



El Camino College
COURSE OUTLINE OF RECORD – Approved

I. GENERAL COURSE INFORMATION

Subject and Number: Computer Information Systems 26
Descriptive Title: Using Microsoft Excel
Course Disciplines: Computer Information Systems
Division: Business

Catalog Description:

In this course, students learn to use spreadsheets to solve business and information system problems in a graduated series of laboratory projects. The database, graphics features, macros, and advanced logical and financial functions of spreadsheets are utilized. The student will create and enhance charts, work with multiple worksheets and integrate spreadsheets with other Windows applications.

Conditions of Enrollment:

Prerequisite: Computer Information Systems 13 with a minimum grade of C or equivalent experience

Course Length: X Full Term Other (Specify number of weeks):
Hours Lecture: 2.00 hours per week TBA
Hours Laboratory: 3.00 hours per week TBA
Course Units: 3.00

Grading Method: Letter
Credit Status: Associate Degree Credit

Transfer CSU: X Effective Date: Prior to July 1992
Transfer UC: No Effective Date:

General Education:
El Camino College:

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 Spreadsheets

Given an in-class assignment, construct an accurate and complete spreadsheet that demonstrates appropriate formatting and fundamental math calculations.

2. SLO #2 External References

Given an in-class assignment, construct an accurate and complete spreadsheet that demonstrates math calculations and lookups that include external references.

3. SLO #3 Conditional Formatting

Given an in-class assignment, modify an existing spreadsheet to include conditional numeric formatting involving mathematical states (positive, negative and zero), and conditional logic involving day and time calculations.

4. SLO #4 Testing for Logic and Errors

Given an in-class assignment, demonstrate proficiency in array processing of spreadsheet formulas, table structures, and database (“D”) functions.

5. SLO #5 Spreadsheet Formulas

Demonstrate comprehension of spreadsheet formulas, functions, internal and external referencing, range naming, charting, and absolute and relative referencing.

6. SLO #6 Spreadsheet Operations

Demonstrate comprehension of multi-dimensional table structures, basic macro construction, and consolidations by name and by position.

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. Build a spreadsheet, differentiating among values, labels, formulas, and functions.

Performance exams

2. Enter data and format them using standard and custom formats including conditional formatting.

Performance exams

3. Construct and repeat formulas using relative and absolute references.

Performance exams

4. Solve problems with logical functions, lookup tables, and functions.

Performance exams

5. Utilize built-in functions in Text, Math and Trigonometry, Logical and Database categories.

Performance exams

6. Develop PivotTables and PivotCharts.

Performance exams

7. Manage multiple workbooks and worksheets using grouping, group editing, external references in formulas, and three-dimensional formulas.

Performance exams

8. Extract data from external worksheets for consolidation.

Performance exams

9. Build and use macro procedures.

Performance 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	4	I	Formulas and Functions A. Absolute Referencing B. Relative Referencing C. Mixed Referencing
Lecture	5	II	Pivot Tables and Pivot Charts A. Pivot Table B. Pivot Chart
Lecture	3	III	Multiple Workbooks A. Multiple worksheets B. 3-D referencing
Lecture	6	IV	Advanced Functions and Conditional Formatting A. Advanced functions B. Conditional formatting C. Nesting IF functions D. CountIF function E. SumIF function F. AverageIF function
Lecture	5	V	What-If Analysis A. Goal Seek B. Scenario Manager C. Single Variable Data Tables D. Multiple Variable Data Tables
Lecture	1	VI	External Data A. Data Connections B. External Data
Lecture	6	VII	Excel with other Windows Programs A. Queries and Trend lines B. Power Pivot and Data Models C. Team Foundation Services
Lecture	1	VIII	Data Among Applications A. Destination workbook B. Source workbooks
Lecture	5	IX	Macros A. Macro B. Macro virus protection
Lab	6	X	Formulas and functions A. Formulas in worksheets B. Functions in worksheets
Lab	8	XI	Pivot tables and pivot charts

			A. Pivot Tables B. Pivot Charts
Lab	6	XII	Excel workbooks A. Group worksheets B. 3D reference workbooks
Lab	8	XIII	Advanced functions and conditional formatting A. IF function B. Vlookups C. Conditional Formatting
Lab	6	XIV	What-If Analysis A. Single Outcome Data Tables B. Multiple Outcome Data Tables
Lab	4	XV	External data A. Data files from text files B. Data connection
Lab	4	XVI	Excel with other Windows programs A. Queries and Trend lines B. PowerPivot and Data Model
Lab	4	XVII	Data among applications A. Destination Workbook B. Source Workbook
Lab	8	XVIII	Macros A. Macro task B. Macro button
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:

Health Solutions has a line of equipment that they sell to hospitals around the country. They have a small sales force that travels all around the country selling their products. The manager of the sales force, Bill Markum, has asked you to help him build an Excel workbook that he could use to maintain data about the sales people. He has already recorded the sales for one salesman and would like for you to record the rest of the data. Bill has asked you to put in formulas that would calculate a commission at 5% on monthly sales. Bill has also asked that you provide formulas to calculate total sales and total commissions. He would like to have a summary worksheet that shows the sales and commissions of the sales force. The management of Health Solutions has decided to give a bonus to its sales force based on their performance for the year. Bill has asked you to calculate the bonus amount based on the table provided below.

1. Start Excel and open the Sales Data workbook.
2. Save the workbook as Health Solutions Sales 2007.
3. Notice that there are tabs for each of the salespersons. Enter the sales data.

4. Create a worksheet group consisting of all the worksheets for the sales force. Enter formulas in the Cagney worksheet that will calculate the monthly commission at 5%, the total sales, and total commission. (Note: Since you have the worksheets in a group, you should only have to enter the formulas on one worksheet.)

C. COLLEGE-LEVEL CRITICAL THINKING ASSIGNMENTS:

1. You work for the Fine Art Frame Factory. Your factory specializes in making and supplying common-size frames sold in large quantities to membership warehouse stores. Your factory makes three sizes of frames: 5x7, 8x10, and 11x17, but also gives a choice of Basic or Deluxe for each size. The Basic frames use only 3/8" fir wood strips, while the Deluxe frames use 3/8" fir wood strips on the sides and 3/4" fir wood strips on the top and bottom. Your factory's stockroom has 345,780 inches of 3/8" strips and 123,420 inches of 3/4" strips ready to be cut and assembled into frames. Cost of the wood is \$.05 per inch for 3/8" strips, and \$.15 per inch for 3/4" strips. The labor cost to assemble a frame is the same for Basic or Deluxe, but is progressively more as the frames increase in size. Larger frames also use more wood, but make more profit. Use Excel to prepare a report that shows management the optimal product mix - using the stock of fir strips on hand, meeting the needs of the current and expected orders, and maximizing the company's profit. Also, prepare a second report that shows management how it could use most of the stock of wood on hand, regardless of the profit. Management reminds you that you must factor in \$12,000 in fixed expenses for the factory.
2. You are looking into the business done by the Pepsi machines leased by your company, National Distributing, which are placed in various places in nearby businesses. The Pepsi Company does not charge you for the machines, only for the Pepsi products which you purchase. You are responsible for insurance and maintenance. The businesses do not charge you to place the machines in their business. One full-time driver is hired in order to service these machines. a. Begin with a new workbook. b. Create an Income Statement with the following data: Sales Information Number of Pepsi machines 15 Monthly Pepsi sales (per machine) 1,200.00 Total Monthly Pepsi sales \$18,000.00 Revenue Price charged per Pepsi 0.50 Total Monthly Revenue \$9,000.00 Variable Expenses Cost per Pepsi 0.15 Total Monthly Variable Expenses \$2,700.00 Fixed Expenses Insurance 160.00 Maintenance 80.00 Salary 1,600.00 Taxes 1,400.00 Total Monthly Fixed Expenses \$3,240.00 Summary Total Monthly Revenue 9,000.00 Total Monthly Expenses 5,940.00 Net Monthly Income \$3,060.00 c. Create a one-variable data table showing a what-if analysis for Monthly Pepsi sales per machine between 800 and 1,400 Pepsi's, in increments of 50. d. Create a two-variable data table showing a what-if analysis for Price Charged per Pepsi from .50 to 1.00 in increments of .10, and Monthly Pepsi sales per machine between 800 and 1,400 Pepsi, in increments of 50.

D. OTHER TYPICAL ASSESSMENT AND EVALUATION METHODS:

- Performance exams
- Other exams
- Quizzes
- Laboratory reports
- Homework Problems
- Multiple Choice
- Completion
- True/False

V. INSTRUCTIONAL METHODS

- Demonstration
- Laboratory
- Lecture
- Multimedia presentations

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

Parsons/Oja/Carey/DesJardins. Microsoft Office 365 Excel 2016 Comprehensive. Cengage Learning, 2016.

B. ALTERNATIVE TEXTBOOKS

C. REQUIRED SUPPLEMENTARY READINGS

Instructor provided hand-outs

D. OTHER REQUIRED MATERIALS

Any Flash Drive

VIII. CONDITIONS OF ENROLLMENT

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

Requisites	Category and Justification
Course Prerequisite Computer Information Systems-13 or	Computational/Communication Skills
Non-Course Prerequisite	The student is expected upon entrance to the course to have attained a competent-level of experience with computer usage and literacy, and have experience with the use of functions, formulas and charting as it is a basis for the beginning of this course.

B. Requisite Skills

Requisite Skills
Construct an accurate worksheet and chart using functions and formulas. CIS 13 - Solve common business problems using appropriate information technology applications and systems.
Utilize the operating system effectively to manage files, maintain computer security, and use productivity business software.

CIS 13 - Solve common business problems using appropriate information technology applications and systems.
Use common computer terminology, and knowledge of their appropriateness as applied to common business needs. CIS 13 - Explain the development and use of information systems in business.

C. Recommended Preparations (Course and Non-Course)

Recommended Preparation	Category and Justification
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D. Recommended Skills

Recommended Skills

E. Enrollment Limitations

Enrollment Limitations and Category	Enrollment Limitations Impact
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Course created by Robert Fredrick on 03/01/1986.

BOARD APPROVAL DATE:

LAST BOARD APPROVAL DATE: 12/17/2018

Last Reviewed and/or Revised by: R. Perkins

Date: 10/10/18

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