UNIVERSITY OF MAURITIUS
MODULE SPECIFICATION SHEET

1. GENERAL INFORMATION

Title	Code	Duration (hrs)	Nº of credits
Software Engineering	ICDT 6001	Lectures: 30	2
		Practicals:	
		Seminars:	
		Tutorials:	
		Others (Specify):	
		Total: 30 hrs	

2. PRE-REQUISITE(S)/PRE-REQUIREMENT(S)

None

3. AIMS

The aim of this module is to introduce important software engineering concepts and practices relevant to the software industry. This module examines the software development process, from requirements elicitation and analysis, through specification and design, to implementation, integration, testing, and maintenance. A variety of concepts, principles, techniques, and tools are presented, covering topics such as software processes, agile methodologies, project management, software requirements and software testing. This module also introduces the notation from the Unified Modeling Language (UML).

4. OUTLINE SYLLABUS

ICDTT 6001 Software Engineering (L - 2)
Software Process Models, Agile Software Development, Requirements Engineering, Requirements Analysis Techniques, Software Testing, Software Project Management, Unified Modelling Language (UML).

5. LEARNING OUTCOMES

Having studied this module, the students should be able to:

- Demonstrate an in-depth knowledge and understanding of software development principles and techniques;
- Identify & discuss the technical & engineering activities of producing a software product;

- Describe issues, principles, methods & technology associated with software engineering theory & practices;
- Choose the right software development process to develop a software product.

6. LECTURER(S)

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Contact Hours	3+0
Consultation Time	To mail the lecturer to request for appointment

7. MODULE MAP

Wk(s)	Hr(s) L+P	Theme(s)	Lecture Title(s)	L, P, S, V, T, Test
1	3+0	Software Process Models	• Introduction to Software Engineering • Software Engineering Concepts and Practices • Generic Process Model • Software Process Models – Waterfall, Prototyping, Incremental.	L, T
2	3+0	Software Processes	• Agile Software Development Methodologies	L, T
3	3+0	Software Requirements	• Concepts of Requirements • Functional & Non-functional requirements • Requirements Engineering • Requirements Analysis • Requirements Validation • SRS Document Preparation	L, T

4	3+0	Software Project Management	• Management Concepts • Software Process & Project Metrics • Project Planning and Scheduling • Software Cost Estimation	L, T
5	3+0	Software Testing	• Software verification and validation • Software Testing Techniques • Software Testing Strategies • Software Testing Tools **TEST 1 (Week 1- Week 4)**	L, Test
6	3+0	UML	• Introduction to UML • Use Case • Class Diagram Case Studies to practice	L, T
7	3+0	UML	• Interaction Diagrams • State Transition Diagram • Case Studies to practice **TEST 2 (UML Only)**	L, Test
8	3+0	Revision and Wrap Up	• Revision • Feedback on test	L, T

Abbreviations: L: Lectures, P: Practicals, T: Tutorials, V: Visits, S: Seminars

8. RECOMMENDED BOOKS/JOURNALS/WEBSITES

"Software Engineering- A Practitioner's Approach ", Latest Edition, by Roger S. Pressman.

"Software Engineering", Latest Edition, by Ian Sommerville.

9. ESSAY(S)/ASSIGNMENT(S)/PRACTICAL(S)

10. ASSESSMENT

(i) **Written Examination**

Paper Duration:	2 hrs
Weighting (%):	60%

(ii) **Continuous Assessment**

	Weighting (%)
Tests: Test 1: 25 Test 2: 15	40%
Total Marks:	40%

An overall total of 60% for combined assessment and written examination components would be required to pass the module, without minimum thresholds within the individual continuous assessment and written examination.

11. OTHER INFORMATION

Useful Links:

Ian Sommerville's web-site for the textbook:
www.software-engin.com

The Software Engineering Institute, at Carnegie Mellon University,
www.sei.cmu.edu

Several other addresses of www sites that contain useful resources (technical documents, tools, etc.) will be indicated by the lecturers during the semester.

On plagiarism and cheating:

Plagiarism and cheating will not be tolerated. It will be dealt with according to the policies of the University of Mauritius regarding academic dishonesty. Please read these policies at
http://www.uom.ac.mu/regulations.htm