2024 / 25

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South East Technological University

Module Descriptor

Introduction to Software Engineering (Computing and Mathematics)

Introduction to Software Engineering (A14942)

Short Title: Intro to Software Eng
Department: Computing and Mathematics
Credits: 5 **Level:** Introductory

Description of Module / Aims

The objective of this module is to provide students with the understanding of techniques and methods used to develop reliable quality software.

Programmes

		stage/semester/status
COMP-0601	BSc (Hons) in Software Systems Development (WD_KDEVP_B)	1 / 2 / M
COMP-0601	BSc in Applied Computing (WD_KCOMP_D)	1 / 2 / M
COMP-0601	BSc in Software Systems Development (WD_KCOMC_D)	1 / 2 / M

Indicative Content

- Software Engineering Discipline
- Project Management
- Software Processes and Methodologies
- Requirements Engineering
- OO Modeling and Design
- Software Testing and Quality
- Software Evolution

Learning Outcomes

On successful completion of this module, a student will be able to:

1. Recognise the importance of software engineering in software development.
2. Illustrate the importance of project planning.
3. Distinguish between different software processes and methodologies.
4. Describe software requirements and illustrate the processes involved in discovering these requirements.
5. Describe various models and activities in the object oriented design process.
6. Recognise the importance of software testing and software quality in the development and maintenance of software.
7. Describe the different stages of systems evolution.

Learning and Teaching Methods

- This module will be presented using a combination of lectures and practical classes.
- The lectures will be used to introduce new topics and their related concepts.
- In practical classes students will apply these concepts and engage with project management and various tools in order to gain experience in the software engineering process.

Learning Modes

Learning Type	F/T Hours	P/T Hours
Lecture	24	12
Practical	24	12
Independent Learning	87	121

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Assignment	50%	2,3,4,5,6,7
Assignment	50%	1,3,4

Assessment Criteria

<40%: Unable to interpret and describe key concepts of software engineeing.

40%–49%: Be able to interpret and describe key concepts of software engineering.

50%–59%: Ability to discuss key concepts of software engineering and the ability to discover and integrate related knowledge in other knowledge domains.

60%–69%: Be able to solve problems within the software engineering by experimenting with the appropriate skills and tools.

70%–100%: All the above to an excellent level. Be able to analyse and design solutions to a high standard for a range of both complex and unforeseen problems through the use and modification of appropriate skills and tools.

Supplementary Material(s)

- Presman, R. and B.R. Maxim. *Software Engineering: A Practitioner's Approach*. 8th ed. New York: McGraw-Hill Higher Education, 2014.
- Sommerville, I. *Software Engineering*. 10th ed. Boston: Pearson, 2015.

Requested Resources

- Room Type: Computer Lab