

Montgomery County Community College
CIS 215
Decision Making Using Spreadsheets
3-2-2

COURSE DESCRIPTION:

This course provides comprehensive instruction in using spreadsheet software as a productive decision making tool. Topics covered will include spreadsheet basics, pivot tables, slicers, what-if scenario tools, data base management, internal functions, data analysis, macro programming and graphing. Additional topics will include file organization, cloud computing, computer hardware analysis, electronic communications, selecting the best software tool, data privacy and security.

PREREQUISITE(S):

High school algebra, MAT 011 Beginning Algebra, or MAT 011B Beginning Algebra with Review of Arithmetic with a minimum grade of 'C' within the past 5 years AND

REA 011 - Fundamentals of College Reading or REA 017 - Vocabulary and Reading Comprehension Development II with a minimum grade of "C"

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Develop spreadsheets that reflect decision-making including spreadsheets that analyze investment decisions, project cash flows, prepare financial statements, and calculate loan costs.	Assigned Readings Lecture Discussion Hands-On Lab Exercises Homework Assignments Training Simulation and Assessment Software Student Determined Additional Projects Based on the Interest of the Student	Student Homework or Project Assignment Assessment Software Graded Discussions Exams Final Project
2. Use tables, charts, and advanced finance, math, date, string, logic, and statistics functions in a spreadsheet.	Assigned Readings Lecture Discussion Hands-On Lab Exercises Homework Assignments Training Simulation and Assessment Software	Student Homework or Project Assignment Assessment Software Graded Discussions Exams Final Project
3. Use data base features within a spreadsheet to create or import data, query information, and	Assigned Readings Lecture Discussion Hands-On Lab Exercises	Student Homework or Project Assignment Assessment Software Graded Discussions

print/display meaningful reports	Homework Assignments Training Simulation and Assessment Software	Exams Final Project
4. Use VBA programming to produce user-friendly applications.	Assigned Readings Lecture Discussion Hands-On Lab Exercises Homework Assignments Training Simulation and Assessment Software	Student Homework or Project Assignment Assessment Software Graded Discussions Exams Final Project
5. Explain essential technological concepts and vocabulary for use in decision making and problem solving.	Assigned Readings Lecture Discussion Hands-On Lab Exercises Homework Assignments Training Simulation and Assessment Software	Student Homework or Project Assignment Assessment Software Graded Discussions Exams Final Project

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Director of Educational Effectiveness. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:

1. Course Orientation
 - a. LMS Navigation
 - b. Operating Systems vs. Application Software
 - c. File Management
 - d. Hardware considerations
 - e. Electronic communications
 - f. Default software settings
2. Review of Spreadsheet Basics
 - a. Types of cell entries
 - b. Selecting menu/toolbar options
 - c. Moving around the spreadsheet
 - d. Opening and saving
 - e. Printing - as displayed/cell formulas
 - f. Using the undo feature
 - g. Using embedded HELP
 - h. Collaboration via the Cloud
3. Revising Existing Spreadsheets
 - a. Inserting and deleting
 - b. Moving and copying
 - c. Changing column widths

- d. More on formatting
4. Charting Data
 - a. Chart Types
 - b. Selecting the best chart for data representation.
 - c. Formatting
 - d. Sparklines
 5. More on Using Functions & Tables for Data Analysis
 - a. Database, date and time, financial, logical, mathematical, special, statistical, and string functions
 6. Considerations When Working with Large or Multiple Worksheets/Workbooks
 - a. Recalculation considerations
 - b. Memory limitations
 - c. Linking
 - d. Creating templates and reports
 - e. Layout and Presentation – Tips, Tricks, and Problems
 7. Data Analysis with Tables
 - a. Tables, pivot tables, pivot charts
 - b. Slicers
 - c. Summarizing and analyzing data for decision making
 - d. Filtering and querying data
 8. Exploring Business Options using What-If Analysis
 - a. Solver
 - b. Scenario Manager
 - c. Goal Seek
 - d. Variable Tables
 9. Connecting to External Data
 - a. Big Data
 - b. Importing data
 - c. Linking and embedding with other applications
 - d. Ethical use of data
 10. VBA Programming Planning and Execution
 - a. Creating input forms
 - b. Recording and editing macros
 - c. Creating buttons for macro execution
 - d. Debugging
 11. Selecting the Best Software Tool and Protecting Data
 - a. Software evolution and versions
 - b. Matching a task to the best software solution

c. Data Privacy, ethics and security concerns

LEARNING MATERIALS:

Textbook & Software: Parsons, et al

New Perspectives Microsoft Office 365 & Excel 2019: Comprehensive, 1st Edition
ISBN #9780357120002

LMS Integrated SAM 365 & 2019, ISBN #9780357368404

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: M. Hartlein	Date: 1/1995
Revised by: M. Hartlein	Date: 12/1997
Revised by: Linda Moulton	Date: 3/2009
Revised by: Linda Moulton	Date: 9/2013
VPAA/Provost or designee Compliance Verification: Victoria Bastecki-Perez, Ed.D.	Date: 12/3/2013
Revised by: Anil Datta	Date: 8/8/2016
VPAA/Provost or designee Compliance Verification: Victoria Bastecki-Perez, Ed.D.	Date: 8/8/2016
Revised by: Pat Rahmlow	Date: 5/8/2017
VPAA/Provost or designee Compliance Verification: Victoria Bastecki-Perez, Ed.D.	Date: 5/22/2017
Revised by: Marie Hartlein	Date: 2/24/2021
VPAA or designee Compliance Verification:	Date: 5/2021



This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.