

Course Outline

1. Document Information

Degree Program	Computer Science
Course Number	CS 305
Course Title	Software Development Practices
Semester Hours	3
Course Coordinator	Abdullah Aydeger
Revision Term	Fall 2020
Latest Revision	Fall 2020

2. Catalog Description

Agile software development approach, tools, methodologies, and technical writing are addressed. Understanding of object-oriented design principles, implementation, and testing to meet customer requirements are enhanced through agile practices using modern development tools. A team project is an integral part of this course.

3. Textbooks

- Richards, M. & Ford, N. (2020). Fundamentals of Software Architecture: An Engineering Approach, O'Reilly Media. ISBN: 9781492043454.

4. References

5. Course Learning Outcomes

- To gain skills and appreciation of the functionality provided by a modern IDE.
- To develop skills in writing clean clear code designed to meet a client's requirements.
- To be able to coordinate with a team face-to-face as well as through a project repository.
- To gain experience and appreciation for software development process, practices & tools.

6. Assessment of the Contribution to Student Outcomes

Outcome	1	2	3	4	5	6
Assessed	X	X	X		X	X

7. Prerequisites by Topic

CS 220 with a grade of C or better

8. Major Topics Covered in the Course

1. Introduction and Perspectives on Software Development {3 classes}
2. Communication, Collaboration and Teamwork {3 classes}
3. The Software Development Environment- working with the IDE {3 classes}
4. Refactoring and communicating through code {8 classes}
5. Project Repositories to Support Teamwork {4 classes}
6. Testing and Automation {6 classes}
7. Object-Oriented Principles, Patterns and Design Notations {7 classes}
8. Estimating, Planning and Tracking progress {6 classes}