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Contra Costa College

# **2016 - 17 CATALOG**

# ADDENDUM

# 2016-2017 Catalog Addendum

All updates are effective Spring 2017 Semester, unless otherwise noted

# NEW COURSES

# Administration of Justice (ADJUS)

#### ADJUS-127A Police Youth Academy - Module A

3 Units: 48 hours of lecture, 32 hours of laboratory per term, LG, DG, CSU This course is an introduction to the functions of a police department and its relationship to the criminal justice system, and examines community involved policing and general practices. This career planning and technical preparation bridge course is for high school and college students interested in, or currently working in, positions as police explorers, police cadets, police aides, and community service officers. The skill level for this course would be that of entry or beginning levels. This course is the first of a sequence of two that will benefit students interested in a career in law enforcement.

#### ADJUS-127B Police Youth Academy - Module B

3 Units: 48 hours of lecture, 32 hours of laboratory per term, LG, DG, CSU Prerequisite: ADJUS-127A; or Challenge Policy: Final practical and written exam in ADJUS-127A with a passing score of 70% or greater. This course further explains the functions of a police department and its relationship to the criminal justice system, and examines community involved policing and general practices. This career planning and technical preparation bridge course is for high school and college students interested in, or currently working in, positions as police explorers, police cadets, police aides, and community service officers. The skill level for this course is intermediate. This course is the second of a sequence of two that benefits students interested in a career in criminal justice.

# **Automotive Services (AUSER)**

#### AUSER-097 Automotive Service Advising

3 Units: 54 hours of lecture, per term, SC, DG, CSU This course involves the fundamental study of automotive service advising and procedures. Topics include: customer service, writing repair orders, estimating labor charges and revising repair estimates in accordance with California law.

# **Business Office Technology (BOT)**

#### BOT-242 Microsoft Outlook for Business

2 Units: 36 hours of lecture, 18 hours of laboratory per term, SC, DG, CSU This course is for students who want to learn the comprehensive functions of Microsoft Outlook, a powerful email and personal information manager program which is part of the Microsoft Office Suite. This course prepares students for Microsoft certification testing but is also useful for students who want a deeper understanding of the program. No previous experience with this software is required.

# **Counseling (COUNS)**

#### COUNS-130 Career and Major Exploration

1.5 Units: 27 hours of lecture per term, SC, DG, CSU, UC This course is designed for students who are undecided about their career and/or educational goals and will assist them in choosing a major or navigating a career/major change. The course will guide students through the formative stages of their career development, beginning with career assessments, including personality, interest, values, and skills. An introduction to the basic career planning process, computerized information systems that aid in the research of occupational and college major options, and result in a plan that outlines a clear academic/ career pathway will also be included.

#### COUNS-140 Job Search Strategies

**1.5 Units: 27 hours of lecture per term, SC, DG, CSU, UC** This course prepares students for the employment search process including personality and value assessment, identification of goals and job skills, how to complete an application, traditional and electronic cover letters and resumes, interviewing techniques, job market research and overview of employee and employer rights. Students will identify and discuss the employability skills most commonly sought by employers.

# **Early Childhood Education (ECHD)**

#### ECHD-895N Foster Parent Skills

This class examines issues relating to adoption, foster parenting, and kinship/guardian care of children. Topics of discussion vary throughout the semester and are dependent upon current issues that are relevant to the field of foster care.

# **Engineering (ENGIN)**

#### ENGIN-160 Programming Concepts and Methodologies for Engineers

4 Units: 54 hours of laboratory, 54 hours of lecture, per term, LR, DG, CSU, UC

This course introduces the basics of software development using a high level language utilizing programming and the interface of software with the physical world.

# Media (MEDIA)

MEDIA-170 Introduction to 3D Graphics & Animation Design 3 Units: 36 hours of lecture, 54 hours of laboratory per term, SC, DG, CSU, UC

This course will introduce students to computer generated 3-D modeling. It provides a basic understanding of the skills and techniques employed by 3-D designers in a wide range of applications. In this course, students will explore basic mesh modeling, texturing, lighting, animation and rendering.

# **Physical Education (PE)**

#### PE-250A Beginning Spinning

.50-2 Units: 27-108 hours of laboratory per term, SC, DG, CSU, UC This beginning spin course is designed to provide students with a exercise session that will simulate varied terrain such as, rolling hills, steep climbs, and flat sprints. In addition, other drill variations will provide a great interval workout. Each workout begins with a warm-up, then an increasing level of workload and finishes with a cool-down. This course is suitable for all levels for fitness.

#### PE-250B Intermediate Spinning

.50-2 Units: 27-108 hours of laboratory per term, SC, DG, CSU, UC This intermediate spin course is designed to provide students with a training session that focuses on intervals, sprints, climbs, runs, surges and jumps. Using cadence ladders students will gain intermediate level spin skills.

#### PE-250C Advanced Spinning

**.50-2** Units: 27-108 hours of laboratory per term, SC, DG, CSU, UC This advanced spin course is designed to provide students with a training session based on tabata strength style protocol. The tabata workout is an interval training cycle of 20 seconds max intensity of weighted exercises followed by 10 seconds of intermediate intensity rest period. All styles of spin will be incorporated into the tabata protocol. This course will also increase intensity by adding weight workouts during the spin workout to maximize spin performance.

# Speech (SPCH)

#### SPCH-141L Argumentation Lab

**.50-2** Units: 27-108 hours of laboratory per term, LG, DG, CSU, UC This course is designed and intended to serve students with an interest in practicing argumentation and debate beyond the classroom. Students will develop, practice, and demonstrate argumentation and debate techniques specific to their needs, whether competitive, personal or professional. Although SPCH 141 is recommended, it is not required in order to enroll and succeed in SPCH 141L.

# **REVISED COURSES**

Strike through = deletion Yellow highlighting = addition

# Administration of Justice (ADJUS)

#### ADJUS-163A Security Guard Certification - Powers of Arrest .5 Unit: 9 hours of lecture, per term, SC, DG

This is the first course in a series of open entry/open exit courses designed to prepare the student for a career in private security. This course qualifies the student for a Powers of Arrest card from the state of California. The Powers of Arrest card is also known as a Guard Card. Petition to repeat intended for legally mandated certification training.

# **Anthropology (ANTHR)**

#### ANTHR-140L Physical Anthropology Laboratory

1 Unit: 54 hours of laboratory per term, LR, DG, CSU, UC **Prerequisite:** ANTHR-140 (may be taken concurrently)

This is an introductory laboratory course in which scientific methodology is taught and used to explore/experiment with topics found in introductory physical anthropology and primate evolution courses. Topics will include: paleontology, hands-on study of fossils, Mendelian and population genetics, human variability, forensics, medical anthropology, epidemiology, non-human primates, primate dental and skeletal anatomy, paleoprimatology, paleoanthropology, hominid dietary patterns, the study of hominids as bio-culturally adapted animals, and a survey of general methodologies utilized in physical anthropological research. Field trips may be included.

# Art (ART)

#### ART-124 Painting: Beginning I

2-4 Units: 3 Units: 18-36 hours of lecture, 54-144 72 hours of laboratory, per term, SC, DG, CSU, UC

This course provides a study and practice of technical and compositional elements in opaque acrylic painting. Students needno previous experience in art.

This course is an introduction to principles, elements, and practices of painting. Focus on exploration of painting materials, perceptual skills and color theory, paint mixing and technique, as well as creative responses to materials and subject matter.

#### ART-132 Digital Art: Beginning I

1-4 Units: <mark>3 Units:</mark> 18-36 hours of lecture, <del>18-144</del> <mark>54</mark> hours of laboratory, per term, SC, DG, CSU, UC (C-ID: ARTS 250)

This course is for traditional and novice artists expanding to digital media. Students will work with Adobe Photoshop, and focus on photographic image making, scanning, image manipulation, and digital painting. Students will focus on image creation, not technology, using the computer as a tool to helpshape their vision.

This course is an introduction to fundamental concepts, practices, and theories of digital art production for traditional and novice artists. Topics include integration of traditional design, color, and compositional principles with contemporary digital tools such as Adobe Photoshop.

#### ART-135 Hot Metals Beginning Jewelry I

<del>2-4 Units:</del> 3 Units: <del>18-</del>36 hours of lecture, <del>54-144</del> <mark>72</mark> hours of laboratory, per term, SC, DG, CSU

Required materials fee of \$3.00 per unit.

This course is an entry-level class in jewelry making that introduces concepts and skills in jewelry design, jewelryconstruction and fabrication, presentation, marketing, and sales. Students will learn and utilize various technologies involved in the jewelry making process. This class is designed for students who have little or no experience in jewelry making. This course is an introduction to a wide range of methods, techniques (including basic stone setting), and materials used to create jewelry and small-scale metal artwork and objects. This course will include an examination of the history and contemporary practices of jewelry-making and metal fabrication with a global cultural perspective.

#### ART-140 Sculpture: Beginning I

2-4 Units: 3 Units: 18-36 hours of lecture, 54-144 72 hours of laboratory, per term, SC, DG, CSU, UC

Required materials fee of \$3.00 per unit.

Students will study sculpture as a three dimensional communication and will be encouraged to research cultural sculpture relating to their own ethnic history. Students will demonstrate knowledge/skills in subtractive and additive l sculpture, mold making, clay modeling, and bronze casting. This course is an introduction to three-dimensional sculptural principles, techniques, and concepts utilizing a wide range of materials and practices. Various sculpture methods are practiced with attention to creative self-expression and historical context.

#### ART-145 Ceramics: Beginning I

<del>2-4 Units: <mark>3 Units:</mark> 18-</del>36 hours of lecture, <del>54-144</del> 72 hours of laboratory, per term, SC, DG, CSU, UC

Required materials fee of \$3.00 per unit.

This course is for students who have no prior experience in ceramics. Students will learn about clay and other ceramic-materials, and will learn basic hand forming techniques, wheel-throwing techniques, decorating techniques and basic ceramic-firing procedures as applied to creating functional stoneware-objects.

This course is an introduction to ceramics materials, concepts, and processes including basic design principles, creative development, hand-building, throwing, glaze techniques, firing and ceramic terminology. The course covers aesthetics and creative development of clay objects examining historical, contemporary, and personal modes of expression across cultures.

#### ART-158 Digital Photography: Beginning I

2-4 Units: 3 Units: 18-36 hours of lecture, 54-144 54 hours of laboratory, per term, SC, DG, CSU, UC

This course provides basic instruction in the operation and use of digital still cameras. Differences between traditional and digital photographic techniques will be discussed and explored. Coursework will include thematic projects, downloading of images, storage media, archiving strategies, utilizing imageenhancing software (Photoshop), and the submission of a CDbased portfolio of digital images.

This course is an introduction to the processes, principles, and tools of digital photography. Topics include the development of technical and aesthetic skills, elements of design and composition, camera technology, materials and equipment, and contemporary trends in photography.

#### ART-174 Drawing and Composition: Beginning I

<del>2-3 Units: <mark>3 Units:</mark> 18-</del>36 hours of lecture, <mark>72</mark> hours of laboratory, per term, SC, DG, CSU, UC (C-ID: ARTS 110)

Required materials fee of \$3.00 per unit.

This course is entry-level using charcoal and other drawingmedia on an 18 inches x 24 inches or larger format. Projectsin: non-objective composition, perspective, and drawingfrom observation of still life materials, with an emphasis on composition and design. This course is for students who havelittle or no previous experience in the visual arts.

This course is an introduction to principles, elements, and practices of drawing, employing a wide range of subject matter and drawing media. Focus on perceptually based drawing, observational skills, technical abilities, and creative responses to materials and subject matter.

#### ART-184 Pastels and Color Theory

3 Units: 36 hours of lecture, 72 hours of laboratory, per term, SC, DG, CSU, UC (C-ID: ARTS 270)

This course is designed to introduce students to color theory and the use of chalk pastels. Students will make drawings using black and white, monochromatic, complementary, and primary color palettes. This is a preliminary step to students learning aboutand developing a successful personal color palette.

This course will introduce students to the principles, theories, and applications of additive and subtractive color in two dimensions. Topics will include major historical and contemporary color systems, production of projects in applied color, and the elements of design as they apply to color.

### **Automotive Services (AUSER)**

#### AUSER-101 Automotive Fundamentals

4 Units: 54 hours of lecture, 54 hours laboratory, per term, <del>LR</del>, <mark>SC</mark>, DG, CSU

This course is an overview of automotive industry fundamentals: basic automotive repairs and diagnosis, professional practice and industry standard procedures, electrical fundamentals, brakes, suspension and steering operation and service essentials of engine operation and testing, safety procedures, use and interpretation of automotive service information, and hand tool identification and usage.

#### AUSER-103 Automotive Electrical/Electronic Systems

5 Units: 54 hours of lecture, 108 hours laboratory, per term, LR, DG, CSU *Prerequisite:* AUSER 101 (may be taken concurrently)

This course covers the basic fundamentals of automotive electrical and electronic systems, including: starting, charging, ignition, lighting, and accessory circuits. The class stresses proper use of the test equipment required to do engine diagnosis and tune-up. The class also will introduce automotive computer systems. The course will also assist students in preparing for the ASE A-6 Electrical and Electronics examination. Petition to repeat for certification training purposes.

#### AUSER-225 Advanced Automotive Collision Repair (Laboratory)

5 Units: <mark>54 hours of lecture</mark>, <del>270 hours</del> <mark>108</mark> hours laboratory, per term, LR, DG, CSU

Prerequisite: AUSER 123, <del>124</del>, 125, and <del>126</del>

#### Normally offered in the fall

This course provides advanced experience in collision repair practices in all phases and is designed to allow the student to focus on collision repair as a career goal. Students will continue to add to the ICAR Education Edition Professional Development Program ProLevel 2 and 3.

#### AUSER-226 Advanced Automotive Painting and Refinishing (Laboratory)

5 Units: <mark>54 hours of lecture</mark>, <del>270 hours</del> <mark>108 hours</mark> of laboratory, per term, LR, DG, <mark>CSU</mark>

### Prerequisite: AUSER <del>123</del>, 124, <del>125</del>, 126

Normally offered in the spring

This course provides advanced experience in all phases of collision repair emphasizing on painting and refinishing while allowing the student to focus on their career goal. Students will continue to add to the ICAR Education Edition Professional Development Program ProLevel 2 and 3.

# **Biological Science (BIOSC)**

#### BIOSC-106 Experimental Analysis in Biology

.5 Unit: 6 hours of lecture, 12 hours of laboratory per term, P/NP, DG This course is intended to provide preparation for the successful completion of BIOSC 119, 134, 140, 141, 148, and 155 higher level biology courses. It introduces students to common experimental techniques and situations in biology and offers practice in the collection, analysis, display, and interpretation of data. Students cover and review metric system, ratios and proportions, graphing, serial dilutions, microscope use, pH and basic chemistry, and some general cell biology and biochemistry. Students who believe they are already adequately prepared may challenge the course by examination. Students have one chance to pass this examination.

#### BIOSC-157 Foundations in Biotechnology

3 Units: 54 hours 2 Units: 44 hours of lecture, per term, LR, DG, CSU, UC (C-ID: BIOT 150 BX)

#### Prerequisite: BIOSC-106 or BIOSC-172L Corequisite: BIOSC-159

This course is designed to provide students wanting to enter the field of biotechnology with a solid foundation in the chemical, biochemical, microbiological, mathematical, bioinformatic and regulatory concepts used in biotechnology labs. Students practice laboratory calculations, design and analyze experiments, and become familiar with the documentation and practices important for working in a regulated environment (laboratory notebooks, QA/QC, SOP's, cGMP). Good communication and work-readiness skills are emphasized.

#### BIOSC-159 Foundations in Biotechnology Laboratory

1 Unit: <del>54 hours</del> <mark>66 hours</mark> of laboratory per term, LR, DG, CSU, UC (C-ID: BIOT 150 BX)

#### Corequisite: BIOSC-157

This course is designed to provide students with training in the skills and applications commonly used in biotechnology and molecular biology laboratories. It will provide technical practice with analytical instruments, the formulation and use of reagents, and the culture and study of model organisms. Students will learn and apply the Scientific Method, perform data analysis, keep a laboratory notebook according to cGMP, follow Standard Operating Procedures and practice good communication and teamwork skills as they carry out laboratory experiments that reveal foundational concepts of biology, biotechnology, and molecular biology.

#### BIOSC-160 Nutrition

3 Units: 54 hours of lecture, per term, LR, DG, CSU, UC

This course provides a study of the essential nutrients, their function in the body, and how to determine the food needs of the normal individual. This course provides scientific concepts related to the study of the essential nutrients, their function in the body, and the relationship of nutrition to health, fitness and diseases.

#### BIOSC-182 GLP and GMP: Principles and Compliance

<del>1 Unit: 18 hours</del> <mark>2 Units: 36 hours</mark> of lecture, per term, LR, DG, CSU (C-ID: BIOT 210X)

This course will introduce students to the laws, regulations, and quality practices associated with the biotechnologyindustry, with emphasis on the development of pharmaceuticals and medical devices. Students will gain hands-on experiencenavigating and using the Food and Drug Administration (FDA)website.

This course will introduce students to the concepts of quality control and validation as it relates to manufacturing in regulated industries. GLP, cGMP, Quality Assurance and Quality Control laws, regulations, and quality practices associated with the biotechnology industry are included, with emphasis on the development of pharmaceuticals and medical devices.

#### BIOSC-183 Mammalian Cell Culture

<del>1 Unit: 15 hours of lecture and 9 hours of laboratory</del>, <mark>2 Units: 18 hours of lecture and 54 hours of laboratory</mark> per term, LR, DG, CSU (C-ID: BIOT 230 BX)

#### **Prerequisite:** BIOSC 159 (may be taken concurrently)

This course is designed to prepare students for employment as cell culture technicians. Students will learn aseptic techniques, how to work in a cell culture hood, how to compose mammalian cell culture media and the function of each medium component, how to use a hemacytometer and vital staining to count cells and determine viability, how to passage cells, and how to cryopreserve cell cultures. In addition, students will be introduced to concepts of stem cell research, including multi-potent and totipotent cell lines.

#### BIOSC-186 Protein Purification and Analysis

1 Unit: 15 hours of lecture and 9 hours of laboratory, 2 Units: 18 hours of lecture and 54 hours of laboratory per term, LR, DG, CSU (C-ID: BIOT 220 BX)

Prerequisite: BIOSC 159, 172L or 148 (may be taken concurrently) This course will teach how to isolate a specific protein from a complex cell lysate using affinity chromatography. The isolatedprotein will be analyzed by qualitative and quantitative protein assays. The size and purity of the isolated protein will beanalyzed by SDS-Polyacrylamide Gel Electrophoresis (SDS-PAGE). This course will teach students how Sample preparation, protein separation and purification, column chromatography, large-scale recovery, and use of assays for recovery analysis are studied. Students practice isolating a specific protein from a complex cell lysate using affinity and other forms of chromatography, and analyze the results by qualitative and quantitative protein assays. The size and purity of the isolated protein are analyzed by SDS-Polyacrylamide Gel Electrophoresis (SDS-PAGE). Application of current Good Manufacturing Process (cGMP), Good Laboratory Practice (GLP), and Standard Operating Procedures (SOP's) in relation to these techniques will be addressed.

# **Business Office Technology (BOT)**

**BOT-210A** Keyboard Skills through Word Processing 2 Units: 36 hours of lecture, 18 hours of laboratory, per term, SC, DG, CSU *Satisfies computer literacy requirements for graduation.* This course is designed for the student to learn to key (type) using the touch system on a computer keyboard. Instruction includes basic operating systems commands, basic-word processing commands, internet research, email and correct

formats for correspondence and reports.

#### BOT-222 Microsoft Word<del>/Information Processing</del> for Business

3 Units: 36 hours of lecture, 72 hours of laboratory, per term, SC, DG, CSU **Prerequisite:** BOT 210A or CIS-135 with a minimum grade of C; or complete typing exam with a minimum of 40 wpm <del>Co-requisite: BOT-095A-D</del>

This course will introduce students to intermediate and advanced features of Microsoft Word such as styles, outlines, mail merge, and macros. Basic skills in Microsoft Windows and the Internet will also be introduced. <del>Students will receivehands-on experience working on actual projects--the best way to prepare them for the on-the-job challenges they'll face.</del> This course offers complete instruction in <del>all</del>-skill sets and activities for the appropriate Microsoft Office Specialist certification (MOS) Exams. Petition to repeat for certification purposes.

#### CIS-201BOT-224 Microsoft Excel/Information Processing for Business

3.5 Units: 54 hours of lecture, 36 hours of laboratory, per term, SC, DG, CSU Prerequisite: CIS-135 or CIS 037 with a minimum grade of C Co-requisite: CIS-095A-D

This course will introduce students to intermediate and advanced features of Microsoft Excel such as lists, filters, pivottables, and macros. lookup, pivot tables, pivot charts, and data set management. Ten-key skills using the computer numeric keypad and the principles of mathematics used on the job will also be introduced. Students will receive hands-on experienceworking on actual projects--the best way to prepare them for the on-the-job challenges they'll face. This course offers complete instruction in-all-skill sets and activities for the appropriate Microsoft Office Specialist Certification (MOS) Exams.

#### CIS-200BOT-226 Microsoft Access/Information Processing for Business

3.5 Units: 54 hours of lecture, 36 hours of laboratory, per term, SC, DG, CSU Prerequisite: CIS-135 or CIS-038 with a minimum grade of C Co-reauisite: CIS-095A-D

This course will introduce students to intermediate and advanced features of Microsoft Access such as building links, relationships, indexes, designing advanced queries and macros, forms and reports. The history of records management and the Alphabetic Indexing Rules 1-10 will also be introduced. Studentswill receive hands-on experience working on actual projects--the best way to prepare them for the on-the-job challenges they'll face. This course offers complete instruction in all skill sets and activities for the appropriate Microsoft Office Specialist Certification (MOS) Exams.

#### BOT-248 Business Correspondence

3 Units: 54 hours of lecture, per term, SC, DG, CSU This course presents the principles of effective business communication, with extensive practice in planning, writing, and revising for conciseness, readability, emphasis and tone

and revising for conciseness, readability, emphasis and tone. Students explore methods of collecting, organizing, and interpreting information for both oral and written reports. A variety of written and oral assignments are presented with emphasis on a final written report. <del>This course meets the English composition requirement for graduation</del>.

# Computer Information Systems (CIS)

#### CIS-166A Basic Web Page Development

1.75 Units: 27 hours of lecture, 18 hours of laboratory, per term, SC, DG, CSU Co-requisite: CIS 095A-D

Introduction to web page development using static HTML and CSS. Basic "real-world" application of web pages including text, styles, graphics, links, frames, tables, and forms using a simple text editor.

#### CIS-166B Advanced Web Page Development

1.75 Units: 27 hours of lecture, 18 hours of laboratory, per term, SC, DG, CSU **Prerequisite:** CIS 166A or Challenge the CIS 166A exam with 70% or better or provide a sample web page with links, graphics, image maps, tables, frames, and forms and explain the HTML code that supports it. **Co-requisite:** CIS 095A-D

This course is a continuation of CIS 166A: Basic Web Page Development. Advanced "real-world" application of Web pages including cascading style sheets (CSS), JavaScript, DHTML, XML, and multimedia using a simple text editor.

#### CIS-190B Windows Fundamentals

1.5 Units: 27 hours of lecture, 18 hours of laboratory, per term, SC, DG,

#### Co-requisite: CIS 095A-D

This course will introduce concepts of the Windows operating system, and is designed to meet the needs of both novice and experienced users. Students will learn how to use the desktop function of Windows, and how to customize the options for individual needs. Upon completion of the course, the student will be able to document the tasks and processes of their current Windows environment.

#### CIS-201 BOT-224 Microsoft Excel/Information Processing for Business

3.5 Units: 54 hours of lecture, 36 hours of laboratory, per term, SC, DG, CSU

#### Prerequisite: CIS-135 or CIS 037 with a minimum grade of C Co-requisite: CIS-095A-D

This course will introduce students to intermediate and advanced features of Microsoft Excel such as lists, filters, pivot tables, and macros. lookup, pivot tables, pivot charts, and data set management. Ten-key skills using the computer numeric keypad and the principles of mathematics used on the job will also be introduced. Students will receive hands-on experienceworking on actual projects--the best way to prepare them for the on-the-job challenges they'll face. This course offers complete instruction in all-skill sets and activities for the appropriate Microsoft Office Specialist Certification (MOS) Exams.

#### CIS-200 BOT-226 Microsoft Access/Information Processing for Business

3.5 Units: 54 hours of lecture, 36 hours of laboratory, per term, SC, DG, CSU

#### Prerequisite: CIS-135 or <del>CIS-038</del> with a minimum grade of C Co-requisite: CIS-095A-D

This course will introduce students to intermediate and advanced features of Microsoft Access such as building links, relationships, indexes, designing advanced queries <del>and macros</del>, forms and reports. The history of records management and the Alphabetic Indexing Rules 1-10 will also be introduced. <del>Studentswill receive hands-on experience working on actual projects--the best way to prepare them for the on-the-job challenges they'll face.</del> This course offers complete instruction in-<del>all</del> skill sets and activities for the appropriate Microsoft Office Specialist Certification (MOS) Exams.

### **Counseling (COUNS)**

#### PSYCH-103A COUNS 103A Personal Development for College Success

1.5 Units: 27 hours of lecture, per term, SC, DG, CSU, UC

This course will focus on personal development as a foundation for building the traits of a successful college student. Students will have the opportunity to engage collaboratively with peers in a format that promotes team building. Topics covered may include self-awareness, values clarification, motivation, goal setting, and strengthening communication skills. These topics are covered as a foundation for major and career exploration.

#### PSYCH-103B COUNS 103B Ensuring Transfer Success

**1.5 Units: 27 hours of lecture, per term, LR, DG, CSU, UC** This course focuses on the transfer process with particular emphasis on the systems of higher education in California (CSU, UC and private colleges and universities). This course will cover transfer preparation including admissions requirements for transfer, general education requirements and how to prepare for a particular major. Financial aid resources, scholarships, writing personal statements, accessing internet resources for transfer and financial aid, and completing the college admissions application will also be covered. Students will be able to explore their personal and academic goals as they prepare for transfer.

#### COUNS-108 Introduction to Educational Planning

<del>.3 Unit: 2</del> Unit: 6 hours 4 hours of lecture, per term, P/NP, ND, DG This course offers an introduction to educational planning and is designed to provide students with information and a concrete plan for succeeding in college. Topics covered includecollege policies and procedures, identifying educational andcareer goals, strategic use of campus student support services, and educational planning. Emphasis is placed on educational planning tools such as general education patterns, and major preparation resources used for transfer and local certificates and associate degrees (IGETC, CSU GE, CCC GE, ASSIST.org, AA-T, AS-T, CCC catalog, and private college resources). Information obtained through multiple measures assessment methods will help student identify the correct sequencing of math and English courses. Students will identify other major and general education courses to include in their online educational plan.

### COUNS-120 Managing College Success and Life Transitions

3 Units: 54 hours of lecture, per term, SC, DG, CSU, UC This course is designed to assist students in obtaining the knowledge and skills necessary to successfully achieve their educational goals and effectively manage life challenges and transitions. The course explores the key areas of effectivecollege study techniques, motivation, decision-making, goalsetting, interpersonal communication, critical thinking, and timemanagement skills; personal budgeting, maintaining a healthy lifestyle, and effective management of social and personal issues/responsibilities confronting students. In addition, students learn to develop strategies to make meaningful choices affecting educational, career and personal lifestyle changes. Topics such as motivation and attitudes, time management, decision-making processes, goal-setting, critical thinking skills, study skills and interpersonal communication will be explored. Students will evaluate their own skills and behaviors in relation to these topics and learn strategies to make meaningful choices about their education, career and personal goals.

# English as a Second Language (ESL)

#### ESL-195 Reading and Composition for Advanced ESL Students

5 Units: 90 hours of lecture, per term, SC, DG, UC

#### **Prerequisite:** ESL 192 or placement in writing <del>level 4 <mark>Level 5</mark> in ESL</del> Placement Test

This course focuses on composition and reading skills for high-advanced ESL students. It includes college-level critical/ analytical reading, expository writing that incorporates references to college level readings, and an argument paper based on outside sources.

# Drama (DRAMA)

#### DRAMA-106 Technical Theatre Production/Stagecraft

2.5 Units 3 Units: 135 hours of laboratory, per term, SC, DG, CSU, UC This course introduces the theories and practices of backstage and front-of-house techniques used in theatrical productions, including basic carpentry, electricity, sound systems, and specialization.

This course will introduce the student to the basics of technical theatre. The focus will be on backstage operations and crew assignments. Emphasis on understanding the roles, duties, and responsibilities of the stage manager and running crew: prop master, dresser, sound and light operators, and technicians. This will include the following areas: communication with designers, actors, directors, and fellow running crew, load in/ load out, technical rehearsals and show run procedures, safety, backstage etiquette, professionalism and practical applications for productions.

#### DRAMA-125 Acting on Camera

3 Units: <del>36 hours <mark>54 hours</mark> of lecture<del>, 54 hours of laboratory</del>, per term, SC, DG, CSU, UC</del>

#### Advisory: Taking Drama-122 or equivalent is recommended

This course covers practical training and practice in acting on camera for the performer. Close attention will be paid to those techniques of acting that have special application to performing in television and film.

### **Emergency Medical Sciences** (EMED)

#### EMED-110 Emergency Medical Technician I

6 Units: 72 hours of lecture, 72 hours of laboratory, 36 hours of laboratory by arrangement, per term, LR, DG, CSU

#### Prerequisite: EMED-107 or EMR card and current CPR card

This course provides the student with the knowledge and skills to become certified as an Emergency Medical Technician I in the state of California. Topics covered are patient assessment, oxygen administration, recognition and treatment of various medical and trauma emergencies, and other aspects that relate to pre-hospital care. The student will spend time in an emergency department and in an ambulance to experience the field of EMS. This course meets the state of California regulations of EMT I training. A grade of C or better is required in order to be eligible for certification. Petition to repeat for legally mandated certification training.

# **Mathematics (MATH)**

#### MATH-875N Computer Assisted Tutoring-Math Supervised Mathematics Tutoring

An individualized self-paced CAI (computer aided instruction) laboratory for students to develop their basic skills in mathematics. Small study groups will also be utilized. This laboratory provides supplemental tutorials utilizing alternative learning modes and materials. With instructor assistance and supervision following appropriate diagnosis, learning contracts will bearranged to address students' individual academic needs and goals. Enrollment will be open to all students who demonstrate basic skill deficiency as measured by the college assessment instruments or students' informed self-decisions. May be repeated indefinitely. This course provides individualized mathematics tutoring designed to assist students to increase their success in college. Students enrolled in this course receive support from trained tutors in one or more mathematics courses per semester. Content will vary depending on the course subject matter. Students must be enrolled in a college credit course. May be repeated indefinitely.

### Media (MEDIA)

#### MEDIA-130 Screenplay and Scriptwriting

3 Units: 54 hours of lecture, per term, SC, DG, CSU, UC

This course provides instruction in writing scripts and treatments for a variety of media productions including film, television, and multimedia. Topics covered include theme, story development, plot outlines, dialogue, character, dramatic structure, scriptformats, and storyboarding. script formatting, fundamental technical, conceptual and stylistic issues related to writing fiction and non-fiction scripts for informational and entertainment purposes in film and electronic media. Includes a writing evaluation component as a significant part of the course requirement.

#### MEDIA-165 Motion Graphic Design and Animation 3 Units: <del>54 hours of lecture <mark>36 hours of lecture, 54 hours of laboratory</mark>,</del>

per term, SC, DG, CSU, UC

This course provides instruction in the design and animation of motion graphics using Adobe After Effects software. Topics covered include templates, key-framing, behavior-based animation, motion graphic design, visual effects design, building 3D scenes and project integration with Adobe Creative Suite applications.

# Medical Assisting and Office Technician (MEDIC)

#### (Effective, Summer 2017)

MEDIC-219 Venipuncture for the Healthcare Professional 1 Unit: 14 hours of lecture, 12 hours of laboratory, per term, P/NP, DG Prerequisite: MEDIC-161 MEDIC-221; Challenge: successful completion of equivalent course and/or examination, or healthcare professional license.

This course is designed for students of allied health training programs or allied health practitioners who have not yet received training in venipuncture. It is for those who work for, or plan to work for, a doctor's office, clinic or other healthcare provider that is NOT a licensed clinical laboratory. It will provide the basic theory and procedure for performing simple venipuncture by syringe and needle, evacuated system and butterfly needle for the purpose of blood collection. It will also cover the basics of the cardiovascular system, infection control and safety, and skin puncture procedures. This course fulfills national accreditation competencies in diagnostic procedures for medical assistants.

### Music (MUSIC)

#### MUSIC-251 Advanced Piano Ensemble

2 Units 2.5 Units: 36 hours of lecture, 36 18 hours of laboratory, 18 hours of laboratory by arrangement per term, SC, DG, CSU, UC This course offers the study and performance of keyboard ensemble literature, and provides an opportunity for the intermediate/advanced piano students to grow musically through experiencing ensemble performance. May be repeated three times.

### **Nursing (NURS)**

#### NURS-198 Certified Nursing Assistant Nurse Assistant Certification Course

7 Units: 72 hours of lecture, 162 hours of laboratory, per term, LR, ND **Prerequisites:** College Reading Assessment score of 34. This prerequisite requirement may be satisfied by completing either ENGL 82, ENGL 84, ENGL 92 or ESL 146; or place at ESL level 3.

College Writing Assessment score of 25. This prerequisite requirement may be satisfied by completing either ENGL 82, ENGL 84, <del>ENGL 92</del> or ESL 146; or place at ESL level 3.

Cardio Pulmonary Resuscitation (CPR). American Heart Association CPR certification for the HealthCare Provider is required. Online CPR classes are not accepted. Current CPR certification must be shown at CCC Admissions and Records Office to register for NURS 198. Cardio Pulmonary Resuscitation (CPR): American Heart Association BLS course for the Healthcare Provider current card required.

This course is designed to train the individual to function as a Certified Nursing Assistant (CNA). Students will be part of a health team under the supervision of a Registered Nurse or a Licensed Vocational Nurse in a health care agency. The programmeets standards according to federal and state regulations. The core curriculum is framed around the modules required by the Department of Health Services. Students interested in this course must obtain the CNA Application packet from the nursing department office (HS 103) well in advance in order to complete all the necessary forms such as physical exam, proof of negative TB test, and LiveScan fingerprinting. The CNA application packet must be completed and submitted to the nursing office prior to or by the first day of class.

#### This course is designed to train the student to function as a Certified Nursing Assistant. The student will be part of a health team under the supervision of a Registered Nurse or a Licensed Vocational Nurse in a health care agency. The program meets standards according to federal and state regulations. The core curriculum is framed around the modules required by the California Department of Public Health. Example of topics and skill development include communication skills, infection control, patient's rights, and basic CNA skills.

#### NURS-212 Pharmacology for Nurses

2 Units: 36 hours of lecture, per term, LR, DG, CSU Advisory: Recommend prior completion of BIOSC 132, BIOSC 134, and either BIOSC 119 or 148.

This course will present the basic principles of pharmacology and clinical drug therapy needed by the professional nurse to safely care for the adult medical surgical patient. Content includes principles of pharmacodynamics, pharmacokinetics, the nurse's role in safe medication administration and in clinical drug therapy.

# **Political Science (POLSC)**

#### POLSC-125 Government of the United States

**3 Units: 54 hours of lecture, per term, SC, DG, CSU, UC (C-ID: POLS 110)** This course examines U.S. Constitution and the U.S. system of government at the national and state levels; the course covers both U.S. and California political processes and institutions. The rights, obligations, and participation of citizens will be discussed. The course will also highlight contemporary relationships of state and local government, rights and liberties established by the U.S. Constitution, including key U.S. Supreme Court cases,

the resolution of conflicts and the establishment of cooperative processes under the constitutions of both the state and the nation and the political processes involved. Significant events since the American Revolution and the contributions of women and ethnic groups will also be examined. The cultural diversity of the U.S. and California will be emphasized.

# **Psychology (PSYCH)**

#### PSYCH-103A COUNS 103A Personal Development for College Success

**1.5 Units: 27 hours of lecture, per term, SC, DG, CSU, UC** This course will focus on personal development as a foundation

for building the traits of a successful college student. Students will have the opportunity to engage collaboratively with peers in a format that promotes team building. Topics covered may include self-awareness, values clarification, motivation, goal setting, and strengthening communication skills. These topics are covered as a foundation for major and career exploration.

#### PSYCH-103B COUNS 103B Ensuring Transfer Success

**1.5 Units: 27 hours of lecture, per term, LR, DG, CSU, UC** This course focuses on the transfer process with particular emphasis on the systems of higher education in California (CSU, UC and private colleges and universities). This course will cover transfer preparation including admissions requirements for transfer, general education requirements and how to prepare for a particular major. Financial aid resources, scholarships, writing personal statements, accessing internet resources for transfer and financial aid, and completing the college admissions application will also be covered. Students will be able to explore their personal and academic goals as they prepare for transfer.

## **Real Estate (RE)**

#### RE-161 Legal Aspects of Real Estate

3 Units: 54 hours of lecture, per term, LR, DG, CSU

This course presents a study of California real estate law, including rights incidental to property ownerships and management, agency contracts and application to real estate transfer, conveyances, probate proceedings, trust deeds and foreclosure, as wellas recent legislation covering real estate transactions. This course applies toward the educational requirement for the salesperson/ agent's and broker's examinations.

This course provides an understanding of current real estate law in California, and the legal problems involved in real estate transactions. This course covers property rights and interests; acquisitions and transfers; real estate contracts; commissions, agency, and fiduciaries; foreclosure and probate proceedings; public controls and taxation. It also applies toward the educational requirements for the State of California salesperson's/ broker's examinations.

#### RE-164 Real Estate Finance

3 Units: 54 hours of lecture, per term, LR, DG, CSU

This course includes as topics to be covered, the analysis of real estate lending policies and problems in financing; transactions in residential apartment, commercial and special purpose properties. Methods of financing properties will be emphasized. This course applies toward the state educational requirements for the salespersons/agent's and /broker's examinations.

# Spanish (SPAN)

#### SPAN-121 Second-Semester Spanish

5 Units: 90 hours of lecture, per term, SC, DG, CSU, UC

#### <del>Advisory: <mark>Prerequisite:</mark> SPAN 120 or placement test score at SPAN-121</del> <mark>level</mark>

This course is a second-semester Spanish. The goals are to communicate in Spanish through the development of skills in speaking, understanding, reading and writing, and to develop an appreciation of the cultures of the Hispanic world. Secondsemester Spanish is intended for students who are not native Spanish speakers.

# INACTIVATED COURSES

# Industrial Technology (INTEC)

INTEC-101 Residential Safety, Repair, and Maintenance 3 Units: 36 hours of lecture and 54 hours of laboratory, per term, LR, DG, CSU This course focuses on residential repair maintenance and construction. Students learn basic repair, maintenance and safety practices in plumbing, electrical and carpentry. Students will learn earthquake safety practices and readiness. The course prepares students for employment in related fields of plumbing, electrical, sheet rock, apartment maintenance and management as well as home inspection.

#### INTEC-102 Advanced Residential Safety, Repair, and Maintenance

3 Units: 36 hours of lecture and 54 hours of laboratory, per term, LR, DG, CSU This course expands the fundamentals essential of residential repair, maintenance and construction learned in INTEC 101. Students continue to learn basic repair, maintenance and safety practices in plumbing, electrical and carpentry. Students will learn earthquake safety practices, proactive preparation and readiness. The course prepares students for employment in related fields in plumbing, electrical, sheet rock, apartment maintenance and management as well as home inspection.

### La Raza Studies (LARAZ)

#### LARAZ-250 Poetry for the People: Introduction to the Art of Poetry

**3 Units: 54 hours of lecture, per term, SC, DG, CSU, UC** This course introduces students to poetry as culture, history, criticism, politics, and practice. Focusing comparatively on poetry from three American racial/ethnic groups, this course requires students to learn both the technical structure of various forms of poetry as well as the world views which inform specific poetic traditions. Th e groups and traditions may vary from semester but will include three of the following: Chicano/Latino, African/African American, Asian/Asian American, Pacific Islander, and Indigenous/ Native American.

# NEW DEGREES & CERTIFICATES

# **Biological Science (BIOSC)**

#### **Associate in Science Transfer Degree**

#### Required core courses (23 units)

Plus 8 units from the following:			
5 units	MATH 190	Analytic Geometry and Calculus	
5 units	CHEM 121	General College Chemistry II	
5 units	CHEM 120	General College Chemistry I	
4 units	BIOSC 145	Organismal Biology	
4 units	BIOSC 147	Cell and Molecular Biology	

4 units	PHYS 120	General College Physics I, and
4 units	PHYS 121	General College Physics II

OR		
Δ	units	

4 units

PHYS 130	General Physics I , and	
PHYS 230	General Physics II	

#### Plus 4-5 units from the following:

5 units	CHEM 226	Organic Chemistry I
4 units	COMP 251	Fundamentals of Computer Science C++
4 units	BIOSC 148	General Microbiology
4 units	BIOSC 132	Human Anatomy
4 units	BIOSC 134	Human Physiology

# REVISED DEGREES & CERTIFICATES

# **Automotive Services (AUSER)**

#### Associate in Science Degree

#### **Required core courses:**

4 units	AUSER 101	Automotive Fundamentals
<del>5 units</del>	AUSER 102	Brakes, Steering and Suspension
5 units	AUSER 103	Automotive Electrical/Electronic Systems
<del>5 units</del>	AUSER 104	Engine Performance
<del>5 units</del>	AUSER 106	Engine Service and Repair
3 units	AUSER 107	Introduction to Hybrid Electric Vehicles
3 units	AUSER 238	Automotive Heating and Air Conditioning
<mark>3 units</mark>	AUSER 097	Automotive Service Advising
5 units	AUSER 111	Automotive Brakes
5 units	AUSER 113	Automotive Suspension & Steering
5 units	AUSER 115	Engine Service and Repair
4 units	AUSER 117	Automotive Drive Trains
<mark>4 units</mark>	AUSER 203	Automotive Engine Performance
2.5 units	AUSER 207	Hybrid Electric Vehicles Diagnostics and Repairs

- Automotive Services continued on next page

#### **Certificate of Achievement**

#### Automotive Service Technician ..... 42 Units 43.5 Units

A certificate of achievement may be earned by completing all the courses required for this major with a grade of C or better.

#### Required core courses:

4 units	AUSER 101	Automotive Fundamentals
1.5 units	PSYCH 103A	Personal Development for College Success
5 units	AUSER 111	Automotive Brakes
5 units	AUSER 113	Automotive Suspension & Steering
3 units	AUSER 238	Automotive Heating and Air Conditioning
5 units	AUSER 115	Engine Service & Repair
5 units	AUSER 103	Automotive Electrical/Electronic Systems
4 units	AUSER 117	Automotive Drive Trains
4 units	AUSER 203	Automotive Engine Performance
3 units	AUSER 107	Introduction to Hybrid Electric Vehicles
<b>Electives</b>	(2.5 Units or	more)
4 units	AUSER 190	Automotive Electrical Systems
2.5 units	AUSER 207	Hybrid Electric Vehicles Diagnostics and Repair
<del>3 units</del>	AUSER 153	Automotive Steering & Suspension Systems &-
		Headlight Aiming
<del>.5-4 units</del>	AUSER 09	Occupational Work Experience
<del>.5-6 units</del>	AUSER 100	Topics in Automotive Services
4 units	AUSER 208	Level I Smog Inspector
<del>3 units</del>	AUSER 209	Level II Smog Inspector
<mark>3 units</mark>	AUSER 097	Automotive Service Advising

#### **Certificate of Achievement**

#### Chassis Level I Technician......15.5 Units

The Chassis Level I Technician program provides students with basic training In automotive brakes, suspension and steering systems. Program graduates are prepared for apprentice level positions in the industry.

A certificate of achievement may be earned by completing all of the courses required for this certificate with a grade of C or better.

#### Courses required for the certificate:

1.5 units College S	PSYCH-103A uccess	COUNS 103A	Personal Development for
4 units	AUSER 101	Automotive Funda	amentals
5 units	AUSER 111	Automotive Brake	S
5 units	AUSER 113	Automotive Steeri	ng and Suspension

#### **Certificate of Achievement**

#### Powertrains Level I Technician ...... 14.5 Units

The Powertrain Level I Technician program provides students with basic service and repair training in automotive engine and transmission systems. Program graduates are prepared for apprentice level positions in the industry.

A certificate of achievement may be earned by completing all of the courses required for this certificate with a grade of C or better.

#### Courses required for the certificate:

1.5 units College S	PSYCH-103A uccess	COUNS 103A	Personal Development for
4 units	AUSER 101	Automotive Fundamentals	
5 units	AUSER 115	Engine Service and Repair	
4 units	AUSER 117	Automotive Drive	Trains

# **Biological Science**

#### **Associate in Science Degree**

The field of biotechnology (a field of applied biology that involves the use of living organisms and bioprocesses in engineering, technology, medicine, and other applications) touches nearly every aspect of each of our lives.

An Associate in Science Degree may be earned by completing a minimum of 60 units of degree credit coursework, including the major requirements and breadth requirements, with a minimum grade point average of 2.0. Students must complete all courses for the major with a grade of C or better. The Biotechnology A.S. degree is appropriate for students wishing to obtain entry-level employment in the biotechnology industry while preparing to advance their career by transferring to a 4-year university.

#### Required core biotechnology courses: (<del>20</del>19 units)

кеди	Required core blotechnology courses: ( <del>20-19</del> units)			
3 uni	ts BIOSC 172	Introduction to Biotechnology		
<del>3</del> - <mark>2</mark> u	nits BIOSC 157	Foundations in Biotechnology		
1 uni	t BIOSC 159	Foundations in Biotechnology Lab		
4 uni	ts BIOSC 147	Cell and Molecular Biology		
5 uni	ts CHEM 120	General College Chemistry		
4 uni	ts ENGL 1A	Composition and Reading		
Plus	Plus 4 units from the following laboratory courses:			
4 uni	ts BIOSC 148	General Microbiology		
<mark>1 unit</mark> 2	<mark>units</mark> BIOSC 182	GLP and GMP; Principles and Compliance		
<mark>1 unit</mark> 2	units BIOSC 183	Mammalian Cell Culture		
<del>1 uni</del>	t BIOSC 184	ELISA Methodology and Assay Development		
<del>1 uni</del>	BIOSC 185	Polymerase Chain Reaction, Theory & Application		
<del>1 unit<mark>2</mark></del>	units BIOSC 186	Protein Purification and Analysis		
<del>1 uni</del>	t BIOSC 187	<b>DNA Manipulation and Cloning</b>		

2 units BIOSC 172L Introduction to Biotechnology Lab

#### Plus 3 units the following business and communication courses:

Plus 3.5-4 units the following computer and data proficiency courses:			
3 units	BOT 248	Business Correspondence	
3 units	BUS 120	Introduction to Management	
3 units	BUS 125	Report Writing	
3 units	BUS 109	Introduction to Business	
<del>3 units</del>	ENGL 166		
3 units	SPCH 120	Public Speaking	

 4 units
 MATH 164
 Introduction to Probability and Statistics

 4 units
 CIS 135
 Introduction to Computers

 3.5 units
 CIS-201BOT-224
 Microsoft Excel/Information Processing for Business

 3.5 units
 CIS-200BOT-226
 Microsoft Access/Information Processing for Business

#### Certificate of Achievement Biotechnology Assistant ......12.5<mark>-14</mark> Units

The Biotechnology Assistant Certificate of Achievement provides both entry-level workforce skills and a bridge into the rigorous biotechnology training programs at CCC and other programs in the region. Students will receive hands-on laboratory experience utilizing state of the art bio-manufacturing equipment. Collegelevel reading, communication, math, and professional skills are required along with laboratory training for even the most basic of entry-level positions in the biotechnology industry. Students completing this certificate will be able to demonstrate their competence for entry-level employment. This certificate also prepares students for higher-level training and education, which can further increase employability in a field where advanced degrees are highly desirable. A certificate of achievement may be earned by completing all courses required for this program with a grade of C or better.

#### Required core courses: (12.5-14 Units)

2 units	BIOSC 172L	Introduction to Biotechnology Lab
and:		
1.5 units	<del>PSYCH-103A</del> COUNS 103A	Personal Development for College Success
or		
3 units	COUNS-120	Managing College Success and Life
		Transitions
and:		
5 units	MATH 118	Elementary Algebra
or		
5 units	MATH 120	Intermediate Algebra
and:		
4 units	ENGL 142B	Writing: Expository – B
or		
4 units	ENGL 001A	Composition and Reading

#### **Certificate of Achievement**

#### Biotechnology Technician ......16.5-17 Units

A certificate of achievement may be earned by completing all the courses required for this certificate with a grade of C or better. The Biotechnology Technician Certificate of Achievement provides classroom and hands-on laboratory training needed for entry-level employment in the areas of manufacturing, quality control, quality assurance, and research and development in the biotechnology industry.

#### Required core biotechnology courses: (7 units 6 units)

3 units	BIOSC 172	Introduction to Biotechnology
<del>3 units</del> <mark>2 units</mark>	BIOSC 157	Foundations to Biotechnology
1 unit	BIOSC 159	Foundations in Biotechnology Lab

#### Plus <del>3 units</del> <mark>4 units</mark> from the following advanced laboratory courses:

4 units	BIOSC 14/	Cell and Molecular Biology
4 units	BIOSC 148	<mark>General</mark> Microbiology
<del>1 unit<mark>2 units</mark></del>	BIOSC 182	GLP and GMP; Principles and Compliance
<del>1 unit<mark>2 units</mark></del>	BIOSC 183	Mammalian Cell Culture
<del>1 unit</del>	BIOSC 184	ELISA Methodology & Assay Development
<del>1 unit</del>	BIOSC 185	Polymerase Chain Reaction, Theory- and Applications
<del>1 unit<mark>2 units</mark></del>	BIOSC 186	Protein Purification and Analysis
1 unit	BIOSC 187	DNA Manipulation and Cloning

#### Plus 3 units from the following business and communication courses:

3 units	SPCH 120	Public Speaking
<del>3 units</del>	ENGL 166	Technical Communication
3 units	BUS 125	Report Writing
3 units	BUS 120	Introduction to Management
3 units	BUS 109	Introduction to Business
3 units 3 units <mark>3 units</mark>	BUS 125 BUS 120 BUS 109	Report Writing Introduction to Management Introduction to Business

#### 3 units BOT 248 Business Correspondence

### Plus 3.5 -4 units from the following computer and data proficiency courses:

autu proncis	cincy courses.	
4 units	CIS 135	Introduction to Computers
4 units	MATH 164	Introduction to Probability and Statistics
3.5 units——	- <del>CIS-201<mark>BOT-224</mark></del>	Microsoft Excel <del>/Information Processing</del> for Business
3.5 units	<del>CIS-200<mark>BOT-226</mark></del>	Microsoft Access <del>/Information Processing</del> for Business

# **Business Office Technology**

#### **Associate in Science Degree**

#### Required courses, with suggested sequence:

#### 1st semester

3 units	BOT 118	Basic Communication Skills for Business
2 units	BOT 210A	Keyboard Skills Through Word Processing
3.5 units (	<del>CIS-201<mark>BOT-224</mark></del>	Microsoft Excel <del>/Information Processing</del> for Business
2nd semester		
3 units	BOT 222	Microsoft Word/Information Processing
4 units	CIS 135	Introduction to Computers
3.5 units	CIS-200BOT-226	Microsoft Access/Information Processing-

for Business

3rd semester		
3 units	BUS 181	Applied Accounting
3 units	BOT	Any BOT Elective

#### 4th semester

3 units	BOT 243	General Office Procedures
3 units	BOT 248	Business Correspondence

### Certificate of Achievement Business Office Technology:

#### Required courses, with suggested sequence:

#### 1st semester

3 units	BOT 118	Basic Communication Skills for Business
2 units	BOT 210A	Keyboard Skills Through Word Processing
3.5 units	<del>CIS-201<mark>BOT-224</mark></del>	Microsoft Excel <del>/Information Processing</del> for Business
2nd seme	ester	
3 units	BOT 222	Microsoft Word/Information Processing
4 units	CIS 135	Introduction to Computers
3.5 units	<del>CIS-200<mark>BOT-226</mark></del>	Microsoft Access <del>/Information Processing</del> for Business
3rd seme	ster	
3 units	BUS 181	Applied Accounting
3 units	BOT	Any BOT Elective
4th semester		

# 3 unitsBOT 243General Office Procedures3 unitsBOT 248Business Correspondence

#### Associate in Science Degree Business Office Technology: General Office 20 Units

An Associate in Science Degree may be earned by completing a minimum of 60 units of degree credit coursework, including the major requirements and breadth requirements, with a minimum grade point average of 2.0. Students must complete all courses for the major with a grade of C or better.

#### Required courses, with suggested sequence:

### 1st semester

3 units	BOT 118	Basic Communication Skills for Business
2 units	BOT 210A	Keyboard Skills Through Word Processing
3.5 units	<del>CIS-201</del> BOT-224	Microsoft Excel <del>/Information Processing</del> for Business
2 units	BOT	Any BOT Elective
2nd semester		
3 units	BOT 222	Microsoft Word/Information Processing
3 units	BOT 243	General Office Procedures
3.5 units	<del>CIS-200<mark>BOT-226</mark></del>	Microsoft Access <del>/Information Processing</del> for Business

#### Certificate of Achievement Business Office Technology: General Office . 20 Units

A certificate of achievement may be earned by completing all the courses required for this major with a grade of C or better.

Required courses, with suggested sequence:

1st semest	ter	
3 units	BOT 118	Basic Communication Skills for Business
2 units	BOT 210A	Keyboard Skills Through Word Processing
3.5 units	<del>CIS-201<mark>BOT-224</mark></del>	Microsoft Excel <del>/Information Processing</del> for Business
2 units	BOT	Any BOT Elective
2nd semester		
3 units	BOT 222	Microsoft Word/Information Processing
3 units	BOT 243	General Office Procedures
3.5 units	<del>CIS-200<mark>BOT-226</mark></del>	Microsoft Access <del>/Information Processing <mark>f</mark> for Business</del>

# **Computer Information Systems**

#### Computer Information System:

#### Required courses, with suggested sequence:

#### 1st semester

4 units	CIS 135	Introduction to Computers
3 units	CIS 125	Computer Logic Concepts
2nd semes	ter	
2 units	BOT 210A	Keyboard Skills Through Word Processing
1.5 units	CIS 190B	Windows Fundamentals
3rd semes	ter	
3 units	BOT 222	Microsoft Word/Information Processing
1.75 units	CIS 166A	Basic Web Page Development
1.75 units	CIS 166B	Advanced Web Page Development
4th semes	ter	
3.5 units	<del>CIS-200<mark>BOT-226</mark></del>	Microsoft Access <del>/Information Processing</del> for Business
3.5 units	<del>CIS-201<mark>BOT-224</mark></del>	Microsoft Excel <del>/Information Processing</del> for Business

#### Certificate of Achievement Computer Information System:

**Computer Operations.....24 Units** A certificate of achievement may be earned by completing all the courses required for the major with a grade of C or better.

#### Required courses, with suggested sequence:

#### 1st semester

4 units	CIS 135	Introduction to Computers
3 units	CIS 125	Computer Logic Concepts
2nd semes	iter	
2 units	BOT 210A	Keyboard Skills Through Word Processing
1.5 units	CIS 190B	Windows Fundamentals
3rd semester		
3 units	BOT 222	Microsoft Word/Information Processing
1.75 units CIS 166A		Basic Web Page Development
1.75 units CIS 166B		Advanced Web Page Development
4th semester		
3.5 units	<del>CIS-200<mark>BOT-226</mark></del>	Microsoft Access <del>/Information Processing</del> for Business

#### Certificate of Achievement Computer Information System:

**Computer Programming ......21.5 Units** A certificate of achievement may be earned by completing all the courses required for this major with a grade of C or better.

#### Required courses, with suggested sequence:

#### 1st semester

4 units	CIS 135	Introduction to Computers		
3 units	CIS 125	Computer Logic		
2nd semester				
2 units	BOT 210A	Keyboard Skills Through Word Processing		
1.5 units	CIS 190B	Windows Fundamentals		
3rd semester				
1.75 units CIS 166A		Basic Web Page Development		
1.75 units CIS 166B		Advanced Web Page Development		
4th semester				
4 units	COMP 251	Fundamentals of Computer Science C++		
3.5 units	CIS-200 <mark>BOT-226</mark>	Microsoft Access <del>/Information Processing for Business</del>		

#### Associate in Science Degree Computer Information System: Computer Programming ......21.5 Units

An Associate in Science Degree may be earned by completing a minimum of 60 units of degree credit coursework, including the major requirements and breadth requirements, with a minimum grade point average of 2.0. Students must complete all courses for the major with a grade of C or better.

CIS-201BOT-224 Microsoft Excel/Information Processing

for Business

Required courses, with suggested sequence:

#### 1st semester

3.5 units

4 units	CIS 135	Introduction to Computers		
3 units	CIS 125	Computer Logic		
2nd semester				
2 units	BOT 210A	Keyboard Skills Through Word Processing		
1.5 units	CIS 190B	Windows Fundamentals		
3rd semester				
1.75 units CIS 166A		Basic Web Page Development		
1.75 units CIS 166B		Advanced Web Page Development		
4th semester				
4 units	COMP 251	Fundamentals of Computer Science C++		
3.5 units	CIS-200BOT-226	Microsoft Access/Information Processing		

for Business

# ester

Culinary Arts Management	
Certificate of Accomplishment	

Culinary Arts: Basic Food Service..... 12.5 Units 17 units

A certificate of accomplishment may be earned by completing all the courses required for this major with a grade of C or better.

#### Courses required for the certificate:

1.5 units	CULIN 105	Food Safety Training
3 units	CULIN 127	Becoming ServSafe Certified
3 units	CULIN 280	Applied Math for Food Service
3 units	CULIN 200	California Cuisine
1.5 units	CULIN 250	International Cuisine
8 units	CULIN 099	Occupational Work Experience

#### Each of the following courses will be taken for two semesters:-

1 unit CULIN 095A-D Culinary Arts Laboratory

1.5 units CULIN 275 Fundamentals of Cooking

# Geography

#### **Certificate of Accomplishment**

#### Required courses, with suggested sequence:

#### 1st semester

4 units MATH 164 Introduction to Probability and Statistics

#### 2nd semester

3 units Systems	GEOG 126	Introduction to Geographic Information
3.5 units	<del>CIS-201<mark>BOT-224</mark></del>	Microsoft Excel/Information Processing
		for Business

# NEWLY APPROVED FOR UC TRANSFER

- COUNS-120Managing College Success and Life TransitionsCOUNS-130Career and Major ExplorationCOUNS-140Job Search Strategies
- ENGIN-160 Programming Concepts and Methodologies for Engineers
- KINES-197 Human Development Throughout the Lifespan
- KINES-199 Personal Fitness Training
- MEDIA-130 Screenplay and Scriptwriting
- MEDIA-165 Motion Graphic Design and Animation
- MEDIA-170 Introduction to 3D Graphics and Animation
- MUSIC-163 Beginning Choir
- MUSIC-167 Vocal Chamber Music: CC Singers
- MUSIC-190B Music Production: Programming
- PE-250A Beginning Spinning
- PE-250B Intermediate Spinning
- PE-250C Advanced Spinning
- PSYCH-103B Ensuring Transfer Success
- SPCH-141L Argumentation Lab