CAP 092A  INTRODUCTION TO CLOUD TECHNOLOGIES AND SOCIAL MEDIA  2.0 UNITS
Total Lecture: 36 hours
Advisory: CAP 010A
Acceptable for credit: California State University
This course is designed for anyone who wants to learn more about Web 2.0 and cloud technologies. This course provides an introduction to Web 2.0 applications, such as social networking sites (SNS), video-sharing sites, wikis, blogs and mashups. Students utilize Web 2.0 applications to facilitate interactive information sharing and collaboration via the Internet. This course may be offered via distance learning. Pass/No Pass Option.

CAP 092B  GOOGLE APPS FOR PERSONAL PRODUCTIVITY  2.0 UNITS
Total Lecture: 36 hours
Advisory: CAP 010A or CAP 037A
Acceptable for credit: California State University
This course introduces students to Google Drive and Google applications. Students learn to use GMail, Google Calendar, Document, Spreadsheet, Chrome and Presenter to achieve personal and professional productivity goals. Students also identify opportunities to utilize Google apps to communicate and collaborate within a virtual-social network. This course may also be offered via distance learning. Pass/No Pass Option.

CIS 001  INTRODUCTION TO COMPUTER SCIENCE AND TECHNOLOGY  4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Acceptable for credit: University of California, California State University
This course is an introduction to the concepts of computer science and information technology. It covers computer architecture, the Internet and networking, and basic programming and data manipulation. Students develop a practical, realistic understanding of computer science and information technology. This course is recommended for students in any major who want to learn about computers and programming. Pass/No Pass Option.

CIS 007  PYTHON PROGRAMMING  4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Acceptable for credit: University of California, California State University
This is an introductory course in programming using Python. No prior programming experience required. Students learn to design, code, and execute programs using the Python programming language. This class covers basic programming skills such as data types, control structure, algorithm development, and program design with functions. It also includes lists, object-oriented programming and GUI programming concepts and topics. This course may also be offered via distance learning. Pass/No Pass Option. C-ID # COMP 152.

CIS 008  ADVANCED PYTHON PROGRAMMING 4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CIS 007
Acceptable for credit: University of California, California State University
This is an advanced course in Python programming that covers features of the language and its libraries. Students learn about parallel programming using threads and processes, network programming (client-side and server-side), database programming and persistence, text processing and regular expressions, and HTML and XML parsing. This course may also be offered via distance learning. Pass/No Pass Option.

CIS 033  ROBOTICS AND EMBEDDED SYSTEMS  4.00 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CIS 037A and CIS 039
Acceptable for Credit: California State University
This course is an introduction to microcontrollers and interfacing. It covers the basic hardware components such as LEDs, switches, motors and sensors needed to build a robot and introduce the components needed for the drone hardware. In addition, it includes programming of the microcontroller. This course may also be offered via distance learning. Pass/No Pass Option.

CIS 035  INTRODUCTION TO DRONES AND UNMANNED AERIAL VEHICLES  4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Acceptable for credit: California State University
This course is an introduction to unmanned aerial vehicles (UAV). It covers the basic rules and regulations of flying a commercial drone and its applications. It also covers the components of a drone system, maintenance, applications, simulations, and hands-on training on how to fly and control a drone in different environments. Pass/No Pass Option.

CIS 037A  INTRODUCTION TO C PROGRAMMING  4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Acceptable for credit: University of California, California State University
This course is an introduction to the concepts and methods of computer programming using C language. The course covers data types, expressions, control structures, functions, sequential files, arrays, pointers, strings, string library and ADTs. It also covers low level programming elements such as memory manipulations, pass-by reference pointers, structs and bit level manipulation. This course may also be offered via distance learning. Pass/No Pass Option.

CIS 039  INTRODUCTION TO COMPUTER SYSTEMS  3.0 UNITS
Total Lecture: 45 hours, Total Lab: 27 hours
Acceptable for credit: University of California, California State University
This course provides a solid introduction to computer systems and machine language programming. Students learn the inner working of computer systems, instruction sets, assembly language programming, and data representation. Students also learn how to understand the code that a compiler generates, the memory layout and hierarchy, and the details of linking and loading. This course may also be offered via distance learning. Pass/No Pass Option. C-ID # COMP 142.

CIS 040  C++ PROGRAMMING  4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CIS 037A
Acceptable for credit: University of California, California State University
This is an introductory course in programming using C++. Students learn to design, code, and execute programs using the C++ programming language. This class includes control structures, functions, object-oriented programming concepts and topics. This course may also be offered via distance learning. Pass/No Pass Option.
### CIS 043 SOFTWARE DEVELOPMENT WITH JAVA 4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CIS 037A
Acceptable for credit: University of California, California State University
This course is an introduction to the concepts and methods of computer programming with an emphasis on OOP, (Object-Oriented Programming). Java programming language concepts include data types, selection, loops, arrays objects and classes. This course also includes GUI (graphical user interface), Graphics, files and exception handling. This course may be offered via distance learning. Pass/No Pass Option. C-ID # COMP 122.

### CIS 044 INTRODUCTION TO DATA STRUCTURES USING JAVA 4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CIS 043 and MAT 003A
Acceptable for credit: University of California, California State University
This course is an advanced course in Java Programming Language. It covers basic data structures such as stacks, lists, dynamic arrays, trees, and the algorithms of their implementation. Other topics introduced are the definition and terminology of graphs, internal and external sorting, merging, searching, Hashing, Big-O notation, and Standard collection of Classes. This course may be offered via distance learning. Pass/No Pass Option.

### CIS 045 LINUX ESSENTIALS I 3.0 UNITS
Total Lecture: 45 hours, Total Lab: 27 hours
Acceptable for credit: California State University
This is an introductory course in the Linux operating system. Students learn the basic Linux commands and utilities, including files, editors and shell scripting. This course may be offered via distance learning. This course may be offered via distance learning. Pass/No Pass Option.

### CIS 046 LINUX ESSENTIALS II (SHELL PROGRAMMING) 3.0 UNITS
Total Lecture: 45 hours, Total Lab: 27 hours
Advisory: CIS 045
Acceptable for credit: California State University
This course builds upon CIS 045, Linux Essentials I, to cover shell and scripting in depth. Students learn to program in Bourne Again Shell, including variables, expressions, control structure, files and subroutines. This course also includes networking and internet scripting. This course may be offered via distance learning. Pass/No Pass Option.

### CIS 047 LINUX SYSTEM ADMINISTRATION I 4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Acceptable for credit: California State University
This is an introductory course in Linux system administration. Students learn hands-on skills for Linux administration, including system initialization, file system management, user and services administration, and network configuration. This course may be offered via distance learning. Pass/No Pass Option. C-ID # ITIS 155.

### CIS 048 ADVANCED LINUX SYSTEM ADMINISTRATION 3.0 UNITS
Total Lecture: 36 hours, Total Lab: 54 hours
Advisory: CIS 047
Acceptable for credit: California State University
This is an advanced course in the Linux system administration series. Students learn to set-up and configure Linux based servers and networks. The course covers file systems, file sharing, mail server, LDAP, DNS, firewall, web server and network security. This course may be offered via distance learning. Pass/No Pass Option.

### CIS 055 INTRODUCTION TO DATABASE AND SQL 3.0 UNITS
Total Lecture: 45 hours, Total Lab: 27 hours
Advisory: CAP 070
Acceptable for credit: California State University
This course covers the concepts of relational databases and SQL query language. Students learn to create tables, insert data, update data and retrieve records in a database. This course introduces students to widely used database systems such as Oracle, Microsoft SQL server, and MySQL. This course may also be offered via distance learning. Pass/No Pass Option.

### CIS 056 DATABASE PROGRAMMING AND MANAGEMENT 3.0 UNITS
Total Lecture: 45 hours, Total Lab: 27 hours
Advisory: CAP 084A
Acceptable for credit: California State University
This course is an introduction to database programming and management. It builds upon the basic database and SQL course to cover stored procedures, functions, packages, and database triggers. This course may be offered via distance learning. Pass/No Pass Option.

### CIS 060 MOBILE APPS PROGRAMMING - IPHONE 4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CIS 007, CIS 043
Acceptable for credit: California State University
This course is an introduction to programming iPhone and iPad applications in Cocoa using an object-oriented paradigm. Students learn to develop simple to more advanced applications using Swift, Model-View-Control framework, graphical-user interface, classes, methods, and messages. This course may also be offered via distance learning. Pass/No Pass Option.

### CIS 063 MOBILE APPS PROGRAMMING - ANDROID 4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CIS 043
Acceptable for credit: California State University
This course is an introduction to programming applications for the Android operating system. Students learn to develop simple to more advanced applications using the latest Java technologies and the Android SDK. This course may also be offered via distance learning. Pass/No Pass Option.

### CIS 086 WEB DEVELOPMENT WITH PHP AND MYSQL 3.0 UNITS
Total Lecture: 36 hours, Total Lab: 54 hours
Advisory: CAP 097A, CIS 037A
Acceptable for credit: California State University
This is an introductory course on web server side programming using PHP and MySQL. This course covers basic PHP programming elements including variables, strings, arrays, files and forms processing. It covers MySQL database basics and how to create a database driven web application. This course may be offered via distance learning. Pass/No Pass Option.

### CIS 088 ADVANCED JAVASCRIPT FOR WEB DEVELOPERS 4.0 UNITS
Total Lecture: 54 hours, Total Lab: 54 hours
Advisory: CAP 088B, CAP 098A or GDS 045
Acceptable for credit: California State University
This is an advanced course on JavaScript. It covers the following advanced topics: IIFEs, Regular expressions, JSON, XML, REST, HTML5 Canvas, jQuery, MVC, single page applications, Angular, client-server interaction, Node.js and Ajax. This course may also be offered via distance learning. Pass/No Pass Option.