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

Major Required — 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 - Statistical Foundations for Business Analytics (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 — 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. Any combination of courses listed below will satisfy the required 18 units. Emphases are listed to provide guidance for helping students to choose courses of interest that best fit your career goals, but there is no requirement for choosing a specific emphasis for fulfilling these units. Consultation on emphasis selection is available through the CIS Department Advisor.

Students must have earned a grade of "C" (2.0) or better in CIS 3050 , CIS 3090 , and CIS 3252 before registering for any career emphasis course.

Application Development Emphasis — 18 units

Emphasis Recommended — 6 units
CIS3150 - Systems Analysis and Design (3)
CIS4290 - IS Project Management and Development (3)

Emphasis Other — 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 - Mobile App Programming (3)

Information Security and Forensics Emphasis — 18 units

Emphasis Recommended — 6 units
CIS2650 - Contemporary Operating Systems (3)
CIS2670 - IT Infrastructure (3)

Emphasis Other — 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 Recommended — 6 units
CIS2670 - IT Infrastructure (3)
CIS3150 - Systems Analysis and Design (3)

Emphasis Other — 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)
At least 3 units from each sub-area
1. Oral Communication
2. Written Communication
3. Critical Thinking

Area B. Scientific Inquiry and Quantitative Reasoning (12 units)
At least 3 units from B1, B2, B4, and B5 including 1 unit of lab from B1 or B2 to fulfill B3
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)
At least 3 units from each sub-area and 3 additional units from sub-areas 1 and/or 2
1. Visual and Performing Arts
2. Literature, Modern Languages, Philosophy and Civilization
3. Arts and Humanities Synthesis

Area D. Social Sciences (12 units)
At least 3 units from each sub-area
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
First	IGE 1100, IGE 1200	A2 and C2
Second/Third	IGE 2100, IGE 2200	C1 and C2
	IGE 2300, IGE 2400	D1 and D3
Third/Fourth	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.