Montgomery County Community College
CIS 210
Applied Software Development
3-2-2

COURSE DESCRIPTION:
This course will teach a student the knowledge and skills required to develop software applications that meet the real needs of users and business organizations. They will develop the ability to identify, evaluate and review processes that would lead to optimum desirable methodologies that are functional and appropriate. Students will learn to successfully bring products to life using effective tools for the development, modification, debugging, testing and verification of software design.

PREREQUISITE(S):
CIS 111 Programming Concepts

CO-REQUISITE(S):
None

Upon successful completion of this course, the student will be able to:

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
1. Evaluate user and business needs.	Lecture/Discussion Homework Assignments Assigned readings Research	Discussion/Questions Research presentations Quiz
2. Create a software development matrix.	Lecture/Discussion AV/Multimedia Materials Class projects Homework Assignments Assigned readings Research	Discussion/Questions Research presentations Quiz
3. Utilize business process management for software design.	Lecture/Discussion AV/Multimedia Materials Homework Assignments Assigned readings Research	Discussion/Questions Research presentations Quiz
4. Create story maps for software development.	Lecture/Discussion AV/Multimedia Materials Hands on Labs Homework Assignments Assigned readings Research	Discussion/Questions Research presentations Quiz

LEARNING OUTCOMES	LEARNING ACTIVITIES	EVALUATION METHODS
5. Apply software development systems.	AV/Multimedia Materials Lecture/Discussion Hands on Labs Homework Assignments Assigned readings Research	Final assessment Final project and presentation

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. Phases of the Software Development Life Cycle.
2. Key features of current trends in system development.
3. The Agile process of software development.
4. Story mapping for developing software.
5. Scrum methodologies.
6. System requirements using appropriate techniques.
7. Use case diagrams and scenario descriptions.
8. Developing Business Process Management models
9. Functional system requirements using case modelling and workflow analysis.
10. Using PERT and GANTT charts.
11. Preparing cost benefit analysis.
12. Technical architecture systems.
13. Integrity controls for inputs, outputs, data and processing.
14. Formats for system documentation.
15. Prepare and present a system proposal in a team environment

LEARNING MATERIALS:

Stellman, Andrew ; Greene, Jennifer. (2014) Learning Agile: Understanding Scrum, XP, Lean, and Kanban (2nd ed) O'Reilly Media ISBN 9781449331924

Patton, Jeff. (2014) User Story Mapping, (1st ed) O'Reilly Media, ISBN 1491904909

Busuttil, Jock. (2015) The Practitioner's Guide to Product Management (1st ed) Grand Central Publishing ISBN 9781455548569

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: Anil Datta Date: 11/8/2015
VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D. Date: 11/8/2015

Revised by: Marie Hartlein Date: 10/1/2019
VPAA/Provost or designee Compliance Verification: Date: 10/1/2019

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.