

2024 / 25

School of Science and Computing

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**SE
TU**

Ollscoil
Teicneolaíochta
an Oirdheiscirt

South East
Technological
University

Module Descriptor

Systems Analysis, Design and Testing (Computing and Mathematics)

Systems Analysis, Design and Testing (A13443)

Short Title: SAD & Testing
Department: Computing and Mathematics
Credits: 5
Level: Introductory

Description of Module / Aims

This module introduces students to the main topics of Systems Analysis, Design and Testing. Systems must be planned in order that all interested parties can review and understand the necessary system objectives. This module will introduce the student to the problems associated with the development of software systems; they should appreciate the problems associated with developing software systems, and techniques that can overcome some of these problems. During this module the student will be exposed to various lifecycles. Appropriate CASE tools will be applied throughout the module.

Programmes

stage/semester/status		
SYST-0023	BSc (Hons) in Software Engineering (WD_KDEVP_BI)	1 / 1 / M
SYST-0023	BSc (Hons) in Software Systems Development (WD_KDEVP_B)	1 / 1 / M
SYST-0023	BSc in Applied Computing (WD_KCOMP_D)	1 / 1 / M
SYST-0023	BSc in Information Technology (WD_KINFT_D)	1 / 1 / M
SYST-0023	BSc in Software Systems Development (WD_KCOMC_D)	1 / 1 / M

Indicative Content

- The Development Process
- Roles involved in the development process
- Planning & Requirements
- Analysis & Design
- Testing
- Implementation
- Post Implementation

Learning Outcomes

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

1. Identify systems development stages and the roles of the personnel involved.
2. Describe the requirements for the proposed system.
3. Identify the feasibility of the proposed system.
4. Model the proposed system requirements.
5. Identify appropriate testing techniques for a system.
6. Define the steps involved in migrating to the proposed system.
7. Describe all areas of maintenance/user support functions.

Learning and Teaching Methods

- This module will be presented by a combination of lectures and a computer-based practical.
- The lectures will be used to introduce new topics and their related concepts. The student will be encouraged to manage their own.
- Learning by asking questions and entering class discussions.
- In practical classes the student will be presented with problems similar to those presented in lectures. The aim of the practicals is to provide the student with the skills and confidence to apply what has been demonstrated and learned.

Learning Modes

Learning Type	F/T Hours	P/T Hours
Lecture	24	12
Practical	24	12
Independent Learning	87	111

Assessment Methods

	Weighting	Outcomes Assessed
Final Written Examination	50%	1,3,5,7
Continuous Assessment	50%	
In-Class Assessment	20%	5,6,7
Project	30%	2,3,4,6

Assessment Criteria

<40%: Unable to interpret and describe key concepts of the specific knowledge domain(s).

40%–49%: Be able to interpret and describe key concepts of the specific knowledge domain(s).

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

60%–69%: Be able to solve problems within the specific knowledge domain(s) 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)

- Hoffer, J., J. George and J. Valacich. *Modern Systems Analysis and Design*. 7th ed. UK: Pearson, 2013.
- Kendall, K. and J. Kendall. *Modern Systems Analysis and Design*. 9th ed. New Jersey: Pearson, 2013.

Requested Resources

- Room Type: Computer Lab