

Montgomery County Community College
 CIS 151
 Systems Analysis and Design
 3-2-2

COURSE DESCRIPTION:

This course reviews and applies traditional (life cycle) systems development methodologies implemented by project teams and including reporting responsibility to a systems development steering committee. The life cycle followed incorporates an initial investigation, a feasibility study, systems analysis, systems design, technical design, program specification, and implementation planning.

REQUISITES:

Previous Course Requirements

- * CIS 111 Computer Science I: Programming and Concepts

Concurrent Course Requirements

None

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Apply the full scope of systems analysis including problem definition, data collection (observation, interviewing, and questionnaires), documentation of existing systems, and definition of new system requirements.	Lecture Discussion Case Study Assignments Homework Assignments	Final Project
2. Identify distributed processing concerns and considerations, including networking systems involving interactions among mainframes, minicomputers, and/or microcomputers.	Lecture Discussion Case Study Assignments Homework Assignments	Examinations

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
3. Describe and define an orderly approach to systems development within a business organization.	Lecture Discussion Case Study Assignments Homework Assignments	Examinations
4. Describe the need for a structured, or life cycle, methodology for systems development and identify the phases for life cycle covered in this course.	Lecture Discussion Case Study Assignments Homework Assignments	Examinations
5. Develop data gathering instruments and questionnaires and to conduct data gathering interviews with user personnel.	Lecture Discussion Case Study Assignments Homework Assignments	Final Project
6. Create and implement systems documentation, including system flowcharts, data flow diagrams, and structure charts.	Lecture Discussion Case Study Assignments Homework Assignments	Final Project
7. Describe the role of a systems development steering committee as a management and decision-making authority.	Lecture Discussion Case Study Assignments Homework Assignments	Examinations
8. Describe the role of and interaction with users that takes place during systems development.	Lecture Discussion Case Study Assignments Homework Assignments	Examinations
9. Demonstrate proficiency using various tools related to systems analysis and design including Visio, MS Project, and UML.	Lecture Discussion Case Study Assignments Homework Assignments	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 Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria.*

SEQUENCE OF TOPICS:

1. Overview of Systems Analysis and Design
2. Systems Planning
3. Systems Analysis
 - a. Requirements Modeling
 - b. Data and Process Modeling
 - c. Object Modeling
 - d. Development Strategies
4. Systems Design
 - a. Output and User Interface Design
 - b. Data Design
 - c. System Architecture
5. Systems Implementation
6. Systems Operation, Support and Security
7. Toolkit (used throughout the course)
 - a. Communication Tools
 - b. CASE Tools
 - c. Financial Analysis Tools
 - d. Project Management Tools
 - e. Internet Resource Tools

LEARNING MATERIALS:

Tilley, Rosenblatt. *Systems Analysis and Design, 11th Ed w/ Course Mate access code.*
Course Technology. ISBN: 978-1305494602

The following software is used in this course and is available at no charge through the MSDNAA program:

- MS Project software
- Visio

The following software is used and is available on campus or may be purchased by the student:

- Office Software: Word, Excel, PowerPoint, and Access

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:	Marie Hartlein	Date:	1/1995
Revised by:	Marie Hartlein	Date:	6/1997
Revised by:	Alan Evans	Date:	1/2004
Revised by:	P. L. Vetere	Date:	2/2005
Revised by:	Pat Rahmlow	Date:	3/2008
Revised by:	Pat Rahmlow	Date:	3/2009
VPAA/Provost Compliance Verification:	Dr. John C. Flynn, Jr.	Date:	9/11/2009

Revised by:	Patricia S. Rahmlow	Date:	3/2013
VPAA/Provost or designee Compliance Verification:			

Victoria Bastecki-Perez, Ed.D.

Date: 7/11/2013

Revised by: Patricia S. Rahmlow
VPAA/Provost or designee Compliance Verification:

Date: 5/2017

Date: 8/21/2017



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.