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South East Technological University

Module Descriptor

Digital Transformation of Information Systems

(Computing and Mathematics)

Digital Transformation of Information Systems (A13223)

Short Title: Digital Transformation of IS
Department: Computing and Mathematics
Credits: 5 **Level:** Intermediate

Description of Module / Aims

This module will address the transformation of legacy approaches of enterprise applications to new ways of using digital, social and emerging technologies. The emergence of all these new technologies adds new capabilities to businesses and options for the next generation of enterprise applications. Cloud services for enterprise applications are examined in detail where students will integrate their technical knowledge and theory with practice of a cloud service to support a business system. The module will also include current relevant issues on privacy ethics and security.

Programmes

		stage/semester/status
COMP-0968	BSc (Hons) in Software Engineering (WD_KDEVP_BI)	3 / 6 / M
COMP-0968	BSc (Hons) in Software Systems Development (WD_KDEVP_B)	3 / 6 / M
COMP-0968	BSc in Information Technology (WD_KINFT_D)	3 / 6 / M
COMP-0968	BSc in Software Systems Development (WD_KCOMC_D)	3 / 6 / M

Indicative Content

- Changes in economics and technology: Digital transformation strategies, disruptive technologies, new business models
- Digital Enterprise Wave: Internet of things (IOT), cloud technologies, artificial intelligence (AI), analytics and mobile for real-time data
- Evolving enterprise applications to support a dynamic digital business - advanced inventory control, sensor and location data from mobile devices for marketing intelligence, cloud based manufacturing and planning
- Cloud-based services for enterprise applications: SaaS, PaaS, IaaS
- Emerging social tools for enterprise application strategies
- Management issues including technology investment, digital innovations, relevant ethics, privacy and security issues

Learning Outcomes

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

1. Examine the role played by digital transformation in different industries.
2. Compare digital technologies in continuous changing business environments.
3. Examine and demonstrate enterprise applications in cloud computing.
4. Interpret ways in which enterprises are enhancing their communication and collaboration with emerging social tools.
5. Examine the appropriate procedures for relevant ethics, privacy and security issues with digital wave technologies.

Learning and Teaching Methods

- This module will be presented by a combination of lectures and computer based practicals.
- The lectures will be used to introduce new topics and their related concepts. Lectures will be supplemented by participative case studies and independent reading on the issues covered in the lecture material.
- The practical element is intended to provide the student with the skills needed to use and understand a cloud Enterprise Application system.

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
Continuous Assessment	50%	
Practical	50%	3
Final Written Examination	50%	1,2,3,4,5

Assessment Criteria

<40%: Unable to interpret and describe key concepts of Digital Transformation of Information Systems.

40%–49%: Be able to interpret and describe key concepts of Digital Transformation of Information Systems.

50%–59%: Ability to discuss key concepts of the specific knowledge domain and ability to discover and integrate related knowledge in other information systems, networks and data.

60%–69%: Be able to solve problems within information systems using cloud services 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)

- Bounfour, A. *Digital Futures, Digital Transformation.* Switzerland: Springer International Publishing, 2016.
- Laudon, K. and J. Laudon. *Management Information Systems: Managing the Digital Firm.* 14th ed.. New York: Pearson, 2016.

Requested Resources

- Room Type: Computer Lab