



El Camino College
 COURSE OUTLINE OF RECORD – Official

Course Acronym:	CIS
Course Number:	13
Descriptive Title:	Computer Information Systems
Division:	Business
Department:	Computer Information Systems
Course Disciplines:	Computer Information Systems
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.
Prerequisite:	Eligibility for English 1A
Co-requisite:	
Recommended Preparation:	Proficient in pre-algebra skills or Business 115
Enrollment Limitation:	
Hours Lecture (per week):	2
Hours Laboratory (per week):	3
Outside Study Hours:	4
Total Course Hours:	90
Course Units:	3
Grading Method:	Letter Grade only
Credit Status:	Credit, degree applicable
Transfer CSU:	Yes
Effective Date:	Prior to July 1992
Transfer UC:	Yes
Effective Date:	
General Education: ECC	Area 4B - Language and Rationality: Communication and Analytical Thinking
Term:	
Other:	
CSU GE:	
Term:	

Other:	
IGETC:	
Term:	
Other:	
<p>Student Learning Outcomes:</p>	<p>SLO #1 Applicability</p> <p>Solve common business problems using appropriate information technology applications and systems design and developmental tools.</p> <p>SLO #2 System Development Process</p> <p>Demonstrate an understanding of the system development process and use of information systems within an organization.</p> <p>SLO #3 Communications</p> <p>Identify and analyze existing and emerging technologies and their impact on organizations and society including communication and global relationships.</p> <p>SLO #4 Networking</p> <p>Demonstrate knowledge of network configurations, risk management and security protocols.</p>
<p>Course Objectives:</p>	<ol style="list-style-type: none"> 1. Explain the development and use of information systems in business. 2. Solve common business problems using appropriate information technology applications and systems. 3. Summarize the impact of the expanding scope of digital technology including career opportunities, privacy, security, ethics, and global relationships. 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.
<p>Major Topics:</p>	<p>I. Information systems concepts (3 hours, lecture)</p> <ol style="list-style-type: none"> 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 <p>II. Communication and network concepts, systems, and applications (6 hours, lecture)</p> <ol style="list-style-type: none"> A. Network fundamentals B. Internet and World Wide Web C. Network applications <p>III. Internet usage and e-business systems (3 hours, lecture)</p> <ol style="list-style-type: none"> A. Efficient search techniques

- B. Manufacturer and e-tailer web sites
- C. Communications
- D. Brokerage sites
- E. Subscription sites

IV. System infrastructure concepts (3 hours, lecture)

- A. Enterprise architecture
- B. Data warehousing
- C. Telecommunications networks
- D. Hardware
- E. Software
- F. Procedures

V. System and Application software programs and concepts (6 hours, lecture)

- 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

VI. Information security (3 hours, lecture)

- A. Ethical issues
- B. Privacy
- C. Crime
- D. Threats
- E. Resources
- F. Controls

VII. Types of information systems and their roles in business (3 hours, lecture)

- 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

VIII. Systems development life cycle (SDLC) (3 hours, lecture)

- A. Feasibility

	<ul style="list-style-type: none"> B. Analysis C. Design D. Development E. Implementation F. Maintenance <p>IX. Organization and management of structured and unstructured data using spreadsheets and database tools (6 hours, lecture)</p> <ul style="list-style-type: none"> A. Structured data and databases B. Unstructured data (images, videos, email, documents and text) <p>X. Lab Practical exercises in electronic spreadsheet development and database software to solve business problems (36 hours, lab)</p> <ul style="list-style-type: none"> 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 <p>XI. Lab Practical exercises in Internet technologies (18 hours, lab)</p> <ul style="list-style-type: none"> 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
Primary Method of Evaluation:	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	<p>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.</p>

<p>Critical Thinking Assignment 1:</p>	<p>Rafael and Mina 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. Rafael works as a carpenter's apprentice, and Mina is a customer service specialist at a local bank. In last year, Rafael's "take home" wages were \$24,000 after taxes and deductions, and Mina's take-home salary was \$30,000. Rafael gets a 2% raise every year, and Mina 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.</p> <p>Rafael and Mina 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.</p> <p>After talking to several lenders, Rafael and Mina 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.</p> <p>Because of the depressed housing market, Rafael and Mina 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. Rafael and Mina'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).</p> <p>Rafael and Mina'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.</p> <p>Prepare appropriate documents that graphically analyzes the different possible scenarios covering their concerns.</p>
<p>Critical Thinking Assignment 2:</p>	<p>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.</p> <p>The Louisville warehouse has been operating for several years, but the new logistics manager, Tej Salandri, 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 Chau, Tej 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.</p> <p>Tej would like to develop an inventory management DSS model that addresses these concerns while optimizing the warehouse operating cost. She also wants to identify possible improvements to the operation.</p>

	You are the corporate MIS manager for Appliance World. You have traveled to the Louisville warehouse to meet with Tej and develop an optimized inventory management program in Microsoft Excel.
Other Evaluation Methods:	Completion, Homework Problems, Laboratory Reports, Matching Items, Multiple Choice, Presentation, Quizzes, True/False, Written Homework
Instructional Methods:	Demonstration, Discussion, Group Activities, Lab, Lecture, Multimedia presentations, Role play/simulation
If other:	Internet Presentation/Resources
Work Outside of Class:	Answer questions, Problem solving activity, Required reading, Skill practice, Study
If Other:	
Up-To-Date Representative Textbooks:	Carey, <u>New Perspectives Microsoft Office 365 & Excel 2019 Comprehensive</u> , Cengage, 2020. Stair/Reynolds, <u>Principles of Information Systems</u> , 14 th Edition, Cengage Publishing, 2021. Shellman/Vodnik, <u>New Perspectives Microsoft Office 365 & Access 2019 Comprehensive</u> , Cengage, 2020.
Alternative Textbooks:	
Required Supplementary Readings:	
Other Required Materials:	Flash memory drive
Requisite:	
Category:	
Requisite course(s): List both prerequisites and corequisites in this box.	
Requisite and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s).	
Requisite Skill:	Eligibility for English 1A
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	This course involves reading college level textbooks, developing projects, and answering essay questions. A student's success in this class will be enhanced if they have these skills. Summarize, analyze, evaluate, and synthesize college-level texts. Write a well-reasoned, well-supported expository essay that demonstrates application of the academic writing process.
Requisite course:	Business-115
Requisite and Matching skill(s): Bold the requisite skill. List	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.

the corresponding course objective under each skill(s).	BUS 115 - Convert business problems into equations and solve using addition, subtraction, multiplication, and division, fractions, decimals, and percentages. BUS 115 - Analyze and interpret the forms of a graph such as bar, line, and circle.
Requisite Skill:	Proficient in pre-algebra skills
Requisite Skill and Matching skill(s): Bold the requisite skill. List the corresponding course objective under each skill(s). If applicable	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. 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. Read, interpret, and construct tables, charts and graphs.
Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Stan Niemczycki
Date:	12/01/1981
Original Board Approval Date:	
Last Reviewed and/or Revised by:	Monica Chaban
Date:	09/02/2020
Last Board Approval Date:	12/19/2022