I. GENERAL COURSE INFORMATION

Subject and Number: **Computer Information Systems 13**
Descriptive Title: **Computer Information Systems**
Course Disciplines: **Computer Information Systems**
Division: **Business**

Catalog Description:
This course introduces students to the concepts and technologies used in processing information in an organization. Topics include information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware, and applications. Students will apply these concepts and methods through hands-on projects developing computer-based solutions using application software.

Conditions of Enrollment:

Prerequisite: English 1 or eligibility for English 1A or qualification by appropriate assessment
Recommended Preparation: Mathematics 23 or qualification by appropriate assessment or Business 15

Course Length: **X Full Term Other (Specify number of weeks):**
Hours Lecture: **2.0 hours per week TBA**
Hours Laboratory: **3.0 hours per week TBA**
Course Units: **3.0**

Grading Method: **Letter**
Credit Status: **Associate Degree Credit**

Transfer CSU: **X** **Effective Date: Prior to July 1992**
Transfer UC: **X** **Effective Date: Fall 1999**

General Education:
El Camino College:
4B – Language and Rationality – Communication and Analytical Thinking
Term: Other:

CSU GE:

IGETC:

II. OUTCOMES AND OBJECTIVES

A. COURSE STUDENT LEARNING OUTCOMES (The course student learning outcomes are listed below, along with a representative assessment method for each. Student learning outcomes are not subject to review, revision or approval by the College Curriculum Committee)

1. **SLO #1 Applicability** Solve common business problems using appropriate information technology applications and systems design and developmental tools.
2. **SLO #2 System Development Process** Demonstrate an understanding of the system development process and use of information systems within an organization.
3. **SLO #3 Communications** Identify and analyze existing and emerging technologies and their impact on organizations and society including communication and global relationships.
4. **SLO #4 Networking** Demonstrate knowledge of network configurations, risk management and security protocols.

   The above SLOs were the most recent available SLOs at the time of course review. For the most current SLO statements, visit the El Camino College SLO webpage at http://www.elcamino.edu/academics/slo/.

B. Course Student Learning Objectives (The major learning objective for students enrolled in this course are listed below, along with a representative assessment method for each)

1. Explain the development and use of information systems in business.
   - Objective Exams
2. Solve common business problems using appropriate information technology applications and systems.
   - Other (specify)
   - Lab assignment
3. Summarize the impact of the expanding scope of digital technology including career opportunities, privacy, security, ethics, and global relationships.
   - Objective Exams
4. Identify and analyze existing and emerging technologies and their impact on organizations and society including computer, communication and information systems, privacy, security, crime, ethics, global relationships, and career opportunities.
   - Objective Exams

III. OUTLINE OF SUBJECT MATTER (Topics are detailed enough to enable a qualified instructor to determine the major areas that should be covered as well as ensure consistency from instructor to instructor and semester to semester.)

Lecture or Lab	Approximate Hours	Topic Number	Major Topic
Lecture	3	I	Information systems concepts A. Computer systems B. Computer-based information systems C. Information Technology (IT) impact on organizations D. Importance to society E. Business processes F. IT support
Lecture	6	II	Communication and network concepts, systems, and applications A. Network fundamentals B. Internet and World Wide Web C. Network applications
Lecture	3	III	Internet usage and e-business systems A. Efficient search techniques B. Manufacturer and e-tailer web sites C. Communications D. Brokerage sites E. Subscription sites
Lecture	3	IV	System infrastructure concepts A. Enterprise architecture B. Data warehousing C. Telecommunications networks D. Hardware E. Software F. Procedures
Lecture	6	V	System and Application software programs and concepts A. System software 1. Operating systems 2. Network operating systems 3. Utility software B. Application software 1. Single Purpose Software 2. Software Suites 3. Common features of application software 4. Ownership rights and licensing
Lecture	3	VI	Information security A. Ethical issues B. Privacy C. Crime D. Threats E. Resources F. Controls

Lecture	3	VII	Types of information systems and their roles in business A. Customer Relationship Management (CRM) B. Supply Chain Management C. Business Intelligence D. Intelligent Systems 1. Decision Support System (DSS) 2. Management Information Systems (MIS) 3. Transaction Processing Systems 4. Geographic Information 5. Office Systems 6. Design and Manufacturing Systems 7. Artificial Intelligence
Lecture	3	VIII	Systems development life cycle (SDLC) A. Feasibility B. Analysis C. Design D. Development E. Implementation F. Maintenance
Lecture	6	IX	Organization and management of structured and unstructured data using spreadsheets and database tools A. Structured data and databases B. Unstructured data (images, videos, email, documents and text)
Lab	36	X	Lab Practical exercises in electronic spreadsheet development and database software to solve business problems A. Budgeting B. Estimating C. Loan Evaluation D. Stock Analysis E. Financial Reporting F. Order Fulfillment G. Scheduling H. Investment Evaluation I. Product Evaluation J. Human Resource Tracking System K. Inventory Tracking
Lab	18	XI	Lab Practical exercises in Internet technologies A. Research methods using search engines B. Social media C. Web-based evaluation tools
Total Lecture Hours		36	
Total Laboratory Hours		54	
Total Hours		90	

IV. PRIMARY METHOD OF EVALUATION AND SAMPLE ASSIGNMENTS

A. PRIMARY METHOD OF EVALUATION:

Problem solving demonstrations (computational or non-computational)

B. TYPICAL ASSIGNMENT USING PRIMARY METHOD OF EVALUATION:

Kurt Lee is a financial analyst for Hardin Financial, a consulting firm in Owatonna, Minnesota. As part of his job, he records stock market activity in Excel workbooks. One workbook contains the recent stock market activity of Mitchell Oil. He wants your help in creating a chart displaying the stock values. The chart should display the stock's opening, high, low, and closing values, and the number of shares traded for each day of the past few weeks. The volume of shares traded should be expressed in terms of millions of shares. In the stock market chart, the daily chart values should be graphically formatted to clearly show an increase or a decrease from the previous day. Be sure to represent the difference between the stock's closing and opening values, and graphically display win/loss of the stock's value.

C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:

1. Ted and Alice are a young couple who have been living in an apartment for the first two years of their marriage. They would like to buy their first house, but do not know whether they can afford it. Ted works as a carpenter's apprentice, and Alice is a customer service specialist at a local bank. In last year, Ted's "take home" wages were $24,000 after taxes and deductions, and Alice's take-home salary was $30,000. Ted gets a 2% raise every year, and Alice gets a 3% raise. Their apartment rent is $1,200 per month ($14,400 per year), but the lease is up for renewal and the landlord said he needs to increase the rent for the next lease.
Ted and Alice have been looking at houses and have found one they can buy, but they will need to borrow $200,000 for a mortgage. Their parents are helping them with the down payment and closing costs.
After talking to several lenders, Ted and Alice have learned that the state legislature is voting on a first-time home buyers' mortgage bond. If the bill passes, they will be able to get a 30-year fixed mortgage at 3% interest. Otherwise, they will have to pay 6% interest on the mortgage.
Because of the depressed housing market, Ted and Alice are not figuring equity value into their calculations. In addition, although the mortgage interest and real estate taxes will be deductible on their income taxes, these deductions will not be higher than the standard allowable tax deduction, so they are not figuring on any savings there either. Ted and Alice's other living expenses (such as car payments, food, and medical bills), the utilities expenses for either renting or buying, and estimated house maintenance expenses are listed in the Constants section (see Figure C-32).
Ted and Alice's primary concern is their cash on hand at the end of this year and next year. They are thinking of starting a family, but they know it will be difficult without adequate savings.

Prepare appropriate documents that graphically analyzes the different possible scenarios covering their concerns.

2. Appliance World is a national retailer of household appliances, with warehouses and stores across the country. The company's warehouse in Louisville, Kentucky, stocks eight families of appliances: ovens and ranges, compact refrigerators, standard refrigerators, washing machines, clothes dryers, dishwashers, microwave ovens, and chest freezers.
The Louisville warehouse has been operating for several years, but the new logistics manager, Harry Murvin, is concerned that the traditional operations model used for managing the inventory, known as EOQ (Economic Order Quantity), is not the most cost-efficient way to run the warehouse. The EOQ model fails to consider real-world constraints such as storage capacity and asset management. Moreover, in a recent meeting with marketing vice president Susan Barnes, Harry learned that the Louisville operation has an order service level of only 50 percent because the warehouse does not carry safety stock to deal with variation in sales demand. Susan is concerned that Appliance World is losing customers to the large home-improvement chains, which have been selling household appliances for the past several years.
Harry would like to develop an inventory management DSS model that addresses these concerns while optimizing the warehouse operating cost. He also wants to identify possible improvements to the operation.
You are the corporate MIS manager for Appliance World. You have traveled to the Louisville warehouse to meet with Harry and develop an optimized inventory management program in Microsoft Excel.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

Quizzes
Written homework
Laboratory reports
Homework Problems
Multiple Choice
Completion
Matching Items
True/False
Presentation

V. INSTRUCTIONAL METHODS

Demonstration
Discussion
Group Activities
Internet Presentation/Resources
Laboratory
Lecture
Multimedia presentations
Simulation

Note: In compliance with Board Policies 1600 and 3410, Title 5 California Code of Regulations, the Rehabilitation Act of 1973, and Sections 504 and 508 of the Americans with Disabilities Act, instruction delivery shall provide access, full inclusion, and effective communication for students with disabilities.

VI. WORK OUTSIDE OF CLASS

Study
Answer questions
Skill practice
Required reading
Problem solving activities

Estimated Independent Study Hours per Week: 4

VII. TEXTS AND MATERIALS

A. UP-TO-DATE REPRESENTATIVE TEXTBOOKS

Carey/Parsons/Oja/Ageloff. New Perspectives on Microsoft Excel 2016, Introductory. Cengage, 2016.
Morley, Deborah and Charles S. Parker. Understanding Computers: Today and Tomorrow, Comprehensive. 16th ed. Cengage, 2016.
Adamski/Finnegan. New Perspectives on Microsoft Access 2016, Introductory. Cengage, 2016.

B. ALTERNATIVE TEXTBOOKS

C. REQUIRED SUPPLEMENTARY READINGS

D. OTHER REQUIRED MATERIALS

Flash memory drive

VIII. CONDITIONS OF ENROLLMENT

A. Requisites (Course and Non-Course Prerequisites and Corequisites

Requisites	Category and Justification
English 1	Course Prerequisite: This course requires careful reading of different aspects of information systems and information technology applications.
Eligibility for English 1A or qualification by appropriate assessment	Non-course prerequisite: This course requires careful reading of different aspects of information systems and information technology applications.

B. Requisite Skills

Requisite Skills
Demonstrate rules of English grammar, mechanics, and usage. Able to write concise sentences. Able to read with comprehension computer concept and technical information, business case studies, and software usage instructions. Demonstrate study and test-taking techniques. ENGL 1 Summarize, analyze, evaluate, and synthesize college-level texts. ENGL 1 Write a well-reasoned, well-supported expository essay that demonstrates application of the academic writing process.

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification
Course Recommended Preparation or Mathematics-23	Course
Course Recommended Preparation Business-15	Course

D. Recommended Skills

Recommended Skills
Analyze and solve business problems using arithmetic skills, solve problems for the unknown, and communicate the solution and analysis with appropriate tables, charts and graphs. BUS 15 - Convert business problems into equations and solve using addition, subtraction, multiplication, and division, fractions, decimals, and percentages. MATH 23 - Perform various operations (addition, subtraction, multiplication, division, and exponentiation) on different sets of numbers (whole, integer, and rational) and recognize equivalence when it occurs, particularly with fractions, decimals and percentages. MATH 23 - Read, interpret, and construct tables, charts and graphs. BUS 15 - Analyze and interpret the forms of a graph such as bar, line, and circle.

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact

Course created by Stan Niemczycki on 12/01/1981.

BOARD APPROVAL DATE:

LAST BOARD APPROVAL DATE: 11/18/2019

Last Reviewed and/or Revised by: Monica Chaban **Date: September 25, 2019**