of contemporary biological topics that will affect their lives; e.g., population growth and control, environmental problems, genetic manipulation, nutrition, energy issues, etc.

**BIO 030** Tropical Ecology (3.0 Lecture) 3.0 UNITS
The amazing diversity of life in the tropics is the subject of this introductory level class. Students explore rainforest inhabitants and their relationships, and learn about their value and conservation. This lecture course may be taken with or without BIOSC 030L, Tropical Ecology Lab.

**BIO 030L** Tropical Ecology Field Studies (1.0 Lab) 1.0 UNIT
In this introductory level class, students carry out research methods that ecologists use to observe and investigate tropical ecosystems. This lab course may be taken with or without BIOSC 030, Tropical Ecology.

**BIO 031L** Tropical Ecology Field Studies (1.0 Lab) 1.0 UNIT
Anti-Requisite: BIO 030L In this introductory level laboratory class, students carry out research methods that ecologists use to observe and investigate tropical ecosystems. This course includes a field trip to Costa Rica. Students who take this course are not required to complete BIO 30, the lecture course in Tropical Ecology.

**BIO 032** California Plants and Animals (3.0 Lecture/1.0 Lab) 4.0 UNITS
This field course explores the ecology of California flora and fauna through studies of plants and animals in terrestrial and aquatic ecosystems within the San Francisco Bay region.

**BIO 041** Principles of Evolution and Animal Biology (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: MAT 000C (or any higher level mathematics course), Prerequisite: CHM 002 (or any higher level chemistry course) and Prerequisite: BIO 010 or Prerequisite: Equivalent High School or College Biology course with lab. This course is intended for students majoring in biology and related fields. The course introduces the principles of animal biology and evolutionary theory to the biology major. Topics include animal phylogeny, diversity, principles of evolution, natural history, morphology, physiology, and development.

**BIO 042** Principles of Plant Biology (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: High School or College biology course and Prerequisite: MAT 000C and Prerequisite: CHM 001A This is a course for biology majors that examines principles of botany through comprehensive studies of the major plant, fungi and algal phyla, with emphasis on structure, function and evolution of vascular plants. Ecological principles are also discussed.

**BIO 043** Principles of Cell and Molecular Biology (3.0 Lecture/2.0 Lab) 5.0 UNITS
Advisory: CHM 001B or CHM 001BH Prerequisite: BIO 010 or Equivalent course in College Biology Prerequisite: BIO 010L Prerequisite: CHM 001A or CHM 001AH Prerequisite: MAT 000C or High School Algebra II, or equivalent Prerequisite: CHM 001BH Prerequisite: BIO 011 or Equivalent course in College Biology Prerequisite: CHM 001A or CHM 001AH Prerequisite: MAT 000C or High School Algebra II, or equivalent OR Advisory: CHM 001B or CHM 001BH Prerequisite: BIO 042 or Equivalent course in College Biology Prerequisite: CHM 001A or CHM 001AH Prerequisite: MAT 000C or High School Algebra II, or equivalent This course is a comprehensive introduction to cell and molecular biology, and completes the general biology sequence required for transfer students in the biological sciences and for those seeking to enter Pharmacy and other professional programs.

**BIO 047** Human Anatomy (3.0 Lecture/2.0 Lab) 5.0 UNITS
Advisory: MAT 000C or High School Algebra II, or equivalent. Prerequisite: BIO 047 and Prerequisite: CHM 001AH Prerequisite: BIO 010 and BIO 010L OR Prerequisite: BIO 011 OR Prerequisite: BIO 022 OR Prerequisite: BIO 001A OR Prerequisite: BIO 001AH This course is a detailed lecture and laboratory study of the gross and microscopic structures of the human body in preparation for careers in nursing, physical therapy, occupational therapy, kinesiology, etc.

**BIO 048** Human Physiology (3.0 Lecture/2.0 Lab) 5.0 UNITS
Advisory: MAT 000C or High School Algebra II, or equivalent. Prerequisite: BIO 047 and Prerequisite: CHM 001A or CHM 001AH OR Prerequisite: BIO 047 and Prerequisite: CHM 001A OR Prerequisite: BIO 047 and Prerequisite: CHM 001A This honors course provides students with a basic understanding of the physiological mechanisms underlying body function in order to provide a foundation for more in-depth study and practical application. With an emphasis on cause and effect, details of the chemical and cellular basis for the workings of the nervous, muscular, cardiovascular, respiratory, renal and digestive systems are emphasized. Laboratory investigations of physiological processes familiarize students with scientific analysis and research techniques.

**BIO 048H** Human Physiology - Honors (3.0 Lecture/2.0 Lab) 5.0 UNITS
Advisory: MAT 000C or High School Algebra II, or equivalent. Prerequisite: BIO 047 and Prerequisite: CHM 001A or CHM 001AH OR Prerequisite: BIO 047 and Prerequisite: CHM 001A OR Prerequisite: BIO 047 and Prerequisite: CHM 001A This honors course provides students with a basic understanding of the physiological mechanisms underlying body function in preparation for more in-depth study and clinical application. The chemical and cellular basis for the workings of the nervous, muscular, cardiovascular, respiratory, renal and digestive systems are emphasized. Laboratory investigations of physiological processes familiarize students with scientific analysis and research techniques.

**BIO 081H** Honors Seminar in Biology Studies (1.0 Lecture) 1.0 UNIT
This course is an honors course involving discussion and analysis of current and significant research work in the field of biological science. Students develop an in-depth understanding of the application of the scientific method to research areas such as cell and molecular biology, genetics, cancer, neuroscience, ecology, sustainability, etc. The course includes presentations by students and invited guests. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.
### BUSINESS (BUS)

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE NAME</th>
<th>UNITS</th>
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<tbody>
<tr>
<td>BUS 010</td>
<td>Global Business (3.0 Lecture)</td>
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<tr>
<td>BUS 021</td>
<td>Introduction to Business Computing (3.0 Lecture)</td>
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<tr>
<td>BUS 021L</td>
<td>Introduction to Business Computing Laboratory (1.0 Lab)</td>
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<tr>
<td>BUS 022</td>
<td>Principles of E-Business (3.0 Lecture)</td>
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<td>BUS 023</td>
<td>Social Media Marketing (3.0 Lecture)</td>
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<td>BUS 028A</td>
<td>Business Law I (3.0 Lecture)</td>
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<td>BUS 037</td>
<td>Fundamentals of Project Management (3.0 Lecture)</td>
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<td>BUS 038</td>
<td>Applied Project Management (3.0 Lecture)</td>
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<td>BUS 040</td>
<td>Professional Selling (3.0 Lecture)</td>
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<td>BUS 041</td>
<td>Beginning Business Analytics (2.5 Lecture / 0.5 Lab)</td>
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<tr>
<td>BUS 051</td>
<td>Introduction to American Business (3.0 Lecture)</td>
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<td>BUS 052</td>
<td>Fundamentals of Financial Investing (3.0 Lecture)</td>
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<tr>
<td>BUS 054</td>
<td>Small Business Start Up and Management (3.0 Lecture)</td>
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<tr>
<td>BUS 056A</td>
<td>Marketing Principles (3.0 Lecture)</td>
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<td>BUS 061</td>
<td>Business and Society (3.0 Lecture)</td>
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<td>BUS 064B</td>
<td>Business Math (4.0 Lecture)</td>
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<tr>
<td>BUS 074</td>
<td>Purchasing &amp; Supply Chain Management (3.0 Lecture)</td>
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<tr>
<td>BUS 078B</td>
<td>Business Communications (3.0 Lecture)</td>
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**Advisory:**
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- BUS 021: BUS 021L or BUS 022
- BUS 023: BUS 021L or BUS 022
- BUS 037: BUS 021L or BUS 022
- BUS 038: BUS 021L or BUS 022
- BUS 040: BUS 021L or BUS 022
- BUS 041: BUS 021L or BUS 022
- BUS 051: BUS 021L or BUS 022
- BUS 052: BUS 021L or BUS 022
- BUS 054: MAT 903 or High School Algebra I, or equivalent.
- BUS 056A: BUS 021L or BUS 022
- BUS 061: BUS 021L or BUS 022
- BUS 064B: BUS 021L or BUS 022
- BUS 074: BUS 021L or BUS 022
- BUS 078B: BUS 021L or BUS 022

**Prerequisites:**
- BUS 061: BUS 021L or BUS 022

**Mission College Pathways**

**Environmental Studies Projects in 2.0 UNITS**
Advisory: BIO 025. Under the guidance of a faculty member, student groups carry out research projects that address global problems by applying local solutions on topics such as vermiculture, sustainable aquaponics, habitat enhancement, or burrowing owl conservation. This course is also listed as GLOBL 092E. Pass/No Pass Option.

**BUSINESS (BUS)**

**BUS 010 Global Business (3.0 Lecture) 3.0 UNITS**
Advisory: MAT 903 or High School Algebra I, or equivalent. This course provides a comprehensive overview of global business including international management, finance, law, global strategy and marketing. Emphasis is on the firm in the global competitive context, decisions to enter markets, how to compete in global markets, and how to develop and implement a global strategy.

**BUS 021 Introduction to Business Computing (3.0 Lecture) 3.0 UNITS**
This course introduces computer hardware, software and technology applications in business. Information systems and the strategies for managing them change quickly, but the principles that guide both remain timeless. These principles form the backbone of this comprehensive survey of the field, designed for a student’s first course in information technology. By presenting the details as well as the big picture, this course puts the lessons of managing Information Systems into an understandable context. The overall principle is that the right information, if it is delivered to the right person, in the right fashion, and at the right time, can improve and ensure organizational effectiveness and efficiency.

**BUS 021L Introduction to Business Computing Laboratory (1.0 Lab) 1.0 UNIT**
This course provides hands-on training in business applications.

**BUS 022 Principles of E-Business (3.0 Lecture) 3.0 UNITS**
This course introduces students to the basics of electronic business and commerce. Eligibility for ENGL 001A and READ 054 Advisory BUS 051.

**BUS 023 Social Media Marketing (3.0 Lecture) 3.0 UNITS**
This course provides an overview of social media marketing tools. Students complete hands-on activities using and relating to social media marketing. Eligibility for ENGL 001A and READ 054 Advisory BUS 056A.

**BUS 028A Business Law I (3.0 Lecture) 3.0 UNITS**
This course provides an introduction to the laws in the United States with an emphasis on matters relating to the conduct of business and commerce.

**BUS 037 Fundamentals of Project Management (3.0 Lecture) 3.0 UNITS**
In this course, students will learn the secrets to successful project management: how to create a plan, implement it, monitor progress, correct as necessary and deliver as promised. This course prepares students with the necessary skills required to successfully manage a project and to prepare for the PMP® (Project Management Professional) or CAPM® (Certified Associate in Project Management) certification exams.

**BUS 038 Applied Project Management (3.0 Lecture) 3.0 UNITS**
In this course, students apply project management skills to real life project situations. Students also learn how to control project schedules, budgets, and scope using a variety of techniques. In-class exercises and case studies lead students to skills they can immediately apply to their own projects.

**BUS 040 Professional Selling (3.0 Lecture) 3.0 UNITS**
Advisory: COM 001 This course is a study of sales principles and strategies. Topics include advanced sales techniques, high impact questioning methodologies, closing techniques and managing objections, account and territory planning and management, resource planning and management. The course explores in detail the “selling cycle”. Students taking this course explore how to succeed in sales.
BUS 084  Internet Marketing (3.0 Lecture)  3.0 UNITS
This course introduces students to Internet marketing techniques and tools and examines how advanced technologies affect marketing functions. Consideration is given to the development of an organization's marketing plan and strategies in this dynamic environment. The course provides students with the opportunity to conceptualize and document an internet marketing plan based on one's professional goals.

BUS 102  Leadership (3.0 Lecture)  3.0 UNITS
This course guides students in developing life-long learning skills for leadership that apply to any organizational level in a wide variety of business environments. Both historical and cutting-edge leadership theory and practice are explored. Topics discussed include visioning, inspiring, motivating as well as the effective use of power. By taking an active leadership role in the course, students examine the issues, challenges, and practical skills of leadership in today's workplace. Presentations, team activities, reflection, interviewing, and feedback are core developmental components of this course.

BUS 104  Project Risk Management (3.0 Lecture)  3.0 UNITS
Advisory: MAT 903 or equivalent. Advisory: ENG 001A or ENG 001AX This course focuses on the fundamentals of project risk management. This course will be of particular value to program managers, project managers, project engineers, software systems engineers, and those responsible for the development of policies and processes.

BUS 105  Agile Project Management (2.0 Lecture)  2.0 UNITS
Prerequisites: BUS 037 The Agile Project Management course is designed for business students, project team members, product owners and project leaders looking to understand and apply the Agile approach and practices to new product development, software development and knowledge work projects. This course teaches management of projects using agile methods with a detailed focus on SCRUM and Kanban. Students will explore SCRUM roles, artifacts, events, and processes thereby learning how products can be delivered economically and how customers are brought into the loop of product development. Students will learn Kanban and how this flow-based method is used to achieve efficient and smooth work management improving time-to-market. Even if you are currently using other project management methodologies, you will discover how Agile methods can make your projects more successful.

BUS 107  Soft Skills for Project Managers (2.0 Lecture)  2.0 UNITS
This course is designed for students who want to build their soft skills. Soft skills, sometimes known as “people skills”, can provide an edge to project managers who have learned to use them well. This course will concentrate on the three pillars of Soft skills, Leadership, Communication and Collaboration. In this course we take a deep dive into these critical skills. Topic include, leading teams, coaching, mentoring, negotiating skills, motivating people, decision making and influencing, reading body language, team dynamics, conflict, power, and organizational behavior. Since, project managers typically spend over 80% of their time interfacing with people - these skills are critical to successful project managers. This course is part of the new certificate for Project Management. Advisories: Eligibility for ENG 001A or ENG 001AX and REA 054

BUS 108  PMP & CAPM Exam Prep (2.0 Lecture)  2.0 UNITS
Prerequisites: BUS 037 This course will prepare students for the for CAPM® (Certificate Associate in Project Management) or PMP® (Project Management Professional) exam. Students will receive substantial Project Management Education (PDU) hours. This course emphasizes PMBOK Guide® (Project Management Body of Knowledge) and is structured around the ten knowledge areas, and it is focused on exactly what is necessary to pass the exam. The Project Management Professional (PMP®) certification is the profession's most globally recognized and respected certification credential based on the Project Management Institute (PMI®) well-known Project Management Body of Knowledge (PMBOK®).

BUS 109  Business Law Entrepreneurs (2.0 Lecture)  2.0 UNITS
This course provides students from variety backgrounds to understand legal attributes of entrepreneurship. The course materials are a diverse mixture of different topical areas in law. These areas include commercial law, law of torts, business structure, employment and contract law, the legal framework of finance, intellectual property and laws governing the sale of a business. The students will be able to identify the specific legal issue that an entrepreneur needs to understand at various stages. Advisory: BUS 054 Eligibility for ENG 001A or ENG 001AX and REA 054

BUS 111  The Entrepreneurial Mindset (3.0 Lecture)  3.0 UNITS
This course is constructed for students to learn about the principles contained in the entrepreneurial mindset and the unlimited opportunities it can provide. So, what is an entrepreneurial mindset? An entrepreneurial mindset is the specific set of beliefs, knowledge, and thought processes that drives entrepreneurial behavior (The Learning Initiative 2018). This course also takes the approach that anyone (not just those who want to start businesses) can benefit from understanding and applying an entrepreneurial mindset to any situation. Advisory: BUS 054 Eligibility for ENG 001A or ENG 001AX and REA 054

BUS 112  Business Modeling (3.0 Lecture)  3.0 UNITS
This course covers practical business model techniques used by leading companies in different industries. The business model describes the foundation used of how companies create, deliver and capture value. The students will learn about the nine building blocks in creating and implementing a business model. These blocks include Customer Segments, Value Propositions, Channels, Customer Relationship, Revenue Streams, Key Resources, Key Activities, Key Partnerships and Cost Structure. Further the students shall understand disruptive innovation as a sensation and strategy in today's business environment. Lastly, students will develop their own business model and understand the importance of sustainable. Advisory: BUS 054 Eligibility for ENG 001A or ENG 001AX and REA 054

BUS 113  Operations Management (3.0 Lecture)  3.0 UNITS
This course is an introduction to the field of operations management and addresses the design and management of the activities and resources that a firm uses to produce and deliver its products or services. Topics covered include applied forecasting and aggregate operation planning. Concepts are illustrated by using real world case studies.

BUS 114  Entrepreneurship Finance (2.0 Lecture)  2.0 UNITS
Prerequisites: CAP 062B or BUS 021L or Equivalent Advisory: BUS 054 This course introduces financial thinking, tools, and techniques adapted to the area of entrepreneurship. Students will be introduced to the theories, knowledge, and financial tools an entrepreneur needs to start, build, and harvest a profitable venture. Students will learn how and where to obtain the financing necessary to launch and develop the venture. Discipline financial management practices are vital to a venture's operation.

BUS 115  Human Resources Management (3.0 Lecture)  3.0 UNITS
This course is designed as an overview of the Human Resource functions and the employment of human resources to achieve organizational strategic goals by working with and through people. Topics include HR legal environment, recruitment and selection, training and development, compensation and benefits, performance appraisals, workforce diversity, downsizing, outsourcing and contracting.

BUS 116  Computer Keyboarding Speed and Accuracy (1.0 Lecture)  1.0 UNIT
Advisory: Eligibility for ENG 001A and REA 054 This course is designed for anyone who wants to learn the "touch" system of keyboarding on the computer. Proper techniques of keyboarding are emphasized to develop speed and accuracy. This course may be repeated one time. Pass/No Pass Only.

BUS 117  Computer Keyboarding Speed and Accuracy (1.0 Lab)  1.0 UNIT
Advisory: CAP 010A This course provides students with practice on corrective drills to correct keyboarding techniques and improve basic speed and accuracy.

BUS 118  Ten-Key Numeric Keypad (1.0 Lab)  1.0 UNIT
This course develops entry-level vocational proficiency in the use of 10-key numeric keypad.

BUS 119  Distance Learning - How to Succeed (0.5 Lab)  0.5 UNITS
Advisory: CA 010A and CA 070. Be a successful distance learner! In this course students will learn how to register and take a class online. Topics will
include: using a browser, email, plug-ins, using a course management system, communicating online, taking a test, and sending work. Pass/No Pass Only.

CAP 033A Word Processing - Course 1 (3.0 Lecture) 3.0 UNITS
Advisory: CAP 010A This course teaches word processing applications using Microsoft Word. The course includes text-editing, formatting, storage, retrieval, printing, tables, charts, document filing and management, columns, style sheets, spell check and thesaurus, and other basic word processing skills.

CAP 033B Word Processing - Course 2 (3.0 Lecture) 3.0 UNITS
Advisory CAP 033A and Advisory CAP 010A This course covers advanced word processing features using MS Word.

CAP 045A Introductory Microsoft Project (1.0 Lecture) 1.0 UNIT
Students learn the basic features of Microsoft Project in order to plan and manage the tasks, resources, scope, and time for a project. Eligibility for ENG 001A and REA 054 Advisory CAP 070

CAP 045B Intermediate Microsoft Project (2.0 Lecture) 2.0 UNITS
Students expand their knowledge of Microsoft Project to plan, manage, monitor and analyze the progress of a project.

CAP 046D Introduction to Microsoft Powerpoint (1.0 Lecture) 1.0 UNIT
Advisory: CAP 010A. Students learn the basic features of PowerPoint. Students learn how to create presentations and how to format them.

CAP 046E Intermediate Microsoft Powerpoint (1.0 Lecture) 1.0 UNIT
Advisory: CAP 010A and CAP 046D This course covers advanced features of PowerPoint. Students integrate PowerPoint with MS Word, Excel, and web pages. They learn to customize a slide show and other advanced features.

CAP 062B An Introduction to Microsoft Excel (1.0 Lecture) 1.0 UNIT
Advisory: CAP 070. This course is an introduction to Microsoft Excel. Topics covered include entering and editing worksheet information, formatting and printing worksheets, creating charts, and using functions. This course is designed for students who are computer literate.

CAP 063B Intermediate Microsoft Excel (2.0 Lecture) 2.0 UNITS
Advisory: CAP 062B. This course is the second in a series of Excel courses designed to help students learn Excel features that are used in business decisions. They apply What-IF Analysis such as scenario tables, goal seek, and solver. Students also use advanced functions such as VLOOKUP, NestedIF’s, Pivot tables and Pivot charts, macros and more. This course is designed for students who are computer literate and have a previous working knowledge of Excel formulas, functions, and charts.

CAP 070 Using MS Windows (1.0 Lecture) 1.0 UNIT
This course introduces students to the current version of the Windows operating system and helps students acquire fundamental computer skills including file management, Internet connectivity &security, network file sharing, hardware management, troubleshooting and customizing/ personalizing Windows settings. Eligibility for ENG 001A and REA 054

CAP 071E Microsoft Outlook (1.0 Lecture) 1.0 UNIT
Advisory: CAP 070. Students learn how to manage email with rules and folders, enter appointments and events, create and manage a schedule, track tasks, and manage contacts and contact groups. Pass/No Pass Option.

CAP 081B Introduction to Microsoft Access (1.0 Lecture) 1.0 UNIT
Advisory: CAP 010A and CAP 070. Learn to create database tables and enter data, organize, and retrieve data from the tables. Create simple forms to enter data into a database and format reports from the data in the database. This course is for students who are computer literate and who would like to start working with a database.

CAP 092A Fundamentals of Web 2.0 & Cloud Technologies (2.0 Lecture) 2.0 UNITS
Want to learn more about Web 2.0 and cloud technologies? This course provides an introduction to Web 2.0 applications, such as social networking sites (SNS), video-sharing sites, wikis, blogs and mashups.

CAP 092B Google Apps for Personal Productivity (2.0 Lecture) 2.0 UNITS
This course introduces students to Google Drive and Google applications. Students learn to use Gmail, Google Calendar, Document, Spreadsheet, Chrome and Presenter to achieve personal and professional productivity goals. Students also identify opportunities to utilize Google apps to communicate and collaborate within a virtual-social network.

CAP 100 Learning the Keyboard Noncredit (NONCREDIT) 0.0 UNIT
This non credit course is designed for anyone who wants to learn the "touch" system of keyboarding on the computer. Proper techniques of keyboarding are emphasized to develop speed and accuracy.

CAP 101 Computers Simplified for Beginning Learners Noncredit (NONCREDIT) 0.0 UNIT
This noncredit course takes students through the basics of using a computer to perform essential tasks for workforce and academic survival. Highlights of the course include: operating system basics, applications software, e-mail basics, computer peripherals, and Internet basics.

CHILD DEVELOPMENT (CHD)

CHD 001 Child Growth and Development (3.0 Lecture) 3.0 UNITS
This course is a study of typical and atypical child growth and development in all domains from conception through adolescence. There is an emphasis on interactions between maturational processes and environmental factors within the family cultural context. Students observe children using investigative research methods, evaluate differences and analyze characteristics of development at various stages. This course fulfills requirements as a core course for Title 22 licensing and the Child Development Permit Matrix.

CHD 002 Child, Family, and Community (3.0 Lecture) 3.0 UNITS
This course examines the effect of family and community on a child's development. Families, their functions, and changing family structure are examined. The factors and resources for early interventions and inclusions for families with children with differing abilities are explored. Interactions among the child, family, school, peers, media and community are discussed.

CHD 003 Language and Literacy for the Young Child (3.0 Lecture) 3.0 UNITS
This course explores the development of language in young children and how to apply that understanding in developmentally, linguistically and culturally appropriate ways in the early childhood classroom. Students learn how to promote language development and literate behaviors among emerging multilingual children through a variety of materials and experiences.

CHD 004 Cognitive Experiences for Children (3.0 Lecture) 3.0 UNITS
Will examine theories of cognitive development through research review and observation. Students will use information to plan curriculum.

CHD 005 Music and Movement (3.0 Lecture) 3.0 UNITS
This course is a study of music and movement activities and how these activities affect the child's growth and development. Observation of children is required. Students develop a resource file of songs and music which they can use for curriculum design and lesson plans. Eligibility for ENG 001A and REA 054

CHD 006 Supervision and Administration (3.0 Lecture) 3.0 UNITS
Prerequisite: CHD 001, CHD 002, and CHD 010. This course is an introduction to the administration procedures in early care and education programs. Topics include licensing requirements, administrative structures and governance, budgeting, program operation, and quality improvement techniques. This course fulfills the State of California licensing requirements.
and partially fulfills requirements for Program Director or Site Supervisor Permits.

CHD 007  Management Issues in Child Development Programs (3.0 Lecture)  3.0 UNITS
Prerequisite CHD 006 This course is an in-depth study of effective application of personnel management and leadership procedures in early childhood programs. Topics include the unique goals, roles and responsibilities of the director or supervisor of the children's center. The course includes staff/administrator relationships, staff development and in-service training, and it focuses on effective problem solving techniques, decision making models, meetings, performance appraisals, and assessment of individual leadership styles. This course fulfills requirements for the State of California licensing policies and procedures from Title 22. This course also fulfills the requirements for the Site Supervisor and Program Director Child Development Permit.

CHD 008A  Practicum A (1.5 Lecture/2.0 Lab)  3.5 UNITS
Prerequisite: CHD 001 and Prerequisite: CHD 002 and Prerequisite: CHD 010 and Prerequisite: CHD 015 and Prerequisite: CHD 026 This course gives students the opportunity to interact with children and demonstrate developmentally appropriate early childhood teaching competencies. Students work under the supervision of a practicum supervisor at the Mission College Child Development Center.

CHD 010  Principles and Practices in Education (3.0 Lecture)  3.0 UNITS
This course is an introductory survey of the field of education. Students explore problems and potentials of education in today's world. This course is designed for those who are considering a professional career in education.

CHD 013  Teaching in a Diverse Society (3.0 Lecture)  3.0 UNITS
Prerequisite CHD 001 and CHD 002 This course is an examination of the development of social identities and the theoretical and practical implications of oppression and privilege as they apply to young children, families, programs, classrooms and teaching. Various classroom strategies are explored emphasizing culturally and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. This course includes self-examination and reflection on issues to social identity, stereotypes and bias, social and educational access, media and schooling.

CHD 014  Art and Creative Development of Young Children (3.0 Lecture)  3.0 UNITS
Students examine theories of artistic development and learn how creativity affects the child's overall development. Students will design developmentally appropriate lesson plans focusing on creative expression. Observation of children will be required.

CHD 015  Observation and Assessment of Children (3.0 Lecture)  3.0 UNITS
Prerequisite: CHD 001 Prerequisite: CHD 002 This course focuses on the appropriate use of assessment and observation strategies to document development, growth, play and learning in order to joint with families and professionals in promoting children's success. Weekly observations are required.

CHD 016  Infant and Toddler Development (3.0 Lecture)  3.0 UNITS
Advisory: CHD 001 This course provides students with an in-depth study of the child from prenatal through the early childhood years. This course is an extension of CHD 001, Child Growth and Development, in the exploration of the development of the very young child. This course meets the Infant-Toddler state licensing requirement. Observation of children is required.

CHD 017  Child Health and Safety (3.0 Lecture)  3.0 UNITS
This course is designed to give students the skills needed to be able to identify children's health problems. The course is designed for persons working with children in early childhood environments. Included in the course is the study of infectious diseases, preventative health practices, nutrition and health promotion. The course meets State AB 962 requirements.

CHD 018  Parenting Issues for Teachers (1.0 Lecture)  1.0 UNIT
This course is designed to give the student the skills needed as teachers to effectively work with parents and diverse families of the children in their care.

CHD 020  The Child with Special Needs in the Community (3.0 Lecture)  3.0 UNITS
This course is designed for students who are considering a career or certificate in special education or who desire to work with children with special needs and their families. The course introduces atypical development, disabilities, laws and policies and the impact a child with disabilities has on families. Eligibility for ENGL 001A and READ 054 Advisory CHD 001 , Advisory CHD 002

CHD 021  Children and Play (3.0 Lecture)  3.0 UNITS
Students examine the history and theories of play and explore how developmental stages of play affect the child's overall growth. Students gain skills to analyze the child's development and to design lesson plans that include developmentally appropriate play experiences that further the child's growth. Observations of children's play are required. Eligibility for ENGL 001A and READ 054 Advisory CHD 001

CHD 022  Adult Supervision in Early Childhood Programs (2.0 Lecture)  2.0 UNITS
This course gives students the skills necessary to assess program and staff performance and supervise adults in early childhood settings. Students have opportunities to review program assessment models such as the National Association for the Education of Young Children (NAEYC) Accreditation self-study and to conduct self-assessments on leadership and communication styles. Career development strategies are also examined. This class partially fulfills the Site Supervisor or Program Director Permit requirements.

CHD 024  Positive Guidance in Early Childhood Programs: Managing Challenging Behaviors (3.0 Lecture)  3.0 UNITS
This course assists students in learning positive guidance techniques to support children who are having challenging behaviors in early childhood programs. The course includes genetic, environmental, and cultural factors that impact the behavior of young children and practical strategies for intervention and prevention.

CHD 025  Inclusion Strategies and Curriculum in Early Childhood Education (3.0 Lecture)  3.0 UNITS
This course focuses on the theories, research, and practical applications from the fields of both early childhood education and special education. This course assists students in designing effective curriculum and intervention strategies for children with disabilities who are being served in inclusive and natural environments. Advisory: CHD 001, CHD 002

CHD 026  Introduction to Curriculum (3.0 Lecture)  3.0 UNITS
Prerequisite: CHD 001 This course presents an overview of knowledge and skills related to providing appropriate curriculum and environments for young children from birth to age 8.

CHD 053  Contemporary Education in a Changing Society (3.0 Lecture)  3.0 UNITS
This course is designed for students who are considering a professional career in education. The course focuses on the history, theories, and approaches to education in a culturally and linguistically diverse student population. Students will participate in a Community Service Learning project at a school. Grade Only.

CHINESE (CHI)

CHI 001  First Semester Chinese (5.0 Lecture)  5.0 UNITS
This course is an introduction to the pronunciation and basic grammatical structures of the Mandarin Chinese language. Emphasis is on listening and speaking skills; however, reading and writing are introduced and practiced. Chinese culture is incorporated in the course content.

CHI 002  Second Semester Chinese (5.0 Lecture)  5.0 UNITS
Prerequisite: CHI 001 Chinese 002 is a continuation of Chinese 001 and is an elementary level course.
COMMUNITY HEALTH (CHL)

CHL 010 Community Health Problems (3.0 Lecture) 3.0 UNITS
Advisory: MAT 900. Introductory course giving overview of the field of community health with a focus on community health problems and issues facing consumers today. Grade Only.

CHEMISTRY (CHM)

CHM 001A General Chemistry (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHEM 002 or High School Chemistry with a “B” or better AND Prerequisite: MAT 000C or MAT 000CM or High School Algebra II or equivalent Chemistry 001A is the honors version of the first of a two-semester sequence in general inorganic chemistry designed for science majors and those seeking entry to medicine and other professional programs in the health sciences. Topics include atomic structure, theories of chemical bonding, nomenclature, stoichiometry, thermodynamics, gas laws, and the properties of solids, liquids, gases, and solutions. Students cannot get credit for both CHEM 001A and CHEM 001AH. Enrollment in the Honors Transfer Project is required.

CHM 001AH General Chemistry I - Honors (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHEM 002 or High School Chemistry with a “B” or better AND Prerequisite: MAT 000C or MAT 000CM or High School Algebra II or equivalent Chemistry 001AH is the honors version of the first of a two-semester sequence in general inorganic chemistry designed for science majors and those seeking entry to medicine and other professional programs in the health sciences. Topics include atomic structure, theories of chemical bonding, nomenclature, stoichiometry, thermodynamics, gas laws, and the properties of solids, liquids, gases, and solutions. Students cannot get credit for both CHEM 001A and CHEM 001AH. Enrollment in the Honors Transfer Project is required.

CHM 001B General Chemistry (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHEM 001A or CHEM 001AH. This course is a continuation of CHEM 001A (General Chemistry I) and is intended for majors in chemistry, biological sciences, engineering, and professional programs in medicine and pharmacy. Topics include chemical kinetics, chemical equilibrium, thermodynamics, electrochemistry, chemistry of the transition elements, and selected topics in nuclear chemistry.

CHM 001BH General Chemistry II - Honors (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHEM 001A or Prerequisite: CHEM 001AH This course is a continuation of CHEM 001A (General Chemistry I) and is intended for majors in chemistry, biological sciences, engineering, and professional programs in medicine and pharmacy. Topics include chemical kinetics, chemical equilibrium, thermodynamics, electrochemistry, chemistry of the transition elements, and selected topics in nuclear chemistry. Students cannot get credit for both CHEM 001B and CHEM 001BH. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

CHM 002 Introductory Chemistry (3.0 Lecture) 3.0 UNITS
Prerequisite: MAT 000C OR High School Algebra II, or equivalent. This is a preprofessional chemistry course designed for students planning a career in science-related fields and to prepare students for CHEM 001A.

CHM 002L Introductory Chemistry Laboratory (1.0 Lab) 1.0 UNIT
Corequisite: CHEM 002 or Prerequisite: CHEM 002 This course is a laboratory component to accompany CHM 002: Introductory Chemistry.

CHM 012A Organic Chemistry I (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHEM 001B or CHEM 001BH. This course is a study of the fundamentals of organic chemistry with emphasis on underlying concepts. It is recommended for chemistry majors, chemical engineering majors, and most biology majors, pre-pharmacy, pre-medical and pre-dental students.

CHM 012AH Organic Chemistry I - Honors (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHEM 001B or CHEM 001BH. This course is a study of the fundamentals of organic chemistry with emphasis on underlying concepts. It is recommended for chemistry majors, chemical engineering majors, and most biology majors, pre-pharmacy, pre-medical and pre-dental students. Students cannot get credit for both CHEM 012A and CHEM 012AH. Enrollment in the Honors Transfer Project is required.

CHM 012B Organic Chemistry II (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHM 012A or CHM 012AH. This course is the continuing study of the fundamentals of organic chemistry with emphasis on underlying concepts. It is recommended for chemistry majors, chemical engineering majors, and most biology majors, pre-pharmacy, pre-medical and pre-dental students.

CHM 012BH Organic Chemistry II - Honors (3.0 Lecture/2.0 Lab) 5.0 UNITS
Prerequisite: CHM 012A or CHM 012AH This honors course is the continuing study of the fundamentals of organic chemistry with emphasis on underlying concepts. It is recommended for chemistry majors, chemical engineering majors, and most biology majors, pre-pharmacy, pre-medical and pre-dental students. Students cannot get credit for both CHEM 012B and CHEM 012BH. Enrollment in the Honors Transfer Project is required.

CHM 030A Fundamentals of Chemistry (3.0 Lecture/1.0 Lab) 4.0 UNITS
Prerequisite: MAT 903 or High School Algebra I, or equivalent. OR Prerequisite: MAT 903M or any higher math Chemistry 030 is an introductory chemistry course designed for nursing and allied-health majors. Topics include dimensional analysis, inorganic nomenclature, atomic and molecular structure, bonding, chemical reactions, gas laws, solutions, acids-bases, oxidation-reduction, equilibrium and electrolyte systems. This course is not recommended for students majoring in biology or chemistry or for those seeking entry to professional programs in medicine or pharmacy.

CHM 060 Survey of General, Organic, and Biological Chemistry (3.0 Lecture/1.0 Lab) 4.0 UNITS
Prerequisite: MAT 903 or High School Algebra I, or equivalent. OR Prerequisite: MAT 903M or any higher math Chemistry 060 is a one-semester survey of General, Organic, and Biological Chemistry designed for students majoring in health sciences such as nursing or physical therapy.

COMPUTER INFORMATION SYSTEMS (CIS)

CIS 001 Introduction to Computer Science and Technology (3.0 Lecture/1.0 Lab) 4.0 UNITS
This course is an introduction to the concepts of computer science and information technology. It covers computer architecture, the Internet and networking, and basic programming and data manipulation. Students develop a practical, realistic understanding of computer science and information technology. This course is recommended for students in any major who want to learn about computers and programming.

CIS 007 Python Programming (3.0 Lecture/1.0 Lab) 4.0 UNITS
This is an introductory course in programming using Python. No prior programming experience required. Students learn to design, code, and execute programs using the Python programming language. This class covers basic programming concepts, object-oriented programming and GUI programming concepts and topics.

CIS 008 Advanced Python Programming (3.0 Lecture/1.0 Lab) 4.0 UNITS
This is an advanced course in Python programming that covers features of the language and its libraries. Students learn about parallel programming using threads and processes, network programming (client-side and server-side), database programming and persistence, text processing and regular expressions, and HTML and XML parsing.

CIS 033 Robotics and Embedded System (3.0 Lecture/1.0 Lab) 4.0 UNITS
Advisory: CIS 037A and CIS 039 This course is an introduction to microcontrollers and interfacing. It covers the basic hardware components such as LEDs, switches, motors and sensors needed to build a robot and introduces the components needed for the drone hardware. In addition it includes programming of the microcontroller.

CIS 037A Introduction to C Programming (3.0 Lecture/1.0 Lab) 4.0 UNITS
This course is an introduction to the concepts and methods of computer programming using C language. The course covers data types, expressions, control structures, functions, sequential files, arrays, pointers, strings, string library and ADTs. It also covers low level programming elements such as
CIS 039  Introduction to Computer Systems and Assembly Language (3.0 Lecture/1.0 Lab)  4.0 UNITS
Advisory: CIS 037 This course provides a solid introduction to computer systems and machine language programming. Students learn the inner working of computer systems, instruction sets, assembly language programming, and data representation. Students also learn how to understand the code that a compiler generates, the memory layout and hierarchy, and the details of linking and loading.

CIS 040  C++ Programming (3.0 Lecture/1.0 Lab)  4.0 UNITS
Advisory: CIS 037A This is an introductory course in programming using C++. Students learn to design, code, and execute programs using the C++ programming language. This class includes control structures, functions, object-oriented programming concepts and topics.

CIS 043  Software Development With Java Programming (3.0 Lecture/1.0 Lab)  4.0 UNITS
This course is an introduction to the concepts and methods of computer programming with an emphasis on OOP (Object-Oriented Programming), using Java programming language. This course also includes applets, GUI (graphical user interface), arrays lists, arrays, streams and exception handling.

CIS 044  Intro to Data Structures Using Java (3.0 Lecture/1.0 Lab)  4.0 UNITS
This course is an advanced course in Java Programming Language. It covers basic data structures such as stacks, lists, dynamic arrays, trees, and the algorithms of their implementation.

CIS 044A  Perl Programming  4.0 UNITS
Advisory: MATH 903 or MATH 903M, Eligibility for ENGL 001A and READ 053. This is an introductory course in Perl programming. This course includes instruction on the basic features of Perl scripting/programming. It covers regular expressions, operators, arrays, functions, file handlers, system interface and exception handling. Pass/No Pass Option.

CIS 045  Linux Essentials I (3.0 Lecture/1.0 Lab)  4.0 UNITS
This is an introductory course in the Linux operating system. Students learn the basics of Linux commands and utilities, including files, editors and scripting. This course covers the Unix Bash language scripting including variables, expressions, control structure, files, subroutines, and the ”awk” and ”sed” commands.

CIS 046  Linux Essentials II (Shell Programming) (2.5 Lecture/0.5 Lab)  3.0 UNITS
This course builds upon CIS 045, Linux Essentials I, to cover shell and scripting in depth. Students learn to program in Bourne Again Shell, including variables, expressions, control structure, files and subroutines. This course also includes networking, internet and Perl scripting.

CIS 047  Linux System Administration (3.0 Lecture/1.0 Lab)  4.0 UNITS
Advisory: CIS 045 This is a course in Linux system administration. Students learn hands-on skills for Linux administration, including system initialization, file system management, user and service administration and network configuration. It covers file systems, file sharing, mail server, LDAP, DNS, file wall, web server and network security.

CIS 048  Advanced Linux System Administration (2.0 Lecture/1.0 Lab)  3.0 UNITS
This is an advanced course in the Linux system administration series. Students learn to set-up and configure Linux based servers and networks. The course covers file systems, file sharing, mail server, LDAP, DNS, file wall, web server and network security.

CIS 051  Introduction to Data Analysis (3.0 Lecture/1.0 Lab)  4.0 UNITS
Advisory: CIS 007 This is an introductory course on data analysis. It provides a foundation for understanding data analysis principles, tools and applications. Topics include data loading and storage, data manipulation, data cleaning and preparation, data wrangling, plotting, visualization and analysis. Students will use Python programming language and Python libraries such as NumPy, Pandas, Matplotlib in the course.

CIS 055  Database Management Systems I (2.5 Lecture/0.5 Lab)  3.0 UNITS
Advisory: CIS 001 This course is the first of two courses that covers the current, classical database systems, database design, and architecture. Entity-relationship and enhanced entity models. Relational model, normalization techniques, emerging standard of SQL query language, XML, embedded, and dynamic SQL. Introduces students to widely used database systems such as Oracle, Microsoft SQL server, and MySQL. Students will work in groups to implement and design a commercial database application project.

CIS 056  Database Management Systems II (2.5 Lecture/0.5 Lab)  3.0 UNITS
Advisory: CIS 055 This course is the second of two courses that covers database management and SQL programming, stored procedures, functions, packages, and database triggers, relational database systems, object-oriented data model, database trends, web database topics, and use cases, introduction to interface languages. Students will work in groups to implement a commercial database application project.

CIS 060  Mobile Apps Programming - Iphone (3.0 Lecture/1.0 Lab)  4.0 UNITS
Advisory: CIS 043 or Advisory CIS 040 This course is an introduction to programming iPhone and iPad applications using an object-oriented paradigm. Students learn to develop simple to more advanced applications using Swift including Model-View-Control framework, graphical-user interface, classes, methods, and messages.

CIS 063  Mobile Apps Programming - Android (3.0 Lecture/1.0 Lab)  4.0 UNITS
This course is an introduction to programming applications for the Android operating system. Students learn to develop simple to more advanced applications using the latest Java technologies and the Android SDK.

CIS 064  Advanced Android Apps Development (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: CIS 063 This is an advanced course on Android application development that builds upon CIS 063, Mobile Apps Programming-Android. Topics include broadcast, services, custom views, widgets, SMS, and device hardware features.

CIS 082  Ruby and Ruby on Rails (3.0 Lecture/1.0 Lab)  4.0 UNITS
This is web programming course on agile web development using Ruby on Rails. It covers Ruby on Rails framework, Ruby programming language, Model-View-Controller (MVC) framework, site layouts, data models, authentication, validations, updates, user management and application deployment.

CIS 086  Web Development with PHP and MySQL (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory CA 097A and Advisory CIS 007 This is an introductory course on web server side programming using PHP and MySQL. This course includes basic PHP programming elements, mySQL database basics and how to create a database driven web application using PHP and mySQL.

CIS 088  Advanced Javascript for Web Developers (3.0 Lecture/1.0 Lab)  4.0 UNITS
This is an advanced course on JavaScript. It covers the following advanced topics: IIFEs, Regular expressions, JSON, XML, REST, HTML5 Canvas, jQuery, MVC, single page applications, Angular, client-server interaction, Node.js and Ajax.

COMPUTER INFORMATION TECHNOLOGY (CIT)

CIT 011  Introduction to Computer Hardware and Software (A+)(3.0 Lecture/1.0 Lab)  4.0 UNITS
Advisory: MAT 903 or High School Algebra I, or equivalent. This course covers the fundamentals of computer hardware and software and advanced concepts such as security, networking, mobile devices such as tablets and smartphones, client side virtualization, and the responsibilities of an IT professional. It helps students prepare for entry-level career opportunities in ICT and the CompTIA A+ certification. It also provides a learning pathway to Cisco CCNA. Hands-on lab activities are an essential element of the course. The Virtual Laptop and Virtual Desktop are stand-alone tools designed to supplement classroom learning and provide an interactive "hands-on" experience in learning environments with limited physical equipment.
The use of Packet Tracer supports alignment with the new CompTIA A+ certification objectives.

**CIT 012 Introduction to Networking (Network+) (3.0 Lecture/1.0 Lab) 4.0 UNITS**
This course introduces the fundamental building blocks that form the modern network, such as protocols, media, topologies and hardware. It then provides in-depth coverage of the most important concepts in contemporary networking, such as TCP/IP, Ethernet, wireless transmission, virtual networks, security and troubleshooting. This course helps students prepare for entry-level career opportunities in ICT and the CompTIA Network+ certification. It also provides a learning pathway to Cisco CCNA.

**CIT 016 CyberSecurity and Ethical Hacking (3.0 Lecture/1.0 Lab) 4.0 UNITS**
This course is an introduction to IT security and ethical hacking using the latest operating systems, security techniques, and wireless standards. It also covers the fundamentals of system security, network infrastructure, access control, assessments and audits, cryptography, and organizational security. Students gain hands-on experience with various ethical hacking methods and techniques.

**CIT 017 Cyber Security Essentials (3.0 Lecture/1.0 Lab) 4.0 UNITS**
The Cybersecurity Essentials course develops foundational understanding of cybersecurity and how it relates to information and network security. This course explores the importance of cybersecurity, data confidentiality, and best practices for using the internet and social media safely. This course introduces students to characteristics of cybercrime, security principles, technologies, and procedures to defend networks. Through interactive, multimedia content, lab activities, and multi-industry case studies, students build technical and professional skills to pursue careers in cybersecurity. Pass/No Pass Option.

**CIT 018 CCNA Cyber Security Operations (3.0 Lecture/1.0 Lab) 4.0 UNITS**
The CCNA Cybersecurity Operations course introduces the knowledge and skills needed for a Security Analyst working with a Security Operations Center team. It teaches core security skills needed for monitoring, detecting, investigating, analyzing, and responding to security events, thus protecting systems and organizations from cybersecurity risks, threats, and vulnerabilities. Pass/No Pass Option.

**CIT 021 Cisco Network Fundamentals (CISCO-1) (3.0 Lecture/1.0 Lab) 4.0 UNITS**
This course is the first of four courses leading to the CCNA designation. This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks.

**CIT 022 Routing and Switching Essentia (CISCO-2) (3.0 Lecture/1.0 Lab) 4.0 UNITS**
Prerequisite: CIT 021 This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality.

**CIT 023 Scaling Networks (CISCO-3) (3.0 Lecture/1.0 Lab) 4.0 UNITS**
Prerequisite: CIT 022 This course is the third of four courses leading to the Cisco Certified Network Associate Routing and Switching (CCNA Routing and Switching) designation. It describes the architecture, components, and operations of routers and switches in a larger and more complex network. Students learn how to configure routers and switches for advanced functionality.

**CIT 024 Connecting Networks (CISCO-4) (3.0 Lecture/1.0 Lab) 4.0 UNITS**
Prerequisite: CIT 023 This course is the fourth of four courses leading to the CCNA designation. This course discusses the WAN technologies and network services required in Enterprise networks.

**CIT 078 Microsoft Server Essentials 1 (3.0 Lecture/1.0 Lab) 4.0 UNITS**
Advisory: CIT 011 This course focuses primarily on the installation, storage, “compute features and functionality” and the “networking features and functionality” available in Windows Server 2016. It covers general installation tasks and considerations and the installation and configuration of Nano Server, in addition to the creation and management of images for deployment. It also covers DFS and BranchCache solutions, high performance network features and functionality, and implementation of software-defined networking (SDN) solutions, such as Hyper-V Network Virtualization (HNV) and Network Controller.

**COMMUNICATION STUDIES (COM)**

**COM 001 Public Speaking (3.0 Lecture) 3.0 UNITS**
This is a basic course in speech communication that emphasizes the fundamentals of informative and persuasive speaking presented extemporaneously. The theory and techniques that are stressed include: research, critical evaluation, reasoning, organization, style, and delivery; the role of the listener in oral communication; and understanding the audience-speaker relationship. Advisory: LIB 010 or LIB 010H.

**COM 001H Public Speaking - Honors (3.0 Lecture) 3.0 UNITS**
Advisory: LIB 010 or LIB 010H This honors course is an enhanced version of the traditional curriculum, emphasizing the fundamentals of informative and persuasive speaking with extemporaneous speaking style. The theory and techniques that are stressed include: research, critical evaluation, reasoning, organization, style, and delivery; the role of the listener in oral communication; and understanding the audience-speaker relationship. Students cannot receive credit for both COM 001 and COM 001H. Enrollment in the Honors Transfer Project is required.

**COM 004 Small Group Communication (3.0 Lecture) 3.0 UNITS**
This course is designed to provide students with theoretical and practical experiences into the interaction, information-sharing, decision-making and problem-solving processes of small groups. In addition, students will demonstrate effective oral communication skills in a variety of situations.

**COM 008 Interpersonal Communication (3.0 Lecture) 3.0 UNITS**
Students learn theory and skills to improve human communication in personal relationships and the workplace. Topics include effective listening, assertiveness, expressing feelings and ideas clearly, nonverbal communication, and conflict resolution.

**COM 012 Introduction to Intercultural Communication (3.0 Lecture) 3.0 UNITS**
Advisory: ENG 001A or ENG 001AX. This is an introductory course examining the effects of culture on interpersonal communication. Emphasis is given to the influence of culture upon the interpretation of the communication act and to the skills that improve intercultural communication.

**COM 015 Fundamentals of Communication 3.0 UNITS**
This course is designed for students who want to improve their communication skills. Emphasis is on presentational skills, group communication skills, employment interviewing, and interpersonal/intercultural communication in career settings. Grade Only.

**COM 019A Communication Activities (1.0 Lab) 1.0 UNIT**
In this course students may participate in one or more speech communication activities such as training to be a Teaching Assistant, competing in speech competitions, and facilitating ESL conversation groups. Students are required to meet one-on-one with the instructor regularly to conduct and assess activities. Eligibility for ENG 001A and REA 054.

**COM 019B Communication Activities 1.0 UNIT**
Students can participate in a variety of speech communication activities such as leading conversation groups for ESL students, intercollegiate competition in individual speaking events and debate, judging high school competition, and designing individual communication projects. Pass/No Pass Option.

**COM 019D Communication Activities 1.0 UNIT**
Students can participate in a variety of speech communication activities such as leading conversation groups for ESL students, intercollegiate competition in individual speaking events and debate, judging high school competition, and designing individual communication projects. Pass/No Pass Option.
Mission College Pathways

**COURSES**

**COM 020**  
Argumentation and Debate (3.0 Lecture)  
This is a basic course in rhetorical theory and practice. Students engage in argumentation and debate while learning the means of discovering and supporting intelligent decisions and adapting them to particular audiences. Attention is given to distinguishing fact from inference, presenting, analyzing and refuting propositions of fact, value, and policy; identifying and applying types and methods of reasoning; correct use and analysis of evidence, and the identification and analysis of fallacies.

**COM 020H**  
Argumentation and Debate - Honors (3.0 Lecture)  
This honors course provides an introduction to rhetorical theory and practice. Students engage in argumentation and debate while learning the means of discovering and supporting intelligent decisions and adapting them to particular audiences. Attention is given to distinguishing fact from inference, presenting, analyzing and refuting propositions of fact, value, and policy; identifying and applying types and methods of reasoning; correct use and analysis of evidence, and the identification and analysis of fallacies. Students cannot receive credit for both COM 020 and COM 020H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

**COM 022**  
Voice & Articulation  
Advisory: Eligibility for ENGL 001A. This course is designed for students who would benefit from skills improvement in voice and articulation, as needed in communication situations. This course may be repeated 1 time. Pass/No Pass Option.

**COU**

**COU 000A**  
Orientation to Mission College (0.5 Lecture)  
This course provides new students with basic information needed to attend college. It includes an orientation to Mission College programs and services, assessment information, registration procedures, an overview of general education requirements, and educational planning.

**COU 003**  
Strategies for Personal and Professional Growth  
This course will present students with practical and proven strategies for improving the skills necessary to be successful in college and in their personal lives. Students will explore and practice strategies to set clear goals, make wise choices, improve self management, enhance creative and critical thinking skills, and acquire skills for life-long learning. Credit/No Credit Option.

**COU 005**  
Strategies For Success (3.0 Lecture)  
This is a comprehensive course that integrates critical and creative thinking proficiency, personal growth and values, and academic study strategies. Emphasis is on the attainment of life-long success in academic, professional and personal development.

**COU 007**  
University Transfer Planning (1.0 Lecture)  
This course provides in-depth information and assistance with the transfer process to 4-year colleges/universities.

**COU 007H**  
University Transfer Planning - Honors (1.0 Lecture)  
This honors course provides in-depth information and assistance with the transfer process to 4-year colleges/universities. Students cannot get credit for both COUN 007 and COUN 007H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

**COU 012**  
Careers & Life Styles (3.0 Lecture)  
This course assists the student in examining the components of career choice. Students will explore personal interests, values, abilities and skills. Self-assessment instruments will be used to help identify career options. Decision-making strategies, resume writing, interviewing skills and job search techniques will be reviewed.

**COU 012A**  
Careers & Life Styles (1.0 Lecture)  
This course assists the student in examining the components of career choice. Students will explore personal interests, values, abilities and skills. Self-assessment instruments will be used to help identify career options.

**COU 012C**  
Careers and Life Styles (1.0 Lecture)  
Learn successful job search techniques. Learn to identify your skills and compare them to job requirements. Resume writing, interviewing and networking skills and job search marketing techniques are reviewed. Pass/No Pass Option.

**COU 017**  
Transfer Success and Life Transitions (3.0 Lecture)  
Through the context of transferring from a community college to a university, this course introduces students to appropriate life skills that can help them achieve greater success in their educational, personal, and professional lives. The course is designed specifically for students interested in successfully navigating the process of transferring to a college or university.

**COU 023**  
Becoming a Master Student-Athlete (2.0 Lecture)  
In this course student-athletes learn tools for success to be applied in the classroom and in their sport.

**COU 051A**  
Personal Growth-Increasing Self-Esteem And Reaching Goals (1.0 Lecture)  
This course will assist students in increasing an awareness of themselves and others, identifying strengths and weaknesses in potential for personal growth, and enhancing self-esteem. Topics to be addressed are assessing self-esteem, making and reaching goals, identifying fears and learning how to overcome them, clarifying values, and improving communication skills. Pass/No Pass Option.

**COU 055**  
Valuing Diversity (3.0 Lecture)  
This course addresses the complexities of interpersonal relationships within the diverse cultures and ethnic groups in our society. Students examine cultural perceptions, while exploring self-concepts, values, beliefs, communication styles, religion, gender, ageism, and lifestyles in order to promote respect for differences and develop a sense of community.

**COU 145B**  
Bridge to College (1.0 Lecture)  
This course is designed to assist students to successfully transition to college by providing basic orientation to college and information about study skills and techniques for college success.

**ECONOMICS (ECN)**

**ECN 001A**  
Principles of Macroeconomics (3.0 Lecture/1.0 Lab)  
Prerequisite: MAT 903 or High School Algebra I, or equivalent. Advisory: MAT 000C or High School Algebra II, or equivalent. This course is a general study of the U.S. economy, including national output, employment, price level, and fiscal and monetary policy. The course also includes an online lab component.

**ECN 001B**  
Principles of Microeconomics (3.0 Lecture/1.0 Lab)  
Advisory: MAT 000C or High School Algebra II, or equivalent. Prerequisite: MAT 903 or High School Algebra I, or equivalent. This course is a study of decision making by households, firms, and government in a market-oriented economy. This course includes an online lab component.

**ECN 006**  
The Global Economy (3.0 Lecture)  
This course is an examination of the basic principles of international economics and the relationships between nations and their economic policies. Topics to be covered include the pros and cons of economic globalization, the WTO and IMF, debt relief, outsourcing of jobs, multinational corporations and sweat shops, capital flows, and free trade versus fair trade.

**ENGINEERING (EGR)**

**EGR 010**  
Introduction to Engineering (3.0 Lecture/1.0 Lab)  
Advisory: MAT 903 or MAT 903M or High School Algebra I, or equivalent. This course exposes students to the field of engineering and the various
engrge engineering disciplines. The course presents the basic skills necessary to succeed as an engineering student. The nature of engineering work and the roles of engineers are explored. The Engineering Design Process is addressed through multiple team-based projects and engineering problem-solving topics. Communication skills for technical presentations and reports are developed through practical engineering scenarios. Guest speakers from local engineering firms and tours to local companies are included.

**ENG 001A** English Composition (3.0 Lecture) 3.0 UNITS
Prerequisite: ENG 905AC OR Prerequisite: ENG 908 OR Prerequisite: ESL 980 OR Prerequisite: completion of the Mission College Placement Assistance Tool prior to registration. This English Composition course emphasizes the writing of college level essays, research writing, argument, and analytical reading skills.

**ENG 001AX** English Composition with Additional Support (5.0 Lecture) 5.0 UNITS
Prerequisite: ESL 980 OR Prerequisite: ENG 908 OR Prerequisite: ENG 905AC OR Prerequisite: completion of the Mission College Placement Assistance Tool prior to registration. This course introduces the techniques of collegiate English composition with emphasis on clear, effective writing and analytical reading. Students will learn to think critically about their own writing and will receive extensive support throughout the writing process.

**ENG 001B** English Composition and Literature (3.0 Lecture) 3.0 UNITS
Prerequisite: ENG 001A or ENG 001AX This course continues emphasis on English composition skills with an introduction to techniques of reading and writing about literature and acquiring skills in analysis and interpretation.

**ENG 001C** Clear Thinking in Writing (3.0 Lecture) 3.0 UNITS
Prerequisite: ENG 001A or ENG 001AX This course continues an emphasis on English composition skills and enhancing critical thinking, particularly in the reading and writing of arguments. Course content includes analytical reading skills and methods of analysis, principles of logic, techniques of reasoning and style, and research skills. This course may be offered via distance learning.

**ENG 005A** English Literature Through 18th Century (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001A or ENG 001AX This course is a survey of English literature that begins with Anglo-Saxon writings and the epic "Beowulf" and extends through the works of the eighteenth century ending with the writings of Samuel Johnson.

**ENG 005B** English Literature From 19th Century to Present (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001AX or ENG 001A This course is a chronological survey of the second half of English literature, beginning with the Romantic Period of the nineteenth century and continuing to the present.

**ENG 006A** Survey of World Literature (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001A or ENG 001AX World Literature is the study of representative works of world literature from the seventeenth century to the present. The course emphasizes the literary and cultural significance of selected great works of Western and non-Western literary traditions, including women's, minority, and ethnic literature from around the world.

**ENG 007A** American Literature to 1865 (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001AX or ENG 001A This course covers major American writers and literary traditions through 1865. It begins with Native American works and ends with the work of Walt Whitman.

**ENG 007B** American Literature 1865 to Present (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001AX or ENG 001A This course covers major American writers and literary traditions from 1865 to the present.

**ENG 013** Chicana/o-Latina/o Literature (3.0 Lecture) 3.0 UNITS
This course provides an introduction to authors, topics, and movements in Chicana/o and Latina/o literature from the late 19th century to the present.

**ENG 015** Introduction to Film Analysis (3.0 Lecture) 3.0 UNITS
Critical analysis of film as a literary art form is covered in this course.

**ENG 043** Classical Mythology (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001A or ENG 001AX Classical Mythology is an examination of the major classical myths of Western heritage for an appreciation of their literary value and their influence on modern life and culture.

**ENG 048** Introduction to Shakespeare (3.0 Lecture) 3.0 UNITS
Advisory: ENG 001A or ENG 001AX Introduction to Shakespeare is a study of selected plays and sonnets. The course emphasizes detailed analysis of
representative tragic, comedic, romance, and history plays, as well as the cultural contexts, dramatic conventions, poetics, and critical theory relevant to understanding Shakespeare's works. The course also focuses on critical analysis of issues including, but not limited to, gender, sexuality, and race as they are represented in both source material and literary criticism.

**ENG 070 Creative Writing (3.0 Lecture) 3.0 UNITS**

Students learn and practice various strategies associated with these genres, read and workshop each other's writing, and read/analyze the work of professional writers. Other activities may include attending literary events, hearing visiting writers, and making book presentations.

**ENG 900 Writing Skills Lab (0.5 Lab) 0.5 UNITS**

English 900 is required for any student taking English 903 or 905. It is also advised for students wanting extra help in any English course. This course provides instruction designed to help students improve their writing by having them practice the steps of the writing process and apply writing strategies. Any student may enroll in the course. In order to receive credit, students must complete the required coursework. Pass/No Pass Only.

**ENG 905 English Fundamentals (3.0 Lecture) 3.0 UNITS**

Prerequisite: Completion of the Mission College Placement Assistance Tool prior to registration. Concentration is on the writing of basic expository paragraphs and essays.

**ENG 905AC Accelerated Essay Writing (6.0 Lecture) 6.0 UNITS**

Prerequisite: Completion of the Mission College Placement Assistance Tool prior to registration. Concentration is on the writing and revision process, academic essays and introduction to research skills. The course qualifies students for English 001A.

**ENG 908 Effective Writing (3.0 Lecture) 3.0 UNITS**

Prerequisite: Completion of the Mission College Placement Assistance Tool prior to registration. Concentration is on the writing process, academic essays, and introduction to research skills. This course prepares and qualifies students for English 001A.

**ESL (ESL)**

**ESL 910LC Foundations in Listening and Culture 3.0 UNITS**

Independent study course providing guidance and practice in basic listening, reading and writing skills in the English language. Aspects of American life are also featured. Pass/No Pass Option.

**ESL 930CC 3.0 UNITS**

Students develop and practice the oral and written skills in standard English necessary within the context of child care and parenting. Students practice listening, speaking, reading, and writing skills useful for communicating with and about children, including day-to-day care, health and safety. This course is intended for parents, grandparents, child care providers, preschool teachers, and students of Child Development who are non-native speakers of English.

**ESL 930EC ESL for Child Care Part I (3.0 Lecture) 3.0 UNITS**

Advisory: Qualifying score (at the ESL 930 level) on the ESL placement test. This high-beginning course develops oral and written communication skills in standard English within the context of child care and parenting. Students practice skills useful for communicating with and about children on topics including day-to-day care, health and safety.

**ESL 930GW High Beginning Grammar and Writing (3.0 Lecture/0.5 Lab) 3.5 UNITS**

Advisory: Concurrent enrollment in ESL 930RV and ESL 930LS is recommended. Prerequisite: A qualifying score on ESL placement test. Develops basic writing and grammar skills of standard written English.

**ESL 930LC High Beginning Language and Culture (3.0 Lecture) 3.0 UNITS**

Advisory: Appropriate placement by multiple measures. This is the first of a two course sequence designed to help the high-beginning student develop strategies for communicating in the English language. Although some strategies for speaking are included, the emphasis is on developing skills in listening, reading, vocabulary and writing. Topics of American culture are covered.

**ESL 930LS High Beginning Listening and Speaking (3.0 Lecture/0.5 Lab) 3.5 UNITS**

Advisory: Concurrent enrollment in ESL 930GW and ESL 930RV. Prerequisite: ESL 920 or a qualifying score on the ESL placement test. In this course students receive guidance and extensive practice in listening and speaking at the word, phrase, and sentence level. Listening focuses on comprehension of verbal instructions, of vocabulary in context, and of ideas in sentences, monologs, and dialogues. Speaking focuses on the clear pronunciation of common words and phrases and the development of basic English pronunciation patterns of stress and intonation. This course includes one and a half hours of laboratory weekly to facilitate skill development.

**ESL 930PL Basic Pronunciation and Listening (3.0 Lecture) 3.0 UNITS**

Prerequisite: a qualifying score in the ESL Placement Test Advisory: ESL 930LS This basic pronunciation course includes sound-spelling patterns, important vowel and consonant contrasts, syllables, word stress, and key intonation patterns.

**ESL 930RV High Beginning Reading and Vocabulary (3.0 Lecture/0.5 Lab) 3.5 UNITS**

Advisory: ESL 930GW and ESL 930LS Prerequisite: Qualifying score on ESL placement test or Prerequisite ESL 920. This course focuses on comprehension of simplified articles and stories in English. Students also increase their understanding of and ability to use high frequency vocabulary.

**ESL 940EC ESL for Child Care Part II (3.0 Lecture) 3.0 UNITS**

Advisory: ESL 930EC, ESL 930GW, ESL 930LS and ESL 930RV. This low-intermediate course develops oral and written English language skills useful for child care and parenting. Students practice skills to communicate with and about young children at different stages of development.

**ESL 940GW Low Intermediate Grammar and Writing (5.0 Lecture) 5.0 UNITS**

Advisory: Concurrent enrollment in ESL 940RV and ESL 940LS. Prerequisite: Qualifying score on the ESL Placement Exam. In this course, students continue the development of basic grammar and writing skills using level appropriate structures of standard written English.

**ESL 940LC Low Intermediate Language and Culture (3.0 Lecture) 3.0 UNITS**

Advisory: ESL 930LC or Appropriate placement by multiple measure.

**ESL 940LS Low Intermediate Listening and Speaking (3.0 Lecture/0.5 Lab) 3.5 UNITS**

Advisory: Concurrent enrollment in ESL 940GW and ESL 940RV. Prerequisite: ESL 930LS or a qualifying score on the ESL placement test. In this course, students practice oral instructions and questions, high-frequency vocabulary, conversations and short lectures. The course continues the development of basic English pronunciation of common words and phrases.

**ESL 940PL Low Intermediate Pronunciation and Listening (3.0 Lecture) 3.0 UNITS**

Prerequisite: Qualifying score on the ESL Placement Exam. Low-Intermediate level students receive guidance and extensive practice on the most important aspects of American English pronunciation. These include fundamental sound-spelling patterns, important vowel and consonant contrasts, syllables, word stress, and key intonation patterns.

**ESL 940RV Low Intermediate Reading and Vocabulary (3.0 Lecture) 3.0 UNITS**

Prerequisite: Qualifying score on the ESL Placement Exam. This course focuses on vocabulary development and comprehension of short readings.

**ESL 950EC ESL for Child Development: Introduction (3.0 Lecture) 3.0 UNITS**

Qualifying score (at the ESL 950 level) on the ESL placement test, or ESL 930EC and ESL 940EC. This intermediate course develops oral and written English language skills necessary to communicate about a child's development. Students practice skills to introduce, objectively describe, and reflect on children, their actions, and their interests.
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### HOSPITALITY MANAGEMENT (FDR)

| FDR 050A  | Introduction to the Hospitality Industry (3.0 Lecture) | 3.0 UNITS |
|           | This course is an overview of the Hospitality and Tourism Industry designed to prepare students for careers in hospitality management. Tours and guest lectures highlight this course. Information about the Hospitality Management Program is explained. Advisory: students should have basic arithmetic skills. |
| FDR 051   | Basic Food Preparation (2.0 Lecture/3.0 Lab) | 5.0 UNITS |
|           | Corequisite: FDR 051S. Advisory: INF 050. It is highly recommended that INF 050 be taken simultaneously with FDR 051. This is a lecture and laboratory course dealing with the fundamentals of food preparation. Students practice the basic principles of food preparation and prepare small quantities from standard recipes, and international cuisines are introduced. Materials Fee $200.00 |
| FDR 051S  | Introductory Catering Operations Lab (0.5 Lab) | 0.5 UNITS |
|           | Corequisite: FDR 051. This supplemental instruction class gives students hands-on practice in catering operations. It is a required corequisite to FDR 051: Basic Food Preparation. |
| FDR 052   | Quantity Foods Operation (1.0 Lecture/5.0 Lab) | 6.0 UNITS |
|           | Prerequisite: FDR 051 Prerequisite: FDR 055 Prerequisite: FDR 058 Prerequisite: FDR 075 Prerequisite: INF 050 Corequisite: FDR 052S Advisory: FDR 059 Students engage in and plan an actual cafeteria style lunch operation. |

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Action station preparation and catering operations are emphasized. Menu planning, purchasing, commercial kitchen organization, sanitation and safety, and cost accounting are reinforced. A chef’s uniform is required. Lab fee: $150.00. Registered students are responsible for logging on to Canvas and retrieving the posted information prior to the first day of class.

FDR 052S   Quantity Foods Lab (0.5 Lab)  0.5 UNITS
This course is a required supplement for students enrolled in FDR 052, Quantity Foods. Students must fulfill 24-30 hours working on department on-site and off-site banquet and catering events. Activities include, but are not limited to: client contact and communication, event planning, service and execution, breakdown and followup.

FDR 073S   Intermediate Cuisine Lab (0.5 Lab)  0.5 UNITS
Corequisite: FDR 072 This supplemental instruction class gives students hands-on practice in catering operations. It is a required corequisite for FDR 072: Intermediate Cuisine.

FDR 073   Fundamentals of Baking and Confectionery (1.0 Lecture/1.0 Lab)  2.0 UNITS
An introduction to baking & pastry work. A uniform is required.
FDR 106A Food Trucks: Starting a Mobile Food Business (2.0 Lecture) 2.0 UNITS
Food trucks are the single fastest growing sector of the restaurant industry. Discover how to develop your business, build your brand, and gain a loyal following.

FDR 106B Food Trucks: Mobile Food Operations (1.0 Lecture/0.5 Lab) 1.5 UNITS
Corequisite: INF 050 Prerequisite: FDR 106A This is a continuation of Food Truck Course FDR 106A. Students engage in an in-depth study of managing food truck operations. Students gain hands-on experience at planning, preparing for, and execution of actual food truck concession events. Students must be concurrently enrolled in or have completed Sanitation and Safety course INF 050. Students must also have completed FDR 106A with a passing grade. A chef’s uniform and a $100.00 fee is required.

FIRE TECH (FPT)

FPT 051 Fire Protection Organization (3.0 Lecture) 3.0 UNITS
Advisory: MAT 903 or High School Algebra I, or equivalent. This course provides a general introduction to the field of Fire Protection, including: career opportunities; philosophy and history of fire protection; the organization and function of fire protection services; and a basic introduction to the chemistry and physics of fire and fire control techniques, with an introduction to fireground hazards, strategy, and tactics.

FPT 052 Fire Behavior and Combustion (3.0 Lecture) 3.0 UNITS
Advisory: MAT 903 or High School Algebra I, or equivalent. Advisory: FPT 051 This course focuses on the theory and fundamentals of how and why fires start and spread, including an in-depth study of fire chemistry, fire behavior and physics, and fundamentals of fire control methods, including fire characteristics of materials and compounds and the use of extinguishing agents and fire control techniques.

FPT 053 Fire Protection Systems (3.0 Lecture) 3.0 UNITS
Advisory: FPT 051 or FPT 052 This course focuses on fire protection systems including: utilization of portable fire extinguishing equipment including inspection and maintenance procedures; fundamentals of design and operation of various types of sprinkler systems; fundamentals of design and operation of special hazard protection systems and associated fire detection and signaling systems; water supply requirements for standpipe, sprinkler and other fire protection systems.

FPT 054 Building Construction for Fire Protection (3.0 Lecture) 3.0 UNITS
Advisory MAT 903 or High School Algebra I, or equivalent. Advisory: FPT 051 This course provides instruction regarding the theory and fundamentals of building construction: laws, regulations and standards; the Uniform Building Code requirements for fire safety in buildings; classification of buildings by occupancy; elements of building construction and design; and fire protection requirements for buildings, special occupancy areas and open areas.

FPT 055 Fire Prevention Technology (3.0 Lecture) 3.0 UNITS
Advisory: FPT 051 This course provides instruction on the following: the organization and function of fire prevention; fire and life safety inspections; utilization of the Uniform Fire Code and related standards; surveying and mapping procedures; recognition of fire and life hazards; enforcing the solution of a fire hazard; public education aspects of fire prevention; and firefighters’ responsibility in determining the cause of fire.

FPT 056 Hazardous Materials Technology (3.0 Lecture) 3.0 UNITS
Advisory: FPT 051 and FPT 052 Advisory: MAT 903 or High School Algebra I, or equivalent This course provides an in-depth study of materials presenting special problems in firefighting operations, including the identification of hazardous materials and the handling procedures utilized for emergencies, and enables first responders to recognize a hazardous material incident and implement actions to protect themselves, the public, the environment and nearby property while responding in a defensive fashion. Students may obtain a First Responder Operations Certification from California Specialized Training Institute (CSTI) or State Fire Training. Additional costs will be assessed for certification.

FPT 057 Rescue Practices (2.0 Lecture/1.0 Lab) 3.0 UNITS
Advisory: FPT 051 This course is designed to prepare the student to evaluate basic rescue situations and establish a plan of action to safely eliminate the hazard and/or remove the victim(s) taking proper precautions for possible injuries.

FPT 060 Wildland Fire Suppression (1.5 Lecture/1.5 Lab) 3.0 UNITS
Advisory: FPT 051 This course focuses on the organizational skills necessary for Wildland Fire Suppression. The course is designed to provide the Student with the basic knowledge and skills needed prior to emergency response and preparation for the 2019 Firefighter 1 Requirement for Wildland Fire Suppression. Certifications to be announced and optional are; S190 Intro to Wildland Fire Behavior, and S130 Firefighter Training; additional costs will be assessed for certifications. The minimum safety equipment required for the field evolutions consists of an OSHA-approved helmet with chin strap # 44 impact goggles and leather gloves.

FPT 061 Fundamentals of Fire Suppression (1.5 Lecture/1.5 Lab) 3.0 UNITS
Advisory: FPT 051 This course provides instruction in: manipulative skill and technical training in the identification and operation of fire service tools and equipment; the tying and employment of fire service knots and hitches; identification, activation and employment of portable fire service extinguishers; donning and testing of protective breathing apparatus; basic hose evolutions; laying of multiple lines; operating hose lines above and below street level; fire service ladder evolutions; and basic salvage and overhaul techniques.

FPT 065 Emergency Medical Technician Theory (6.0 Lecture) 6.0 UNITS
Co-Requisite: FPT 065C and FPT 065L Prerequisite: HOC 002 or American Heart Association BLS for the Healthcare Provider or equivalent. This EMT training program is designed to prepare individuals to render pre-hospital basic life support at the scene of an emergency, during transport of the sick and injured, or during interfacility transfer within an organized EMS system. This course meets all the theory requirements for certification as an Emergency Medical Technician-I as specified in the regulations approved by the State of California Emergency Medical Services Authority in July 2017. Students must also successfully complete FPT 065L and FPT 065C concurrently with FPT 065 to be eligible for certification.

FPT 065C Emergency Medical Technician Clinical Experience (0.5 Lab) 0.5 UNITS
Co-Requisite: FPT 065 and FPT 065L Prerequisite: HOC 002 or American Heart Association BLS for the Healthcare Provider or equivalent. The purpose of this EMT training course is to prepare individuals to render pre-hospital basic life support at the scene of an emergency, during transport of the sick and injured, or during interfacility transfer within an organized EMS system. This course meets all the clinical requirements for certification as an Emergency Medical Technician as specified in the regulations approved by the State of California Emergency Medical Services Authority in July 2017. This course allows the student to experience “hands-on” skills while caring for patients under the supervision of a preceptor. The student needs to show proof of a current Tuberculosis (TB) skin test.

FPT 065L Emergency Medical Technician Laboratory (1.5 Lab) 1.5 UNITS
Co-Requisite: FPT 065 and FPT 065C Prerequisite: HOC 002 or American Heart Association BLS for the Healthcare Provider or equivalent. Advisory: MAT 903 or High School Algebra I, or equivalent. The purpose of this EMT training course is to prepare individuals to render pre-hospital basic life support at the scene of an emergency, during transport of the sick and injured, or during interfacility transfer within an organized EMS system. This course meets all the skills-laboratory requirements at the mandated instructor: student ratio of 1:10 for certification as an Emergency Medical Technician I as specified in the regulations approved by the State of California Emergency Medical Services Authority in July 2017. Students must successfully complete concurrently FPT 065 and FPT 065C to be eligible for certification.

FPT 110 Emergency Medical Technician (3.5 Lab) 3.5 UNITS
Prerequisite: Students must be registered through the South Bay Regional Public Safety Training Consortium; Prerequisite: Current First Aid or Medic First Aid card and Prerequisite: AHL 011 or current CPR card (either American Heart Association/BLS Healthcare Provider level, or American Red Cross/Professional Rescuer level) or Prerequisite: Current Emergency Medical Responder card (preferred) Advisory: AHL 003 or a solid understanding
of medical terminology. Advisory: BIO 022 or a solid understanding of human anatomy and physiology. This course provides instruction to the level of Emergency Medical Technician (previously called EMT-I or EMT Basic). Students acquire the knowledge and skills necessary to provide emergency medical care at a basic life support level with a fire, ambulance, or other specialized service.

**FPT 111  Fire Fighter I Academy (2.5 Lecture/7.0 Lab)** 9.5 UNITS
Prerequisite: Students must be part of the South Bay Regional Public Safety Training Consortium; Prerequisite: AHI 011 or Current CPR card (either American Heart Association/BLS Healthcare Provider level or American Red Cross/Professional Rescuer medical Clearance Form or Current Medical Responder card (preferred) and Prerequisite: HED 004 or current First Aid or Medic First Aid card This academy includes instruction on basic firefighting skills, laws and regulations affecting the fire service. The course provides the student with knowledge and skills to safely perform, under minimal supervision, essential and advanced fire ground tasks, basic rescue, basic fire prevention and fire investigation task and to use, inspect, and maintain firefighting and rescue equipment.

**FPT 112  Fire Continued Professional Training (2.5 Lab)** 2.5 UNITS
Prerequisite: Students must be part of the South Bay Regional Public Safety Training Consortium, and Prerequisite: FPT 110 or Proof of graduation from a California State Fire Academy This course provides training recommended by the California State Fire Marshall to keep students current with new equipment, policies, laws and skills needed to be prepared in the line of duty. It also provides the student with command awareness and the control techniques required to effectively manage a fire fighter emergency event should the situation occur.

**FPT 180  Emergency Medical Technician-I Refresher Course (2.0 Lecture)** 2.0 UNITS
Prerequisite: HOC 002 or American Heart Association BLS for the Healthcare Provider or equivalent. Advisory: MAT 903 or High School Algebra I, or equivalent. The purpose of this EMT Refresher Course is to review topics to prepare individuals to render prehospital basic life support at the scene of an emergency, during transport of the sick and injured, or during inter-facility transfer within an organized EMS system. This course meets all the refresher course requirements for recertification as an Emergency Medical Technician as specified in the regulations approved by the State of California Emergency Medical Services Authority in July 2017.

**FRENCH (FRN)**

**FRN 001  First Semester French (Elementary Level) (5.0 Lecture)** 5.0 UNITS
Corequisite FRNCH 001L. This course covers basic French grammar, structure, vocabulary and pronunciation in a cultural context.

**FRN 001L  French Laboratory (0.5 Lab)** 0.5 UNITS
Corequisite FRN 001 This self-paced lab course improves language skills, reinforces grammar, presents culture of French-speaking countries through computer programs, CDs, films, current publications, Internet research. This course is required for students enrolled in FRN 001 to further enhance class material, and may be also taken independently by students who are not enrolled in a foreign language course.

**FRN 002  Second Semester French (5.0 Lecture)** 5.0 UNITS
Prerequisite: FRN 001 OR Two years high-school French or equivalent with a grade of "C" or better. This class is a continuation of FRN 001 with further development of basic skills and structures. Students enrolled in FRN 002 must also enroll in the lab component, FRN 002L.

**FRN 002L  Second Semester French Laboratory (Elementary Level) (0.5 Lab)** 0.5 UNITS
Advisory FRN 001L. Advisory Concurrent enrollment in FRN 002 is advisable. This class is a continuation of FRN 001L with further development of basic skills and structure. Students enrolled in FRN 002 must also enroll in the lab component FRN 002L. FRN 002L may also be taken independently by students who are not enrolled in a foreign language course.

**FRN 003  Third Semester French (5.0 Lecture)** 5.0 UNITS
Prerequisite: FRN 002 or its equivalent or permission of instructor. French 003 is a continuation of French 002, emphasizing intensive oral and written skills.

**FRN 004  Fourth Semester French (5.0 Lecture)** 5.0 UNITS
Prerequisite: FRN 003 and/or its equivalent FRN 004 is a continuation of FRN 003 emphasizing written and oral skills in the cultural context.

**FRN 005  Fifth Semester French (Advanced Level) 5.0 UNITS**
Prerequisite: FRNCH 004 or its equivalent. FRNCH 005 is a continuation of FRNCH 004. This course continues the development of reading and writing proficiency. Pass/No Pass Option.

**FRN 006  Sixth Semester French (Advanced Level) 5.0 UNITS**
Prerequisite: FRNCH 005 or its equivalent. FRNCH 006 is a continuation of FRNCH 005. This course further develops reading and writing proficiency. Pass/No Pass Option.

**FRNCH 050A  Basic Conversational French and Culture 3.0 UNITS**
Beginning practical, conversation and culture. Pass/No Pass Option.

**FRNCH 050B  Basic Conversational French and Culture 3.0 UNITS**
Advisory: FRNCH 050A. Continuation of basic, practical conversation and culture. Pass/No Pass Option.

**FRNCH 051A  Conversational French and Culture 3.0 UNITS**
Advisory: FRNCH 050B. Intermediate conversation & culture -- reviews basic grammar, develops vocabulary & oral expression. Credit/No Credit Option.

**GRAPHIC DESIGN (GDS)**

**GDS 011  The History of Modern Design (3.0 Lecture)** 3.0 UNITS
This introductory survey course focuses on the history, perception and development of design during the Twentieth Century. The students will develop an understanding of the evolution and role of the Modern Movement and how it affects society. The students will also learn about the evaluation criteria of two-dimensional and three dimensional design while examining examples of architecture, industrial, graphic, fashion and interior design. The students will be introduced to influential Twentieth Century design figures and their work.

**GDS 012  History of Photography (3.0 Lecture)** 3.0 UNITS
This course surveys the history of photography from its origins to the present. Students examine the practice of photography as an art form and as a form of visual communication in historical, socio-political and cultural contexts.

**GDS 015  Photo-Media and Social Change (3.0 Lecture)** 3.0 UNITS
This course examines the impact of a wide range of new photographic genres on global social change. This includes analysis of the historical and social context of photojournalism, art photography, and internet multi-media and their influence on culture.

**GDS 035  Graphic Design I (2.0 Lecture/1.0 Lab)** 3.0 UNITS
In this introductory course, students learn about the practical, artistic, and technical sides of Graphic Design. Students also begin to gain the necessary critical thinking and technical skills required across the various professional careers within Graphic Design. Students are evaluated through a series of hands-on projects. Multiple software packages within Adobe Creative Cloud (CC) are explored.

**GDS 039A  3D Animation and Modeling (2.0 Lecture/1.0 Lab)** 3.0 UNITS
Advisory: GDS 064 This is an introductory course in learning to create 3D animation. Students learn creative techniques using 3D modeling and animation software, including modeling, rigging, texture mapping, lighting effects and animation. Students produce 3D animation projects. Students also analyze the historical and contemporary trends in computer animation films.

**GDS 041  Mobile Game Design and Development (2.0 Lecture/1.0 Lab)** 3.0 UNITS
This class focuses on creating mobile games using third party developer tools. Students learn how to design, program, test, and publish their mobile game to various mobile platforms.
GDS 043A  3D Game Character Animation with Maya (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: ART 031A, GDS 039A This is an introductory course in character animation using Maya to generate animation. Using pre-built 3D characters, students learn basic animation principles such as squash and stretch, and anticipation. Students learn the controls for 3D mesh characters, and generate walk cycles, run cycles, and action sequences. Students develop concepts for short movies for 3D characters in action sequences, and add lighting and textures to their scenes in making their animated movie shorts.

GDS 045  Web Design and Development 1 (2.0 Lecture/1.0 Lab)  3.0 UNITS
This introductory course focuses on the design and technical skills required to create effective web designs using HTML, CSS and a variety of software packages. The basic principles of type, color, and layout are explored, along with necessary basic coding skills. Emphasis is placed on using industry standard workflows and techniques to create compelling designs.

GDS 046  Web Design and Development 2 (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 045 This intermediate level course focuses both on the creative design and the appropriate software and coding skills required in web design and front end web development. This course provides an intermediate level content continuation of the GDS 045 course. Advanced design principles of type, color, illustration and layout are explored, along with intermediate to advanced HTML and CSS. There is also an introduction to Javascript and other relevant technologies. A basic understanding of computer system operation is required.

GDS 047  Web Animation (2.0 Lecture/1.0 Lab)  3.0 UNITS
This introductory course focuses on the skills required to create effective web animations using a variety of software applications. Principles of animation, visual communication, UI design, and web and mobile optimization are explored. A basic understanding of computer system operation is assumed. Eligibility for ENG 001A andREA 054 Advisory: GDS 045.

GDS 049  Wordpress and Content Management Systems (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: CAP 088A, GDS 046 In this advanced web design and development class, students use WordPress to build dynamic websites that can be updated easily. Students are also introduced to PHP & MySQL, theme customization, and other CMS frameworks.

GDS 051  Mobile Application and Web Development With Web Standards (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 045, GDS 046 This class focuses on using web technologies like HTML5 and CSS3 to create rich web applications as well as native mobile applications. Students learn to develop media using web standards. Current options for delivery methods on mobile devices are explored.

GDS 055A  Design Agency and Branding (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 035, GDES 062. In a real-world environment, this course is designed to increase the skills and abilities needed by students in the design industry, with an emphasis on creating brands and promoting brand awareness across all media, including interactive and print. The course includes project-based exploration of creative ideas in logo design, concept work, layout, package design, advertising, and more. The students, with active faculty involvement and supervision, work on real-world projects responding to design needs of clients.

GDS 056  Presentation Design (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: CAP 046D, CAP 046E This class focuses on the visual communication skills necessary to produce compelling presentations. Topic include color design, animation, interaction, storytelling, and advanced technical skills used in the production of assets for presentation. The class assumes an existing intermediate knowledge of Microsoft Powerpoint.

GDS 060  Page Layout (2.0 Lecture / 1.0 Lab)  3.0 UNITS
Advisory: GDS 035 This introductory level course in page layout and design uses Adobe InDesign software. Students assemble a variety of pieces such as booklets, brochures, magazines, newspapers, newsletters, and other communication materials. Emphasis is on learning techniques used by graphics professionals to create full-color pieces integrating text, photos, and illustrations.

GDS 062  Digital Illustration with Adobe Illustrator (2.0 Lecture/1.0 Lab)  3.0 UNITS
This is a beginning digital illustration course for graphic designers, illustrators and artists. Students learn how to create original illustrations and designs using Adobe Illustrator. Basic art principles are explored.

GDS 063  Typography (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 035 and GDS 060 This is a course for graphic designers on the study and demonstration of letterforms and typography. Practical design projects examine the interaction of form and message, with emphasis on fundamental theory, i.e., elements, principles, and attributes of typographical design. Students may create work for inclusion in a portfolio. This course requires both non-digital attention to hands-on craftsmanship and basic knowledge of Adobe CC software.

GDS 064  Introduction to Adobe Photoshop (2.0 Lecture/1.0 Lab)  3.0 UNITS
This is a beginning Adobe Photoshop course for graphic designers, artists, and photographers. Students learn how to create original artwork, refine photographs and manipulate digital imagery. Basic design principles are explored.

GDS 066  Advanced Adobe Illustrator (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 062 This advanced level course uses Adobe Illustrator software. Designed for the student who wishes to continue with techniques and methods beyond the GDES 062 beginning course, students produce a variety of sophisticated digital illustrations. Emphasis is on technique as well as methodologies for creating illustrations with a distinctive style.

GDS 067  Graphic Design II (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 035, GDS 060, GDS 063 This mid-level design course will develop the students' confidence and competence in form and concept for visual communication. Projects emphasize the creation of professional level pieces using industry standard techniques and best practices. This course assumes competency in Adobe Photoshop, Illustrator, and InDesign.

GDS 068  Portfolio Production Studio (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 062 and GDS 064 In this course students create original portfolio content necessary for graduation and for procuring employment. Students develop and showcase their individual design/illustration approach, demonstrated via intermediate to advanced-level creative projects. Visual communication principles, processes and methodology are explored in lecture and in lab. Previous experience with Adobe Photoshop and Adobe Illustrator is advised.

GDS 070  User Experience, Interface, and Multimedia Design (2.0 Lecture/1.0 Lab)  3.0 UNITS
In this course students are introduced to the fields of User Experience Design and Interface Design. Key topics covered in this course are interaction design, mobile and desktop interface design, information architecture, user research, as well as UX planning documents such as wireframes and personas. Students learn many of the principles, processes, and techniques used to develop effective user interfaces.

GDS 071  Intermediate Multimedia Design  3.0 UNITS
Advisory: ART 033A or ART 034A, and GDES 046, GDES 074, or GDES 075. This is an intermediate level course focusing on developing creative design skills that are required to conceptualize and model an interactive experience. The course will cover intermediate level principles of organizing information effectively and creating visually compelling interfaces. Principles involved in the production of interactive DVD's and CD-ROM's, video, web sites, and other media will be addressed. Pass/No Pass Option.

GDS 072  Digital Imaging and User Interface Design (2.0 Lecture/1.0 Lab)  3.0 UNITS
In this course, students apply design principles to the creation of digital product designs using industry standard software. Students design interfaces and other assets used in User Interface Design and User Experience Design. This course may be offered via distance learning. Pass/No Pass Option.

GDS 073  Digital Photography (2.0 Lecture/1.0 Lab)  3.0 UNITS
This introductory course focuses on photography as a creative medium. Emphasis is placed on aesthetics, composition, content and the technical and
creative design skills required to create effective digital images using digital cameras and a variety of software packages. Students also critically evaluate photographic images according to the principles of photographic theory. A basic understanding of Adobe Photoshop and computer system operation is required. Students must have access to a digital camera.

GDS 074  Digital Video Production With Final Cut Pro (2.0 Lecture/1.0 Lab)  3.0 UNITS
This introductory course focuses on video production and related hardware and software. The students develop an understanding of video production and post-production in a series of hands on exercises. Camera operation, video and audio production techniques, special effects, the basic principles of motion graphics, video editing and audio editing are explored. Access to a camera capable of recording video, and a basic understanding of computer system operation are required.

GDS 080  Packaging Design (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 035 This course introduces the student to the skills required to create effective packaging designs. The role of typography, color and the use of materials such as paper, plastics, and other materials are examined and design solutions created using both traditional and computer generated techniques. The variety of packaging styles available and the environmental implications of packaging are discussed.

GDS 081  Motion Graphics With After Effects (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 064, GDS 074 This course focuses on the preparation and production of motion graphics/visual effects for video, film and the internet. The student develops an understanding of the principles of type in motion, keyframe animation, masking/keying, tracking, color correction and compositing. The focus is on creative visual communication. The student develops skill in the use of After Effects, as well as other appropriate software. Access to a camera capable of recording video, and a basic understanding of Adobe Photoshop and computer system operation are recommended.

GDS 082  Game Design and Architecture (2.0 Lecture/1.0 Lab)  3.0 UNITS
This introductory course focuses on the planning and methodology of game design. The students will develop an understanding of conceptual game development process and, game architecture. The students will also examine and evaluate a number of case studies. A basic understanding of computer system operation is required.

GDS 085  Professional Portfolio and Design Career Preparation (2.0 Lecture/1.0 Lab)  2.0 UNITS
Advisory: ENG 001A Advisory: GDS 035, GDS 055A This capstone course focuses on assembling a professional portfolio, as well as preparing for work as a freelance designer. The course includes portfolio development using projects created in prior art and design classes, self-promotional and interviewing techniques, and the process of working as an independent contractor. The students also interact with professionals in the field of design across multiple disciplines.

GDS 089  Javascript I (2.0 Lecture/1.0 Lab)  3.0 UNITS
Advisory: GDS 045 This is an introductory course on using Javascript to develop applications for the web. Students learn to develop interactive web pages using Javascript. The course covers Javascript basics, arrays, objects, an introduction to DOM scripting and debugging. Intermediate topics include advanced objects, Web forms, events, DOM Scripting dynamic content, cookies and Web storage, and an introduction to advanced topics such as AJAX and JavaScript libraries.

GEOGRAPHY (GEO)

GEO 001  Introduction to Physical Geography (3.0 Lecture)  3.0 UNITS
This course examines the interactions among weather and climate, water resources, landforms, and living things. Human impact on all aspects of the physical environment and use of geospatial technology are explored.

GEO 002  Introduction to Cultural Geography (3.0 Lecture)  3.0 UNITS
People's relationship to the land; descriptions of the technologies and human endeavors of the world’s regions.

GEO 006  World Regional Geography (3.0 Lecture)  3.0 UNITS
World Regional Geography deals with the study of a particular group of world regions or realms as each compares with the rest of the world in terms of both physical and cultural landscapes. It uses the fundamental geographic concepts and themes to provide a framework for understanding development patterns around the world. Development is viewed from the perspective of the natural environment that provides the basis for development as well as the cultural, social, political, and the economic factors that vary from region to region.

HEALTH EDUCATION (HED)

HED 002  Health and Lifestyle (3.0 Lecture)  3.0 UNITS
Advisory: CAP 033A This course is designed to provide students with the learning experiences that will lead to a better understanding of the concept of a healthy lifestyle. Major topics covered in the class will be understanding behavior and change, relationships, cardiovascular health, fitness, nutrition and weight control, stress management, drug and alcohol abuse, reproductive issues, self-care and the use of the health care system.

HED 004  First Aid and CPR (0.5 Lecture)  0.5 UNITS
This course covers Adult/Child/Infant CPR/AED (automated external defibrillator) and first aid instruction and skills. A certificate of completion will be given. American Heart Association fee must be paid to Mission Cashier prior to first class meeting. Students' workbook (text) must be purchased and read before class.

HISTORY (HIS)

HIS 004A  History of Western Civilization (3.0 Lecture)  3.0 UNITS
Cultural contributions in western civilization from Mesopotamia & Egypt to European Renaissance.

HIS 004AH  History of Western Civilization - Honors (3.0 Lecture)  3.0 UNITS
This honors course covers the development of Western society and culture from prehistoric times to 1600. Students cannot get credit for both HIS 004A and HIS 004AH. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

HIS 004B  History of Western Civilization (3.0 Lecture)  3.0 UNITS
Study of political and cultural contributions in Western Civilization from 1500 to present.

HIS 004BH  History of Western Civilization - Honors (3.0 Lecture)  3.0 UNITS
This honors course covers the development of Western society and culture from 1600 to the present. Students cannot get credit for both HIS 004B and HIS 004BH. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

HIS 015  World History to 1500 (3.0 Lecture)  3.0 UNITS
This course is a survey of World Civilization from prehistoric times to 1500. Emphasis is on the major political, economic, social, cultural and intellectual movements that have molded world societies.

HIS 015H  World History to 1500 - Honors (3.0 Lecture)  3.0 UNITS
This honors course is a survey of World Civilization from prehistoric times to 1500. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

HIS 016  World History Since 1500 (3.0 Lecture)  3.0 UNITS
This course covers the development of world civilizations and cultures from 1500 to the present.
COURSES

HIS 016H World History Since 1500 - Honors (3.0 Lecture) 3.0 UNITS
This course covers the development of world civilizations and cultures from 1500 to the present. Students cannot get credit for both HIST 016 and HIST 016H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

HIS 017A History of the United States to 1877 (3.0 Lecture) 3.0 UNITS
This course covers the development of American government and culture from colonial through Civil War and Reconstruction periods.

HIS 017AH History of the United States to 1877 - Honors (3.0 Lecture) 3.0 UNITS
This course studies the development of American government and culture from colonial through Civil War and Reconstruction periods. HIST 017AH is more rigorous in the course work and research than HIST 017A. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

HIS 017B History of the United States Since 1877 (3.0 Lecture) 3.0 UNITS
This course covers the emergence of the United States as a world power in the late 19th and 20th centuries.

HIS 017BH History of the United States Since 1877 - Honors (3.0 Lecture) 3.0 UNITS
This honors course covers the emergence of the United States as a world power in the late 19th and 20th centuries. HIST 017BH is more rigorous in the coursework and research than 017B. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

HIS 020 History and Geography of California (3.0 Lecture) 3.0 UNITS
This course examines California's geographic regions, Native Americans of California, institutions of Spanish California, developments during Mexican and early American period, economic foundations of the state, political growth and institutions of American California, diversity in California history through the 20th Century, and state and local government.

HIS 031 History of East Asia (3.0 Lecture) 3.0 UNITS
This course is a survey of the history of China, Japan, Korea, Vietnam and related countries in East Asia with emphasis on the political, social, and economic development of these countries and their interaction with the West.

HIS 033 Women's Issues Past and Present (3.0 Lecture) 3.0 UNITS
This course is an introduction to the historical study of major women’s issues and movements from colonial times to the modern era.

HIS 033H Women's Issues Past and Present - Honors (3.0 Lecture) 3.0 UNITS
This honors course introduces students to the historical study of major women's issues and movements from colonial times to the modern era. Students cannot get credit for both HIST 033 and HIST 033H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

HMT 075 Housekeeping in Hotels, Motels and Institutions (3.0 Lecture) 3.0 UNITS
In a hotel, housekeeping is the largest department and is responsible for the delivery of the hotel's basic product, a clean room. A highly diverse workforce in this department necessitates skilled managers, according to hotel industry advisory board members. Standards today are such that managers whose ultimate goal is to achieve the executive position as general manager must have experience successfully managing the housekeeping department. This course provides students with fundamental principles for managing housekeeping operations. This is an elective course that is part of the Associate of Sciences Degree Foodservice/Restaurant Management, as well as the Hospitality Management transfer major.

HMT 076 Hotel and Motel Front Office Management (3.0 Lecture) 3.0 UNITS
This course is an introduction to the principles of effective front office management. Students examine the guest services role, reservations, registration, account settlement, the audit process and evaluate a hotel operation. Computer simulation provides a hands-on interactive learning experience.

HEALTH OCCUPATIONS (HOC)

HOC 001 Medical Terminology (3.0 Lecture) 3.0 UNITS
This course offers 14 modules over the semester, with the scheduled requirement that one module be completed each week. The modules introduce medical terminology related to medical specialties, diagnostic and therapeutic procedures, and an overview of each body system.

HOC 001A Health Occupations Bootcamp (2.0 Lecture) 2.0 UNITS
Advisory: Basic arithmetic skills This course is designed to prepare the potential Health Occupations student for entry into and successful completion of a Health Occupations program. The course content focuses on competencies expected upon entry, study skills, test-taking strategies, stress management, mathematics for dosage calculation, critical thinking, critical reasoning, and introduction to the nursing process.

HOC 002 Cardiopulmonary Resuscitation (0.5 Lecture) 0.5 UNITS
The course is designed to prepare the student to provide mouth-to-mouth rescue breathing and closed chest heart compression (Basic Life Support) to a victim of sudden death. This course is taught according to guidelines of the American Heart Association. AHA CPR/AED course completion cards are issued to students who successfully meet course objectives. The student is required to read the textbook “BLS for Healthcare Providers” prior to attending class.

HOC 003 Emergency Disaster Preparedness for Allied Health Professionals (0.5 Lecture) 0.5 UNITS
The course is designed to assist allied health workers in assessing and developing plans for emergency and disaster situations in the home, community agency or clinical setting. Note: The student must purchase and read the textbook prior to the start of the class.

HOC 004 First Aid and CPR (0.5 Lecture) 0.5 UNITS
The American Heart Association (HeartSavers) CPR/AED and First Aid course is a training program to prepare individuals to respond to life-threatening emergencies and to injuries and sudden illness that may arise in the workplace and in the community. This course covers CPR for adults, children and infants and the use of AEDs (automated external defibrillators), and has scenarios to facilitate discussion of appropriate care in first aid emergencies. Successful participants receive an American Heart Association Adult/Child/Infant CPR, AED and First-Aid certificate.

HOC 005 Introduction to Community Health Worker (3.0 Lecture) 3.0 UNITS
Learn the various roles, skills and function of Community Health Workers. This course introduces important core competencies for providing direct services, including, cultural humility, scope of practice, ethics, client-centered coaching, care management, and home visiting. Eligibility for ENGL 001A and READ 054 required to read the textbook prior to the start of the class.

HOC 006 Personal Health and Life Style (3.0 Lecture) 3.0 UNITS
This course is designed to provide students with learning experiences that will lead to a better understanding of the concept of a healthy lifestyle. Major topics covered in the class are: understanding the dynamics of behavior and change, relationships, cardiovascular health, fitness, nutrition and weight control, stress management, drug and alcohol abuse, reproductive issues, self-care and utilization of the health care system. Eligibility for ENGL 001A and READ 054 Advisory: CAP 033A

HOC 008 Community Health Problems (3.0 Lecture) 3.0 UNITS
This is an introductory community health course with a focus on community health issues, including chronic disease and substance abuse, and management strategies that address these problems. This course is required for students in the community health worker program and individuals...
working in residential care agencies. Advisory: student should have basic arithmetic skills.

HOC 010 Health Communication: Health Literacy, Health Coaching, and Motivational Interviewing (3.0 Lecture) 3.0 UNITS

Students will learn methods of communication in healthcare: health literacy, health coaching, group dynamics, and motivational interviewing. In addition, students will demonstrate an understanding of how one's culture affects health behavior and will develop a client-informed plan. Advisory: MAT 900

HOC 011 0.5 UNITS

The course is designed to prepare the student to provide mouth-to-mouth rescue breathing and closed chest heart compression (Basic Life Support) to a victim of sudden death. This course is taught according to guidelines of the American Heart Association. AHA CPR/AED course completion cards are issued to students who successfully complete course objectives. The student is required to read the textbook "BLS for Healthcare Providers" prior to attending class.

HOC 012 Community Health Worker Internship (1.0 Lecture / 2.0 Arranged Lab) 3.0 UNITS

Prerequisite: HOC 005 This internship course provides students with an opportunity to learn in a work setting while obtaining practical experience in community health work. Students will contract for a minimum of 100 hours at an internship placement and participate in a weekly seminar to discuss their fieldwork and apply academic theory to practice.

HOC 019A Nursing Assistant Fundamentals (3.5 Lecture/0.5 Lab) 4.0 UNITS

Co-Requisite: HOC 019B Advisory: HOC 004 This beginning course in nursing fundamentals gives the student a foundation in the basic scientific principles required to provide health care in a skilled nursing facility. Students who successfully complete this course, along with HOC 019B, are eligible to apply for the California Certified Nurse Assistant (CNA) exam.

HOC 019b Nursing Assistant Clinical Experience (2.0 Lecture) 2.0 UNITS

This clinical practicum provides the Nurse Assistant student with experience in the application of basic patient care skills in a skilled nursing facility. Students who successfully complete this course, along with HOC 019A, are eligible to apply for the examination National Nurses Aide Assessment Program (NNAAP) examination. Eligibility for ENG 001A and REA 054 Corequisite HOC 019A Students must pass the course with 75% or higher.

HOC 019f Home Health Aide Fundamentals (1.5 Lecture) 1.5 UNITS

This course introduces the Certified Nurse Assistant (CNA) to the basic concepts of home care nursing. Students learn entry-level skills for employment as a home health aide. Successful completion of this course along with HOC 019G provides eligibility for a California Home Health Aide (HHA) certificate.

HOC 019g Home Health Aide Clinical (0.5 Arranged Lab) 0.5 UNITS

Advisory: Students should have basic arithmetic skills. This clinical practicum provides the student with experience in basic nursing skills in a skilled nursing facility/home setting. Students who successfully complete this course along with HOC 019F are eligible to apply for the California Home Health Aide Certificate.

HOC 020 Introduction to Professional Health Care (0.5 Lecture) 0.5 UNITS

Advisory: HOC 001, HOC 001A, HOC 905 or Advisory: HOC 001, HOC 001A, MAT 903. This course helps acquaint incoming vocational nursing and psychiatric technician students with Mission College, available student services, and the Health Occupations career tracks. It covers college orientation and information regarding Health Occupations policies and procedures, study skills, assignments, time management, and career opportunities.

HOC 022 Patient Nursing Care Fundamentals (1.5 Lecture) 1.5 UNITS

Advisory: AHL 001A, ENG 001A, HOC 003, HOC 905, MAT 903 or High School Algebra I or equivalent. Corequisite: HOC 020, HOC 023A, HOC 023B, HOC 023C, HOC 024, HOC 025A, HOC 025B, HOC 026A, HOC 026B, HOC 027, HOC 028, PSY 001 or PSY 001H, PSY 012. This is a foundation course in which beginning Health Occupations students gain knowledge of fundamental principles and techniques necessary to provide basic nursing care to patients. Ethical and legal responsibilities of the vocational nurse and psychiatric technician are explored. Students utilize the nursing process and therapeutic communication while gaining competence in performing basic nursing procedures and skills, including administration of medications and enemas; performing physical assessments of body systems; collecting and ensuring integrity of diagnostic specimens; insertion of nasogastric tube; enteral feedings; airway suctioning; tracheostomy care; wound assessment and care, including application of dressings; as well as documentation of assessment findings, care provided and patient's responses.

HOC 023a Beg. Medical-Surgical Nursing Theory (2.5 Lecture) 2.5 UNITS

Corequisite: HOC 022, HOC 023B, HOC 023C, HOC 024, HOC 025A, HOC 025B, HOC 026A, HOC 026B, HOC 027, HOC 028, PSY 001 or PSY 001H, PSY 012. This course focuses on beginning level nursing care and interventions for patients with diseases or disorders of particular body systems. The nursing process is used as a critical thinking tool in understanding diagnostics, assessing manifestations experienced by the patient, identifying and implementing evidence-based nursing interventions, and evaluating outcomes. Students identify the roles of vocational nurses and psychiatric technicians in collaborating with other health team members and planning therapeutic management of patients with conditions affecting the musculoskeletal, neurological, neurosensory and reproductive systems. Includes six hours of related pharmacology content.

HOC 023b Beg. Cognitive Disabilities - Mental Health Theory (1.0 Lecture) 1.0 UNIT

Advisory: AHL 001A, HOC 001, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023C, HOC 024, HOC 025A, HOC 025B, HOC 026A, HOC 026B, HOC 027, PSY 001 or PSY 001H, PSY 012. This beginning course is designed to present theoretical concepts of mental health disorders, legal and ethical principles and their implications for the vocational nursing and psychiatric technician student to identify and understand therapeutic communication skills, psychopharmacological concepts and assessment skills in caring for persons with psychiatric disorders. Among these skills are objective and subjective observations and data collection through assessment of strengths and abnormalities in function and behavior across the lifespan. Includes two hours of related pharmacology content.

HOC 023c Beg. Cognitive Disabilities - Developmental Disability Theory (1.0 Lecture) 1.0 UNIT

Advisory: AHL 001A, HOC 001, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023B, HOC 024, HOC 025B, HOC 026B, HOC 027, PSY 012. This is a beginning course in which the causes of intellectual and development disorders are explored. Psychiatric Technician students learn to perform focused behavioral and functional assessments and plan behavior modification interventions for enhancing the quality of life within areas of interpersonal relations, social inclusion, physical well-being and personal development for clients with intelligence and developmental disorders. Includes two hours of related pharmacology content.

HOC 024 Pharmacology A (1.0 Lecture) 1.0 UNIT

Advisory: AHL 001A, HOC 001, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023B, HOC 023C, HOC 025A, HOC 025B, HOC 025C, HOC 025D, HOC 026A, HOC 026B, HOC 027, PSY 001 or PSY 001H, PSY 012. This beginning course in pharmacology presents the vocational nursing and psychiatric technician student with the basic principles of pharmacology. The emphasis is on defining pharmaceutical agents, the use of reference books, and the nursing implications in pharmacological therapy. The course covers the uses of pharmaceutical agents, precautions for use, side effects, medication interactions, contraindications, and patient teaching for safe and proper pharmaceutical agent use for patients with disorders of the musculoskeletal, neurological, neurosensory, and reproductive systems.

HOC 025A Fundamentals Skills/Simulation Lab (1.0 Lab) 1.0 UNIT

Advisory: AHL 001A, HOC 001, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023B, HOC 024, HOC 027, PSY 001 or PSY 001H. This course allows the beginning vocational nursing and psychiatric technician student with the basic principles of pharmacology. The course focuses on beginning level nursing care and interventions for patients with diseases or disorders of particular body systems. The nursing process is used as a critical thinking tool in understanding diagnostics, assessing manifestations experienced by the patient, identifying and implementing evidence-based nursing interventions, and evaluating outcomes. Students identify the roles of vocational nurses and psychiatric technicians in collaborating with other health team members and planning therapeutic management of patients with conditions affecting the musculoskeletal, neurological, neurosensory and reproductive systems. Includes six hours of related pharmacology content.
practice on manikins, return demonstration of skills and participation in simulated clinical scenarios aimed to meet the needs of the medical-surgical and geriatric patients with musculoskeletal, neurological, neurosensory, reproductive and mental health disorders in inpatient and outpatient settings.

**HOC 025B** Fundamentals Skills/Simulation Lab (1.0 Lab) 1.0 UNIT
Advisory: AHL 001A, HOC 001, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023B, HOC 023C, HOC 024, HOC 026B, HOC 027. This course allows the beginning psychiatric technician student the opportunity to integrate the concepts of the nursing process, clinical reasoning, nursing theory, and nursing skills in a laboratory setting which simulates the clinical experience. Focus is placed on developing competence in performing basic nursing procedures and skills through practice on manikins, return demonstration of skills and participation in simulated clinical scenarios aimed to meet the needs of the medical-surgical and geriatric patients with musculoskeletal, neurological, neurosensory, reproductive and mental health disorders in inpatient and outpatient settings.

**HOC 026A** Beg. Clinical Practicum (5.0 Lab) 5.0 UNITS
Advisory: AHL 001A, HOC 001, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023B, HOC 023C, HOC 024, HOC 025A, HOC 027, PSY 001 or PSY 001H. This is a foundation course which provides the Vocational Nursing student clinical experiences during which they integrate standards of professional practice, theoretic principles of nursing, therapeutic communication, nursing process and basic nursing skills during supervised care to patients with acute or chronic medical-surgical concerns or mental illnesses. Students spend approximately seventeen hours each week in community agencies.

**HOC 026B** Beg. Clinical Practicum (5.0 Lab) 5.0 UNITS
Advisory: AHL 001A, HOC 002, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023B, HOC 023C, HOC 024, HOC 025B, HOC 027, PSY 012. This is a foundation course which provides the beginning psychiatric technician student clinical experiences during which they integrate research-based standards of professional practice, theoretic principles of nursing science, therapeutic communication, nursing process and basic nursing skills during supervised care to patients/clients with acute or chronic medical-surgical concerns, intellectual, developmental and mental health disabilities and disorders throughout the lifespan. Students spend approximately seventeen hours each week in community health care agencies.

**HOC 027** Nursing Process and Communication (2.0 Lecture) 2.0 UNITS
Advisory: AHL 001A, HOC 001, HOC 905, MAT 903 or High School Algebra I, or equivalent. Corequisite: HOC 022, HOC 023A, HOC 023B, HOC 023C, HOC 024, HOC 025A, HOC 025B, HOC 026A, HOC 026B, PSY 001 or PSY 001H. This course is designed to provide the beginning health care practitioner with an introduction to the framework of nursing process and basic communication concepts. Both are essential to development of problem-solving and critical thinking abilities as well as the formation of trusting interpersonal relationships necessary to meet individualized needs of the client, family, and community. Vocational nursing and psychiatric technician students participate in activities designed to integrate therapeutic communication through each step of the nursing process that facilitates active engagement of the patient and family in health care management while supporting effective, collaborative teamwork among interdisciplinary healthcare members.

**HOC 028** Care of the Geriatric Patient (1.0 Lecture) 1.0 UNIT
This course is designed to give the vocational nursing student an introduction to the care of the older adult client in both an institutional and a community setting. This course is a required course that must be completed prior to students beginning the Health Occupations VN career track second semester. Non-Health Occupations students may enroll in this course as well. Grade Only. (CSU)

**HOC 032** Care of Obstetrical and Neonatal Patients (2.0 Lecture) 2.0 UNITS
Prerequisite: HOC 022; HOC 023A; HOC 023B; HOC 024; HOC 025A; HOC 026A; HOC 027; HOC 028; PSY 001; Corequisite: HOC 033A; HOC 033B; HOC 034; HOC 035A; HOC 035B; HOC 036A; NTR 015 or NTR 040. This course is designed for the student to focus on intermediate concepts in caring for child-bearing families. Concepts include family communications, teaching, the nursing process, critical thinking, legal-ethical issues, and the advocacy role within the VN scope of practice. Grade Only. (CSU)

**HOC 033A** Int. Medical/Surgical Nursing Theory (2.0 Lecture) 2.0 UNITS
This course focuses on intermediate level nursing care and interventions for clients with diseases or disorders of the cardiovascular, respiratory, and urinary systems. Grade Only. (CSU)

**HOC 033B** Int. Project-Based Medical/Surgical Reasoning (1.5 Lecture) 1.5 UNITS
This course is designed to provide practice for the intermediate level vocational nursing student with principal problem-solving and critical reasoning through a variety of group activities and projects related to patients with cardiac, vascular, respiratory, and genitourinary disorders. Grade Only. (CSU)

**HOC 033C** Int. Cognitive Disabilities - Mental Health Theory (2.5 Lecture) 2.5 UNITS
This intermediate continuation course is designed to integrate and apply previously learned concepts, present theoretical principles and current biological, psychosocial and socio-cultural concepts of abnormal and maladaptive behavior to psychiatric technician students. Students plan and evaluate therapeutic patient-centered goals and interventions used to establish the group process. Includes two hours of related pharmacology content. Grade Only. (CSU)

**HOC 033D** Int. Cognitive Disabilities - Devel. Disability Theory (2.5 Lecture) 2.5 UNITS
This intermediate continuation course is designed to present to the Psychiatric Technician student the opportunity to integrate healthcare concepts with the principles of behavioral modification to provide physical, intellectual and behavioral care for developmentally and intellectually disabled individuals. Grade Only. (CSU)

**HOC 034** Pharmacology B (1.0 Lecture) 1.0 UNIT
This intermediate continuation pharmacology course focuses on safe administration and patient teaching principles for patients with disorders of the cardiovascular and respiratory systems. Grade Only. (CSU)

**HOC 035A** Int. Nursing Skills/Simulation Lab (1.0 Lab) 1.0 UNIT
This course integrates intermediate nursing skills, theoretical concepts and clinical competence in a controlled laboratory setting using case studies, group care planning, simulation scenarios and class discussions. Simulated scenarios reinforce planning and implementing interventions aimed to meet the needs of the medical-surgical and geriatric patients with respiratory, cardiac, vascular, and urinary disorders, and obstetrical and neonatal patients in inpatient and outpatient settings.

**HOC 035B** Int. Skills/Simulation Lab (1.0 Lab) 1.0 UNIT
This course integrates intermediate psychiatric technician skills, theoretical concepts and clinical competence in a controlled laboratory setting using case studies, group care planning, simulation scenarios and class discussions. Simulated scenarios reinforce planning and implementing interventions aimed to meet the needs of patients with respiratory, cardiac, vascular, urinary, mental health disorders and developmental disabilities in inpatient and outpatient settings.

**HOC 036A** Int. Clinical Practicum (5.0 Lab) 5.0 UNITS
This is a clinical experience course in which intermediate vocational nursing students apply theoretical concepts, basic nursing skills, the nursing process and therapeutic communication to delivery of safe, quality healthcare to medical-surgical, obstetrical and newborn patients in a variety of community healthcare settings under direct supervision of the instructor.

**HOC 036B** Int. Clinical Practicum (5.0 Lab) 5.0 UNITS
This is a continuation clinical experiential course in which intermediate psychiatric technician students apply theoretical concepts, basic nursing skills, the nursing process and therapeutic communication to delivery of safe, quality healthcare to patients with medical-surgical, mental health and developmental disability disorders under direct supervision of the instructor.
### COURSES

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<td>Advanced Project-Based Medical Surgical Reasoning (1.5 Lecture)</td>
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<td>HOC 043C</td>
<td>Adv. Cognitive Disabilities - Mental Health Theory (2.5 Lecture)</td>
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<td>HOC 043D</td>
<td>Adv Cognitive Disab - Developmental Disab. Theory (2.5 Lecture)</td>
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<td>HOC 044</td>
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<td>HOC 045A</td>
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<td>HOC 046A</td>
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<td>HOC 047</td>
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<tr>
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<td>HOC 052</td>
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<td>HOC 053</td>
<td>Introduction to Clinical Judgment (1.0 Lab)</td>
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**Mission College Pathways**

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make decisions on setting priorities, delegation, quality improvement, legal parameters of nursing practice, and ethical issues confronting nursing today.

HOC 064 Advanced Clinical Practicum (5.0 Lab) 5.0 UNITS
Prerequisite: HOC 050 Students must pass the course with a grade of 75% or higher. Prerequisite: HOC 050A Prerequisite: HOC 051 Students must pass with a grade of 75% or higher. Prerequisite: HOC 053 Prerequisite: HOC 054 Corequisite: HOC 060 Students must pass the course with a grade of 75% or higher. Corequisite: HOC 061 Students must pass the course with a grade of 75% or higher. Corequisite: HOC 062 Students must pass the course with a grade of 75% or higher. Corequisite: HOC 063 This course provides the nursing student with directed clinical experiences in acute care hospitals and a variety of community healthcare agencies for maternal-child and pediatric patients/clients as well as for adult and geriatric patients/clients who have acute or chronic medical-surgical illnesses.

HUMANITIES (HUM)

HUM 007 International Films (3.0 Lecture) 3.0 UNITS
This course provides a critical look at the world and its problems through some of the finest international films. Films from Asia, Africa, Europe, South America and the United States will be viewed and analyzed to explore such topics as nationalism, sovereignty, war and peace, ethnic conflict, economics and immigration.

HUM 013 Creativity and Visual Communication 3.0 UNITS
This course will examine the concept of creativity and the way we construct visual messages. The effects of technology on visual communication, the use of the Web and new media techniques will be discussed. Pass/No Pass Option.

HUM 015 Introduction to Film Analysis (3.0 Lecture) 3.0 UNITS
Critical analysis of film as a literary art form. Eligibility for ENG 001A and REA 005

HUM 016A Hispanic Roots and Culture (3.0 Lecture) 3.0 UNITS
This course undertakes a study of Hispanic culture beginning with the native American and Spanish civilizations and continuing to the present. Pass/No Pass Option.

HUM 018 African-American Culture and Humanities (3.0 Lecture) 3.0 UNITS
An overview of the humanities through the culture and life experiences of African-Americans. Pass/No Pass Option.

HUM 018H African-American Culture and Humanities - Honors (3.0 Lecture) 3.0 UNITS
This honors course provides an overview of the humanities through the culture and life experiences of African-Americans. Students may not receive credit for both HUM 018 and HUM 018H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

COURSES
HUM 020 Asian Roots and Culture (3.0 Lecture) 3.0 UNITS
This course provides an introduction to the lands, people, languages and culture of Asia beginning with the earliest times and continuing to the present. Pass/No Pass Option.

HUM 022 Introduction to Islam (3.0 Lecture) 3.0 UNITS
This course provides an introduction to Islam as a religious system focusing on its origins, basic sources, history, culture and values. Pass/No Pass Option.

HUM 024 The Asian-American Experience (3.0 Lecture) 3.0 UNITS
Advisory: Eligibility for ENGL 001A and READ 054. The Asian-American Experience is a multi-disciplinary course that introduces students to the historical and contemporary experiences of different groups of Asian-Americans. Pass/No Pass Option.

HUM 030 Cultural Studies (3.0 Lecture) 3.0 UNITS
Through foreign travel, this course exposes students to the culture and daily life of people in different countries around the world. Students attend mandatory meetings on campus before trip departure.

(HVC)

HVC 111 HVAC Apprenticeship: Basic Refrigeration/Heritage/CFC/OSHA 10 (0.5 Lecture/2.5 Lab) 3.0 UNITS
First year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of Thermodynamics, Chloro-Fluoro Carbons (CFC), and basic Refrigeration, as it pertains to the Air Conditioning Service industry. Also provides OSHA 10 certification.

HVC 112 HVAC Apprenticeship: Refrigeration Science (1.5 Lecture/1.5 Lab) 3.0 UNITS
First year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of Basic Refrigeration, Refrigeration Equipment, and Equipment Maintenance.

HVC 113 HVAC Apprenticeship: Basic Electricity for The HVAC Service Trade (0.5 Lecture/2.5 Lab) 3.0 UNITS
Second year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of basic electricity, including AC/DC theory and Ohm’s Law. Students will be expected to apply these theories in the laboratory using electronic and testing instruments.

HVC 114 HVAC Apprenticeship: Advanced Electricity/Pneumatic DDC Introduction (0.5 Lecture/2.5 Lab) 3.0 UNITS
Second year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of Advanced Electricity, Motors, Starter, Circuitry, and Variable Drives.

HVC 115 HVAC Apprenticeship: Controls I/Electro Pneumatics (1.0 Lecture/2.0 Lab) 3.0 UNITS
Third year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of Controls, Control Theory, Timing Circuits, Computerized Control, and Energy Management Systems.

HVC 116 HVAC Apprenticeship: Controls II/Advanced Pneumatics Calibration/Hydronics (1.0 Lecture/2.0 Lab) 3.0 UNITS
Third year of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of advanced control systems, including the uses of 2-Position, Floating and Modulating Controls. Fiber Optics and Direct Digital Controls are introduced.

HVC 117 HVAC Apprenticeship: Start, Test & Balance I (1.5 Lecture/1.5 Lab) 3.0 UNITS
Fourth year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with an introduction to Start, Test and Balance for fluid distribution. Ducting, Cooling, Fans, and Air Distribution is covered in the laboratory exercises.

HVC 118 HVAC Apprenticeship: Start, Test & Balance II/Energy Auditing Practices (1.5 Lecture/1.5 Lab) 3.0 UNITS
Fourth year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of Start, Test and Balance for Piping Systems, Pumps, Chillers, Boilers, and Condensers. Students will learn how to audit mechanical equipment to ensure proper energy efficiency techniques are applied.

HVC 119 HVAC Apprenticeship: Chillers/Special Systems/ HVACR Star Review (1.0 Lecture/2.0 Lab) 3.0 UNITS
Fifth year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of pipe drafting and blueprint reading for Heating, Ventilation and Air Conditioning (HVAC) Systems. Hands-on activities include applying airside, waterside and pressure testing systems.

HVC 120 HVAC Apprenticeship: HVACR Junior Mechanics Review & Exam (1.0 Lecture/2.0 Lab) 3.0 UNITS
Fifth year course of the Refrigeration & Air Conditioning Apprenticeship program. This course provides students with a working knowledge of Troubleshooting, Test and Repair of Refrigeration and Air-Conditioning systems.

INSTITUTIONAL FOODS (INF)

INF 050 Sanitation and Safety (2.0 Lecture) 2.0 UNITS

INTERDISCIPLINARY STUDIES (INS)

INS 010 Peer Tutor and Mentor Training (1.5 Lecture) 1.5 UNITS
This course provides students with effective learning strategies and academic assistance techniques for peer tutoring and mentoring in a community college setting.

INS 015 Advanced Training for Peer Tutors and Mentors (1.5 Lecture) 1.5 UNITS
Advisory: INS 010 This is an advanced peer tutor and mentor training course. Topics include the roles and responsibilities of tutors and mentors, as well as specific strategies to help students reach their academic and personal goals.

INS 947 Supervised Tutoring (NONCREDIT) 0.0 UNITS
Corequisite: Enrollment in the course or courses (other than INS 947) at Mission College for which tutoring is sought. This 0 unit open entry/open exit course provides learning assistance in the form of tutoring. Students will be assigned to tutoring by an instructor or counselor based on an identified learning need. For more information, contact the Academic Support Center in room SEC-154.

INS 949 College Study Skills (1.0 Lecture) 1.0 UNIT
Advisory: ENG 905, REA 960. This course is designed to help students analyze their study skills needs and to help students learn and apply needed study skills techniques. Techniques and strategies to be explored may include time management, preparation for examinations, textbook study strategies, and using campus support systems effectively. Science, Math and Statistics disciplines require the interpretation of technical texts and the ability to clearly communicate these complex concepts to others verbally and in writing. In this course, there is a strong focus on helping Science and Math students to read academic texts for greater understanding. The emphasis is on metacognition and mastering and applying the skills needed in order to facilitate successful studying and independent learning.

INS 950 Academic Achievement 0.0 UNITS
Corequisite: Students must be enrolled in a Mission College or Community Education course. This open entry/open exit course is intended for students who need help with academic skills related to other courses they are taking at Mission College. Topics may include learning strategies, writing, reading, oral/aural skills, computational and logic skills for science and engineering, and/or study skills. Pass/No Pass Option.
Adapted Aerobics (1.0 Lab) 1.0 UNIT
This course is designed to introduce skills needed for daily cardiovascular fitness through the use of aerobic activities for students with verifiable disabilities.

INS 960 0.5 UNITS
Academic Strategies
This open entry/open exit course consists of individualized instruction. Students work regularly with an instructor to identify and practice a variety of academic skills. Students receive individualized assessment and a personalized curriculum to further skill-building in the following areas: learning strategies, writing, reading, oral/aural skills, computational and logic skills for science and engineering, and/or study skills. Students hold regular meetings with the instructor as well as complete lab hours in the learning assistance center. Pass/No Pass Option.

JPN 001 5.0 UNITS
First Semester Japanese
The student will learn the fundamentals of Japanese grammar, pronunciation, and two written syllabary systems, Hiragana and Katakana, and be able to converse on a limited scale on topics of everyday importance. The student will able to understand spoken and written (primarily Romanized) Japanese within the limits of the grammatical structures and vocabulary introduced in the course.

JPN 002 5.0 UNITS
Second Semester Japanese
Prerequisite: JPN 001 This course is a continuation of JPN 001 with further development of basic skills and structure.

KIN 001A 1.0 UNIT
Adapted Weight Training
This course is designed for students with verifiable disabilities. A personalized exercise plan (PEP) is developed to meet each student's needs. Focus is on increasing overall muscular strength and endurance based on each individual's ability.

KIN 001B 1.0 UNIT
Adapted Physical Education
This course will allow students with verifiable disabilities to focus on individual goals along with developing the five health related fitness components: muscular strength, muscular endurance, flexibility, cardiovascular endurance and body composition.

KIN 001C 1.0 UNIT
Adapted Aerobics
This course is designed to introduce skills needed for daily cardiovascular fitness through the use of aerobic activities for students with verifiable disabilities.

KIN 001D 1.0 UNIT
Adapted Tennis
This course is designed to introduce the basic fundamentals of tennis to students with verifiable disabilities. Emphasis is placed on basic strokes, footwork and serves.

KIN 001E 1.0 UNIT
Adapted Yoga
This class introduces students with verifiable disabilities to basic yoga poses. Emphasis is placed on asana/poses, postural alignment, breath awareness and relaxation in order to develop overall fitness and balance.

KIN 001G 1.0 UNIT
Adapted Badminton
This course is designed to introduce the basic fundamentals of badminton to students with verifiable disabilities. Emphasis is placed on basic strokes, footwork and serves.

KIN 001J 1.0 UNIT
Adapted Balance and Stability
This course is designed to introduce basic balance activities, and stability exercises for students with verifiable disabilities. Activities focus on enhancing energy levels and increasing confidence to perform daily activities.

KIN 014A 1.0 UNIT
Volleyball - Introduction
This course is designed to introduce students to the fundamental skills of volleyball. Players learn to serve, pass, set and employ the basic strategies of the game.

KIN 014B 1.0 UNIT
Volleyball - Beginning
Advisory: KIN 014A This course is designed to review the fundamental skills of volleyball and add hitting, blocking and tipping to the players' repertoire. Players work on improving the depth and accuracy of their shots while employing the strategies of the game.

KIN 014C 1.0 UNIT
Volleyball - Intermediate
Advisory: KIN 014B This course is designed to enhance the fundamental skills of volleyball and add jump-serving hitting, swing-blocking, setting, and tipping to the players' repertoire. Players work on fine tuning the depth and accuracy of their skills while employing specific strategies of the game.

KIN 014D 1.0 UNIT
Volleyball - Advanced
Advisory: KIN 014C This course is designed to enhance the fundamental skills of volleyball and add hitting, blocking and tipping techniques to the players' repertoire. Players work on improving the depth and accuracy of their skills while employing specific, advanced strategies of the game.

KIN 015A 1.0 UNIT
Basketball - Introduction
This course is designed to introduce the student to the basic skills and techniques of basketball.

KIN 015B 1.0 UNIT
Basketball - Beginning
Advisory: KIN 015A This course is designed to teach the basic skills and of basketball. Drills are utilized to increase playing ability while scrimmages are used to develop the concept of team play.

KIN 015C 1.0 UNIT
Basketball - Intermediate
Advisory: KIN 015B This course is designed to teach the intermediate skills of basketball. Drills are utilized to increase playing ability while scrimmages are used to develop the concept of team play.

KIN 015D 1.0 UNIT
Basketball - Advanced
Advisory: KIN 015C This course is designed to teach the advanced skills of basketball. Drills are utilized to increase playing ability while scrimmages are used to develop the concept of team play.

KIN 019A 1.0 UNIT
Soccer - Introduction
This course is designed to introduce the basic rules, skills, techniques and history of soccer. Drills are included to introduce the student to shooting, passing, trapping, and dribbling. Scrimmages are utilized to develop team play concepts.

KIN 019B 1.0 UNIT
Soccer - Beginning
Advisory: KIN 019A This course is designed to review the basic rules, skills, and techniques of soccer, as well as develop players' execution of the fundamental strategies of the game. Drills are included to enhance shooting, passing, heading and dribbling. Scrimmages are utilized to develop team play concepts.
**KIN 020A**  Badminton- Introduction (1.0 Lab)  1.0 UNIT
This course introduces the student to the fundamentals and strategies of the game of badminton. The main emphasis of this course is on basic skills, drills and the rules of badminton.

**KIN 020B**  Badminton: Beginning (1.0 Lab)  1.0 UNIT
Advisory: KIN 020A  This course continues the development of the fundamental skills and strategies of the game of badminton. The main emphasis of this course is on drills, finesse shots, shot placement, court position, and singles and doubles strategy.

**KIN 020C**  Badminton - Intermediate (1.0 Lab)  1.0 UNIT
Advisory: KIN 020B  This course introduces the student to the intermediate skills and strategies of the game of badminton. The main emphasis of this course is on drills, finesse shots, shot placement, court position, and singles and doubles strategy.

**KIN 020D**  Badminton - Advanced (1.0 Lab)  1.0 UNIT
Advisory: KIN 020C  This course introduces the student to the advanced skills and strategies of the game of badminton. The main emphasis of this course is on drills, finesse shots, shot placement, court position, and singles and doubles strategy.

**KIN 021A**  Tennis - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to teach the fundamentals of tennis to students. Mastery of these skills enables students to progress to the next level of tennis.

**KIN 021B**  Tennis - Beginning (1.0 Lab)  1.0 UNIT
Advisory: KIN 021A  This course is designed to improve the basic fundamentals of tennis. Repetition of these skills will enable the student to improve and progress to the next level. Singles and doubles strategies will become more evident as the player becomes more consistent.

**KIN 021C**  Tennis - Intermediate (1.0 Lab)  1.0 UNIT
Advisory: KIN 021B  This course is designed to develop skill and knowledge of the game of tennis at an intermediate level. Students will develop the use of spin and shot placement. Singles and doubles play are encouraged.

**KIN 021D**  Tennis - Advanced (1.0 Lab)  1.0 UNIT
Advisory: KIN 021C  This course provides the student with the opportunity for further mastery of specific tennis skills and strategies at an advanced level.

**KIN 021E**  Tennis - Tournament (2.0 Lab)  2.0 UNITS
Advisory: KIN 021D  This course is designed for the student who has played or desires to play tournament tennis. Advanced skills and strategy are reviewed and practiced to increase mastery for tournament play.

**KIN 021F**  Tennis - Doubles Strategies and Play (0.5 Lecture/1.0 Lab)  1.5 UNITS
Advisory: KIN 021C  Students are instructed in the basic skills of doubles for the sport of tennis. Rules of play, strategies, and skill development for doubles are emphasized.

**KIN 023A**  Archery: Introduction (1.0 Lab)  1.0 UNIT
This course is designed to introduce students to the sport of archery. Students learn about safety guidelines, choosing proper equipment, target shooting, scoring, etiquette, and the rules of archery.

**KIN 023B**  Archery: Beginning (1.0 Lab)  1.0 UNIT
Advisory: KIN 023A  This course is designed to refine the shooting skills of the beginning archery student. Emphasis is placed on shooting technique, form, and concentration. Safety guidelines, etiquette, and rules of archery are reviewed.

**KIN 024A**  Bowling - Introduction (1.0 Lecture/0.5 Lab)  1.5 UNITS
This class is designed to introduce the student to the basic techniques and theory of Bowling. Emphasis is on approach, delivery, timing, rules, and scoring.

**KIN 030A**  Pilates Matwork - Introduction (1.0 Lab)  1.0 UNIT
This course is an introduction to Joseph Pilates' Physicalmind Conditioning Method. The matwork provides the ideal physical fitness for the attainment and maintenance of a uniformly developed body and sound mind. The study of Pilates improves flexibility, strength and breathing techniques.

**KIN 030B**  Pilates Matwork - Beginning (1.0 Lab)  1.0 UNIT
Advisory: KIN 030A  This course is the study and practice of Joseph Pilates' Physicalmind Conditioning Method at a beginning level. Through the study of matwork, the student improves physical well-being including flexibility, strength and breathing techniques.

**KIN 030C**  Pilates Matwork - Intermediate (1.0 Lab)  1.0 UNIT
This course is the study and practice of Joseph Pilates' Physicalmind Conditioning Method at an intermediate level. Through the study of matwork, the student improves physical well-being including flexibility, strength and breathing techniques.

**KIN 030D**  Pilates Matwork - Advanced (1.0 Lab)  1.0 UNIT
This course is the study and practice of Joseph Pilates' Physicalmind Conditioning Method at an advanced level. Prior Pilates practice is strongly recommended.

**KIN 031A**  Step Aerobics - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to utilize the step as a means for improving cardiovascular fitness. A thorough warm-up and cool-down is included in each class. Knowledge of proper step technique as well as an understanding of ways to improve all aspects of fitness is also covered in this course.

**KIN 031B**  Step Aerobics - Beginning (1.0 Lab)  1.0 UNIT
This course is designed to build upon the skills learned in KIN 031A. Proper step technique, body alignment and basic choreography are taught.

**KIN 031C**  Step Aerobics - Intermediate (1.0 Lab)  1.0 UNIT
This course is designed to satisfy the needs for cardiovascular activity and to develop and maintain cardiovascular fitness through the use of continuous rhythmic movements and general overall exercise.

**KIN 032A**  Aerobics-Introduction (1.0 Lab)  1.0 UNIT
This is an intermediate level course designed to help students maintain cardiovascular fitness through the use of continuous rhythmic movements, weights, and various forms of stretching to complete their workouts.

**KIN 032B**  Aerobics- Beginning (1.0 Lab)  1.0 UNIT
This is a beginning level course designed to satisfy the needs for cardiovascular activity for individuals who are developing a fitness routine. Students maintain cardiovascular fitness through the use of continuous rhythmic movements, weights, and various forms of stretching to complete their workouts.

**KIN 032C**  Aerobics - Intermediate (1.0 Lab)  1.0 UNIT
This course introduces the student to kickboxing for aerobic fitness. Basic punches, kicks, and stances are taught. Techniques are taken from karate, tai chi and boxing as ways to improve cardiovascular fitness.

**KIN 033A**  Kickboxing Fitness- Introduction (1.0 Lab)  1.0 UNIT
Advisory: KIN 033A Students build upon the kickboxing movements learned in KIN 033A, with an emphasis on proper body alignment and a more advanced level of cardiovascular fitness. Techniques are from karate, tai chi and boxing as ways to improve overall fitness.

**KIN 033B**  Kickboxing Fitness - Beginning (1.0 Lab)  1.0 UNIT
This course advances students' kickboxing skills for aerobic fitness. Basic punches, kicks, and stances are taught. Techniques are taken from karate, tai chi and boxing as ways to improve cardiovascular fitness.

**KIN 033C**  Kickboxing Fitness-Intermediate (1.0 Lab)  1.0 UNIT
Advisory: KIN 033B  This course continues the student to kickboxing for aerobic fitness. Basic punches, kicks, and stances are taught. Techniques are from karate, tai chi and boxing as ways to improve cardiovascular fitness.

**KIN 035A**  Weight Training - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to enhance the development of muscular fitness and overall body tone. Information is presented to increase student understanding of various aspects of weight training from safety through proper lifting techniques.

**KIN 035B**  Weight Training - Beginning (1.0 Lab)  1.0 UNIT
This course is designed to enhance the development of muscular fitness. Information is presented to increase the student's understanding of various aspects of weight training from safety through proper lifting techniques.
KIN 035C  Weight Training - Intermediate (1.0 Lab)  1.0 UNIT
This course is designed for students at the intermediate level. Topics include advance training techniques such as pyramids and super sets.

KIN 037A  Cardio-Cross Training - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to enhance the student’s cardiovascular condition by providing a variety of methods of training at an introductory level.

KIN 037B  Cardio-Cross Training - Beginning (1.0 Lab)  1.0 UNIT
This course is designed to enhance the student’s cardiovascular condition by providing a variety of methods of training at the beginning level.

KIN 037C  Cardio-Cross Training - Intermediate (1.0 Lab)  1.0 UNIT
This course is designed to enhance the student’s cardiovascular condition by providing a variety of methods of training at an intermediate level.

KIN 037D  Cardio-Cross Training - Advanced (1.0 Lab)  1.0 UNIT
This course is designed to enhance the student’s cardiovascular condition by providing a variety of methods of training at an advanced level.

KIN 038A  Lower Body Conditioning Introduction (1.0 Lab)  1.0 UNIT
This course is designed to improve middle and lower extremity muscular strength, condition, and shape at the introductory level.

KIN 038B  Lower Body Conditioning Beginning (1.0 Lab)  1.0 UNIT
This course is designed to improve middle and lower extremity muscular strength, condition, and shape for the beginning level of lower body conditioning.

KIN 038C  Lower Body Conditioning Intermediate (1.0 Lab)  1.0 UNIT
This course is designed to improve middle and lower extremity muscular strength, condition, and shape at the intermediate level.

KIN 038D  Lower Body Conditioning Advanced (1.0 Lab)  1.0 UNIT
This course is designed to improve middle and lower extremity muscular strength, condition, and shape for the advanced level of lower body conditioning.

KIN 038E  Lower Body Conditioning - Endurance Training (1.0 Lab)  1.0 UNIT
This course is designed for the introductory, intercollegiate level of lower body conditioning. Students improve middle and lower extremity training through muscular strength and endurance training and cardiovascular conditioning.

KIN 038F  Lower Body Conditioning - Speed Training (1.0 Lab)  1.0 UNIT
Advisory: KIN 038E This course is designed to improve middle and lower extremity through speed training for the beginning intercollegiate level of lower body conditioning.

KIN 038G  Lower Body Conditioning - Agility Training (1.0 Lab)  1.0 UNIT
Advisory: KIN 038F This course is designed to improve core strength and lower extremity agility for lower body conditioning at the intermediate collegiate level.

KIN 038J  Lower Body Conditioning - Plyometric Training (1.0 Lab)  1.0 UNIT
Advisory: KIN 038G This course is designed to improve core and lower extremity strength through plyometric training and conditioning for the advanced intercollegiate level.

KIN 039A  Fire Agility - Introduction (2.0 Lab)  2.0 UNITS
This course introduces the student to the specific skills required to pass a physical agility firefighting test. The emphasis is on improving both cardiovascular and anaerobic endurance as well as muscle strength and endurance. Intense resistance training, anaerobic and cardiovascular workouts are employed. Non-Fire Technology students are also welcome.

KIN 039B  Fire Agility - Beginning (2.0 Lab)  2.0 UNITS
This course allows the student to build on the specific skills required to pass a physical agility firefighting test. Resistance training, plyometrics and cardiovascular workouts are employed. Non-Fire Technology students are also welcome.

KIN 039C  Fire Agility - Intermediate (2.0 Lab)  2.0 UNITS
This course allows the student to build on the specific skills required to successfully pass the CPAT and other physical agility firefighting test. Emphasis is on intermediate fitness training techniques. Non-Fire Technology students are also welcome.

KIN 039D  Fire Agility: Advanced (2.0 Lab)  2.0 UNITS
This course covers the advanced skills and techniques designed to enhance the overall fitness level of the Fire Technology student in order to prepare them to successfully complete the CPAT and other fire agencies physical agility tests. Building upon the skills learned in KIN 039A, 039B and KIN 039C, the emphasis is on advanced training methodologies. Advanced resistance training techniques, plyometric speed and agility training and cardiovascular workouts are utilized. Non-Fire Technology students are also welcome.

KIN 040A  Modern Dance - Introduction (1.0 Lab)  1.0 UNIT
This course is an introduction to the varied theories, styles, and techniques of the modern dance idiom.

KIN 040B  Modern Dance - Beginning (1.0 Lab)  1.0 UNIT
This course is the study and practice of the varied theories, styles, and techniques of the modern dance idiom at a beginning level.

KIN 040C  Modern Dance - Intermediate (1.0 Lab)  1.0 UNIT
This course is the study and practice of the varied theories, styles, and techniques of the modern dance idiom at an intermediate level.

KIN 041A  Ballet - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to introduce the student to the discipline, aesthetics, traditions, and historical background of classical ballet.

KIN 041B  Ballet - Beginning (1.0 Lab)  1.0 UNIT
This course is designed for beginning level dancers to practice the discipline of ballet including improving technique and performance skills. Historical background, traditions and etiquette are also covered.

KIN 041C  Ballet - Intermediate (1.0 Lab)  1.0 UNIT
This course is designed for intermediate level dancers to practice the discipline of ballet including improving technique, building strength, and developing higher level performance skills.

KIN 041D  Ballet - Advanced (1.0 Lab)  1.0 UNIT
This course is designed for advanced level dancers to practice the discipline of ballet including perfecting technique and developing advanced level performance skills.

KIN 042A  Jazz Dance - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to introduce the student to the varied theories, styles and techniques of the jazz dance idiom.

KIN 042B  Jazz Dance - Beginning (1.0 Lab)  1.0 UNIT
This course is designed for the beginning level student. Emphasis is placed on the varied theories, styles and techniques of the jazz dance idiom. Practice and performance opportunities are available at a beginning level.

KIN 042C  Jazz Dance - Intermediate (1.0 Lab)  1.0 UNIT
Advisory: KIN 042B This course is designed for the intermediate level student. Emphasis is placed on the varied theories, styles and techniques of the jazz dance idiom. Practice and performance opportunities are available at an intermediate level.

KIN 046A  Ballroom Dancing - Introduction (1.0 Lab)  1.0 UNIT
This course introduces students to various ballroom dances. Alignment and posture, etiquette, and spontaneous leading and following are emphasized.
KIN 046B  Ballroom Dancing - Beginning (1.0 Lab)  1.0 UNIT
This course covers the foundations of ballroom dance, including beginning level steps, positions of the body, and basics of styling for the various dances.

KIN 046C  Ballroom Dancing - Intermediate (1.0 Lab)  1.0 UNIT
This intermediate ballroom dance course covers various ballroom dances with an emphasis on technique, styling and performance skills that are specific to each dance.

KIN 046D  Ballroom Dancing - Advanced (1.0 Lab)  1.0 UNIT
This is an advanced level course covering various ballroom dances. Advanced techniques for styling and performance are emphasized.

KIN 047A  Hip Hop - Introduction (1.0 Lab)  1.0 UNIT
This course introduces students to the fundamentals of hip hop. Students will learn general patterns as well as the basics of creating their own style and routines. Information is presented describing the history and cultural development of hip hop as a dance form.

KIN 047B  Hip Hop - Beginning (1.0 Lab)  1.0 UNIT
This course is the study and practice of hip hop at a beginning level. Students learn general patterns as well as the basics of creating their own style and routines. Information is presented describing the history and cultural development of hip hop as a dance form.

KIN 047C  Hip Hop - Intermediate (1.0 Lab)  1.0 UNIT
This course is the study and practice of hip hop at an intermediate level. Students learn choreography as well as create their own style and routines.

KIN 047D  Hip Hop - Advanced (1.0 Lab)  1.0 UNIT
This course is the study and practice of hip hop at an advanced level. Students learn choreography as well as create their own style and routines.

KIN 048A  Latin Dance/Salsa - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to introduce the student to selected Latin and rhythm dances. There is an emphasis on alignment and posture, etiquette, and leading and following.

KIN 048B  Latin Dance/Salsa - Beginning (1.0 Lab)  1.0 UNIT
This is a beginning level course designed to practice selected Latin and rhythm dances. There is an emphasis on alignment and posture, etiquette, and leading and following.

KIN 050A  Tai Chi - Introduction (1.0 Lab)  1.0 UNIT
This course introduces the student to the fundamentals and health enhancing aspects of Tai Chi. Instruction covers the history and philosophy and emphasizes Tai Chi body movements and forms utilizing energy flow and stress reducing elements that are generated in the process.

KIN 050B  Tai Chi - Beginning (1.0 Lab)  1.0 UNIT
This course reviews the fundamentals and health enhancing aspects of Tai Chi. There is an introduction to Pushing Hands exercises and various Qi Gong exercises are included.

KIN 051A  Aikido - Introduction (1.0 Lab)  1.0 UNIT
This course introduces the student to the philosophy, principles and physical techniques of Aikido. Aikido is a non-violent martial art that emphasizes harmony and natural movements to resolve conflicts.

KIN 051B  Aikido - Beginning (1.0 Lab)  1.0 UNIT
This course reviews the philosophy, principles, and physical techniques of Aikido. The course emphasizes harmony and natural movements to resolve conflicts and integrate mind-body awareness. The principles of contraction and expansion and circular movement are explored in more detail.

KIN 051C  Aikido - Intermediate (1.0 Lab)  1.0 UNIT
This course reviews the philosophy, principles and physical techniques of Aikido.

KIN 053A  Karate - Introduction (1.0 Lab)  1.0 UNIT
This course introduces students to the Okinawan/Japanese martial art of Wado Ki Kai Karate. Emphasis is on blocks, strikes, kicking movements, traditional forms from the Taikyokyo and Pinan series, and self-defense.

KIN 053B  Karate - Beginning (1.0 Lab)  1.0 UNIT
This class reviews the fundamentals of the Okinawan/Japanese martial art of Wado Ki Kai Karate. Emphasis is on refinement of the student's blocks, strikes, kicking movements, the traditional forms from the Taikyokyo and Pinan series, and self-defense.

KIN 053C  Karate - Intermediate (1.0 Lab)  1.0 UNIT
This class reviews the fundamentals of the Okinawan/Japanese martial art of Wado Ki Kai Karate. Emphasis is on the refinement of the student's skills and the combining of techniques at an intermediate level.

KIN 055A  Self-Defense - Introduction (1.0 Lab)  1.0 UNIT
This course is designed to introduce the student to the fundamental skills, strategy, and tactics of self-defense. Emphasis is on refinement of skills and incorporates additional take downs and ground fighting tactics.

KIN 055B  Self Defense - Beginning (1.0 Lab)  1.0 UNIT
This course reviews the fundamental skills, strategy, and tactics of self-defense. Emphasis is on refinement of the student's blocks, strikes, kicking movements, the traditional forms from the Taikyokyo and Pinan series, and self-defense.

KIN 061A  Hatha Yoga - Introduction (1.0 Lab)  1.0 UNIT
This class provided the student with an introduction to basic Hatha yoga poses with an emphasis on form and body alignment. Strength, flexibility and balance is improved through the practice of the yoga poses. Relaxation and meditation techniques are also introduced.

KIN 061B  Hatha Yoga - Beginning (1.0 Lab)  1.0 UNIT
This class provides instruction and practice of yoga poses with an emphasis on form and body alignment. Strength, flexibility and balance are emphasized. Relaxation and meditation techniques are also incorporated into the practice of poses.

KIN 061C  Hatha Yoga - Intermediate (1.0 Lab)  1.0 UNIT
This class provides instruction in the physical practice of yoga at an intermediate level. Strength, flexibility and balance are emphasized within the physical practice. Breath control and meditation techniques are also incorporated.

KIN 061D  Hatha Yoga - Advanced (1.0 Lab)  1.0 UNIT
This class emphasizes the physical practice of yoga at an advanced level. A prior yoga practice is strongly encouraged. Relaxation and meditation techniques are also incorporated.

KIN 063A  Hiking - Introduction (1.0 Lab)  1.0 UNIT
This course introduces the student to basic hiking techniques as well as various hiking facilities in the local community. Every session includes a warm-up as well as a cool-down after a vigorous hike.

KIN 063B  Hiking - Beginning (1.0 Lab)  1.0 UNIT
This course reviews basic hiking techniques and safety precautions, and introduces students to the challenges of moderate level hiking facilities in the local community. Proper warm-up and cool-down specifically related to hiking are covered.

KIN 063C  Walk / Jog for Fitness - Introduction (1.0 Lab)  1.0 UNIT
This course introduces the student to elementary walking and jogging. Students improve aerobic and muscular fitness. Proper warm-up, stretching, and cool down are introduced. Fitness goals are established and monitored throughout the course.

KIN 063D  Walking / Jogging for Fitness - Beginner (1.0 Lab)  1.0 UNIT
This course introduces the student to beginning walking and jogging. Students learn to understand and identify the stress process and how it relates to personal health and exercise. The relationship between stress reduction and exercise is discussed. Exercise routines and intervention strategies and techniques are developed and practiced during this course to help students effectively deal with stress.
**KIN 070** Weight Training Practicum I (1.0 Lab) 1.0 UNITS
This course is one of the requirements for the fitness specialist certificate program and provides students with an opportunity to serve as an intern in a weight training class presently offered at the college. Each intern serves as an aide to the instructor of the class to acquire the skills and confidence needed to be a personal trainer.

**KIN 071** Sports Injuries (1.5 Lecture) 1.5 UNITS
This course is designed specifically for the fitness specialist or enthusiast who wants a basic understanding of the prevention and care of athletic injuries. Emphasis is on injury related injuries as well as preventative steps recommended to avoid injuries. Basic awareness of the needs of special populations is also discussed.

**KIN 072** Sports Nutrition (1.5 Lecture) 1.5 UNITS
Advisory: KIN 077 This course is designed specifically for the fitness specialist or enthusiast who wants a basic understanding of nutritional principles as they relate to exercise and sports. Emphasis is placed on understanding the role of nutrients in physical performance.

**KIN 073** Fitness Testing (0.5 Lecture/1.0 Lab) 1.5 UNITS
Advisory: KIN 074 This course is designed specifically for the fitness specialist or enthusiast and covers how to administer fitness tests to evaluate a person’s physical fitness.

**KIN 074** Anatomy and Kinesiology (1.5 Lecture) 1.5 UNITS
This course is designed for the fitness specialist or enthusiast who wants to learn about the major muscles of the body and their movements. Students are taught how to analyze any activity and identify movement patterns, as well as the muscle groups responsible for those movements.

**KIN 075** Body Alignment and Stretching Techniques (0.5 Lecture/1.0 Lab) 1.5 UNITS
Advisory: KIN 074 This course is designed for the fitness specialist or enthusiast. Topics covered in class include correct posture and alignment, postural deviations, stretching techniques, and routines for various sports and activities.

**KIN 076** Weight Training Principles and Routines (0.5 Lecture/1.0 Lab) 1.5 UNITS
Advisory: KIN 074 This course is designed specifically for the fitness specialist or enthusiast who wants a more detailed and complete understanding of all aspects of weight training and how to develop specific programs to enhance muscle strength, endurance and definition.

**KIN 077** Exercise Physiology (1.5 Lecture) 1.5 UNITS
Advisory: KIN 074 This course is designed for the fitness specialist or enthusiast who wants a more complete understanding of how the body responds and adapts physiologically to exercise.

**KIN 078** Introduction to Kinesiology (3.0 Lecture) 3.0 UNITS
This course is an introduction to the interdisciplinary approach to the study of human movement. An overview of the importance of the sub-disciplines in physical education and kinesiology (motor learning/control, motor development, biomechanics, exercise physiology, social psychological foundations, and sport nutrition) will be discussed along with career opportunities in the areas of teaching, coaching, allied health, and fitness professions. This course is approved for Distance Education.

**KIN 079** Lifetime Fitness (3.0 Lecture) 3.0 UNITS
This course serves as an introduction to fitness, wellness and lifestyle management. Topics covered include: theories of health and fitness, nutrition, weight management, and behavioral changes that promote a healthy lifestyle. Students participate in activities consisting of a variety of fitness tests and measurements to evaluate their fitness level and set goals related to their own personal development.

**KIN 080** Dance Appreciation (3.0 Lecture) 3.0 UNITS
This course is a study of the function of dance as art and ritual, social activity, spectacle, and entertainment through a survey of major dance works and artists from 19th century to present. It includes cultural contexts as well as styles and forms used in dance such as folk, ethnic, social, square, tap, jazz, modern and ballet.

**KIN 083** Volleyball - Intercollegiate Training (2.0 Lab) 2.0 UNITS
Advisory: Basic knowledge and practice of volleyball is strongly encouraged. Advisory: KIN 014A. This course is designed to develop a highly conditioned body for strength, flexibility, and endurance for the competing Women's varsity volleyball player.

**KIN 084** Intercollegiate Volleyball (3.0 Lab) 3.0 UNITS
This course is intercollegiate volleyball competition for women. Team strategies and skill development are emphasized. Demonstrated subject/skill proficiency and consent of the coach is required.

**KIN 085** Intercollegiate Badminton (3.0 Lab) 3.0 UNITS
Advisory: KIN 098 This course is designed to provide an opportunity for students with advanced badminton skills to participate in and learn an activity geared to their level of ability.

**KIN 086** Intercollegiate Basketball (3.0 Lab) 3.0 UNITS
This course is designed to allow the student the opportunity to play intercollegiate basketball. Aspects covered include skill development, teamwork, and team strategies. Skill and ability should be commensurate with this level of competition.

**KIN 087** Intercollegiate Soccer (3.0 Lab) 2.0 UNITS
This course is intercollegiate soccer competition for women. Team strategies and skill development are emphasized. This course requires demonstrated subject/skill proficiency and consent of the coach.

**KIN 088** Intercollegiate Softball (3.0 Lab) 3.0 UNITS
This course is intercollegiate softball competition for women. Team strategies and skill development are emphasized. This course requires demonstrated subject/skill proficiency and consent of the coach.

**KIN 089** Intercollegiate Tennis - Women (3.0 Lab) 3.0 UNITS
This course is designed for students interested in intercollegiate tennis competition. Practice consists of both mental and physical training.

**KIN 090** Intercollegiate Baseball (3.0 Lab) 3.0 UNITS
This course is intercollegiate baseball competition for men. Team strategies and skill development are emphasized. Demonstrated subject/skill proficiency and consent of the coach is required.

**KIN 091** Intercollegiate Soccer (2.0 Lab) 2.0 UNITS
This course is intercollegiate soccer competition for men. Team strategies and skill development are emphasized. Demonstrated subject/skill proficiency and consent of the coach is required.

**KIN 092** Intercollegiate Tennis-Men (3.0 Lab) 3.0 UNITS
Advisory: KIN 094 This course is designed for male students interested in competing for an intercollegiate tennis team.

**KIN 093** Softball - Intercollegiate Training (2.0 Lab) 2.0 UNITS
Advisory: Recommended High School or travel softball experience. This course provides the student with the opportunity to master the specific individual skills, team techniques and strategies of softball.

**KIN 094** Tennis - Intercollegiate Training (2.0 Lab) 2.0 UNITS
Advisory: Recommended High School or Tournament experience. This course is designed to develop a highly conditioned body for strength, flexibility, and endurance for the competing varsity tennis player.

**KIN 095** Soccer - Intercollegiate Training (2.0 Lab) 2.0 UNITS
This course is designed to enhance the skills and abilities of students involved competitively in the game of soccer. Extensive soccer conditioning is stressed including strength training and speed conditioning. Skill development is covered in class.

**KIN 096** Basketball - Intercollegiate Training (2.0 Lab) 2.0 UNITS
Advisory Recommended High School or travel ball experience. This class is designed for experienced basketball players who wish to learn advanced
strategies of the game. Techniques such as full court press, press breakers, fast break, defensive schemes, and player to player and zone offenses are covered.

**LR 940  Learning Strategies for Basic Writing Skills (3.0 Lecture)  3.0 UNITS**
This course is an introductory course stressing learning strategies for students with disabilities. Pass/No Pass Option.

**LR 942A  Learning Services Math Strategies (3.0 Lecture)  3.0 UNITS**
This course is an introduction to mathematics strategies for students who have had difficulty mastering the basic concepts of mathematics, such as fractions, variables, and simple equations. Pass/No Pass Option.

**LR 942B  Learning Services Math Strategies (3.0 Lecture)  3.0 UNITS**
This course is the second of a two-course sequence covering mathematics strategies for students with who have had difficulty mastering the basic concepts of decimals, ratios/proportions, and percents. Pass/No Pass Option.

**LR 942C  Learning Services Math Strategies (3.0 Lecture)  3.0 UNITS**
This is the third class of a three-course learning sequence covering mathematical strategies for students with disabilities or students who have difficulty mastering pre-algebraic, algebraic and statistical concepts. Students are introduced to techniques that focus on developing compensatory strategies for visual processing, short-term memory, long-term memory, and auditory processing disabilities. Manipulative modules, supportive devices, computer software, websites, as well as drill and practice exercises are stressed in order to assist in the understanding and mastery of these basic concepts.

**LIBRARY (LIB)**

**LIB 010  Information Competency (1.0 Lecture)  1.0 UNIT**
This course covers the basic elements of information competency by introducing students to the nature of research and the role of the library in research, including finding, analyzing, organizing, and presenting information and the legal and ethical aspects of research. Students are introduced to a variety of information resources including print, media, electronic formats and the World Wide Web.

**LIB 010H  Information Competency - Honors (1.0 Lecture)  1.0 UNIT**
This course covers the basic elements of information competency by introducing students to the nature of research and the role of the library in research, including finding, analyzing, organizing, and presenting information and the legal and ethical aspects of research. Students are introduced to a variety of information resources including print, media, electronic formats and the World Wide Web. Students cannot get credit for both LIB 010 and LIB 010H. Enrollment in the Honors Transfer Project is required.

**LIB 920  Information Competency Workshop  0.0 UNITS**
This non-credit course consists of a series of workshops addressing specific areas of Information Competency that will help students doing research. Students may attend all or part of the offered workshops and may attend the workshops in any order. Pass/No Pass Only.

**LIB 930  Library Seminars  0.0 UNITS**
These seminars cover a wide range of topics and introduce students to how to utilize the offerings of a 21st century library for academic, vocational or personal goals. No Grade.

**LEARNING SERVICES (LSR)**

**LR 900  Strategies for Basic Skills Math (3.0 Lab)  3.0 UNITS**
This course is an introduction to basic skills math in the completion of certificated programs.

**LR 902  Assistive Technology Assessment  0.5 UNITS**
This course provides a means for evaluating the appropriate adaptations for computer access of students with disabilities. Pass/No Pass Only.

**LR 904  Orientation to Learning Services  0.0 UNITS**
This course provides students with disabilities with an overview of Mission College and detailed information about the Disability Instructional Support Center (DISC), the services, and courses available through the Center. No Grade/No Credit.

**LR 940  Learning Strategies for Basic Writing Skills (3.0 Lecture)  3.0 UNITS**
This course stresses the practical application of compensatory strategies for students with written language difficulties.
circular functions, radian measure, graphs, polar coordinates, trigonometric identities, inverse trigonometric functions, vectors, and complex numbers.

**MAT 000G** Mathematics for the Liberal Arts Student (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 000C or High School Algebra II, or equivalent. This course prepares students for college-level mathematics courses and fulfills the graduation competency requirement for Associate degree and the general education requirement in mathematics for the CSU system. It introduces critical thinking techniques in areas of mathematics that include, but not limited to sequences and series, probability and statistics, countable and uncountable sets, cryptography and number theory, history of mathematics, mathematics in art and nature, the Pythagorean Theorem, and methods of proof, and game theory. There is emphasis on general problem solving techniques as the class explores mathematics that may will be unfamiliar to most students, and communicate mathematics through class activities and write-ups.

**MAT 001** College Algebra (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 000C or Prerequisite: MAT 000CM or Prerequisite: MAT 00CMX or High School Algebra II, or equivalent. This is a college-level course in preparation for the Calculus sequence. Its contents include real and complex number systems, polynomials, algebraic fractions, exponents and radicals, linear and quadratic equations, simultaneous equations, inequalities, functions, theory of equations, exponential and logarithmic equations, sequence and series, induction and the binomial theorem.

**MAT 002** Precalculus and Trigonometry (6.0 Lecture) 6.0 UNITS
Prerequisite: MAT 000C or Prerequisite: MAT 000CM or Prerequisite: MAT 00CMX or High School Algebra II, or equivalent. This is an intensive course covering those topics traditionally found in the separate courses of college algebra (MATH 001) and trigonometry (MATH 000D). This course is designed for the highly motivated and very well-prepared student who desires to fulfill the requirements of MATH 000D and MATH 001 in one semester. It prepares the student for the Calculus 003A/B sequence.

**MAT 003A** Analytic Geometry and Calculus I (5.0 Lecture) 5.0 UNITS
Prerequisite: MAT 002 or placement into the course by the Mission College Mathematics Placement Exam.; or Prerequisite: MAT 000D or higher or satisfactory score on an appropriate Mathematics Placement Exam. and Prerequisite: MAT 001 or placement into the course by the Mission College Mathematics Placement Exam. This is the first part of the three-semester calculus sequence. Topics include functions, limits, continuity, differentiation and integration, and applications for polynomial and transcendental functions.

**MAT 003AH** Analytic Geometry and Calculus I - Honors (5.0 Lecture) 5.0 UNITS
Prerequisite: MAT 002 or placement into the course by the Mission College Mathematics Placement Exam.; or Prerequisite: MAT 000D or placement into the course by the Mission College Mathematics Placement Exam. and Prerequisite: MAT 001 or placement into the course by the Mission College Mathematics Placement Exam. This course is the honors version of the Calculus I course and is the first part of the three-semester calculus sequence for math, physics and engineering majors. Course topics include functions, limits, continuity, differentiation and integration, maxima, minima, and other applications, and the relationship between calculus and analytic geometry for polynomial and transcendental functions. Students may not receive credit for both MATH 003A and MATH 003AH. Enrollment in the Honors Transfer Project is required.

**MAT 003B** Analytic Geometry and Calculus II (5.0 Lecture) 5.0 UNITS
Prerequisite: MAT 003A or Prerequisite: MAT 003AH This is the second part of the three-semester calculus sequence. Topics include infinite series, vectors in the plane, parametric equations, conic sections, polar coordinates and integration techniques with applications.

**MAT 004A** Multivariable Calculus (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 003B This course covers vector-valued functions, calculus of functions of more than one variable, partial derivatives, multiple integration, Green's Theorem, Stokes' Theorem, and the divergence theorem.

**MAT 004B** Differential Equations (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 003B Topics include ordinary differential equations, with emphasis on linear equations, and partial differential equations. Methods include Laplace Transforms, power series, Fourier series, numerical solutions and applications.

**MAT 004C** Linear Algebra (4.0 Lecture) 4.0 UNITS
Advisory: MAT 004A Prerequisite: MAT 003B This course covers basic linear algebra including systems of linear equations, Gaussian elimination, determinants, matrices, vector spaces, transformations, eigenvalues, and eigenvectors.

**MAT 005** Programming and Problem-Solving in MATLAB (2.0 Lecture/1.0 Lab) 3.0 UNITS
Prerequisite: MAT 003A or Prerequisite: MAT 003AH or higher. This course utilizes the MATLAB environment to provide students with a working knowledge of computer-based problem-solving methods relevant to mathematics, science and engineering. Topics include procedural and object-oriented programming, two- and three-dimensional graphing, data import and export, curve fitting, recursion and applications in engineering, physics, and mathematics.

**MAT 009** Integrated Statistics II (5.0 Lecture) 5.0 UNITS
Prerequisite: MAT 909 This is the second of two courses in the Statway sequence. Students study probability, descriptive and inferential statistics including probability distribution, hypothesis testing, linear regression and applications. Current statistical technology packages are used. This sequence is recommended for students with majors that require no mathematics beyond freshman-level statistics. Successful completion of both Math 909 and Math 009 is required to satisfy CSU and UC transferability.

**MAT 00CMX** Intermediate Algebra MAPS Extra (3.0 Lecture) 3.0 UNITS
Prerequisite: Completion of the Mission College Placement Assistance Tool prior to registration. Co-Requisite: MAT 000CM This lecture course is a corequisite for MAT 000CM. It is part of the MAPS program and provides additional time to help students succeed by participating in enhanced and innovative learning strategies and activities.

**MAT 00CP** Prep Trig/Bus Math 2.0 UNITS
Prerequisite: MATH 000C or satisfactory score on an appropriate Mathematics Placement Exam. The course will concentrate on those areas of Intermediate Algebra which require additional work. Pass/No Pass Only.

**MAT 010** Elementary Statistics (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 000C or Prerequisite: MAT 000CM or Prerequisite: MAT 00CMX or High School Algebra II, or equivalent. Students study and demonstrate knowledge and understanding of descriptive and inferential statistics including probability distribution, hypothesis testing, linear regression, probability, probability distributions and assorted hypothesis testing. Particular emphasis is placed on applications. Current statistical computer packages are used.

**MAT 010H** Elementary Statistics - Honors (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 000C or Prerequisite: MAT 000CM or Prerequisite: MAT 00CMX or High School Algebra II, or equivalent. Students study and demonstrate knowledge and understanding of descriptive and inferential statistics including data analysis, correlation and linear regression, probability, probability distributions and assorted hypothesis testing. Particular emphasis is placed on applications and data analysis. Current statistical computer packages are used. Students may not receive credit for both MAT 010 and MAT 010H. Enrollment in the Honors Transfer Project is required.

**MAT 012** Calculus for Business (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 000C or Prerequisite: MAT 000CM or Prerequisite: MAT 00CMX or High School Algebra II, or equivalent. Course topics include the intuitive concept of a limit, and simple techniques of differential and integral calculus and their most common applications in business. This course is not equivalent to MAT 003A.
MAT 014 Math for Elementary School Teachers (Number Systems) 3.0 UNITS
Prerequisite: MATH 000C or MATH 000CM or successful placement into the course based on the Mission College Mathematics Placement Exam. This lecture course covers systems of numbers, emphasizes patterns and relationships, presents mathematical models and real-world applications, and provides algorithms for estimating and finding exact answers when doing calculations. Appropriate problem solving, critical thinking, and communication are included. The course is designed for students who intend to become elementary school teachers. Pass/No Pass Option.

MAT 019 Discrete Mathematics (4.0 Lecture) 4.0 UNITS
Prerequisite: MAT 001 or successful placement into the course based on the Mission College Mathematics Placement Exam, or Prerequisite: MAT 002. This course covers discrete mathematics appropriate for computer applications. Topics may include graphs, sets, logic, mathematical induction, functions and relations, sequences and series, matrices, combinatorics, Boolean algebra, algebraic structures, and computer implementation.

MAT 090 Arithmetic Functions (3.0 Lecture) 3.0 UNITS
This course covers fundamental arithmetic skills including whole numbers, fractions and decimals, ratio, proportion and percent, simple equations, problem analysis, and practical applications.

MAT 090DX Math Skills for Success in Trigonometry (2.0 Lecture) 2.0 UNITS
Prerequisite: MAT 000C or MAT 000CM/00CMX, or appropriate placement by Multiple Measures. Corequisite: MAT 000D. Math Skills for Success in Trigonometry is for students concurrently enrolled in MAT 000D. In this course students will review algebraic and basic geometric topics that underlie Trigonometry concepts and practice reading skills and other study skills that promote success in MAT 000D. Concurrent enrollment in MAT 000D is required.

MAT 901X Math Skills for Success in College Algebra (2.0 Lecture) 2.0 UNITS
Prerequisite: MAT 000C or MAT 000CM/00CMX, or appropriate placement by Multiple Measures. Corequisite: MAT 001. Math Skills for Success in College Algebra is for students concurrently enrolled in MAT 001. In this course students will review algebraic and basic geometric topics that underlie College Algebra concepts and practice reading skills and other study skills that promote success in MAT 001. Concurrent enrollment in MAT 001 is required.

MAT 902 Pre-Algebra (4.0 Lecture) 4.0 UNITS
Prerequisite: Completion of the Mission College Placement Assistance Tool prior to registration. This course is designed for those students who have a solid foundation in arithmetic skills but need to develop those skills further before taking Algebra.

MAT 903 Elementary Algebra (5.0 Lecture) 5.0 UNITS
Prerequisite: Appropriate placement by Multiple Measures. Course topics include operations with real numbers; properties of real numbers and signed exponents; solving and graphing linear equations; solving linear inequalities; functions; factoring polynomials; solving quadratic equations by factoring; simplifying rational expressions; solving rational equations; applications of linear, quadratic, and rational equations; and working with scientific notation.

MAT 903M Elementary Algebra (MAPS) (5.0 Lecture) 5.0 UNITS
Prerequisite: Completion of the Mission College Placement Assistance Tool prior to registration. Co-Requisite: MAT 903MX. The MAPS program offers students a team approach to succeed in elementary and intermediate algebra. This program is designed for students who have had difficulty in their math course in the past. Students study operations of signed numbers, exponents, polynomials and rational expressions; properties of real numbers, equations and exponents; solving and graphing linear equations; applications of linear equations; and factoring of polynomials. Pass/No Pass Option. Concurrent enrollment in MAT 903M is mandatory.

MAT 903MX Elementary Algebra MAPS Extra (3.0 Lecture) 3.0 UNITS
Prerequisite: Completion of the Mission College Placement Assistance Tool prior to registration. Co-Requisite: MAT 903M. This lecture course is a co-requisite for MAT 903M. It is part of the MAPS program and provides additional time to help students succeed by participating in enhanced and innovative learning strategies and activities.

MAT 909 Integrated Statistics I (5.0 Lecture) 5.0 UNITS
Prerequisite: completion of Mission College Placement Assistance Tool prior to registration. This is the first of two courses in the Statway sequence. Students study probability, descriptive statistics, linear regression and applications. Current statistical technology packages are used. This sequence is recommended for students with majors that require no mathematics beyond freshman-level statistics. Successful completion of both MAT 909 and MAT 099 is required to satisfy CSU and UC transferability.

MAT 910X Math Skills for Success in Statistics (2.0 Lecture) 2.0 UNITS
Co-Requisite: MAT 010 Math Skills for Success in Statistics is for students concurrently enrolled in MAT 010. In this course students will review arithmetic and algebraic topics that underlie statistical procedures and concepts, do hands-on activities that promote a deeper understanding of statistical ideas, and practice reading skills and other study skills that promote success in MAT 010. Concurrent enrollment in MAT 010 is required.

MAT 912X Math Skills for Success in Calculus for Business (2.0 Lecture) 2.0 UNITS
Prerequisite: Appropriate Placement; or Prerequisite: MAT 000C; or MAT 000CM and MAT 000CMX Math Skills for Success in Calculus for Business is for students concurrently enrolled in MAT 012. In this course students will review algebraic and basic geometric topics that underlie Calculus for Business concepts and practice reading skills and other study skills that promote success in MAT 012. Concurrent enrollment in MAT 012 is required.

MAT 970 Problem Solving in Mathematics (1.0 Lecture) 1.0 UNIT
This course introduces the student to various problem solving techniques, and develops mathematical and critical thinking skills.

MECHATRONICS TECHNOLOGY (MTT)

MTT 010 Introduction to Technology and Careers (1.0 Lecture/1.0 Lab) 2.0 UNITS
This course exposes students to the field of mechatronics and control system disciplines. The course presents basic skills necessary to succeed as mechatronics student. The nature of control system in different process industries and the role of mechatronics technicians are explored. Communication skills for reports are developed. Guest speakers from local process firms and tours to local companies are included.

MTT 012 Electronic Systems Measurement and Troubleshooting (1.0 Lecture/1.0 Lab) 2.0 UNITS
Advisory: MTT 010. This course covers the measurement and characterization of electronic systems, data collection, and reporting results in industry-accepted formats. System and component performance are compared to published specifications and troubleshooting techniques are developed. Laboratory practice includes the proper use of standard test instruments.

MTT 020 Programmable Logic Controller (PLC) Process Control Systems (1.0 Lecture/1.0 Lab) 2.0 UNITS
Advisory: MTT 010. This course covers Programmable Logic Controller (PLC) systems, function, interrelationship, and troubleshooting of systems components. PLC input/output systems and requirements are also discussed. Ladder logic programming is studied using basic I/O instructions, logic instructions, timers, counters, and comparison functions. Students will also develop an understanding of Piping/Process and Instrumentation Diagrams (PID).

MTT 022 Programmable Logic Controller (PLC) and Robotic System Components (1.0 Lecture/1.0 Lab) 2.0 UNITS
Advisory: MTT 020. This course explores the integration of sensors, indicators, controllers, and final control elements for Programmable Logic Controller (PLC) and robotic systems. Closed loop control theory, Process/Piping and Instrumentation Diagram (PID), loop tuning, and control loop troubleshooting are also covered. Students will also learn process control system design and Proportional-Integral-Derivative (PID) tuning.
Advisory: MUS 005 This is a beginning-level course in commercial music theory intended for students pursuing a certificate in music. Topics include:

- basic song construction, use of diatonic harmony, analysis of popular song form and harmonic progressions, and the use of music notation software to create lead sheets.

MUS 007 Commercial Music Theory II (3.0 Lecture) 3.0 UNITS
Prerequisite: MUS 006 This is an intermediate-level course in music theory intended for students pursuing a certificate in music. Topics include:

- advanced song construction, use of chord extensions, chord substitutions, analysis of scores for film and video games, basic orchestration and the use of music notation software to create multi-part scores.

MUS 008 Commercial Music Theory III (3.0 Lecture) 3.0 UNITS
Prerequisite: MUS 007 This is an advanced-level course in harmony and musicianship intended for students pursuing a certificate in music. Topics include arranging, orchestration and the use of music notation software to create finished scores for publication.

MUS 010 Music Appreciation (3.0 Lecture) 3.0 UNITS
Advisory: Eligibility for ENG 001A and REA 054. This is a basic introductory course for the student without previous training in music. Students develop an appreciation and enjoyment of music through active listening and guided discussion. Pass/No Pass Option.

MUS 015A Songwriting and Music Business I (3.0 Lecture) 3.0 UNITS
Advisory: Concurrent enrollment in MUS 090. Write lyrics, simple melodies, harmonize with basic diatonic harmony. Pass/No Pass Option.

MUS 015B Songwriting and Music Business II (3.0 Lecture) 3.0 UNITS
Advisory: Concurrent enrollment in MUS 90. Write lyrics, simple melodies, harmonize with basic diatonic harmony. Continuation of Music 015A. Pass/No Pass Option.

MUS 016 Survey of Rock and Popular Music (3.0 Lecture) 3.0 UNITS
Advisory: Eligibility for ENG 001A and REA 054. The course examines the History of Rock and Roll music, from its roots in Africa and 1950's America through the current music scene. Principal study is of the music, its styles and performance practices, its musician-composers, and the important social and musical forces influencing the development of Rock. Pass/No Pass Option.

MUS 017 Music of the World (3.0 Lecture) 3.0 UNITS
This course is a multimedia, multicultural humanities course which introduces students to music from a world music perspective. Course content is centered on videos, a supplemental textbook, and an extensive collection of recorded examples. Topics include the transformative power of music, music and memory, musical style, musical performance and improvisation, music as ritual and music technology. Pass/No Pass Option.

MUS 030A Beginning Piano I (0.5 Lecture/0.5 Lab) 1.0 UNIT
Co-Requisite: MUS 090 For students with no previous training in piano, the course includes studies in note reading, clefs, simple pieces & exercises. Pass/No Pass Option.

MUS 030B Beginning Piano II (0.5 Lecture/0.5 Lab) 1.0 UNIT
Prerequisite: MUS 030A, and Corequisite: MUS 090 This course is for students with some previous training in piano. Topics include note reading, rhythmic notation, interpretive symbols, proper posture, hand position and fingering. Students learn to perform simple piano pieces.

MUS 031A Intermediate Piano I (0.5 Lecture/0.5 Lab) 1.0 UNIT

MUS 031B Intermediate Piano II (0.5 Lecture/0.5 Lab) 1.0 UNIT
COURSES

MUS 032A  Beginning Voice I (0.5 Lecture/0.5 Lab)  1.0 UNIT
This course covers the elements of vocal production, including breathing, correct diction, tone production, vocal support and confidence building, for the Beginning I level singer.

MUS 032B  Beginning Voice II (0.5 Lecture/0.5 Lab)  1.0 UNIT
This course covers the elements of vocal production—breathing, correct diction, tone production, vocal support and confidence building—for the Beginning II level singer.

MUS 036A  Beginning Guitar I (0.5 Lecture/0.5 Lab)  1.0 UNIT
Advisory: MUS 090, Eligibility for ENG 001A and REA 054. This is a beginning course in guitar. Emphasis is on music reading, playing in basic positions, scales, chords, and major and minor keys. Pass/No Pass Option.

MUS 036B  Beginning Guitar II (0.5 Lecture/0.5 Lab)  1.0 UNIT
Prerequisite: MUS 036A Advisory: MUS 090 This beginning/intermediate level course in guitar is for students who have successfully completed MUS 036A. Emphasis is on music reading, playing in advanced basic positions, scales, chords, and major and minor keys.

MUS 036C  Intermediate Guitar I (0.5 Lecture/0.5 Lab)  1.0 UNIT
Prerequisite: MUS 036B Advisory: MUS 090 An intermediate level course in guitar for students who have successfully completed MUS 036B.

MUS 036D  Intermediate Guitar II (0.5 Lecture/0.5 Lab)  1.0 UNIT
Prerequisite: MUS 036C Advisory: MUS 090 This is an advanced-intermediate course in guitar.

MUS 039A  Advanced Piano Masterclass I (0.5 Lecture/0.5 Lab)  1.0 UNIT
Advisory: MUS 090, Eligibility for ENG 001A and REA 054. This course is designed for advanced piano students studying a variety of repertoire, musical styles and performance practices from the Baroque Period to 20th Century. Students will participate in discussions of piano repertoire and preparation for live performances. Pass/No Pass Option.

MUS 039B  Advanced Piano Masterclass II (0.5 Lecture/0.5 Lab)  1.0 UNIT
Advisory: MUS 090, Eligibility for ENG 001A and REA 054. This course is designed for advanced piano students previously enrolled in MUS 039A. This course is designed for advanced piano students studying a variety of repertoire, musical styles and performance practices from the Baroque Period to 20th Century. Students will participate in discussion of piano repertoire and preparation for live performances. Pass/No Pass Option.

MUS 039C  Advanced Piano Masterclass III (0.5 Lecture/0.5 Lab)  1.0 UNIT
Prerequisite: MUS 039B. Advisory: MUS 090. This course is designed for advanced piano students previously enrolled in MUS 039B. This course is designed for advanced piano students studying a variety of repertoire, musical styles and performance practices from the Baroque Period to 20th Century. Students will participate in discussion of piano repertoire and preparation for live performances.

MUS 039D  Advanced Piano Masterclass IV (0.5 Lecture/0.5 Lab)  1.0 UNIT
Prerequisite: MUS 039C Advisory: MUS 090. This is a piano performance course for advanced piano students. Emphasis is placed on developing repertoire and performance skills to prepare for a final piano concerto performance.

MUS 041A  Mission Chorus I (1.0 Lab)  1.0 UNIT
Advisory: MUS 090, Eligibility for ENG 001A and REA 054 Mission Chorus is an ensemble of mixed voices that performs a wide variety of choral repertoire from classical to contemporary. Students participate in public performances. Placement auditions are held before the first day of class. Pass/No Pass Option.

MUS 041B  Mission Chorus II (1.0 Lab)  1.0 UNIT
Advisory: MUS 090, Eligibility for ENG 001A and REA 054. Mission Chorus II is an ensemble of mixed voices that performs a wide variety of choral repertoire from classical to contemporary. Students participate in public performances.

MUS 041C  Mission Chorus III (1.0 Lab)  1.0 UNIT
Advisory: MUS 090, Eligibility for ENG 001A and REA 054. Mission Chorus III is an ensemble of mixed voices, that performs a wide variety of choral repertoire from classical to contemporary. Students will participate in public performances. Students who wish to enroll in MUS 041C must have previous experience in group singing at the intermediate level. Placement auditions will be held before the first day of class. Pass/No Pass Option.

MUS 041D  Mission Chorus IV (1.0 Lab)  1.0 UNIT
Advisory: MUS 090, Eligibility for ENG 001A and REA 054 Mission Chorus IV is an ensemble of mixed voices, that performs a wide variety of choral repertoire from classical to contemporary. Students will participate in public performances. Students who wish to enroll in MUS 041D must have previous experience in group singing at the intermediate to advanced level. Placement auditions will be held before the first day of class. Pass/No Pass Option.

MUS 048A  Symphony Orchestra I (1.0 Lab)  1.0 UNIT

MUS 048B  Symphony Orchestra II (1.0 Lab)  1.0 UNIT

MUS 048C  Symphony Orchestra III (1.0 Lab)  1.0 UNIT
Prerequisite: MUS 048B Advisory: MUS 090 This is an intermediate/advanced level course for the performance of symphonic music of all styles and periods. Emphasis is on group participation and public performance. An audition is required.

MUS 048D  Symphony Orchestra IV (1.0 Lab)  1.0 UNIT
Prerequisite: MUS 048C Advisory: MUS 090 This is an advanced level course for the performance of symphonic music of all styles and periods. Emphasis is on group participation and public performance. An audition is required.

MUS 050  Mission Steelband (1.0 Lab)  1.0 UNIT
Advisory: Concurrent enrollment in MUSIC 090. Ensemble members will learn how to play Caribbean steeldrums and will be required to participate in at least two public performances. Prior experience with percussion/music is not required. Pass/No Pass Option.

MUS 080  MIDI and Music Production I (3.0 Lecture)  3.0 UNITS
Advisory: Eligibility for ENG 001A, READ054, and MUS 005. This course is a practical introduction to the Musical Instrument Digital Interface (MIDI) music system and provides students the skills necessary to create their own music using Pro Tools software. Through a series of hands-on projects students develop basic musicianship skills including: music theory, composition and arranging as it applies to popular music. Students also use the recording studio to complete a final project that incorporates the use of MIDI and audio tracks. Pass/No Pass Option.

MUS 081  Audio Production I (3.0 Lecture)  3.0 UNITS
Advisory: Eligibility for ENGL 001A, READ 054, and MUSIC 080 or equivalent. This course is a hands-on survey of audio recording techniques using ProTools software and hardware. Students complete a series of projects designed to develop basic recording, editing and mixing skills. Pass/No Pass Option.

MUS 082  MIDI and Music Production II (3.0 Lecture)  3.0 UNITS
This is an advanced level, music production course that provides students the skills necessary to create their own compositions for film, TV and video. Through a series of hands-on projects students develop advanced composition skills including: score analysis, orchestration, composition and use of a recording studio to combine an original MIDI music composition with video. Prerequisite MUS 080. Advisory: MUS 005.
<table>
<thead>
<tr>
<th>COURSES</th>
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<tbody>
<tr>
<td><strong>MUS 083</strong> Audio Production II (3.0 Lecture) 3.0 UNITS</td>
</tr>
<tr>
<td>This is an advanced audio recording, mixing and MIDI production course using ProTools software and hardware. Topics include: mixing, EQ, compression, bussing, advanced editing and mastering. Advisory: MUS 081</td>
</tr>
<tr>
<td><strong>MUS 087</strong> Careers in Music Entrepreneurship (3.0 Lecture) 3.0 UNITS</td>
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<tr>
<td>This course is an introduction to the music industry, including its corporate structure and legal practices such as contracts, copyrights, licenses, and royalties. Other topics include production logistics in the recording studio, record manufacturing, music publishing, marketing, touring, and career strategies. Classes include guest speakers from the music industry, field trips, video and audio presentations. Pass/No Pass Option.</td>
</tr>
<tr>
<td><strong>MUS 090</strong> Music Laboratory (0.5 Lab) 0.5 UNITS</td>
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<tr>
<td>Corequisite: Concurrent enrollment in any other music course. Music lab provides music students with supplemental learning activities related to Music Theory, Music Appreciation, Beginning Guitar, Voice and Music History courses.</td>
</tr>
<tr>
<td><strong>MUS 095A</strong> Applied Music I (0.5 Lecture/0.5 Lab) 1.0 UNIT</td>
</tr>
<tr>
<td>Advisory: Eligibility for ENGL 001A and READ 054. Corequisite MUSIC 041A or MUSIC 048A or MUSIC 039A. This course is for declared Music Majors only and is intended to give individual instruction for students on their respective instrument or voice. Students are expected to pass a music jury exam and perform in student recitals. Pass/No Pass Option.</td>
</tr>
<tr>
<td><strong>MUS 095B</strong> Applied Music II (0.5 Lecture/0.5 Lab) 1.0 UNIT</td>
</tr>
<tr>
<td>Advisory: Eligibility for ENGL 001A and READ 054. Corequisite MUSIC 039B or MUSIC 041B or MUSIC 048B. This course is for declared Music Majors only and is intended to give individual instruction for students on their respective instrument or voice. Students are expected to pass a music jury exam and perform in student recitals. Pass/No Pass Option.</td>
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<tr>
<td><strong>MUS 095C</strong> Applied Music III (0.5 Lecture/0.5 Lab) 1.0 UNIT</td>
</tr>
<tr>
<td>Advisory: Eligibility for ENGL 001A and READ 054. Corequisite MUSIC 039C or MUSIC 041C or MUSIC 048C. This course is for declared Music Majors only and is intended to give individual instruction for students on their respective instrument or voice. Students are expected to pass a music jury exam and perform in student recitals. Pass/No Pass Option.</td>
</tr>
<tr>
<td><strong>MUS 095D</strong> Applied Music IV (0.5 Lecture/0.5 Lab) 1.0 UNIT</td>
</tr>
<tr>
<td>Advisory: Eligibility for ENGL 001A and READ 054. Corequisite MUSIC 039D or MUSIC 041D or MUSIC 048D. This course is for declared Music Majors only and is intended to give individual instruction for students on their respective instrument or voice. Students are expected to pass a music jury exam and perform in student recitals. Pass/No Pass Option.</td>
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<tr>
<td><strong>BASIC SKILLS (NCB)</strong></td>
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<tr>
<td><strong>NCB 002</strong> GED Skills Development Lab (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>This lab course is designed to prepare students for the General Educational Development Tests (GED) for high school equivalency. Students learn and practice skills needed to pass the GED exams, as well as the computer skills needed to take a computer-based GED exam.</td>
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<tr>
<td><strong>NCB 003</strong> GED Preparation: Reading &amp; Critical Thinking (NONCREDIT) 0.0 UNITS</td>
</tr>
<tr>
<td>NCBAS 002: Preparing for the GED: Skills Development Lab. This course focuses on the development of basic skills needed to prepare for the General Educational Development Tests (GED) for high school equivalency. Students develop reading skills such as main idea, supporting details, point of view, meaning of words and phrases, inferences, and validity of claims. These skills will enable readers to understand complex texts.</td>
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<tr>
<td><strong>NCB 004</strong> Ged Preparation: Writing &amp; Reasoning (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>This course focuses on the basic skills needed to prepare for the General Educational Development Tests (GED) for high school equivalency. Emphasis is placed on the development of writing skills, including grammar, editing, development, organization, analyzing arguments and using evidence to support a claim.</td>
</tr>
<tr>
<td><strong>NCB 005</strong> GED Preparation: Math Skills (NONCREDIT) 0.0 UNITS</td>
</tr>
<tr>
<td>This course focuses on basic skills needed to prepare for the math portion of the General Education Development Tests (GED) for high school equivalency. Emphasis is placed on developing math and calculator skills.</td>
</tr>
<tr>
<td><strong>NCB 901</strong> Strategies to Improve Writing (NONCREDIT) 0.0 UNITS</td>
</tr>
<tr>
<td>Prerequisite: ESL 960RW Or equivalent Prerequisite: ESL 960LS Or equivalent Advisory: ENG 905 This course gives basic skills students practice using various writing techniques that prepare them for transfer-level courses. Sentence-level strategies are the focus of this class.</td>
</tr>
<tr>
<td><strong>NCB 902</strong> Strategies to Improve Writing (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>Advisory ENG 905 Prerequisite ESL 970RW Advisory ESL 970LS Advisory ESL 970G This course gives basic skills students practice using various writing techniques that prepare them for their transfer-level courses. Essay level strategies are the focus of this class.</td>
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<tr>
<td><strong>NONCREDIT ESL (NCE)</strong></td>
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<tr>
<td><strong>NCE 010</strong> English for Citizenship (NONCREDIT) 0.0 UNITS</td>
</tr>
<tr>
<td>Advisory: NCE 910B In this course, students develop the English speaking, listening, and literacy skills necessary to pass an oral and written U.S. citizenship exam. Topics include a general survey of U.S. history, government, and civics, including culture, institutions, and ideals.</td>
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<tr>
<td><strong>NCE 910A</strong> Foundations in ESL I (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>This noncredit course is a beginning pre-academic ESL Level 0. This course provides basic functional practice in reading, writing, listening, speaking, and grammar for very low beginning ESL students. Corequisite: NCE 910L</td>
</tr>
<tr>
<td><strong>NCE 910B</strong> Foundations in ESL II (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>This course is a continuation of NCE 910A. This course continues to develop very low beginning students' skills in basic reading, writing, listening, speaking, and grammar.</td>
</tr>
<tr>
<td><strong>NCE 910L</strong> Foundations in ESL Lab (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>This lab course is designed for students at the NCE 910 skill level. In the lab, students practice listening, speaking, writing, grammar, and vocabulary skills in order to help them succeed in NCE courses and in the workplace.</td>
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<tr>
<td><strong>NCE 920A</strong> Beginning ESL I (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>This noncredit course provides basic functional practice in reading, writing, listening, speaking, and grammar for beginning ESL students.</td>
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<tr>
<td><strong>NCE 920B</strong> Beginning ESL II (NONCREDIT) 0.0 UNITS</td>
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<tr>
<td>This course is a continuation of NCE 920A. It builds on the topics learned in NCE 920A, but also introduces more complex structures and provides more practice in reading, writing, listening, speaking, and grammar for beginning ESL students. It also provides preparation for placement in Level 930 ESL classes.</td>
</tr>
<tr>
<td><strong>NCE 920EC</strong> NC ESL for Child Care: Intro (NONCREDIT) 0.0 UNITS</td>
</tr>
<tr>
<td>Advisory: NCE 910 This beginning level course develops oral and written communication skills in English within the context of child care and parenting. Students develop listening, speaking, reading and writing skills for communicating about a child's day-to-day care, needs, and interests.</td>
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<tr>
<td><strong>NCE 920GW</strong> Beginning Grammar and Writing (NONCREDIT) 0.0 UNITS</td>
</tr>
<tr>
<td>Advisory: NCE 910B This course is for beginning-level ESL students with minimal knowledge of English grammar and writing conventions. The course is designed to provide an introduction to English grammar and opportunities to practice basic sentence-level writing skills.</td>
</tr>
<tr>
<td><strong>NCE 920L</strong> Beginning ESL Lab (NONCREDIT) 0.0 UNITS</td>
</tr>
<tr>
<td>This lab course is designed for students at the NCE 920 skill level. In the lab, students practice listening, speaking, writing, grammar, reading, and vocabulary skills in order to help them succeed in NCE courses and in the workplace.</td>
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</tbody>
</table>
NCE 925 Preparation for Academic ESL (NONCREDIT) 0.0 UNITS
This is a study skills course for beginning ESL students. In this class, students learn to improve their academic preparation and study skills for greater success in ESL courses.

NCE 930EC NC ESL for Child Care: Health and Safety (NONCREDIT) 0.0 UNITS
Advisory: NCE 920B. This high-beginning level course develops oral and written communication skills in English within the context of child care and parenting. Students develop listening, speaking, reading and writing skills for communicating about a child's health and safety.

NCE 930FD English for Food Preparation 0.0 UNITS
This high-beginning ESL course develops oral and written communication skills within the context of food preparation and kitchen safety. Students study and practice vocabulary for communicating about food preparation at work and at home. Students learn about American workplace culture and explore opportunities in food-related fields.

NCE 931 High Beginning ESL Listening and Speaking (NONCREDIT) 0.0 UNITS
Advisory: NCE 920B In this course students receive guidance and extensive practice in listening and speaking at the word, phrase, and sentence level. Listening focuses on comprehension of oral instructions, in context, and ideas in sentences, monologs, and dialogs. Speaking focuses on the clear pronunciation of common words and phrases and the development of basic English pronunciation patterns of stress and intonation.

NCE 932 High Beginning Grammar and Writing (NONCREDIT) 0.0 UNITS
Advisory: NCE 920B and NCE 931 In this noncredit ESL course, students develop basic reading and writing skills necessary for comprehension of simplified articles and stories in English.

NCE 940EC ESL for Child Care: Ages and States (NONCREDIT) 0.0 UNITS
This low-intermediate level course develops oral and written communication skills in English within the context of child care and parenting. Students develop listening, speaking, reading and writing skills for communicating with and about infants, toddlers, preschoolers, and school-age children. Pass/No Pass, Satisfactory Progress.

NCE 940FD English for Food Services 0.0 UNITS
This noncredit low-intermediate level ESL course develops oral and written communication skills in English within the context of food service industry. Students study and practice vocabulary for communicating about ordering and serving food. Students learn about American customer service culture and explore opportunities in food-related fields.

NCH 001CW Introduction to Community Health Work (NONCREDIT) 0.0 UNITS
Advisory: CAP 010A and CAP 062B This is the first of a three-course sequence leading to the Community Health Worker Certificate of Completion. This course introduces students to the role of the Community Health Worker, the types of client and agencies with whom the Community Health Worker works on a daily basis, and the basic concepts of public health practice.

NCH 002CW Introduction to Chronic Disease Management (NONCREDIT) 0.0 UNITS
This course addresses chronic health conditions (also referred to as chronic illness or chronic disease), the leading cause of illness and death in the United States. Community Health Workers (CHW) often work closely with clients who live with chronic conditions. Topics include basic information about the types of chronic conditions and techniques for their management.

NCH 003CW Externship for Community Health Worker (NONCREDIT) 0.0 UNITS
This externship will give students an experiential learning opportunity to enhance their academic and professional skill sets. Students will learn and understand the duties of a Community Health Worker in a professional setting, and contract for a minimum of 54 hours at an externship placement. Students must complete the first course, NCH 001CW. The next course NCH 002CW can be taken with NCH 003CW externship. (Note: Any student can take both NCH 001CW and NCH 002CW in one semester or summer, then take the NCH 003CW Externship next semester.)

NCO 1611 Older Adult Art (NONCREDIT) 0.0 UNITS
This non-credit course explores art, crafts and creative artistic expression. Practical skills using a variety of artistic techniques are highlighted. Cultural, seasonal and holiday themes are emphasized in the production of arts and crafts items for personal use, sale or gifts.

NCO 3900 Senior Preparedness (NONCREDIT) 0.0 UNITS
This non-credit course expands the student's knowledge of economic, social, governmental, historic, geographic, and cultural issues. Students also expand communication skills as they expand knowledge of world, national and local issues and become better informed community members.

NUTRITIONAL SCIENCE (NTR)

NTR 015 Human Nutrition (3.0 Lecture) 3.0 UNITS
This course is designed to teach basic scientific principles as they apply to human nutrition in maintaining health and preventing disease. Biochemical functions and interrelationships between nutrients in the body are examined. Current nutritional controversies are evaluated. Students develop and increase their analytical and evaluative skills by completing a nutritional self-study during the course. Advisory: Students should have basic arithmetic skills.

NTR 040 Nutrition and Disease (3.0 Lecture) 3.0 UNITS
This course covers basic scientific principles of human nutrition as they relate to disease. This course is designed for individuals entering the health care field or for those with an interest in diet and disease. Eligibility for ENG 001A and REA 054

PHILOSOPHY (PHI)

PHI 001 Introduction to Philosophy (3.0 Lecture) 3.0 UNITS
Advisory: Eligibility for ENG 908 and REA 054. This course focuses on traditional philosophical systems and how they are relevant to solving the problems of contemporary existence. Pass/No Pass Option.

PHI 002 Introduction to Logic (3.0 Lecture) 3.0 UNITS
Advisory: Eligibility for ENG 001A and REA 054. Students are introduced to techniques for evaluating the quality and correctness of a chain of thought. One of the goals of learning these techniques is to extend one's thinking and learning beyond simple memorization and repetition; that is, one begins to understand what it means to think critically about a subject matter. Another aim is to improve one's ability to read critically and to recognize and avoid logical errors. This class demonstrates that there are right and wrong ways to reason, and that good reasoning is a skill that can be developed and improved. Pass/No Pass Option.

PHI 003 Introduction to Ethics (3.0 Lecture) 3.0 UNITS
Prerequisite: ENG 001A. This course explores prominent ethical theories and addresses contemporary moral problems.

PHI 005 Introduction to Social and Political Philosophy (3.0 Lecture) 3.0 UNITS
This course will introduce students to a critical study of some major social and political problems. Pass/No Pass Option.
PHYSICS (PHY)

PHY 002A General Physics - Mechanics and Thermodynamics (4.0 Lecture/1.0 Lab) 5.0 UNITS
Prerequisite: MAT 000D or higher This is a first lecture/lab course in physics for non-majors. Topics covered include Newton's laws of force, the concepts of potential and kinetic energy, momentum, thermodynamics, hydrodynamics, and wave motion.

PHY 002B General Physics - Electricity, Magnetism And Optics (4.0 Lecture/1.0 Lab) 5.0 UNITS
Prerequisite: PHY 002A This lecture/lab course is a continuation of PHY 002A as a lecture/lab course with the study of electricity, magnetism, geometrical and wave optics and atomic physics.

PHY 004A Engineering Physics-Mechanics (4.0 Lecture/1.0 Lab) 5.0 UNITS
Prerequisite: MAT 003A This course is a calculus-based study of forces, energy, momentum and gravity.

PHY 004B Engineering Physics-Electricity and Magnetism (3.0 Lecture/1.0 Lab) 4.0 UNITS
Prerequisite: PHY 004A This lecture/lab course is the second in the engineering physics series, is a calculus-based study of electricity and magnetism that develops the concepts and applications of Maxwell's equations, including DC and AC circuits.

PHY 004C Engineering Physics-Light and Heat (3.0 Lecture/1.0 Lab) 4.0 UNITS
Prerequisite: MAT 003B Prerequisite: PHY 004A This lecture/labatory course is the third course in the calculus-based engineering physics series. Topics include classical thermodynamics, geometrical and wave optics and modern physics.

PHY 004D Engineering Physics-Atomic (2.0 Lecture) 2.0 UNITS
Prerequisite: PHY 004B. This course is an introduction to quantum physics, the electronic structure of atoms, solids, band theory, radiation, and relativity.

PHY 010 Introduction to Physics (3.0 Lecture/1.0 Lab) 4.0 UNITS
Prerequisite: MAT 005 or High School Algebra I, or equivalent. This is a conceptual course in physics, including the development of fundamental concepts as applied to everyday phenomena, from a limited mathematical perspective, emphasizing verbal logic, critical analysis, and rational thought. The topics included in this course are mechanics, thermodynamics, electricity and magnetism, optics, and modern physics.

PLM 101 Plumbing Apprenticeship: Safety/OSHA/Tools/Heritage/Service (0.5 Lecture/2.5 Lab) 3.0 UNITS
First-year course of the Plumber & Pipefitter Apprenticeship program. Provides students with a working knowledge of plumbing industry materials and standards. Learn use and care of pipe trade tools, practice safety and heritage of the United Association. Also provides OSHA 30 certification.

PLM 102 Plumbing Apprenticeship: Mathematics/Science for the Plumbing Trade (1.5 Lecture/1.5 Lab) 3.0 UNITS
First year of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of mathematics and science as it applies to the plumbing industry.

PLM 103 Plumbing Apprenticeship: Plumbing Code/Water Supply Systems (1.5 Lecture/1.5 Lab) 3.0 UNITS
Second year of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of Plumbing Code I and Water Supply Systems.

PLM 104 Plumbing Apprenticeship: Drawing I for the Plumbing Trade (1.0 Lecture/2.0 Lab) 3.0 UNITS
Second year course of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of plumbing and piping layouts, drainage systems, piping and fixture supports as it applies to mechanical drawings.

PLM 105 Plumbing Apprenticeship: Drawing II/Drainage Systems (1.0 Lecture/2.0 Lab) 3.0 UNITS
Third year course of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of Technical Drawings, Isometric Drawings and the creation of Building Plans as it applies to the Plumbing trade.

PLM 106 Plumbing Apprenticeship: Welding/Oxy-Acetylene Training (0.5 Lecture/2.5 Lab) 3.0 UNITS
Third year course of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of welding principles, as it relates to Metal ARC welding, Gas ARC welding, TIG Welding, MIG Welding and Oxygen/Acetylene burning and welding.

PLM 107 Plumbing Apprenticeship: Hydronic & Steam Systems/Pipe Fitting & Service (0.5 Lecture/2.5 Lab) 3.0 UNITS
Fourth year of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of Layout, Cut, and Fit for Hydronic Water Piping and Steam fitting systems.

PLM 108 Plumbing Apprenticeship: Medical Gas/Rigging/Signal Person (1.0 Lecture/2.0 Lab) 3.0 UNITS
Fourth year course of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of Medical Gas, Brazing, Rigging and Crane Signaling.

PLM 109 Plumbing Apprenticeship: ADV. Draw./Layout Plumb. Trade/UA Foreman (1.0 Lecture/2.0 Lab) 3.0 UNITS
Fifth year course of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of Advanced Drawing, Plumbing Layout and Building Detailing. Practical field knowledge of plumbing duties, processes, objectives and code callouts is covered in-depth.

PLM 110 Plumbing Apprenticeship: Code II/Junior Systems/Pipe Fitting & Service (0.5 Lecture/2.5 Lab) 3.0 UNITS
Fifth year course of the Plumber & Pipefitter Apprenticeship program. This course provides students with a working knowledge of Plumbing Codes and review of how changes affect the Plumbing Codes.

POLITICAL SCIENCE (POL)

POL 001 American Government (3.0 Lecture) 3.0 UNITS
Advisory Eligibility: for ENG 001A and REA 054. This course studies democratic structures and functions of American national, state, and local governments. Pass/No Pass Option.

POL 001H American Government - Honors (3.0 Lecture) 3.0 UNITS
Advisory Eligibility: for ENG 001A and REA 054. This course studies democratic structures and functions of American national, state, and local governments. Students cannot get credit for both POL 001 and POL 001H. This
Mission College Pathways

section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

POL 002 Comparative Government (3.0 Lecture) 3.0 UNITS
This course offers an introduction to Comparative Governments. Students will look at the governments, politics and public policies of other nations from Europe to Asia, from Africa to South America, to compare similarities and differences. Particular emphasis will be placed on contemporary political problems and how different nations contend and seek to solve them. Pass/No Pass Option.

POL 003 Introduction to Social and Political Philosophy (3.0 Lecture) 3.0 UNITS
This course introduces students to a critical study of some major social and political problems. What is society? What is a state? What is freedom? What is authority? What is the nature of political obligation? What constitutes justice? What constitutes a right? What are the relationships, if any, between the individual and society? This course is cross-listed as PHIL 005. Pass/No Pass Option.

POL 004 International Relations (3.0 Lecture) 3.0 UNITS
This course offers an introduction to the understanding of International Relations. This class will look at the how and why of world politics, surveying the history, theory, players, processes and structures in International Relations. Pass/No Pass Option.

POL 005 Political Science Research Methodology (3.0 Lecture) 3.0 UNITS
Advisor: Eligibility for ENG 001A, REA 054 and POL 001 or a college level course in any political or social science field. This course is an exploration of the research methodologies used in political science. Pass/No Pass Option.

POL 006 Politics of Race, Class and Gender (3.0 Lecture) 3.0 UNITS
An introduction to the role that race, economic class, and gender play in American politics. The political history, perspectives and experiences of women, Asian Americans, African Americans, Native Americans, Gay and Lesbians, immigrants, Hispanics, and the poor will be variously explored, compared and analyzed. Pass/No Pass Option.

POL 007 International Films (3.0 Lecture) 3.0 UNITS
This course provides a critical look at the world’s problems through some of the finest international films. Films from Asia, Africa, Europe, South America and the United States will be viewed and analyzed to explore such topics as nationalism, sovereignty, war and peace, ethnic conflict, economics and immigration. (Co-listed as HUM 007). Pass/No Pass Option.

POL 020 Controversial Legal Issues (3.0 Lecture) 3.0 UNITS
Advisor: POL 001. This course includes a critical exploration of civil rights and liberties in a modern context. Pass/No Pass Option.

PSYCHOLOGY (PSY)

PSY 001 General Psychology (3.0 Lecture) 3.0 UNITS
Advisor: Eligibility for ENG 908 and REA 054. This course introduces major concepts, problems and methods that psychologists use to investigate and understand the human mind. Pass/No Pass Option.

PSY 001H General Psychology - Honors (3.0 Lecture) 3.0 UNITS
Advisor: Eligibility for ENG 908 and REA 054. This honors course introduces major concepts, problems and methods that psychologists use to investigate and understand the human mind. Students cannot get credit for both PSY 001 and PSY 001H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

PSY 007 Biological Psychology (3.0 Lecture) 3.0 UNITS
Prerequisite: PSY 001 or PSY 001H This course is an introduction to the physiological substrates of behavior. Among the areas covered are neurophysiology, the functional nervous system, senses, emotion, motivation, and learning. The course has value for behavioral science, paramedical, and pre-medical majors.

PSY 010 Social Psychology (3.0 Lecture) 3.0 UNITS
This course studies psychological and sociological influences on an individual while functioning in social contexts. Pass/No Pass Option.

PSY 012 Human Growth and Development (3.0 Lecture) 3.0 UNITS
Advisor: PSY 001. Eligibility for ENG 908 and REA 054. The comprehensive coverage of the growth and development of humans from conception to death is examined. Pass/No Pass Option.

PSY 015 Introduction to Research Methods (3.0 Lecture) 3.0 UNITS
Prerequisite: MAT 010, PSY 001 or Prerequisite: MAT 010H, PSY 001 or Prerequisite: MAT 009, PSY 001 or Prerequisite: SOC 016, PSY 001 or Prerequisite: MAT 010, PSY 001H or Prerequisite: MAT 010H, PSY 001H or Prerequisite: MAT 009, PSY 001H or Prerequisite: SOC 016, PSY 001H This course surveys various psychological research methods with an emphasis on research design, experimental procedures, descriptive methods, instrumentation, and the collection, analysis, interpretation, and reporting of research data. Research design and methodology are examined through a review of research in a variety of sub-disciplines of psychology.

PSY 015H Introduction to Research Methods - Honors (3.0 Lecture) 3.0 UNITS
Prerequisite: MAT 010, PSY 001 or Prerequisite: MAT 010H, PSY 001 or Prerequisite: MAT 009, PSY 001 or Prerequisite: SOC 016, PSY 001 or Prerequisite: MAT 010, PSY 001H or Prerequisite: MAT 010H, PSY 001H or Prerequisite: MAT 009, PSY 001H or Prerequisite: SOC 016, PSY 001H This honors course surveys various psychological research methods with an emphasis on research design, experimental procedures, descriptive methods, instrumentation, and the collection, analysis, interpretation, and reporting of research data. Research design and methodology are examined through a review of research in a variety of sub-disciplines of psychology. Students cannot get credit for both PSY015 and PSY015H. Enrollment in the Honors Program is required.

PSY 025 Introduction to Abnormal Psychology (3.0 Lecture) 3.0 UNITS
Prerequisite: PSY 001 or Prerequisite: PSY 001H The classification and treatment of human maladaptive and maladjusted behavior are studied.

PSY 030 Psychology of Addiction and Substance Abuse (3.0 Lecture) 3.0 UNITS
Advisor: Eligibility for ENG 001A and REA 053. The study of the physiological and psychological processes of addiction and substance abuse. Pass/No Pass Option.

PSY 045 Introduction to Human Sexuality (3.0 Lecture) 3.0 UNITS
Advisor: Eligibility for ENG 001A and REA 054 This course is an introduction to human sexuality, including basic health issues, attitudes, and behavior in western society. Pass/No Pass Option.

PSY 081H Honors Seminar in General Psychology (1.0 Lecture) 1.0 UNIT
Advisor: Eligibility for ENG 001A and READ 054. This honors course offers students the opportunity to investigate, in-depth, a comprehensive range of theories and perspectives of psychology, biological foundations of behavior, research methodology, memory, cognition and intelligence, personality, stress and health, abnormal psychology and therapeutic approaches, life span development, and social psychology. Honors coursework challenges students to be more systematic through expanded assignments, applied applications, and enriched opportunities. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

READING (REA)

REA 054 Critical College Reading and Thinking (3.0 Lecture) 3.0 UNITS
Prerequisite REA 961 or Prerequisite Qualifying score on Reading Placement Test This course enables students to examine, develop and apply the concepts involved in critical reading and thinking. The emphasis is on the ability to interpret, analyze and evaluate college text.
REA 983  Reading Classroom Texts (1.0 Lecture)  1.0 UNIT
This course teaches methods of improving comprehension of college
textbook reading. Academic vocabulary development is also included.
Students must be concurrently enrolled in another college course in which to
practice their skills.

(RFL)

RFL 062  1.0 UNIT
This course is a hands-on design class, including contemporary high-style
techniques such as linear and parallel designs.

REAL ESTATE (RLS)

RLS 090  Principles of Real Estate (3.0 Lecture)  3.0 UNITS
This is a basic Real Estate course and is a requirement for the California
Salesperson license and it is a required course for the Real Estate Certificates
and the AA Degree in Real Estate.

RLS 091  Real Estate Practice (3.0 Lecture)  3.0 UNITS
The students study the operations of a real estate business. This course
applies toward the educational requirements of the California Real Estate
Salesperson and Broker license examinations.

SOCIAL JUSTICE (SJS)

SJS 001  Social Justice (3.0 Lecture)  3.0 UNITS
Interdisciplinary study of social justice. The course will cover philosophical
and historical foundations of the social justice concept and movement and
examine the socio-economic, cultural and political conditions of key social
groups. The lens will be centered on but not limited to the experiences of the
United States.

SJS 002  Introduction to Gender Studies (3.0 Lecture)  3.0 UNITS
In this course, students will learn how sex and gender are shaped by biological
and environmental factors, and what research shows about sex differences.
Further, students will examine gender from feminist perspectives. This course
will examine how gender is constructed in various institutions such as the
family, mass media, education, and the economy. In this course students
will be given a basic understanding of the gender and feminism and will be
introduced to relevant theories of gender, the intersectionality of gender, race
and class, as well as how gender shapes an individual's experience of the
world in realms such as communication, sexuality, relationships, work, health
and violence.

SJS 003  Introduction to LGBTQ Studies (3.0 Lecture)  3.0 UNITS
This introductory course introduces students to a broad range of historical
and contemporary gay, lesbian, bisexual, transgender, and queer issues
addressed through sociological, political, racial, and sexual context.

SOCIOLOGY (SOC)

SOC 001  Introduction to Sociology (3.0 Lecture)  3.0 UNITS
The study of interplay of the individual and society. Pass/No Pass Option.

SOC 001H  Introduction to Sociology - Honors (3.0 Lecture)  3.0 UNITS
This course is the study of the interplay between the individual and society.
The honors component involves an in-depth analysis of specific topics, using
current information from research journals and is more rigorous than SOC 001. Students cannot get credit for both SOC 001 and SOC 002H. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

SOC 002  Social Problems (3.0 Lecture)  3.0 UNITS
A sociological analysis of contemporary social problems. Pass/No Pass Option.

SOC 002H  Social Problems - Honors (3.0 Lecture)  3.0 UNITS
Advisory: SOC 001H or SOC 001. This course is a sociological analysis of
contemporary social problems. The honors component involves an in-depth
analysis of specific topics, using current information from research journals

SOC 016  Introduction to Statistics in Social And Behavioral
Sciences (3.0 Lecture)  3.0 UNITS
Prerequisite: MAT 000C OR MAT 000CM/00CMX OR High School Algebra II, or
equivalent AND PSY 001; OR Prerequisite: MAT 000C OR MAT 000CM/00CMX
OR High School Algebra II, or equivalent AND PSY 001H; OR Prerequisite: MAT
000C OR MAT 000CM/00CMX OR High School Algebra II, or equivalent AND
SOC 001; OR Prerequisite: MAT 000C OR MAT 000CM/00CMX OR High School
Algebra II, or equivalent AND SOC 001H. For students majoring in psychology,
sociology, and other behavioral sciences. Introduces students to the basic
statistical techniques and design methodologies used in behavioral sciences.
Topics include descriptive statistics; probability and sampling distributions;
statistical inference and power; linear correlation and regression; chi-square;
t-tests, and ANOVA. An emphasis will be placed on the interpretation and
relevance of statistical findings and the application of statistical concepts to
real-world problems in the behavioral and social sciences.

SOC 021  Introduction to Race and Ethnicity (3.0 Lecture)
3.0 UNITS
This course introduces the student to the sociological analysis of race,
etnicity, and racism.

SOC 040  Introduction to Marriage and Family (3.0 Lecture)
3.0 UNITS
Advisory: SOC 001H, Eligibility for ENG 090 and REA 054. An analysis of love and
marriage in the 2000's. Pass/No Pass Option.

SOC 045  Introduction to Human Sexuality (3.0 Lecture)
3.0 UNITS
Advisory: Eligibility for ENG 001A and REA 054. This course is an introduction
to human sexuality, including basic health issues, attitudes, and behavior in
western society. Pass/No Pass Option.

SOC 047  Sociology of Criminology (3.0 Lecture)  3.0 UNITS
Advisory: SOC 001H. This course is a sociological analysis of crime and criminal
behavior in the United States; emphasis is placed on the study of victims,
prevention of crime, prosecution, and rehabilitation. Opportunities to visit
rehabilitation centers will be offered. Pass/No Pass Option.

SOC 050  Introduction to Criminal Justice (3.0 Lecture)
3.0 UNITS
Advisory: Eligibility for ENG 001A and REA 054. This course introduces
students to the characteristics of the criminal justice system in the United
States. Pass/No Pass Option.

SOC 054  Concepts of Criminal Law (3.0 Lecture)  3.0 UNITS
Prerequisite: SOC 050. This course offers an analysis of criminal liability in
the United States.

SOC 058  Introduction to Corrections (3.0 Lecture)  3.0
UNITs
Advisory: Eligibility for ENG 001A and REA 054. This course provides a history of
and critical analysis of punishment and the alternatives to punishment.
Pass/No Pass Option.

SOC 060  Community and Justice System (3.0 Lecture)
3.0 UNITS
Advisory: Eligibility for ENG 001A and READ 053. This course examines the
complex relationship between communities and the justice system. Pass/No
Pass Option.

SPANISH (SPA)

SPA 001  First Semester Spanish (Elementary Spanish) (5.0 Lecture)
5.0 UNITS
Co-requisite: SPA 001L. The student acquires the basic skills for
communication in Spanish: listening, speaking, reading, and writing. The
student is exposed to a general overview of Hispanic civilization and culture
from Spain, Latin America, and the United States.
COURSES

SPA 001L Spanish Laboratory (0.5 Lab) 0.5 UNITS
SPA 001L is a requirement for students enrolled in SPA 001, and is designed to further enhance class material.

SPA 002 Second Semester Spanish (Elementary Level) (5.0 Lecture) 5.0 UNITS
Prerequisite: SPA 001 Corequisite: SPA 002L This class is a continuation of SPA 001 with further development of basic skills and structure. Students enrolled in SPA 002 must also enroll in the lab component SPA 002L.

SPA 002L Second Semester Spanish Laboratory (0.5 Lab) 0.5 UNITS
SPA 002L is a requirement for students enrolled in SPA 002, and is designed to further enhance class material.

SPA 003 Third Semester Spanish (5.0 Lecture) 5.0 UNITS
Prerequisite: SPA 002 or equivalent This course is a continuation of SPA 002 emphasizing intensive oral and written drills.

SPA 004 Fourth Semester Spanish (Intermediate Level) (5.0 Lecture) 5.0 UNITS
Prerequisite: SPA 003 or its equivalent SPA 004 is a continuation of SPA 003 emphasizing composition and oral skills in the cultural context.

SPA 005 Fifth Semester Spanish (Advanced Level) (5.0 Lecture) 5.0 UNITS
Prerequisite: SPAN 004 or its equivalent. SPAN 005 is a continuation of SPAN 004. Emphasis is on development of reading and writing proficiency. Pass/No Pass Option.

SPA 050A Basic Conversational Spanish and Culture (3.0 Lecture) 3.0 UNITS
This course focuses on conversation and vocabulary building in a cultural context.

SPA 050B Basic Conversational Spanish and Culture (3.0 Lecture) 3.0 UNITS
Advisory: SPA 050A Emphasis on conversation & vocabulary building in a cultural context.

(TRN)

TRN 010 Introduction to Transit Industry Careers (1.0 Lecture) 1.0 UNIT
Introduction to careers in the public transit industry. Gain knowledge of departments and career pathways in public transit.

TRN 101 Foundations of Public Service for Transit Workers (1.0 Lecture/1.0 Lab) 2.0 UNITS
Students are introduced to public transit agencies and the personal and interpersonal skills needed in serving the public. Per California Code of Regulations, this course is limited to students admitted to the Coach Operator Apprenticeship Program or the Public Transit Leadership Certificate program.

TRN 102 Public Service and Stress Management for Public Transit Employees (1.0 Lecture) 1.0 UNIT
Students are introduced to the relationship between delivering professional public service and managing stress factors inherent in the transit industry. Students acquire fundamental knowledge of public service strategies and stress management skills needed for a career in transit industry operations. This course is limited to students admitted to the Public Transit Leadership Certificate program.

TRN 103 Community Health Issues for Public Transit Employees (1.0 Lecture) 1.0 UNIT
Students are introduced to common community health problems and issues they are likely to encounter on the job in the public transit industry. Topics include biohazards, communicable disease, and occupational safety. Additionally, students are taught a framework for understanding and handling interactions with members of the community suffering from difficult health issues, such as substance abuse or mental illness. This course is limited to students admitted to the Public Transit Leadership Certificate Program.

TRN 104 Peer Mentoring for Public Transit Workers: One-on-One Skills (1.0 Lecture) 1.0 UNIT
Students are introduced to the basic elements of one-on-one peer mentoring in a transit industry environment. Students acquire fundamental knowledge of the personal and interpersonal skills needed to be an effective peer mentor in entry-level transit operations. This course is limited to students admitted to the Public Transit Leadership Certificate program.

TRN 105 Group Facilitation and Training Skills for Peer Mentors (1.0 Lecture) 1.0 UNIT
This course focuses on the theory and practice of facilitating effective meetings in a public transit environment. Topics include the differences between leading and facilitating, fundamental facilitation techniques, and personal strategies for facilitators to maintain neutrality while guiding meeting participants to successful outcomes. This course is limited to students admitted to the Public Transit Leadership Certificate program.

TRN 106 Interpersonal Communication for Transit Workers (1.0 Lecture) 1.0 UNIT
Students are introduced to the principles of effective interpersonal communication in public transit professions. Topics include verbal and non-verbal communication, active listening, and accountability in communication. This course is limited to students admitted to the Public Transit Leadership Certificate program.

TRN 107 Labor/Management Problem Solving in Public Transit (1.0 Lecture) 1.0 UNIT
Students are introduced to the principles of effective labor/management problem solving in public transit professions. Topics include an overview of labor and management, trust building, and developing problem solving strategies. This course is limited to students admitted to the Public Transit Leadership Certificate Program.

TRN 108 Performance Coaching for Public Transit Leaders (1.0 Lecture) 1.0 UNIT
Students are introduced to the principles of effective performance coaching in unionized public transit professions. Topics include leadership roles, management styles, and positive performance coaching. This course is limited to students admitted to the Public Transit Leadership Certificate program.

TRN 109 Transit Business Technology and Practices for Transit Employees (0.5 Lecture/0.5 Lab) 1.0 UNIT
Students acquire fundamental technology skills necessary in today's public transit agencies, including computer basics, simple usage of Microsoft Office applications, and accessing the Internet. This course is limited to students admitted to the Public Transit Leadership Certificate Program.

TRN 110 Transit Operations for New Leaders (2.0 Lecture) 2.0 UNITS
Students are introduced to major support departments in public transit bus (coach) operations: coach maintenance, transit planning and scheduling, transit radio dispatching, and field supervision. Students learn the major functions, relationships, and overall impact of these departments on delivering safe and reliable public bus service on the street. This course is limited to students admitted to the Public Transit Leadership Certificate program.

TRN 121 Way, Power, & Signal Maintenance Core Training I (0.5 Lecture/0.5 Lab) 1.0 UNIT
Students are introduced to the Way, Power, and Signal shop floor and basic safety protocols. This course prepares students for positions in light rail maintenance. Per California Code of Regulations, this course is limited to students admitted to light rail apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 122 Way, Power, & Signal Maintenance Core Training II (1.0 Lecture) 1.0 UNIT
Students are introduced to ladder safety, basic Traffic Control, electrical safety, and lockout/tag out security. This course prepares students for positions in light rail maintenance. Per California Code of Regulations, this course is limited to students admitted to light rail apprenticeship programs at Santa Clara Valley Transportation Authority.
TRN 123 Way, Power, & Signal Maintenance Core Training III (1.0 Lecture) 1.0 UNIT
Students are introduced to rail certification (rules and regulations) and roadway worker protection (safety in the railroad environment). This course prepares students for positions in light rail maintenance. Per California Code of Regulations, this course is limited to students admitted to light rail apprentice programs at Santa Clara Valley Transportation Authority.

TRN 131 Basic Principles of Track Maintenance I (1.5 Lecture/0.5 Lab) 2.0 UNITS
Students are introduced to track structure, safety and use of track, track tools, roadbed, crossings, and ballast. This course prepares students for entry-level positions in railway track work. Per California Code of Regulations, this course is limited to students admitted to the Track Worker Apprenticeship Program.

TRN 132 Basic Principles of Track Maintenance II (1.5 Lecture/0.5 Lab) 2.0 UNITS
Students are introduced to rail maintenance, rail joint maintenance, track alignment and gage, track surface, turnouts, and roadway maintenance. This course prepares students for entry-level positions in railway track work. Per California Code of Regulations, this course is limited to students admitted to the Track Worker Apprenticeship Program.

TRN 133 Advanced Principles of Track Maintenance I (1.5 Lecture/0.5 Lab) 2.0 UNITS
Students are introduced to rail replacement, cutting and welding, turnouts and trackwork, track construction, railroad grade crossing, and management and security. This course prepares students for entry-level positions in railway track work. Per California Code of Regulations, this course is limited to students admitted to the Track Worker Apprenticeship Program.

TRN 134 Advanced Principles of Track Maintenance II (1.5 Lecture/1.0 Lab) 2.5 UNITS
Students are introduced to operation work equipment, vegetation control, rail defects, track inspection, Federal Railroad Administration (FRA) track standards, and derailment work. This course prepares students for entry-level positions in railway track work. Per California Code of Regulations, this course is limited to students admitted to the Track Worker Apprenticeship Program.

TRN 141 Principles of Electricity and Test Equipment (2.5 Lecture/0.5 Lab) 3.0 UNITS
This course covers basic principles of electricity and use of electrical test equipment. Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Core apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 142 Electrical Safety for the Trades (2.5 Lecture) 2.5 UNITS
This course covers the dangers of electricity and how to recognize and avoid electrical hazards. Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Core apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 143 DC Theory and Power Components (2.0 Lecture) 2.0 UNITS
Advisory: MAT 903 or High School Algebra I, or equivalent. This course covers DC (Direct Current) theory and various power components used in overhead line work. Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Core apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 144 Traction Power Safety Practices (2.5 Lecture) 2.5 UNITS
This course covers safe practices for the use of traction power systems. Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Core apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 152 Overhead Line Worker Apprenticeship Fundamentals II (1.5 Lecture/1.0 Lab) 2.5 UNITS
This course covers traction power tools and test equipment, traction power substations, power distribution and control, and overhead contact systems. Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Worker apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 153 Overhead Line Worker Apprenticeship Fundamentals III (2.0 Lecture/0.5 Lab) 2.5 UNITS
This course covers fall protection, rigging and hoisting, hi-rail vehicles, bucket truck and bucket rescue, grounding, and confined space entry. Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Worker apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 154 Catenary Safe Work Practices (4.0 Lecture/1.0 Lab) 5.0 UNITS
This course covers the hazards of working on overhead catenary lines, and how to effectively protect against them. Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Worker apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 155 Mobile Crane - Boom Truck (1.5 Lecture/0.5 Lab) 2.0 UNITS
This course covers safe use of the mobile crane (boom truck). Per California Code of Regulations, this course is limited to students admitted to the Overhead Line Worker apprenticeship program at Santa Clara Valley Transportation Authority.

TRN 201 Service Mechanic: Orientation & Safety (2.5 Lecture) 2.5 UNITS
This course covers an orientation to VTA, the mechanic helper program, the shop floor, familiarization with the fleet, and electrical safety. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 202 Service Mechanic: Tools & Fasteners (2.5 Lecture) 2.5 UNITS
This course focuses on tools and fasteners: correct work methods, care and selection of tools, common tools and uses, and common fasteners and uses. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 203A Service Mechanic: Electrical/Electronics 1 (2.5 Lecture) 2.5 UNITS
This course covers direct current, circuits, Ohm's Law, and Watt's Law. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 203B Service Mechanic: Electrical/Electronics 2 (2.5 Lecture) 2.5 UNITS
Advisory: TRN 203A This course covers batteries, starters, and the ATEC course on wiring, circuits, and schematics. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 204 Service Mechanic: Air Brakes (2.5 Lecture) 2.5 UNITS
This course introduces students to the air brake system used on VTA buses. Classroom theory on brake systems along federal Motor Vehicle Safety Standards (FMVSS) will be emphasized. Topics include: air foundation brakes, air supply system, air service circuits, special circuits, and mechanical components. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 205 Service Mechanic: Transmission (2.5 Lecture) 2.5 UNITS
This course covers transmission, including safety, driveline checks, hydraulics, and other related topics. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 206 Service Mechanic: Diesel Engine (2.5 Lecture) 2.5 UNITS
This course covers diesel engine theory and components. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.
TRN 207  Service Mechanic: Hybrid Familiarization (2.5 Lecture) 2.5 UNITS
This course focuses on hybrid engine systems and the different ways to work with them vs. traditional diesel engines. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 208  Service Mechanic: I/O Controls (2.5 Lecture) 2.5 UNITS
This course focuses on Input/Output controls found on hybrid vehicles (onboard computer). Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 209  Service Mechanic: Preventative Maintenance - PMI (2.5 Lecture) 2.5 UNITS
This course focuses on preventative maintenance practices, such as routine inspections. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 210  Service Mechanic: Overhaul & Repair Orientation (2.5 Lecture) 2.5 UNITS
This course focuses on an overview of the Overhaul and Repair Department at public transit agencies. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 401  Coach Operator: New Operator Training I (1.5 Lecture/0.5 Lab) 2.0 UNITS
This classroom/lab instruction course for Coach Operator Apprentices focuses on DMV legal regulations as they apply to the mass transit industry. Per California Code of Regulations, this course is limited to students admitted to the Coach Operator apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 402  Coach Operator: New Operator Training II (2.5 Lecture/2.5 Lab) 5.0 UNITS
Advisory: TRN 401 This classroom/lab instruction course for Coach Operator apprentices focuses on transit operations - rules and regulations, and processes. Apprentices also complete training in the field. Per California Code of Regulations, this course is limited to students admitted to the Coach Operator apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 403  Coach Operator: New Operator Training III (1.0 Lecture) 1.0 UNIT
Advisory: TRN 401 This classroom instruction course for Coach Operator apprentices focuses on customer service, internal relationships between departments, and personal well-being. Per California Code of Regulations, this course is limited to students admitted to the Coach Operator apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 404  Coach Operator: New Operator Training IV (1.0 Lecture) 1.0 UNIT
Advisory: TRN 401 This classroom instruction course for Coach Operator Apprentices focuses on safety and security while driving. Per California Code of Regulations, this course is limited to students admitted to the Coach Operator apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 405  Coach Operator: New Operator Training V (1.0 Lecture) 1.0 UNIT
Advisory: TRN 401 This classroom instruction course for Coach Operator Apprentices focuses on technical proficiency with coach equipment, troubleshooting, and vehicle inspection. Per California Code of Regulations, this course is limited to students admitted to the Coach Operator apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 421  Transit Dispatching and Radio Communications (4.0 Lecture/4.0 Lab) 8.0 UNITS
This intensive course covers the combined classroom and field training sections of Transit Radio Dispatcher (TRD) training. Per California Code of Regulations, this course is limited to students admitted to the Transit Radio Dispatcher apprenticeship programs at Santa Clara Valley Transportation Authority.

TRN 441  Business Technology and Writing for Supervisors (0.5 Lecture/0.5 Lab) 1.0 UNIT
This course covers fundamental technology and professional written communication skills necessary for supervisory roles in today’s public transit agencies. Per California Code of Regulations, this course is limited to students admitted to the Transit Supervisor apprenticeship programs at Santa Clara Valley Transportation Authority.

VIETNAMESE (VIE)

VIE 001  First Semester Vietnamese (5.0 Lecture) 5.0 UNITS
The student acquires the basic skills for communication in Vietnamese: listening, speaking, reading, and writing. The student is exposed to a general overview of Vietnamese civilization and culture.

VIE 001L  Vietnamese Laboratory 0.5 UNITS
This is an individualized, self-paced laboratory course offered by arrangement at the student’s convenience, which aims to present the culture of Vietnam through a variety of media. The student will review the customs and culture of Vietnam through audio and video tapes, and selected reading materials. Pass/No Pass Option.

VIE 002  Second Semester Vietnamese (5.0 Lecture) 5.0 UNITS
Prerequisite: VIE 001 or Prerequisite: Completion of two years of Vietnamese at high school level or approval from instructor of the course. This course covers language skills necessary for supervisory roles in today’s public transit agencies. Per California Code of Regulations, this course is limited to students admitted to the Service Mechanic apprenticeship programs at Santa Clara Valley Transportation Authority.

VIE 049A  Vietnamese for the Vietnamese-Speaking (3.0 Lecture) 3.0 UNITS
Course designed for the native speaker of Vietnamese. Emphasis on fundamentals of formal spoken and written language. Includes study of culture, traditions, and interpersonal etiquette.

VIE 049B  Vietnamese Language and Culture for Fluent Speakers (3.0 Lecture) 3.0 UNITS
Prerequisite: VIE 049A This course is a continuation of VIE 049A for fluent Vietnamese speakers to study their language, culture, and Vietnamese Americans.

(WHP)

WHP 003F  Dance: Hip Hop - Funk Styles 1.0 UNIT
Advisory: WHP 003X. This course will teach the student the fundamentals and choreography of hip hop funk styles (example: locking, popping, boogalooing, waving, etc.). Students will be expected to perform a hip hop routine reflecting their own style and interpretation. Misconceptions about the hip hop/funk dance culture will be presented. Pass/No Pass Option.

WHP 003L  Beginning Modern Dance 1.0 UNIT
Advisory: Eligibility for ENGL 001A and READ 054. This course is an introduction to the varied theories, styles, and techniques of the modern dance idioms. Pass/No Pass Option.

WHP 003V  Intermediate Social Dance 1.0 UNIT
Advisory WHP 003S. This course will teach the student the fundamentals and choreography of social dance. Emphasis is placed on dance style and more elaborate dance patterns. Pass/No Pass Option.

WHP 003X  Dance: Intermediate Hip Hop 1.0 UNIT
Advisory WHP 003W. This course will introduce the student to intermediate movements and patterns of hip hop/street funk. Students will be expected to...
choreograph a routine based upon their own style and interpretation. Pass/No Pass Option.

**WHP 004H**  
Fitness: Aerobic Dance  
1.0 UNIT  
Advisory: Eligibility for ENGL 001A and READ 054. This course is designed to provide safe cardiovascular activity and to develop and maintain physical and cardiovascular fitness through the medium of dance. Dance movements to popular music are used to achieve these goals. This section requires enrollment in the Honors Transfer Project. More information and the online application can be found at http://honors.missioncollege.edu.

**WHP 007J**  
Golf-Beginning  
1.0 UNIT  
Advisory: Eligibility for ENGL 001A and READ 053. Pass/No Pass Option

**WHP 021**  
Sports Injuries  
1.5 UNITS  
Advisory: WHP 025. This course is designed specifically for the fitness specialist or enthusiast who wants a basic understanding of the prevention and care of athletic injuries. Emphasis will be on fitness related injuries as well as preventative steps recommended to avoid injuries. Basic awareness of the needs of special populations will also be discussed. Pass/No Pass Option.

**WORK EXPERIENCE (WRK)**

**WRK 300CD**  
Occupational Work Experience for Child Development (3.0 units of Work Experience)  
3.0 UNITS  
The student is required to attend an orientation at the beginning of the course. Students earn 1.0 unit of credit for every 60 hours of unpaid work or 75 hours of paid work. Students may earn a maximum of 16 units of occupational work experience during their community college attendance. Note: Students must be working in a job or volunteer position the early childhood special education. Eligibility for ENGL 001A and READ 054.

**WRK 300HM**  
Work Experience for Hospitality Management  
NaN UNITS  
The student is required to attend an orientation at the beginning of the course and complete a minimum of 75 hours for paid work or a minimum of 60 hours for unpaid work for each unit earned per semester. Only one Work Experience course may be taken per semester. Students can earn a maximum of 8 units of Work Experience per term. Students may earn a maximum of 16 units of occupational work experience during their community college attendance. Only one Work Experience course may be taken per semester. Note: Students must be working in a job or volunteer position in the hospitality, food service and restaurant industries.

**WRK 300TN**  
Occupational Work Experience for the Transportation Industry (1.0-8.0 Units)  
1.0 UNIT  
The student is required to attend an orientation at the beginning of the course. Students earn 1.0 unit of credit for every 60 hours of unpaid, or 75 hours of paid work. Students may earn a maximum of 16 units of occupational work experience during their community college attendance. Note: Students must be working in a job or volunteer position in the mass transit industry. Eligibility for ENGL 001A and READ 054.

**WRK 301**  
Work Experience Occupational  
1.0 UNIT  
Students establish measurable goals and learning objectives obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student.

**WRK 302**  
Work Experience Occupational  
2.0 UNITS  
Students establish measurable goals and learning objectives obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student.

**WRK 303**  
Work Experience Occupational  
3.0 UNITS  
Students establish measurable goals and learning objectives obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student.

**WRK 304**  
Work Experience Occupational  
4.0 UNITS  
Students establish measurable goals and learning objectives obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student.