

Name: \_\_\_\_\_  
 Plan: Business Administration, B.S.  
 SubPlan/Option: Computer Information Systems  
 Min. Units Required: **120 units**

### Major Required Core **54 units**

ACC2070 - Financial Accounting for Decision Making (3)  
 ACC2080 - Managerial Accounting for Decision Making (3)  
 BUS3000 - Applied Business Communication (3)  
 BUS3102 - Globalization of Business-Modules (3)  
 BUS4950 - Strategic Management (3)  
 CIS1010 - Introduction to Personal Computing (3) 1  
 CIS3100 - Management Information Systems (3)  
 EC2201 - Principles of Microeconomics (3) (D3)  
 EC2202 - Principles of Macroeconomics (3) (D3)  
 FRL2013 - The Legal Environment of Business and its Transactions (3)  
 FRL3000 - Managerial Finance (3)  
 IBM3012 - Principles of Marketing Management (3)  
 MAT1250 - Introductory Calculus for Business (3) (B4)  
 MHR3010 - Principles of Management (3)  
 MHR3020 - Organizational Behavior (3) (D4)  
 STA1200 - Statistics with Applications (3) (B4)  
 TOM3010 - Operations Management (3)  
 TOM3020 - Managerial Statistics (3)

#### Note(s):

All students in any College of Business Administration subplan, and all other students taking certain business courses, must demonstrate proficiency with specific personal computer software packages. The proficiency must be demonstrated prior to taking any business course with the term "personal computer proficiency" in the prerequisite list. Some business courses identify specific personal computer packages in their prerequisite lists. In these cases, proficiency in the noted packages must be demonstrated prior to taking the course.

1 Personal Computer Proficiency must be demonstrated by satisfying one of the following three alternatives: 1) CIS 1010, 2) personal computer proficiency test in Word, Excel, Access, and PowerPoint, or 3) an approved college course. There are no units associated with the personal computer proficiency test. If the test is passed, then electives in subplan selected may be increased by 3 units.

### Subplan/Option Required Core **9 units**

CIS3050 - Database Design and Development (3)  
 CIS3090 - Object-Oriented Programming for Business (3)  
 CIS3252 - Business Intelligence (3)

### Subplan/Option Electives **18 units**

#### CIS Career Emphases

The Computer Information Systems Department (CIS) has established three career emphases in the major: Application Development, Information Security and Forensics, and Business Intelligence. Every CIS major must select one of these career emphases and take two emphasis core courses and four emphasis elective courses in order to graduate with a major in CIS. Consultation on emphasis selection is available through the CIS Department Advisor.

Students must have earned a grade of "C" (2.0) or better in each of the courses listed below before registering for any career emphasis course. The courses are: CIS 3050, CIS 3090, and CIS 3252.

After selecting a career emphasis, a CIS major must take the required emphasis courses and select four elective emphasis courses.

#### Application Development Emphasis **18 units**

#### Emphasis Required Core **6 units**

CIS3150 - Systems Analysis and Design (3)  
 CIS4290 - IS Project Management and Development (3)

#### Emphasis Electives **12 units**

Select 4 courses:  
 CIS3110 - Client-side Web Development (3)  
 CIS4250 - E-Commerce Application Development (3)  
 CIS4260 - Server-side Web Development (3)  
 CIS4270 - Secure Web Applications (3)  
 CIS4280 - Android Mobile App Programming (3)

### Information Security and Forensics Emphasis **18 units**

#### Emphasis Required Core **6 units**

CIS2650 - Contemporary Operating Systems (3)  
 CIS2670 - IT Infrastructure (3)

#### Emphasis Electives **12 units**

Select 4 courses:  
 CIS3470 - Telecommunication Networks (3)  
 CIS4333 - Information Systems Auditing (3)  
 CIS4670 - Network Security (3)  
 CIS4710 - Information Security (3)  
 CIS4810 - Computer Forensics (3)

#### Business Intelligence Emphasis **18 units**

#### Emphasis Required Core **6 units**

CIS2670 - IT Infrastructure (3)  
 CIS3150 - Systems Analysis and Design (3)

#### Emphasis Electives **12 units**

Select 4 courses:  
 CIS3454 - Data Warehousing (3)  
 CIS3650 - Digital Analytics (3)  
 CIS4321 - Data Mining (3)  
 CIS4567 - Big Data Analytics (3)  
 CIS4680 - Advanced Data Analytics (3)

### Personal Computer Proficiency Requirement

1 (see policy statement in College of Business Administration introductory section).

### General Education Requirements **48 Units**

Students should consult the Academic Programs website

<https://www.cpp.edu/~academic-programs/general-education-course-listings.shtml>

for current information regarding this requirement. Unless specific courses are required, please refer to the list of approved courses under General Education Requirements, Areas A through E.

#### Area A. English Language Communication and Critical Thinking (9 units)

1. Oral Communication
2. Written Communication
3. Critical Thinking

#### Area B. Scientific Inquiry and Quantitative Reasoning (12 units)

1. Physical Sciences
2. Life Sciences
3. Laboratory Activity
4. Mathematics/Quantitative Reasoning
5. Science and Technology Synthesis

#### Area C. Arts and Humanities (12 units)

1. Visual and Performing Arts
- 2a. Philosophy and Civilization
- 2b. Literature and Language Other than English
3. Arts and Humanities Synthesis

#### Area D. Social Sciences (12 units)

1. U.S. History and American Ideals
2. U.S. Constitution and California Government
3. Social Sciences: Principles, Methodologies, Value Systems, and Ethics
4. Social Science Synthesis

#### Area E. Lifelong Learning and Self-Development (3 units)

### Interdisciplinary General Education **21 Units**

An alternate pattern for partial fulfillment of GE Areas A, C, and D available for students is the Interdisciplinary General Education (IGE) program. Students should see an advisor for specific GE coursework required by their major. Please refer to the University Catalog General Education Program section for additional information.

#### How IGE fulfills General Education Requirements:

Year	Completion of IGE Courses	Satisfies GE Requirements
Freshman	IGE 1100, IGE 1200	A2 and C2b
Sophomore	IGE 2100, IGE 2200	C1 and C2a
Junior	IGE 2300, IGE 2400	D1 and D3
Senior	IGE 3100	C3 or D4

### American Institutions **6 Units**

Courses that satisfy this requirement may also satisfy GE Area D1 and D2.

### American Cultural Perspectives Requirement **3 Units**

Refer to the University Catalog General Education Program section for a list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.

### Graduation Writing Test

All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the semester following completion of 60 units for undergraduates.