# Los Angeles Pierce College 2019-2020 General Catalog Addendum A

## KEY

* Underlined green text = Addition
* ~~Strikethrough text~~ = Deletion

## I. New

## New Associate of Science for Transfer Degree (AS-T)

* Hospitality Management

## New Certificate of Achievement (with corrections)

* Cloud Computing and Networking for Amazon Web Services

## New Courses

* CIS 113, 150, 172, 173, 185, 209, 238, 239, 285, 385; E.S.L. 072; HOSPT 120, 140

## New Courses Offered on a Credit-By-Exam Basis

* Added MUSIC 101, 216-1, 216-2, 216-3, 216-4, 217-1, 217-2, 217-3, 217-4, 321

## New UC Transferable Courses

* The following courses are UC transferable, effective Fall 2019: DNCESPC333, EDUC 200

## New Veterans Affairs Information for Students

## II. Corrections/Revisions

## Correction to Film, Television, and Electronic Media AS-T

* Media Arts 805 was omitted from List C and has been added back in to the degree. Also, MEDIART 802 is a 3-unit course (instead of 1-unit course).

## Correction to Geology AS-T

* Reduction of total units for degree (Geology 007 course units reduced).

## Correction to Sociology AA-T

* Added in language for List A courses (Any required core course not already used).

## Correction to Public Relations A.A.

* MEDIART 802 is a 3-unit course (not 1-unit). PHOTO 102 is a 4-unit course (not 3-unit).

## Correction to Courses

* ANML SC 420, 422, 481; CIS 148, 149, 224, 227; ENGLISH 028; GEOLOGY 007; MUSIC 323

## Correction to Graduation Requirements

* Added back policy on general education fulfillment for students with prior degree.

## Correction to LAPC General Education Pattern 2019-2020

* Added MATH 134 to Area D2

## Correction to UC Credit Limits for Courses

* Removed UC Credit Limit notation for HISTORY 011, HISTORY 041, and HISTORY 043

## Revision to Degrees/Certificates that contain CO SCI/CO INFO courses

* The following degrees/certificates were updated to reflect conversion of CO SCI/CO INFO to CS/CIS:
	+ Business Administration AS-T
	+ Mathematics AS-T
	+ Spanish AA-T
	+ Geographic Information Systems A.A.
	+ Geographic Information Systems Certificate
	+ Cloud and Network Technology A.S.
	+ Cloud Computing and Networking for Amazon Web Services Certificate
	+ Cybersecurity Certificate
	+ Networking Technology Certificate
	+ Personal Computer Service Technology Certificate
	+ Programming for Business A.A.
	+ Programming for Business Certificate
	+ Programming for Computer Science A.S.
	+ Routing Technology Certificate
	+ Website Development Certificate
	+ Web Development, Programming and Scripting Certificate
	+ General Studies: Science, Technology, Engineering & Mathematics A.A.
	+ Journalism A.A.
	+ Photojournalism A.A.
	+ Pre-Engineering A.S.

## Revision to General Education Required Courses for Associate Degrees for Transfer

* IGETC for UC added to ADTs (Associate Degrees for Transfer)

## Revision to chart: LAPC Course Credit Applicable to Associate Degree Major and/or Certificate Requirements only

* Added in unit column to chart

# I. New

# New Associate of Science for Transfer Degree (AS-T)

## HOSPITALITY MANAGEMENT

Associate of Science for Transfer Degree
(AS-T)

(STATE CODE 38673)

This degree is intended for students transferring to a California State University campus. It is not a requirement for transfer but may give students an admission advantage at some CSU campuses. Not all CSU campuses accept this degree as fulfillment of lower-division major requirements. Students should meet with a counselor to determine if this degree is a good option for them. Information on which CSU campuses accept this degree can be found at <http://www.sb1440.org/>

**PROGRAM INFORMATION**

Upon successful completion of the Associate in Science Degree for Transfer in Hospitality Management requirements, the student will have demonstrated an understanding of the hospitality industry, hotel management, and cost control in the industry. This coursework will satisfy the lower division hospitality management requirements at a California State University offering this program.

Employment opportunities for this major are in the many areas of the entertainment industry; arts and recreation; resorts and major hotels; notable restaurants, bars, and clubs; tourism services; event planning; and gifts and souvenirs retailing.

**To complete the degree, students must fulfill the following Associate Degree for Transfer requirements (pursuant to SB1440):**

* Completion of 60 semester units or 90 quarter units that are eligible for transfer to a California State University.
* The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education – Breadth Requirements.
* A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
* Obtainment of a minimum grade point average of 2.0.
* A grade of “C” or better (or “P” if the course is taken on a pass/no pass basis) in all courses required for the major or area of emphasis.

Note: Complete either the CSU GE or IGETC general education pattern. Effective Fall 2017, CSU GE Areas A1, A2, A3 and B4 must be completed with a grade of “C-” or higher per CSU EO 1100. All courses applied toward IGETC must be completed with a “C” or higher per the IGETC Standards.

**PROGRAM LEARNING OUTCOMES**

*Upon completion of this program, students will:*

* **Use the knowledge and skills associated with problem solving, critical thinking, and decision making to function effectively in the classroom, community, and industry.**
* **Demonstrate leadership and teamwork to achieve common goals.**
* **Communicate effectively and confidently in the classroom, community, and industry.**
* **Demonstrate knowledge of multicultural perspectives to meet the needs of guests and employees.**
* **Use knowledge of best practices to further sustainability (economic, environmental, and cultural/social) in the industry.**
* **Demonstrate ability to perform basic and supervisory level job functions in travel/tourism careers.**

**MAJOR - REQUIRED COURSES**

SUBJECT COURSE UNITS

HOSPT 100 Introduction to the Hospitality Industry 3

**List A: Choose three courses from the following: 9**

ECON 001\* Principles of Economics I 3

HOSPT 120 Hospitality Cost Control 3

HOSPT 140 Introduction to Hotel Management 3

**List B: Choose three courses from the following: 7-9**

**Any course from List A not already used**ACCTG 001 Introductory Accounting I 5

CAOT 082 Microcomputer Software Survey in the Office 3

**MATH 227\* Statistics 4**

**MAJOR - TOTAL UNITS 19-21**

**GENERAL EDUCATION - REQUIRED COURSES**

Students must complete one of the following General Education Plans:

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

\*See Catalog course description for prerequisites and/or corequisites.

# New Certificate of Achievement (with corrections)

## CLOUD COMPUTING AND NETWORKING FOR AMAZON WEB SERVICES

Certificate of Achievement

(STATE CODE 38606)

**PROGRAM INFORMATION**

The Cloud Computing program prepares students to design solutions for Infrastructure as a Service (IaaS) architectures by provisioning computing instances, establishing virtual private networks, managing databases and storage within a secure online environment. Students produce dynamic solutions responsive to information and computing technology workloads with on-demand pay-as-you-go pricing allowing flexibility for small business, entrepreneurship and enterprise adoption. Industry certifications are embedded to prepare for occupations in Cloud Architect, Cloud Support Associate, Cloud Engineer or Cloud Technicians. Some preparation in information technology or computer programming is recommended.

**GAINFUL EMPLOYMENT**

To find information about the careers for which this certificate prepares you, the costs associated with the program, median debt accumulated by students completing the program, and time to completion, please visit the Gainful Employment Disclosure website at: <http://www.piercecollege.edu/departments/cate.asp>

**PROGRAM LEARNING OUTCOMES**

*Upon completion of this program, students will:*

* Design Infrastructure as a Service (IaaS) solutions by provisioning computing instances, establishing virtual private networks, managing databases and storage within a secure online environment.
* Analyze performance metrics of a cloud architecture to respond dynamically to information and computing technology workloads and optimize service costs.
* Collaborate in a team designing business solutions in an industry aligned project.

**CERTIFICATE - REQUIRED COURSES**

SUBJECT COURSE UNITS

~~CO INFO 533~~CIS 120 ~~Databases Using Access and SQL~~Introduction to Databases 3
~~CO INFO 590~~CIS 192 Introduction to Cloud Computing 3
~~CO INFO 591~~CIS 194 ~~Cloud Computing Architecture~~Compute Engines in Amazon Web Services 3
~~CO INFO 592~~CIS 195 Security in the Cloud 3
**Select two courses from the following: 6
~~CO INFO 534~~CIS 113 ~~Linux Operating Systems~~Intermediate Linux 3
~~CO INFO 535~~CIS 227 ~~Supporting Windows Servers~~Server Administration and Network Security 3
~~CO INFO 553~~CS 112 ~~Web Site Development Using HTML and JavaScript~~Programming in JavaScript 3
~~CO INFO 561~~CIS 173 Data Analysis for Computer Information Systems with Python 3
~~CO INFO 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3**

**CERTIFICATE - TOTAL UNITS 18**

\*See Catalog course description for prerequisites and/or corequisites.

# New Courses

## Computer Information Systems (CIS)

**113 Intermediate Linux (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 534. Credit not given for both courses.*

Students learn a solid foundation in the fundamentals of the Linux operating system which plays a crucial role in government and corporate computing. In fact, Linux is the central operating system for much of the world's IT infrastructure powering more internet servers than any other major operating system. Students learn to configure common tasks in major distributions of Linux including the Linux command line, basic maintenance, installing and configuring workstation, and networking. Content from this course helps with the CompTIA Linux+ exams.

**150 Advanced Website Development Using JavaScript and AJAX (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO SCI 555. Credit not given for both courses.*

***Prerequisite****: CS 111 or CO SCI 508 with a grade of “C” or better.*

***Advisory****: CIS 148 or CO INFO 550.*

Using JavaScript, AJAX, and the latest tools, students develop and program interactive websites. Topics include: Advance JavaScript to manipulate the DOM, handle events, and provide error checking and debugging; AJAX to provide asynchronous server communication; Security to ensure a safe website, jQuery to animate and deliver the “wow factor”; Bootstrap to build “mobile first” responsive and consistent website presentations.

**172 Business Systems Design Using SQL (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 560. Credit not given for both courses.*

***Prerequisite****: CIS 120, CO SCI 533, or CO INFO 533 with a grade of “C” or better.*

Students examine the processes of analysis, design, and implementation of computer database systems as applied to business. Using a relational data base, project work is assigned in table design, data retrieval using Structured Query Language (SQL), and database security and administration.

**173 Data Analysis for Computer Information Systems with Python (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 561. Credit not given for both courses.*

***Advisory****: CIS 120, CO SCI 533, or CO INFO 533.*

Students learn Python as it applies to Computer Information Systems. Students learn practical applications of Python tools and technologies to solve business problems and to manipulate, analyze, and visualize data sets.

**209 Introduction to Computer Hardware and Operating Systems (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 572. Credit not given for both courses.*

Students learn to configure computer hardware such as motherboards, processors, RAM, BIOS/CMOS hard drives, optical drives, expansion cards I/O devices among other peripherals. Students learn to analyze the functionality of a computer system and troubleshoot various computer problems. Students acquire skill to survey, optimize, support and install Windows operating systems, and basic skill for troubleshooting Linux ad Mac OS. Students learn to support and configure Small Office and Home Networks (SOHO.) This course prepares students for the CompTIA A+ certification.

**238 Managing Windows Domain Desktops (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 514. Credit not given for both courses.*

***Advisory****: CIS 209, CO SCI 572, or CO INFO 572.*

Students explore the deployment, installation, configuration, and maintenance of Windows desktops in networked environments with an emphasis on practical, hands-on learning strategies. Students apply multiple installation and upgrade strategies, disk and device management, and basic network configuration for domain-based and workgroup-based networks. Techniques for performance monitoring and security are also practiced. The course is designed to help students prepare for Microsoft certification. The course is designed to help students prepare for Microsoft certification.

**239 Managing and Administering Windows Server (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 531. Credit not given for both courses.*

***Corequisite****: Concurrent enrollment in CIS 227 or CO INFO 535.*

Students examine concepts and skills on how to manage and maintain a Windows Server network; Students manage and maintain servers, configure file and print services, network services, access and infrastructure. Students configure and manage Active Directory as well as Group Policy. This course maps directly to the exam 70-471 from the Microsoft Certified Solution Associate (MCSA).

**185 Directed Study - Computer Information Systems (1) CSU**

**285 Directed Study - Computer Information Systems (2) CSU**

**385 Directed Study - Computer Information Systems (3) CSU**

*Conference 1 unit per hour.*

This course allows the student to pursue directed study in Computer Information Systems on a contract basis under the direction of a supervising instructor.

## English as a Second Language (E.S.L.)

**072 English Bridge for ESL (1) (NDA)**

*Laboratory 3 hours.*

***Corequisite****: Concurrent enrollment in English 101.*

This course is designed to assist the students whose first language is not English and who require supplemental support for English 101. Students focus on grammar, sentence structure, paragraph and essay writing, and research skills particular to those of non-native speakers of English.

## Hospitality (HOSPT)

**120 Hospitality Cost Control (3) CSU**

*Lecture 3 hours.*

Students will learn how to analyze and manage food, beverage, labor, and other costs within a hospitality operation. Emphasis is on problem-solving and applying cost-control techniques to maximize profits while managing expenses. Topics include establishing standards, cost-volume-profit-analysis, forecasting, purchasing and storage controls, menu costing and pricing, theft prevention, and labor control.

**140 Introduction to Hotel Management (3) CSU**

*Lecture 3 hours.*

In this course students will become familiar with the nature of hotel front office operations, including the scope of the industry. They will study the relationship of hotels to other kinds of lodging facilities based on size, target markets, and levels of service. Students will identify and describe the various operational departments and staff within a full-service hotel. They will determine room rates based on different strategies such as the Hubbart Formula. Students will conduct a comparative market analysis and develop a plan to improve service and revenue at a selected property.

# New Courses Offered on a Credit-By-Exam Basis

**Courses Offered on a Credit-By-Exam Basis**

American Sign Language all courses

Animal Science 180, 501, 510

Auto Service Technology 001, 002, 003, 004, 005, 006, 007, 025

Art 102, 201, 501, 604, 605

Biology 123

Computer Science 501, 533, 536, 539, 540, 572, 575, 581, 587

Electronics 004A, 004B, 006A, 006B

Industrial Technology 130, 145, 146, 230, 330

Journalism 101

Media Arts/Multimedia MEDIART 101, 805, MULTIMD 200

Music 101, 216-1, 216-2, 216-3, 216-4, 217-1, 217-2, 217-3, 217-4, 321

Nursing 400, 402, 403, 404, 405, 406, 407, 408, 414, 415, 441, 442

Photography 009

Physics 012

Plant Science 718, 812, 827, 896C

# New UC Transferable Courses

The following courses are UC transferable, effective Fall 2019:

* DNCESPC 333
* EDUC 200

# New Veterans Affairs Information for Students

For Post 9/11 GI Bill® (Ch 33) students and VA Vocational Rehabilitation and Employment (Ch 31) students, our tuition policy complies with 38 USC 3679(e) which means Post 9/11 and Vocational Rehabilitation and Employment students will not be charged or otherwise penalized due to a delay in VA tuition and fee payments. For eligibility consideration, a Post 9/11 GI Bill student must submit a VA Certificate of Eligibility (COE) and a Vocational Rehabilitation Student must provide a VAF 28-1905 form. All persons seeking enrollment must meet the general admissions policies. Those seeking to use VA Education Benefits must submit all prior transcripts for a transfer evaluation and submit one of the following a 22-1990, 22-1995, 22-5490, or a 22-5495 to the VA.

GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government website at [www.benefits.va.gov/gibill](http://www.benefits.va.gov/gibill)

# II. Corrections

# Correction to Film, Television, and Electronic Media AS-T

**MAJOR - REQUIRED COURSES**

Subject COURSE UNITS

**Select two courses from the following: 6**

CINEMA 005 Introduction to Screenwriting 3

CINEMA 107 Understanding Motion Pictures 3

JOURNAL 100 Social Values in Mass Communication 3

**List A: Select one audio and one video course from the following: 6**

Audio:

BRDCSTG 010 Radio Programming and Production 3

**MEDIART 110 Digital Film Sound 3**

**Video:**

MEDIART 101 Introduction to Digital Film/Video Production 3

**List B: Select one course from the following: 3**

Any course not already used above

CINEMA 003 History of Motion Pictures 3

**List C: Select one course from the following: 3-6**

Any course not already used above or

BRDCSTG 001 Fundamentals of Television and Radio Broadcasting 3

BRDCSTG 050\* Radio Documentary Production 6

BRDCSTG 103 Voice and Diction for Radio and Television 3

CINEMA 003 History of Motion Pictures 3

CINEMA 104 History of Documentary Film 3

CINEMA 113 History of Animation 3

MEDIART 104 Photoshop for Motion Pictures and Television 3

MEDIART 109\* Beginning Documentary Production Workshop 3

MEDIART 120 Digital Film Editing 3

MEDIART 801 Digital Media Storytelling 3

MEDIART 802 Introduction to Podcast ~~1~~3

MEDIART 803 Introduction to Webcasting 2

MEDIART 805 Motion Graphics for Digital Video, Animation and New Media 3

MEDIART 807 Interactive Media for Mobile Platforms 3

PHOTO 009 Introduction to Cameras and Composition 3

PHOTO 027A History & Aesthetics of Photography A 3

PHOTO 027B History & Aesthetics of Photography B 3

PHOTO 037\* Visual Journalism: Photography, Video and Multimedia 4

**MAJOR - TOTAL UNITS 18-21**

**GENERAL EDUCATION - REQUIRED COURSES**

Students must complete one of the following General Education Plans:

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

\*See Catalog course description for prerequisites and/or corequisites.

# Correction to Geology AS-T

**MAJOR - REQUIRED COURSES**

SUBJECT COURSE UNITS

CHEM 101\* General Chemistry I 5

CHEM 102\* General Chemistry II 5

GEOLOGY 001 Physical Geology 3

GEOLOGY 002 Earth History 3

GEOLOGY 006\* Physical Geology Laboratory 2

GEOLOGY 007\* Earth History Laboratory ~~2~~1

MATH 261\* Calculus I 5

MATH 262\* Calculus II 5

**MAJOR - TOTAL UNITS ~~30~~29**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Correction to Sociology AA-T

**MAJOR - REQUIRED COURSES**

SUBJECT COURSE UNITS

SOC 001 Introduction to Sociology 3

**Select two courses from the following: 6-8**

SOC 002 American Social Problems 3

SOC 004\* Sociological Analysis 3

MATH 227\* Statistics 4

***OR***

MATH 228B Statistics Pathway Part II 5

***OR***

STAT 001\* Elementary Statistics I for the Social Sciences 3

**List A: Select two courses from the following: 6**

Any required core course not already used

SOC 003 Crime and Delinquency 3

SOC 011 Race and Ethnic Relations 3

SOC 013 Society and Personality 3

SOC 028 The Family: A Sociological Approach 3

SOC 031 Sociology of Gender 3

**List B: Select one course from the following: 3**

Any course not already used above

SOC 015 Religion and American Society 3

SOC 021 Human Sexuality 3

SOC 029 The U.S. and Terrorism 3

SOC 035 The Labor Movement 3

SOC 037 Introduction to Political Sociology 3

SOC 086 Popular Culture 3

SOC 087 Sociology and Deviant Behavior 3

**MAJOR - TOTAL UNITS 18-20**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Correction to Public Relations A.A.

**MAJOR - REQUIRED COURSES**

Subject COURSE UNITS

JOURNAL 100 Social Values in Mass Communication 3

JOURNAL 101 Collecting and Writing News 3

JOURNAL 202\* Advanced Newswriting 3

PHOTO 020 Beginning Photojournalism 4

PHOTO 101 Beginning Digital Photography 3

MEDIART 801 Digital Media Storytelling 3

PUB REL 001 Principles of Public Relations 3

PUB REL 002 Public Relations Techniques 3

MARKET 001 Principles of Selling 3

***Or***

MARKET 021 Principles of Marketing 3

**MAJOR - ELECTIVE COURSES**

Subject COURSE UNITS

**Select 6 semester units from the following: 6**

BRDCSTG 010 Radio Programming and Production 3

CAOT 082 Microcomputer Software Survey in the Office 3

JOURNAL 108 Article Writing 3

JOURNAL 185 Directed Study - Journalism 1

JOURNAL 217\* Publication Laboratory 2

JOURNAL 219 Techniques for Staff Editors 1

JOURNAL 220 Magazine Production 3

JOURNAL 251 Visual Communication in Mass Media 3

MEDIART 802 Introduction to Podcast ~~1~~3

PHOTO 049 A&B Photographic Digital Imaging & Advanced Photographic Digital Imaging 6

PHOTO 102\* Advanced Digital Photography ~~3~~4

**Major - Total Units 34**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 34-37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Correction to Courses

## Animal Science (ANML SC)

420 Clinical Procedures in Animal Care I (2) CSU

Lecture 2 hours.

*Prerequisite*: Animal Science ~~511 and 512~~ 410 with a grade of “C” or better.

Approval to enter the Registered Veterinary Technology Program.

~~Students are introduced to the theoretical knowledge of anesthesia, surgical assisting and dental procedures as it relates to the role of the veterinary technician.~~

Veterinary technology students prepare for practice in a small animal hospital by acquiring theoretical knowledge of physical examinations and medical record keeping, the mathematical skills to accurately calculate drug and fluid doses, as well as the complex decision-making process behind administering and monitoring general anesthesia. Sterility and sterile procedure are also investigated. Suture materials, patterns, and their use are examined.

**422 Clinical Procedures in Animal Care II (2) CSU**

*Lecture 2 hours.*

***Prerequisite****: Animal Science 412 and 420 with a grade of “C” or better.*

***Corequisite****: Concurrent enrollment in Animal Science 423.*

*Offered Spring semesters only.*

~~This course is designed to prepare the advanced veterinary technology student for practice in a small animal veterinary hospital, especially in the areas of anesthesiology and surgery. Students will examine pharmacology of anesthetic agents, how to troubleshoot during general anesthesia and intervene in emergency situations. They will also investigate the veterinary technician’s role in the operatory as a member of the surgical team. The identification of pain, it’s pharmacological and non-pharmacological management are explored in-depth.~~

Advanced veterinary technology students will prepare for practice in a small animal veterinary hospital, with particular focus on the areas of anesthesiology and surgery. The pharmacology of anesthetic agents, how to troubleshoot during general anesthesia, and how to intervene in emergency situations will be discussed. Students will also investigate the veterinary technician's role in the operatory as a member of the surgical team. The identification of pain, as well as it's pharmacological and non-pharmacological management, are explored in-depth.

**481 Clinical Experience for Veterinary Technicians II (3)**

*Lecture 3 hours.*

***Prerequisite****: Animal Science ~~420, 421,~~ 422, 423, 424, 435 and 436 with a grade of “C” or better.*

*Approval to enter the Registered Veterinary Technology Program.*

~~This course integrates extensive class work and outside clinical work in a veterinary setting and provides the student with a comprehensive review for the Veterinary Technician National Exam. During the clinical component of the class students will participate in a variety of clinical experiences encompassing multiple aspects of veterinary technology. Successful completion of this course requires a minimum of 120 hours working at a veterinary clinic. The lecture component of this course requires 3 hours per week of class time. Class time is devoted to board exam review, case studies and impromptu discussions.~~

Advanced Veterinary Technology students will integrate extensive class work and outside clinical work in a veterinary setting while engaging in a comprehensive review for the Veterinary Technician National Exam. During the clinical component of the class students will participate in a variety of clinical experiences encompassing multiple aspects of veterinary technology. Successful completion of this course requires a minimum of 160 hours working at a veterinary clinic. The lecture component of this course requires 3 hours per week of class time. Class time is devoted to board exam review, case studies and impromptu discussions.

## Computer Information Systems (CIS)

**~~148 Web Development Using PHP-MYSQL (3) CSU~~**

*~~Lecture 2 hours. Laboratory 2 hours.~~*

*~~Formerly CO SCI 554. Credit not given for both courses.~~*

***~~Prerequisite~~****~~: CIS 126, CO SCI 550, or CO INFO 550 with a grade of “C” or better.~~*

***~~Advisory~~****~~: CIS 120, CO SCI 533, or CO INFO 533.~~*

~~Students learn the PHP scripting language, and how to write PHP scripts to access web-based databases such as PostgreSQL and mySQL. Students examine setup, configuration, maintenance, security, designs, and implementation issues as it applies to Content Management Systems such as WordPress, Drupal, and Joomla!.~~

**148 Introduction to Web Development HTML5 & CSS (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 550. Credit not given for both courses.*

Students use HTML and Cascading Style Sheets(CSS) to develop and maintain websites. Students use WordPress or similar Content Management Systems to create maintainable page layouts, style pages and forms. Students also use appropriate tools to publish and maintain websites and web pages.

**~~149 Advanced Website Development Using JavaScript and AJAX (3) CSU~~**

*~~Lecture 2 hours. Laboratory 2 hours.~~*

*~~Formerly CO SCI 555. Credit not given for both courses.~~*

***~~Prerequisite~~****~~: CS 111 or CO SCI 508 with a grade of “C” or better.~~*

***~~Advisory~~****~~: CIS 126, CO SCI 550, or CO INFO 550.~~*

~~Use JavaScript, AJAX and the latest tools to develop and program interactive websites. Topics include: Advance JavaScript to manipulate the DOM, handle events, and provide error checking and debugging; AJAX to provide asynchronous server communication; Security to ensure a safe website, jQuery to animate and deliver the “wow factor”; Bootstrap to build “mobile first” responsive and consistent website presentations.~~

**149 Web Development Using PHP-MySQL (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 554. Credit not given for both courses.*

***Prerequisite****: CIS 148, CO SCI 550, or CO INFO 550 with a grade of “C” or better.*

***Advisory****: CIS 120, CO SCI 533, or CO INFO 533.*

The student learn the PHP scripting language, and how to write PHP scripts to access web-based databases such as PostgreSQL and mySQL. Students examine setup, configuration, maintenance, security, designs, and implementation issues as it applies to Content Management Systems such as WordPress, Drupal, and Joomla!.

**224 Routing and Switching Essentials (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 578. Credit not given for both courses.*

***~~Prerequisite~~****~~: CIS 210, CO SCI 587, or CO INFO 587 with a grade of “C” or better.~~*

***Corequisite****: CIS 210, CO SCI 587, or CO INFO 587 with a grade of “C” or better.*

In this course, students learn how to perform basic router and switch configuration using a variety of network strategies. Technologies covered include VLANs, Inter-VLAN routing, Spanning Tree Protocol, Etherchannel, DHCP (v4 &v6), Router redundancy, basic LAN switch security, Wireless LANs (WLAN), and the troubleshooting of covered technologies. This is the second course in the Cisco CCNA V7 preparation program.

**227 Server Administration and Network Security (3) CSU**

*Lecture 2 hours. Laboratory 2 hours.*

*Formerly CO INFO 535. Credit not given for both courses.*

***Prerequisite****: CIS 210, CO SCI 587, or CO INFO 587 with a grade of “C” or better.*

Students learn strategies for deploying, installing, configuring and troubleshooting Windows Server operating systems and their application layer services. Students learn to identify environment issues; understand and comply with disaster recovery and physical / software security procedures; become familiar with industry terminology and concepts; understand server roles / specializations and interaction within the overall computing environment.

## English

**028 Intermediate Reading and Composition (3)**

Lecture 3 hours.

*~~Satisfies reading and composition competency requirements for AA degree.~~*

The course is designed to assist the student in making a successful transition to English 101. Students focus on grammar, sentence structure, and paragraph and essay writing.

## Geology

**007 Earth History Laboratory (~~2~~1) UC:CSU**

*~~Lecture 1 hour.~~ Laboratory ~~2~~3 hours.*

***~~Prerequisite~~****~~: Geology 002 with a grade of “C” or better.~~*

***Corequisite****: Concurrent enrollment in Geology 002.*

This is a supplemental laboratory course for Geology 002, intended to teach the scientific methods of reasoning and to give the student an acquaintance with the fundamental principles of historical geology. Laboratory exercises will examine the history of the earth from its origin to the present as interpreted from the fossil record and radiometric dating techniques. Also included will be the evolutionary study of fossils and study of rock types and ancient landforms. This course will include methods used to determine events in Earth history and reconstruct past environmental conditions. Field trips will be taken. Strongly recommended for the student who is enrolled in or has completed Geology 002.

(CSU GE Area B3 • IGETC Area 5C)

***C-ID:*** *GEOL 110 L*

## Music

**323 Elementary Piano III (2) UC:CSU**

*Lecture 1 hour. Laboratory 2 hours.*

***Prerequisite****: Music 322 with a grade of “C” or better.*

~~Elementary Piano III is a continuation of Elementary Piano II (MUSIC 322). Students must be able to perform two-octave major scales, simple melody and accompaniment pieces such as those found in ‘Music or Millions, Volume 17’ and two-part pieces similar to those found in Bartok’s ‘Mikrokosmos, Volume 2.’~~

As a continuation of Music 322, students will be able to perform Major and minor scales and arpeggios in three octaves, learn new repertoire at the intermediate level, and harmonize and transpose melodies using primary and secondary chords.

(CSU GE Area C1)

# Correction to Graduation Requirements

Policy on general education fulfillment for students with prior degree: Local Los Angeles Community College District associate degree general education requirements are fully satisfied by students who have an Associate, Baccalaureate or higher degree from a United States regionally accredited institution. (Pierce Curriculum Committee 05/14/2010)

# Correction to LAPC General Education Pattern 2019-2020

**D2. COMMUNICATION AND ANALYTICAL THINKING**

*3 Sem/4 Qtr Units Minimum*

**ACCTG** 001; **ADM JUS** 305; **COMM** 101, 104, 121, 122, 151, 190; **LIB SCI** 102; **MATH** 125, 134, 215, 227, 228B, 238, 240, 260, 261, 262, 263; **PHILOS** 005, 006, 009; **POL SCI** 005; **PSYCH** 066, 074; **SOC** 004; **STAT** 001, 101

# Correction to UC Credit Limits for Courses

## History

**011 Political and Social History of the United States I (3) \*UC:CSU**

*Lecture 3 hours.*

Students survey the history of the United States from pre-Columbian times to 1877. Political and social events as well as the development of America’s central institutions are emphasized.

(CSU GE Area D • IGETC Area 4 • Satisfies CSU American Ideals Graduation Requirement US-1)

~~\*UC Credit Limit: History 011, 041 and 043 combined: maximum credit, one course.~~

C-ID: HIST 130

**041 The African American in the History of the U.S. I (3) \*UC:CSU**

*Lecture 3 hours.*

Students analyze United States history and major American institutions from the early colonial era through the Civil War with special emphasis on the contributions of African-Americans to the nation’s political and social development.

(CSU GE Area C2 or D • IGETC Area 3B or 4 • Satisfies CSU American Ideals Graduation Requirement US-1)

~~\*UC Credit Limit: History 011, 041 and 043 combined: maximum credit, one course.~~

**043 The Mexican-American in the History of the United States I (3) \*UC:CSU**

*Lecture 3 hours.*

Students will be able to trace the historical evolution of the Mexicans and their culture and institutions to 1865, and survey the contributions of the Mexican-Americans to the United States, with particular emphasis on the Southwest, and the causes and consequences of the Mexican-American War.

(CSU GE Area C2 or D • IGETC Area 3B or 4 • Satisfies CSU American Ideals Graduation Requirement US-1)

~~\*UC Credit Limit: History 011, 041 and 043 combined: maximum credit, one course.~~

# Revision to Business Administration AS-T

**MAJOR - REQUIRED COURSES**

Subject COURSE UNITS

ACCTG 001 Introductory Accounting I 5

ACCTG 002\* Introductory Accounting II 5

BUS 005 Business Law I 3

ECON 001\* Principles of Economics I 3

ECON 002\* Principles of Economics II 3

**List A: Choose one course from the following: 4-5**

MATH 227\* Statistics 4

MATH 238\* Calculus for Business and Social Science I 5

**List B: Choose two courses from the following: 6**

Any List A course not already used

CAOT 082 Microcomputer Software Survey in the Office 3

***OR***

~~CO SCI 501~~CIS101 Introduction to Computers and Their Uses 3

CAOT 032\* Business Communications 3

**Major - Total Units 29-30**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Mathematics AS-T

MAJOR - REQUIRED COURSES

Subject COURSE UNITS

MATH 261\* Calculus I 5

MATH 262\* Calculus II 5

MATH 263\* Calculus III 5

MATH 270\* Linear Algebra 3

Select one course from the following: 3-5

~~CO SCI 539\*~~CS 114\* Programming in C 3

~~CO SCI 575~~CS 116 ~~Programming Fundamentals for Computer Science~~Programming in C++ 3

MATH 275\* Ordinary Differential Equations 3

PHYSICS 101\* Physics for Engineers and Scientists I 5

Major - Total Units 21-23

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Spanish AA-T

MAJOR - required COURSES

Subject COURSE UNITS

EITHER

SPANISH 001 Elementary Spanish I 5

SPANISH 002\* Elementary Spanish II 5

SPANISH 003\* Intermediate Spanish I 5

SPANISH 004\* Intermediate Spanish II 5

OR (for students who speak spanish at home)

SPANISH 035¹ Spanish for Heritage Speakers I 5

SPANISH 036\*¹ Spanish for Heritage Speakers II 5

AND

List A: Select one course from the following: 3-5

ACCTG 001 Introductory Accounting I 5

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

COMM 100 Introduction to Communication Studies 3

COMM 121 Interpersonal Communication 3

ENGLISH 102\* College Reading and Composition II 3

ENGLISH 103\* Composition and Critical Thinking 3

ENGLISH 203\* World Literature I 3

HISTORY 005 History of the Americas I 3

HISTORY 006 History of the Americas II 3

PHILOS 005\* Critical Thinking and Composition 3

SPANISH 005\* Advanced Spanish I 5

SPANISH 006\* Advanced Spanish II 5

SPANISH 009 Hispanic Civilization 3

SPANISH 010 Latin-American Civilization 3

SPANISH 027 Cultural Awareness Through Advanced Conversation 3

SPANISH 037\*¹ Composition and Conversation for Spanish Speakers 5

Additional Substitution Courses2

SPANISH 011 Great Books of Spanish Literature 3

SPANISH 012 Survey of Mexican Literature 3

SPANISH 015 Great Books of Latin American Literature 3

SPANISH 016 Mexican Civilization 3

SPANISH 025 Spanish American Short Story in Translation 3

SPANISH 026 Understanding Latin America Through Film 3

SPANISH 065 Mexican Literature and Culture 3

Major - Total Units 18-25

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

¹Students who speak Spanish at home but have not been schooled in Spanish should begin the A.A.-T with Spanish 035, and complete the core with Spanish 036 and Spanish 037 or Spanish 004.

2If a student places out of any of the required core course(s) and is not awarded units for that course, the student will need to take additional units to compensate for the course/units required. Suggested substitutions can be taken from the "Additional Substitution Courses" list or any List A course not already used as a major elective.

Note: Language courses must be taken in sequence and must include either SPANISH 004 or SPANISH 036. Consult with the department regarding where to begin the sequence.

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Geographic Information Systems A.A.

MAJOR - REQUIRED COURSES

Subject COURSE UNITS

GIS/GEOG 025 Introduction to Geographic Information Systems and Laboratory 4

GIS/GEOG 033 Intermediate GIS Applications 3

GIS/GEOG 036\* Cartography and Base Map Development 3

GIS/GEOG 037 Introduction to Global Positioning Systems (GPS) 1

GIS/GEOG 038\* Spatial Analysis and Modeling 3

GIS 040\* GIS Internship 1

MAJOR - ELECTIVE COURSES

Subject COURSE UNITS

Select 9 units from the following: 9

ARC 162 Computer-Aided Design and Drafting 3

~~CO INFO 533~~CIS 120 ~~Databases Using Access and SQL~~Introduction to Databases 3

~~CO INFO 561~~CIS 173 Data Analysis for Computer Information Systems with Python 3

EGD TEK 111 2-D Computer-Aided Drafting 3

GEOG 001 Physical Geography 3

MAJOR - TOTAL UNITS 24

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Geographic Information Systems Certificate

**CERTIFICATE - REQUIRED COURSES**

Subject COURSE UNITS

~~CO INFO 533~~CIS 120 ~~Databases Using Access and SQL~~Introduction to Databases 3

***OR***

~~CO INFO 561~~CIS 173 Data Analysis for Computer Information Systems with Python 3

GIS/GEOG 025 Introduction to Geographic Information Systems Laboratory 4

GIS/GEOG 033 Intermediate GIS Applications 3

GIS/GEOG 036\* Cartography and Base Map Development 3

GIS/GEOG 037 Introduction to Global Positioning Systems (GPS) 1

GIS/GEOG 038\* Spatial Analysis and Modeling 3

GIS 040\* GIS Internship 1

**CERTIFICATE - TOTAL UNITS 18**

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Cloud and Network Technology A.S.

**MAJOR - REQUIRED COURSES**

Subject COURSE UNITS

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

~~CO SCI 508~~CS 111  ~~Introduction to Programming Using Visual Basic~~Programming in Visual Basic 3

***OR***

~~CO SCI 575~~CS 116 ~~Programming Fundamentals for Computer Science~~Programming in C++ 3

~~CO INFO 514\*~~CIS 238 ~~Supporting Windows Desktops~~Managing Windows Domain Desktops 3

***OR***

~~CO INFO 591\*~~CIS 194\* ~~Cloud Computing Architecture~~Compute Engines in Amazon Web Services 3

~~CO SCI 533\*~~CIS 120 ~~Databases Using Access and SQL~~Introduction to Databases 3

~~CO SCI 534\*~~CIS 113 ~~Operating Systems~~Intermediate Linux 3

~~CO SCI 535\*~~CIS 227\* ~~Supporting Windows Servers~~Server Administration and Network Security 3

~~CO SCI 537\*~~CIS 225\* LAN & VLAN Switching 3

~~CO INFO 538\*~~CIS 226\* Implementing Wide Area Networking 3

~~CO INFO 572~~CIS 209 ~~Introduction to Personal Computer Hardware Operating Systems~~Introduction to Computer Hardware and Operating Systems 3

***OR***

~~CO INFO 590~~CIS 192 Introduction to Cloud Computing 3

~~CO SCI 578\*~~CIS 224\* ~~Routing and Switching Fundamentals~~Routing and Switching Essentials 3

~~CO SCI 584\*~~CIS 216\* Network Security 3

***OR***

~~CO INFO 592\*~~CIS 195\* Security in the Cloud 3

~~CO INFO 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3

**Technical Electives - Select one course from the following: 3**

~~CO INFO 531~~CIS 239\* Managing and Administering Windows Server 3

~~CO SCI 550~~CIS 148 ~~Introduction to Web Development Using Dreamweaver and CSS~~Introduction to Web Development HTML5 & CSS 3

~~CO SCI 553\*~~CS 112\* ~~Web Site Development Using HTML and JavaScript~~Programming in JavaScript 3

~~CO SCI 581\*~~CIS 111 ~~Personal Computer Upgrade and Repair~~Supporting Windows Desktops 3

~~CO INFO 584\*~~CIS 216\* Network Security 3

~~CO INFO 590~~CIS 192 Introduction to Cloud Computing 3

~~CO INFO 591\*~~CIS 194\* ~~Cloud Computing Architecture~~Compute Engines in Amazon Web Services 3

~~CO INFO 592\*~~CIS 195\* Security in the Cloud 3

**Major - Total Units 39**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 34-37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Cloud Computing and Networking for Amazon Web Services Certificate

**CERTIFICATE - REQUIRED COURSES**

SUBJECT COURSE UNITS

~~CO INFO 533~~CIS 120 ~~Databases Using Access and SQL~~Introduction to Databases 3

~~CO INFO 590~~CIS 192 Introduction to Cloud Computing 3

~~CO INFO 591~~CIS 194\* ~~Cloud Computing Architecture~~Cloud Engines in Amazon Web Services 3

~~CO INFO 592~~CIS 195\* Security in the Cloud 3

**Select two courses from the following: 6**

~~CO INFO 534~~CIS 113 ~~Linux Operating Systems~~Intermediate Linux 3

~~CO INFO 535~~CIS 227\* ~~Supporting Windows Servers~~Server Administration and Network Security 3

~~CO INFO 553~~CS 112\* ~~Web Site Development Using HTML and JavaScript~~Programming in JavaScript 3

~~CO INFO 561~~CIS 173 Data Analysis for Computer Information Systems with Python 3

~~CO INFO 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3

**CERTIFICATE - TOTAL UNITS 18**

*\*See Catalog course descriptions for prerequisites and/or corequisites.*

# Revision to Cybersecurity Certificate

**CERTIFICATE - REQUIRED COURSES**

SUBJECT COURSE UNITS

~~CO INFO 501~~CIS 101 Introduction to Computers and Their Uses 3

~~CO INFO 531~~CIS 239\* Managing and Administering Windows Server 3

~~CO INFO 572~~CIS 209 ~~Introduction to Personal Computer Hardware Operating Systems~~Introduction to Computer Hardware and Operating Systems 3

~~CO INFO 578~~CIS 224\* ~~Routing and Switching Fundamentals~~Routing and Switching Essentials 3

~~CO INFO 584~~CIS 216\* Network Security 3

~~CO INFO 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3

~~CO INFO 592~~CIS 195\* Security in the Cloud 3

CO INFO 594\*\* Cybersecurity Operation 4

**CERTIFICATE - TOTAL UNITS 25**

*\*See Catalog course descriptions for prerequisites and/or corequisites.*

*\*\*Course offered in partnership with Cosumnes River College and Fresno City College.*

# Revision to Networking Technology Certificate

**CERTIFICATE - REQUIRED COURSES**

Subject COURSE UNITS

~~CO INFO 514\*~~CIS 238 ~~Supporting Windows Desktops~~Managing Windows Domain Desktops 3

***OR***

~~CO INFO 591\*~~CIS 194\* ~~Cloud Computing Architecture~~Compute Engines in Amazon Web Services 3

~~CO SCI 534\*~~CIS 113 ~~Operating Systems~~Intermediate Linux 3

~~CO SCI 535\*~~CIS 227\* ~~Supporting Windows Servers~~Server Administration and Network Security 3

~~CO SCI 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3

**CERTIFICATE - total units 12**

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Personal Computer Service Technology Certificate

**CERTIFICATE - REQUIRED COURSES**

SubjeCT COURSE UNITS

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

~~CO INFO 514~~CIS 238 ~~Supporting Windows Desktops~~Managing Windows Domain Desktops 3

***OR***

~~CO INFO 591\*~~CIS 194\* ~~Cloud Computing Architecture~~Compute Engines in Amazon Web Services 3

~~CO INFO 572~~CIS 209 ~~Introduction to Personal Computer Hardware Operating Systems~~Introduction to Computer Hardware and Operating Systems 3

***OR***

~~CO INFO 581\*~~CIS 111 ~~Personal Computer Upgrade and Repair~~Supporting Windows Desktops 3

***OR***

~~CO INFO 590~~CIS 192 Introduction to Cloud Computing 3

~~CO SCI 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3

**CERTIFICATE - total units 12**

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Programming for Business A.A.

**MAJOR - REQUIRED COURSES**

Subject COURSE UNITS

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

~~CO SCI 508~~CS 111 ~~Introduction to Programming Using Visual Basic~~Programming in Visual Basic 3

***Or***

~~CO SCI 575~~CS 116  ~~Programming Fundamentals for Computer Science~~Programming in C++ 3

~~CO SCI 533\*~~CIS 120 ~~Databases Using Access and SQL~~Introduction to Databases 3

~~CO SCI 550~~CIS 148 ~~Introduction to Web Development Using Dreamweaver and CSS~~Introduction to Web Development HTML5 & CSS 3

***OR***

~~CO SCI 553\*~~CS 112\* ~~Web Site Development Using HTML and JavaScript~~Programming in JavaScript 3

~~CO SCI 552\*~~CS 213\* ~~Programming in Java~~Advanced Programming in Java 3

~~CO INFO 561~~CIS 173 Data Analysis for Computer Information Systems with Python 3

~~CO INFO 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3

***OR***

~~CO INFO 590~~CIS 192 Introduction to Cloud Computing 3

**Technical Electives - Select 18 semester units from the following: 18-19**

ADVANCED PROGRAMMING: ~~CO SCI~~CS ~~508~~111 (3 units), ~~516\*~~130\* (3 units), ~~532\*~~236\* (3 units), ~~536\*~~136\* (3 units), ~~539\*~~114\* (3 units), ~~540\*~~216\* (3 units), ~~541\*~~215\* (3 units), ~~542\*~~131\* (3 units), ~~546\*~~230\* (3 units), ~~557\*~~243\* (3 units), ~~559\*~~244\* (3 units), ~~575~~116 (3 units), CIS ~~560\*~~172\* (3 units)

WEB: ~~CO SCI~~CIS ~~534\*~~113 (3 units), ~~550~~148 (3 units), ~~554\*~~149\* (3 units), ~~555\*~~150\* (3 units), ~~556\*~~127\* (3 units), ~~558~~190 (3 units), CS ~~553\*~~112\* (3 units)

NETWORK, CLOUD, OS: ~~CO INFO~~CIS ~~531\*~~239\* (3 units), ~~590~~192 (3 units), ~~591\*~~194\* (3 units), ~~592\*~~195\* (3 units), ~~CO SCI~~ ~~514\*~~238 (3 units), ~~534\*~~113 (3 units), ~~535\*~~227\* (3 units), ~~572~~209 (3 units), ~~581\*~~111 (3 units), ~~587~~210 (3 units)

Information Systems: ACCTG 001 (5 units), 002\* (5 units), BUS 005 (3 units), CAOT 032\* (3 units), ECON 001 (3 units), 002 (3 units)

only one course can be taken from the following: ART 650 (3 units), 651 (3 units), ~~CO SCI~~CIS ~~547~~129 (3 units), ~~548~~130 (3 units), MULTIMD 200 (3 units), PHOTO 049A (3 units)

**Major - Total Units 39-40**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 34-37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Programming for Business Certificate

CERTIFICATE - REQUIRED COURSES

Subject COURSE UNITS

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

~~CO SCI 508~~CS 111 ~~Introduction to Programming Using Visual Basic~~Programming in Visual Basic 3

OR

~~CO SCI 575~~CS 116  ~~Programming Fundamentals for Computer Science~~Programming in C++ 3

~~CO SCI 533\*~~CIS 120 Databases Using Access and SQL 3

~~CO SCI 541\*~~CS 215\* ~~Advanced Database Programming Using Visual C#~~Advanced Database Programming Using C# 3

OR

~~CO SCI 552\*~~CS 213\* ~~Programming in Java~~Advanced Programming in Java 3

Or

~~CO SCI 557\*~~CS 243\* Advanced Programming for Android Devices 3

OR

~~CO SCI 559\*~~CS 244\* Advanced Programming for iOS Devices 3

OR

~~CO SCI 560\*~~CIS 172\*  ~~Business Systems Design Using Oracle Developer and SQL Server~~Business Systems Design Using SQL 3

~~CO SCI 550~~CIS 148 ~~Introduction to Web Development Using HTML and CSS~~Introduction to Web Development HTML5 & CSS 3

OR

~~CO SCI 553\*~~CS 112\* ~~Web Site Development Using HTML and JavaScript~~Programming in JavaScript 3

OR

~~CO INFO 561~~CIS 173 Data Analysis for Computer Information Systems with Python 3

OR

~~CO INFO 590~~CIS 192 Introduction to Cloud Computing 3

Choose one course from the following: 3-5

ACCTG 001 Introductory Accounting I 5

BUS 005 Business Law I 3

CAOT 032\* Business Communications 3

ECON 001 Principles of Economics I 3

CERTIFICATE - total units 18-20

\*See Catalog course description for prerequisites and/or corequisites.

# Revision to Programming for Computer Science A.S.

MAJOR - REQUIRED COURSES

Subject COURSE UNITS

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

~~CO SCI 516\*~~CS 130\* ~~Beginning Computer Architecture and Organization~~Introduction to Computer Architecture and Organization 3

~~CO SCI 532\*~~CS 236\* Advanced Data Structures and Introduction to Databases 3

~~CO SCI 536\*~~CS 136\* Introduction to Data Structures 3

~~CO SCI 539\*~~CS 114\* Programming in C 3

~~CO SCI 540\*~~CS 216\* Object Oriented Programming in C++ 3

~~CO SCI 542\*~~CS 131\* Discrete Structures for Computer Science 3

OR

PHILOS 009 Symbolic Logic I 3

~~CO SCI 546\*~~CS 230\* Advanced Computer Architecture and Organization 3

~~CO SCI 552\*~~CS 213\* ~~Programming in Java~~Advanced Programming in Java 3

~~CO SCI 575~~CS 116 Programming Fundamentals for Computer Science 3

MATH 261\*1 Calculus I 5

MAJOR - ELECTIVE COURSES

SUBJECT COURSE UNITS

Select 5-7 semester units from the following:

~~CO INFO 561~~CIS 173 Data Analysis for Computer Information Systems with Python 3

~~CO SCI 542\*~~CS 131\* Discrete Structures for Computer Science 3

COUNSEL 004 Career Planning 1

ENG GEN 101 Introduction to Science, Engineering and Technology 2

MATH 227\* Statistics 4

MATH 262\* Calculus II 5

PHILOS 009 Symbolic Logic I 3

STAT 001\* Elementary Statistics I for the Social Sciences 3

Major - Total Units 40-42

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units\*\*

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 34-37 units

1These courses are either graduation requirements and satisfy portions of the general education (GE) requirements in the LACCD General Education Plan. Students seeking either the CSU General Education Certified Plan or the Intersegmental General Education Transfer Curriculum (IGETC) should consult with a college counselor about possible additional/different GE requirements.

\*\*This degree has a minimum of 21 GE courses and satisfies the LACCD GE Plan (Math [5], English [3] and 15 additional GE units). Students needing the CSU or IGETC plans will have additional GE requirements. You should consult with a college counselor for details.

\*See Catalog course description for prerequisites and/or corequisites.

# Revision to Routing Technology Certificate

CERTIFICATE - REQUIRED COURSES

Subject COURSE UNITS

~~CO SCI 537\*~~CIS 225\* LAN & VLAN Switching 3

~~CO SCI 538\*~~CIS 226\* Implementing Wide Area Networking 3

~~CO SCI 578\*~~CIS 224\* ~~Routing and Switching Fundamentals~~Routing and Switching Essentials 3

~~CO SCI 587~~CIS 210 ~~Introduction to Computer Networks~~Introduction to Computer Networking 3

CERTIFICATE - TOTAL UNITS 12

\*See Catalog course description for prerequisites and/or corequisites.

# Revision to Website Development Certificate

CERTIFICATE - REQUIRED COURSES

Subject COURSE UNITS

ART 650 Graphic Design for the World Wide Web 3

OR

ART 651 Animation for the Web I 3

OR

~~CO SCI 547~~CIS 129 Digital Image Processing and Programming for the Web 3

OR

~~CO SCI 548~~CIS 130 Web Development Using Flash and ActionScript 3

OR

MEDIART 104 Photoshop for Motion Pictures and Television 3

OR

MULTIMD 200 Digital Imaging 3

OR

PHOTO 049A Photographic Digital Imaging 3

~~CO SCI 508~~CS 111 ~~Introduction to Programming Using Visual Basic~~Programming in Visual Basic 3

OR

~~CO SCI 575~~CS 116 ~~Programming Fundamentals for Computer Science~~Programming in C++ 3

~~CO SCI 550~~CIS 148 ~~Introduction to Web Development Using Dreamweaver and CSS~~Introduction to Web Development HTML5 & CSS 3

~~CO SCI 553\*~~CS 112\* ~~Web Site Development Using HTML and JavaScript~~Programming in JavaScript 3

OR

~~CO SCI 555\*~~CIS 150\* Advanced Website Development Using JavaScript and AJAX 3

CERTIFICATE - total units 12

\*See Catalog course description for prerequisites and/or corequisites.

# Revision to Web Development, Programming and Scripting Certificate

CERTIFICATE - REQUIRED COURSES

Subject COURSE UNITS

ART 650 Graphic Design for the World Wide Web 3

Or

ART 651 Animation for the Web I 3

Or

~~CO SCI 547~~CIS 129 Digital Image Processing and Programming for the Web 3

Or

~~CO SCI 548~~CIS 130 Web Development Using Flash and ActionScript 3

OR

MEDIART 104 Photoshop for Motion Pictures and Television 3

OR

MULTIMD 200 Digital Imaging 3

OR

PHOTO 049A Photographic Digital Imaging 3

~~CO SCI 508~~CS 111 ~~Introduction to Programming Using Visual Basic~~Programming in Visual Basic 3

OR

~~CO SCI 575~~CS 116  ~~Programming Fundamentals for Computer Science~~Programming in C++ 3

~~CO SCI 533\*~~CIS 120 ~~Databases Using Access and SQL~~Introduction to Databases 3

OR

~~CO SCI 556\*~~CIS 127\* Advanced Dreamweaver - Dynamic Website Development 3

~~CO SCI 550~~CIS 148 ~~Introduction to Web Development Using Dreamweaver and CSS~~Introduction to Web Development HTML5 & CSS 3

~~CO SCI 553\*~~CS 112\* ~~Web Site Development Using HTML and JavaScript~~Programming in JavaScript 3

OR

~~CO SCI 555\*~~CIS 150\* Advanced Website Development Using JavaScript and AJAX 3

~~CO SCI 554\*~~CIS 149\* ~~Server-Side Programming for the World Wide Web~~Web Development Using PHP-MySQL 3

CERTIFICATE - total units 18

\*See Catalog course description for prerequisites and/or corequisites.

# Revision to General Studies: Science, Technology, Engineering & Mathematics A.A.

**ACCTG** 001 (5 units), 002 (5 units); **ANATOMY** 001 (4 units); **anml sc** 501 (3 units), 510 (3 units), 511 (3 units), 512 (1 unit); **ANTHRO** 101 (3 units), 111 (2 units); **ASTRON** 001 (3 units), 002 (1 unit); **BIOLOGY** 003 (4 units), 006 (5 units), 007 (5 units), 010 (4 units), 011ABC (3 units), 012ABC (3 units), 110 (4 units), 121 (3 units), 122 (2 units), 123 (3 units); **CHEM** 051 (5 units), 060 (5 units), 101 (5 units), 102 (5 units), 211 (5 units), 212 (5 units), 221 (5 units); **~~CO SCI~~CS** ~~516~~130 (3 units), ~~532~~236 (3 units), ~~536~~136 (3 units), ~~539~~114 (3 units), ~~540~~216 (3 units), ~~546~~230 (3 units), ~~575~~116 (3 units); **EARTH** 003 (4 units); **ELECTRN** 004A (3 units), 004B (1 unit); **ENG GEN** 131 (3 units) **ENV SCI** 001 (3 units), 002 (3 units), 007 (3 units); **GEOG** 001 (3 units), 003 (3 units), 015 (2 units), 017 (5 units), 019 (2 units), 023 (3 units), 025 (4 units), 033 (3 units), 036 (3 units), 037 (1 unit) 038 (3 units); **gis** 025 (4 units), 036 (3 units), 037 (1 unit); **GEOLOGY** 001 (3 units), 002 (3 units), 006 (2 units), 007 (3 units), 010 (3 units), 012 (3 units); **MATH** 215 (3 units), 227 (4 units), 228B (5 units), 238 (5 units), 240 (3 units), 260 (5 units), 261 (5 units), 262 (5 units), 263 (5 units), 270 (3 units), 275 (3 units); **METEOR** 003 (3 units), 004 (2 units), 005 (3 units); **MICRO** 001 (5 units), 020 (4 units); **OCEANO** 001 (3 units), 010 (2 units); **Phys Sc** 004 (4 units), 006 (3 units); **PHYSICS** 006 (4 units), 007 (4 units), 012 (3 units), 066 (5 units), 067 (5 units), 101 (5 units), 102 (5 units), 103 (5 units); **PHYSIOL** 001 (4 units); **PLNT SC** 103 (3 units), 711 (3 units), 714 (3 units), 828 (3 units), 901 (3 units); **PSYCH** 002 (3 units), 073 (1 unit), **STAT** 101 (4 units)

**Science, Technology, Engineering & Mathematics Emphasis total units 18**

# Revision to Journalism A.A.

**MAJOR - REQUIRED COURSES**

Subject COURSE UNITS

BRDCSTG 001 Fundamentals of Television and Radio Broadcasting 3

JOURNAL 100 Social Values in Mass Communication 3

JOURNAL 101 Collecting and Writing News 3

JOURNAL 108 Article Writing 3

***Or***

JOURNAL 220 Magazine Production 3

JOURNAL 202\* Advanced Newswriting 3

JOURNAL 218\* Practical Editing 3

JOURNAL 219 Techniques for Staff Editors 1

***Or***

LIB SCI 102 Internet Research Methods 1

PHOTO 101 Beginning Digital Photography 3

MEDIART 801 Digital Media Storytelling 3

***Or***

PHOTO 020 Beginning Photojournalism 4

**MAJOR - ELECTIVE COURSES**

Subject COURSE UNITS

**Select 6 semester units from the following: 6**

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

ENGLISH 102\* College Reading and Composition II 3

GEOG 002 Cultural Elements of Geography 3

JOURNAL 217\* Publication Laboratory 2

PHOTO 021\* News Photography 4

POL SCI 001 The Government of the United States 3

POL SCI 007 Contemporary World Affairs 3

PUB REL 001 Principles of Public Relations 3

**Major - Total Units 31-33**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 34-37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to Photojournalism A.A.

MAJOR - REQUIRED COURSES

Subject COURSE UNITS

BRDCSTG 001 Fundamentals of Television and Radio Broadcasting 3

JOURNAL 100 Social Values in Mass Communication 3

JOURNAL 101 Collecting and Writing News 3

JOURNAL 202\* Advanced Newswriting 3

PHOTO 101 Beginning Digital Photography 3

PHOTO 102\* Advanced Digital Photography 4

PHOTO 020 Beginning Photojournalism 4

PHOTO 021\* News Photography 4

BRDCSTG 010 Radio Programming and Production 3

Or

MEDIART 801 Digital Media Storytelling 3

Or

PHOTO 049 A&B Photographic Digital Imaging & Advanced Photographic Digital Imaging 6

MAJOR - ELECTIVE COURSES

Subject COURSE UNITS

Select 9 semester units from the following: 9-11

ART 502 Beginning Three-Dimensional Design 3

CINEMA 003 History of Motion Pictures 3

CINEMA 104 History of Documentary Film 3

CINEMA 107 Understanding Motion Pictures 3

~~CO SCI 501~~CIS 101 Introduction to Computers and Their Uses 3

JOURNAL 217\* Publication Laboratory 2

JOURNAL 218\* Practical Editing 3

JOURNAL 220 Magazine Production 3

PHOTO 016\* Fundamental Commercial Photography 3

PUB REL 001 Principles of Public Relations 3

Major - Total Units 39-44

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 34-37 units

\*See Catalog course description for prerequisites and/or corequisites.

# Revision to Pre-Engineering A.S.

**MAJOR - REQUIRED COURSES**

Subject COURSE UNITS

ENG GEN 101 Introduction to Science, Engineering and Technology 2

**Select 34 semester units from the following -
A minimum of one course must be selected from each group: 34-38**

Group 1:

CHEM 101\* General Chemistry I 5

CHEM 102\* General Chemistry II 5

Group 2:

MATH 261\* Calculus I 5

MATH 262\* Calculus II 5

MATH 263\* Calculus III 5

MATH 270\* Linear Algebra 3

MATH 275\* Ordinary Differential Equations 3

Group 3:

PHYSICS 101\* Physics for Engineers and Scientists I 5

PHYSICS 102\* Physics for Engineers and Scientists II 5

PHYSICS 103\* Physics for Engineers and Scientists III 5

Group 4:

~~CO SCI 516\*~~CS 130\* ~~Beginning Computer Architecture and Organization~~Introduction to Computer Architecture and Organization 3

~~CO SCI 539\*~~CS 114\* Programming in C 3

~~CO SCI 540\*~~CS 216\* Object Oriented Programming in C++ 3

EGD TEK 101\* Engineering Graphics 3

ENG GEN 131\* Statics 3

**Major - Total Units 36-40**

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Plans:*

LACCD GE LACCD General Education Plan 21 units

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 34-37 units

*\*See Catalog course description for prerequisites and/or corequisites.*

# Revision to General Education Required Courses for Associate Degrees for Transfer

**GENERAL EDUCATION - REQUIRED COURSES**

*Students must complete one of the following General Education Patterns:*

LACCD GE NOT AVAILABLE WITH THIS MAJOR

CSU GE CSU GE Breadth Certification Plan 39 units

IGETC Intersegmental GE Transfer Curriculum 37 units

IGETC for UC UC and Private School Students only. Students will be inadmissible to CSU unless IGETC 1C is completed 34 units

# Revision to chart: Los Angeles Pierce College Course Credit Applicable to Associate Degree Major and/or Certificate Requirements only

| AP Examination | Score | Pierce Course Credit | UNITS |
| --- | --- | --- | --- |
| AP Art History | 3, 4, 5 | ART 101 and ART 102 | 6 |
| AP Art Studio: Drawing | 3, 4, 5 | ART 201 and ART 202 | 6 |
| AP Art Studio: 2-D Design | 3, 4, 5 | ART 501 | 3 |
| AP Biology | 3, 4, 5 | BIOLOGY 003 | 4 |
| AP Calculus AB | 3, 4, 5 | MATH 261 | 5 |
| AP Calculus BC | 3, 4, 5 | MATH 261 and MATH 262 | 10 |
| AP Computer Science A | 3, 4, 5 | CO SCI 506 or CO SCI 575 | 3 |
| AP Computer Science AB | 3, 4, 5 | CO SCI 536 | 3 |
| AP English Language and Composition | 3, 4, 5 | ENGLISH 101 | 3 |
| AP English Literature and Composition | 3, 4, 5 | ENGLISH 101 | 3 |
| AP French Language | 3, 4, 5 | FRENCH 001 | 5 |
| AP Government and Politics: United States | 3, 4, 5 | POLI SCI 001 | 3 |
| AP History: European | 3, 4, 5 | HISTORY 002 | 3 |
| AP History: United States | 3, 4, 5 | HISTORY 011 and HISTORY 012 | 6 |
| AP History: World | 3, 4, 5 | HISTORY 086 and HISTORY 087 | 6 |
| AP Human Geography | 3, 4, 5 | GEOG 002 | 3 |
| AP Macroeconomics | 3, 4, 5 | ECON 002 | 3 |
| AP Microeconomics | 3, 4, 5 | ECON 001 | 3 |
| AP Music Theory | 3, 4, 5 | MUSIC 101 | 3 |
| AP Physics B | 3, 4, 5 | PHYSICS 006 and PHYSICS 007 | 8 |
| AP Physics C: Mechanics | 3, 4, 5 | PHYSICS 101 | 5 |
| AP Physics C: Electricity and Magnetism | 3, 4, 5 | PHYSICS 102 | 5 |
| AP Psychology | 3, 4, 5 | PSYCH 001 | 3 |
| AP Spanish Language | 3, 4, 5 | SPANISH 001 | 5 |
| AP Statistics | 3, 4, 5 | MATH 227 | 4 |