

CSE 1113 (Approved): Spreadsheet Programming for Business

Course Description

Spreadsheet modeling/programming concepts and techniques to solve business related problems; efficient/effective data handling, computational analysis and decision support.

Transcript Abbreviation: Spreadsheet Progrg

Grading Plan: Letter Grade

Course Deliveries: Classroom

Course Levels: Undergrad

Student Ranks: Freshman

Course Offerings: Autumn, Spring, Summer

Flex Scheduled Course: Never

Course Frequency: Every Year

Course Length: 7 Week

Credits: 1.0

Repeatable: No

Time Distribution: 2.0 hr Lec

Expected out-of-class hours per week: 4.0

Graded Component: Lecture

Credit by Examination: Yes

Exam Types: EM Tests via Office of Testing

Admission Condition: No

Off Campus: Never

Campus Locations: Columbus, Lima, Mansfield, Marion, Newark

Prerequisites and Co-requisites: (Math 1130 or higher) or (Math 130 or higher under quarters)

Exclusions: Not open to students with credit for CSE 1111 or CSE 1112 or CSE 2111 or CSE 101 or CSE 105 or CSE 200

Cross-Listings:

The course is required for this unit's degrees, majors, and/or minors: No

The course is a GEC: No

The course is an elective (for this or other units) or is a service course for other units: Yes

Subject/CIP Code: 14.0901

Subsidy Level: Baccalaureate Course

General Information

This course teaches MS Excel and practical problem solving to develop student quantitative skills. Due to the accelerated pace of the course, students will be performing the practical lab assignments on their own. Thus, this course is suggested only for those students with strong mathematical skills and some basic familiarity with spreadsheet software.

Course Goals

Be competent with programming spreadsheets by appropriately using simple and nested functions, including logical and numerical functions, basic statistical functions, time and date functions, and table lookup functions.

Be competent with designing/engineering spreadsheets to minimize errors in construction and modification, including appropriately using relative/absolute cell referencing.

Be competent with aggregating and summarizing multivariate data sets, including both numerical and categorical variables.

Be competent with importing into spreadsheets from large data sets in text format and with more than one data source.

Be competent with applying sound spreadsheet engineering principles in business contexts such as pro forma income and balance sheets, basic analysis of large data sets, and fundamental computations for financial, marketing, and operational analysis.

Be competent with using spreadsheets to effectively communicate their purpose and process, both on the computer and on paper.

Be competent with using spreadsheets to effectively communicate results using appropriate numerical and graphical tools.

Course Topics

Topic	Lec	Rec	Lab	Cli	IS	Sem	FE	Wor
Course intro & spreadsheet basics - entering/editing data, formatting, filling a series	1.0							
Writing formulas, order of precedence, precision vs. display, Relative/absolute referencing	1.0							
Using functions:simple - SUM, MIN, MAX, COUNT, COUNTA, STD.DEV.,MEDIAN, MODE,	1.0							
Functions requiring multiple arguments: ROUND, COUNTIF, SUMIF, LARGE, SMALL, RANK, SUMPRODUCT, PERCENTILE, QUARTILE	1.0							
Using multiple worksheets, working with large spreadsheets (split screen, freeze panes, What-if Analysis & Goal Seek	1.0							
Date/Time Functions	1.0							
Boolean logic: Relational Operators, AND, OR, NOT functions	1.0							
IF functions	1.0							
Reference Functions (vlookup, hlookup)	1.0							
Solving Larger Problems - Nesting formulas & Modeling Spreadsheet Solutions	1.0							
Formula Auditing, Evaluate Formula tool, Calculation Options & other error checking	1.0							
Database Concepts - Using Excel as a database: sort, filter, Subtotals, Data Tables, Pivot Tables	1.0							
Importing & Exporting Data (csv), Embedding & Linking data, transposing data, Inserting symbols. Scenario Manager, Data Analysis Tools, Macros (other features)	1.0							

Representative Assignments

Lab Assignment 1 - Writing Simple Spreadsheets
Lab Assignment 2 - Solving problems with functions
Lab Assignment 3 - Solving more complex problems, multiple worksheets, goal seek
Lab Assignment 4 - Using Boolean Logic in Problem Solving
Lab Assignment 5 - Modeling a spreadsheet solution for a large problems
Lab Assignment 6 - Using Excel as a database & using Excel tools

Grades

Aspect	Percent
Spreadsheet programming lab assignments (done out of class)	20%
Midterm	30%
Final	50%

Representative Textbooks and Other Course Materials

Title	Author
<i>Course notes, Custom text</i>	D. Gross

ABET-EAC Criterion 3 Outcomes

Course Contribution	College Outcome
a	An ability to apply knowledge of mathematics, science, and engineering.
b	An ability to design and conduct experiments, as well as to analyze and interpret data.
c	An ability to design a system, component, or process to meet desired needs.
d	An ability to function on multi-disciplinary teams.
e	An ability to identify, formulate, and solve engineering problems.
f	An understanding of professional and ethical responsibility.
g	An ability to communicate effectively.
h	The broad education necessary to understand the impact of engineering solutions in a global and societal context.
i	A recognition of the need for, and an ability to engage in life-long learning.
j	A knowledge of contemporary issues.
k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Additional Notes or Comments

Learning outcomes and topics, course delivery structure, and cr-hr designation as requested by FCOB.

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