UⅢiU

UNITED STATES INTERNATIONAL UNIVERSITY

Fall Semester   2016

SWE6140 GROUP WORK IN LARGE SCALE SOFTWARE DEVELOPMENT

LECTURER: Dr. Lawrence Nderu

DAY/TIME: Thursday 5:40 - 9:00PM

VENUE: ICTC LAB 3

CREDIT: 3 UNITS

OFFICE HOURS DAY/TIME: Thursday/Friday 3:00 pm TO 5:00 pm.

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Purpose of the Course

The purpose of this course is to get students to explore and gain practice of real software development for a large project by group work. It aims at simulating the demands of a real world development situation. The course will be instructor led, with the instructor acting in the roles of Managing Director, Client and User to provide guidance. Students will work in groups, and will be supplied with a minimal specification by the course instructor who will act as a customer/client. The students will be provided with guidance on a range of suitable techniques appropriate for gaining an understanding of the problem and undertaking the systems development task.

Prerequisite: IST 4030, IST4060, IST4070

Course Learning Outcomes

At the end of the course the students will be able to do the following:

- Demonstrate how to initiate a software project and define its organizational structures
- Perform requirements engineering in a leadership role or as part of a team, define project scope and human resource planning
- Use Agile software development methods and CASE tools
- Formulate, analyze, visualize, synthesize and communicate designs to solve the application software problem.
- Manage project time and cost planning to guarantee project quality

- Perform Project Monitoring and Control, software testing and deploy system components
- Present a working system that meets specifications

Course Content

Student project to include the following:

- Software engineering as a coherent process: Selection evaluation and use of CASE tools, Critical reflection on current software development/engineering practices, Organization and management of a team.
- System/software techniques; Modeling, Project management
- Project monitoring and control: Computer supported collaborative work, Application of system/software construction techniques to a group project Issues related to software development
- Quality
- Documentation: Review process, walkthroughs, buddy checks, and audit;
- Risk: Analysis and management, ethical, legal, professional and issues, usability issues, task allocation and resourcing.

Mode of Delivery

Lectures and delivery through the Blackboard e-learning platform. Presentations by members of the class, Case discussions, Tutorials, group work, Practical sessions using CASE tools, Library, appropriate software, manual/notes. Throughout the course, the skills will be developed through a combination of theoretical discussions, practical laboratory-based work; classroom based tutorial exercises and directed self-study.

Instructional Materials and/or Equipment

Course text, Handouts, White board, Presentation slides, Blackboard e-learning platform, Journals, CASE tool/ SDK;

Course Assessment

Class assignments, take-home assignments, tests, small projects to demonstrate use of software tools.

Guided Case One - 40%

Requirements Engineering	10%
Requirements Modeling	15%
System Implementation	40%
Project Management	10%
System Presentation	10%
Project Documentation	15%
Total	100%

Case Two – 60%

Requirements Engineering	10%
Requirements Modeling	15%
System Implementation	40%
Project Management	10%
System Presentation	10%
Project Documentation	15%
Total	100%