Faculty of Engineering, Built Environment and Information Technology

Fakulteit Ingenieurswese, Bou-omgewing en Inligtingtegnologie

School of Information Technology

Life Cycle and Maturity Models for IT 2016
MIT 850

Lecturer: Dr. Patricia E.N. Lutu
Last Revision: Version 1, 10 June 2016

1. Module description

1.1 Objectives

The module aims to introduce the fundamental techniques of **software engineering,** by looking at maturity models, software life cycles and methods, standards and procedures to assess and measure quality of processes.

The following themes will be covered:

Unit 1: Traditional processes

Unit 2: Agile processes

Unit 3: Project management

Unit 4: Quality assurance & maturity models

1.2   Outcomes

At the end of this module the student should have a good understanding of Software processes, methodologies, process models, project management, quality assurance and maturity models. The student should be able to appreciate the challenges of software engineering projects, and work effectively as a team member of a software project.

2. Lecturer

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3. Schedule for lectures

3.1 Summary schedule

Lecture	Day: Friday Date:	Time	Venue: Tswelopele	Topic(s)
Lecture 1	22 July	8:00 - 10:30	IT 4-64	Traditional processes
Lecture 2	26 August	8:00 - 10:30	IT 4-64	Agile processes
Lecture 3	23 September	8:00 - 10:30	IT 4-64	Project management
Lecture 4	21 October	8:00 - 10:30	IT 4-64	Quality assurance & maturity models

3.2 Detailed schedule

Unit / Topic	Activities	Dates
Unit 1 Traditional processes	Reading material available on ClickUp	4 July
	Reading	4 July to 21 July
	Lecture & class discussions	22 July
	Assignment 1 available	23 July
	Work on and submit assignment	23 July to 31 July
Unit 2 Agile processes	Reading material available on ClickUp	1 August
	Reading	1 August to 25 August
	Lecture & class discussions	26 August
	Assignment 2 available	27 August
	Work on and submit assignment	27 August - 3 September
Unit 3 Project management	Reading material available on ClickUp	4 September
	Reading	4 September – 22 September
	Lecture & class discussions	23 September
	Assignment 3 available	24 September
	Work on and submit assignment	24 September – 1 October
Unit 4 Quality assurance & maturity models	Reading material available on ClickUp	2 October
	Reading	2 October – 20 October
	Lecture & class discussions	21 October
	Assignment 4 available	22 October
	Work on assignment for exam	22 October – 17 November

4. Web resources and ClickUP

General information concerning the MIT degree is available from the MIT website at: http://www.up.ac.za/mit. Please refer to the MIT Stream A Brochure for 2016 for all general information. Announcements, assignments and course notes for MIT860 will be provided via ClickUP. You should visit ClickUp regularly as important announcements and additional information will be posted at this website.

5. Course Material

Study material will be made available on ClickUp. Please note that students are expected to read the prescribed material, prior to each lecture. The aim of lectures is to consolidate the content of the study material and enable class discussions.

6. Learning Activities

The contact time for the course consists of four lectures of around 2.5 hours each. Lectures will be used to consolidate study material, for class discussions, and possibly for talks by industry experts.

7. Assessment

The assessment for this module will consist of theory assignments and a written examination. The semester mark will be computed from the assignment marks. The final mark will be computed as 60% semester mark plus 40% exam mark. A sub-minimum of 40% for the semester mark is required for exam admission.

8.1 Assignments

The specification for each assignment will be made available on ClickUP at least 4 weeks before the due date. Each student must make an individual submission for each assignment (i.e. no group work). The first 3 assignments will count 60% towards the final mark. Please check the announcements on ClickUp for the latest information on the assignments. Take note of the due dates for assignments. If you hand in any assignment within 1 week after the due date, there will be a penalty of 10%. If you hand in any assignment within 2 weeks after the due date, there will be a penalty of 20%. Assignments handed in more than 2 weeks after the due date will not be marked. You are required to submit the assignments electronically on ClickUp. Remember to include the assignment cover page provided on the MIT 860 website and to adhere to the plagiarism policy of the University.

8.2 Exam

Date	Time	venue
Friday 18 November	8:00 – 11:00	CBT lab, Informatorium

8. Plagiarism policy

The University considers plagiarism as a serious offence. Disciplinary action will be taken against students who commit plagiarism. For a formal definition of plagiarism, the student is referred to http://www.ais.up.ac.za/plagiarism/index.htm

Information may also be found in the MIT Stream A Brochure for 2016. Please note that plagiarism applies to all aspects of this module.