2024 / 25

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South East Technological University

Module Descriptor

Business Systems and Software Engineering

(Computing and Mathematics)

Business Systems and Software Engineering (A34041)

Short Title: Bus Sys and S/W Eng
Department: Computing and Mathematics
Credits: 5 **Level:** Advanced

Description of Module / Aims

The objective of this module is to provide students with the understanding of techniques and methods used to model business systems to enable the development of reliable quality software. Students will analyse and design a system using various business and software analysis tools in order to gain an insight into how they can be utilised in the business modelling and software engineering process.

Programmes

		stage/semester/status
COMP-0983	Higher Diploma in Science in Business Systems Analysis (WD_KBUSY_G)	1 / 2 / M

Indicative Content

- Evolution of the Business to Software Analysis Process
- Software Processes and Methodologies
- Requirements Engineering
- Business Process Modelling
- Object Oriented Modelling

Learning Outcomes

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

1. Analyse the function of the BSA in software engineering.
2. Identify the business and software requirements.
3. Model business systems using BMP tools.
4. Evolve the business models into software models using UML
5. Consider the importance of software testing and software quality in the development of software systems.

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 DevOps tools in order to gain experience in the software engineering process.
- For online delivery, the lectures and practical's will be a combination of comprehensive rich media instructional content (notes), interactive synchronous video (live webinars/classes) and asynchronous interactive video playback (on-demand).

Learning Modes

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

Assessment Methods

	Weighting	Outcomes Assessed
Continuous Assessment	100%	
Assignment	25%	2,3
Assignment	60%	2,3,4
In-Class Assessment	15%	1,2,5

Assessment Criteria

<40%: Unable to interpret and describe key concepts of Business Process Analysis and Software Engineering.

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

50%–59%: Ability to understand and apply the basics for BPM and Software Engineering Modelling

60%–69%: Be able to select appropriate methodologies and apply the techniques of BPM and SE modelling to complete, real world systems

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 systems and unforeseen problems through the use and modification of appropriate skills and tools.

Supplementary Material(s)

- Dennis, A, B Wixom and D Tegarden. *Systems Analysis and Design.* 6th . New York: Wiley, 2021.
- Dumas, M., M. La Rosa, J. Mendling and H. Reijers. *Fundamentals of Business Process Management.* 2nd ed. Boston: Springer, 2018.
- Pressman, R. and B. Maxim. *Software Engineering: A Practitioner's Approach.* 9th ed. New York: McGraw-Hill, 2019.
- Sommerville, I. *Software Engineering.* 10th ed. Boston: Pearson, 2015.

Requested Resources

- Computer Lab: BYOD Lab