Module Details

Module Code:	H7EDT
Long Title:	Emerging Digital Technologies
Title:	Emerging Digital Technologies
Module Level::	LEVEL 7
EQF Level:	6
Credits::	10
Module Coordinator:	CRISTINA HAVA MUNTEAN
Module Author::	David McCarthy
Departments:	School of Computing
Specifications of the qualifications and experience required of staff	

Learning Outcomes

On successful completion of this module the learner will be able to:

#	Learning Outcome Description
LO1	Understand the significant role of emerging digital technologies and their relevance to contemporary business practice.
LO2	Discriminate between relevant emerging digital technologies and distinguish their key definitions and components.
LO3	Assess and analyse the impact of emerging digital technologies across a variety of industries.
LO4	Evaluate industry-agnostic approaches and methodologies for integrating emerging digital technologies to innovate, automate and/or simplify business practice.

Dependencies

Module Recommendations
This is prior learning (or a practical skill) that is required before enrolment on this module. While the prior learning is expressed as named NCI module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).

No recommendations listed

Co-requisite Modules
This is a list of modules that must be studied if this module is selected as an elective or has an integrative assessment

No Co-requisite modules listed

Entry requirements

Indicative Content

Introduction to Emerging Digital Technologies
• Introduction to all Emerging Digital Technologies (EDTs) • EDT showcase (industry application examples)

Cloud Computing and Data Analytics for Business
• Machine learning cloud-based solutions • Business application of data analytics

Artificial Intelligence (AI)
• Key AI definitions and concepts • Artificial Narrow Intelligence • Artificial General Intelligence

AI for Business
• Business benefits of AI • Process automation • Cognitive insight and automation • Application case studies

Blockchain
• Defining blockchain and key concepts • Distributed ledgers • Smart contracts • Case studies

FinTech and Payments
• Introduction to FinTech and FinTech categories • Cryptocurrencies • Applications and case studies

Robotics and EDT integration
• Introduction to Kinematics, Autonomous systems and Computer vision • Industry and commercial applications (e.g. drones in logistics)

Cybersecurity, Privacy and Trust
• Security Fundamentals • Principles of Penetration Testing • IT Law and Ethics • Cryptography

Internet of Things (IoT)
• IoT concepts and standards • IoT hardware • Hardware/software integration

Virtual, Augmented and Mixed Reality
• Key distinctions between VR, AR and MR • Design principles • Use cases

Impact Assessment of Digital Emerging Technologies
• Emerging technologies and the impact of technology on society

Integration of Emerging Digital Technologies in Business
• Innovation and emerging digital technologies • Brief overview of Digital Business Transformation

Module Content & Assessment

Assessment Breakdown	**%**
Coursework	100.00%

Assessments

Blended

Coursework

Assessment Type	Assignment 1	**% of Total Mark**	60
Timing	n/a	**ASSESSMENT_LearningOutcomes**	1,2
Non-Marked	No		

Assessment Description
The student will propose a case study where one or more Emerging Digital Technologies were applied that is aligned with all four learning outcomes

The student will submit a case study report addressing learning outcomes 1 and 2 to highlight the significant role of one or more EDTs in the chose company and their relevance to the company; the report will also identify and define the relevant EDTs and distinguish their key definitions and components.

Assessment Type	Assignment 2	**% of Total Mark**	40
Timing	n/a	**ASSESSMENT_LearningOutcomes**	3,4
Non-Marked	No		

Assessment Description
The student will submit a final report that assesses and analyses the impact of EDTs in the chosen company. The report should also include an evaluation of how the EDT or EDTs were integrated into the business based on a relevant business framework to highlight how the company has innovated, automated and/or simplified business practice with the emerging digital technology.

No End of Module Assessment Approved

No Workplace Assessment Approved

Part Time

Coursework

Assessment Type	Assignment 1	**% of Total Mark**	60
Timing	n/a	**ASSESSMENT_LearningOutcomes**	1,2
Non-Marked	No		

Assessment Description
The student will propose a case study where one or more Emerging Digital Technologies were applied that is aligned with all four learning outcomes

The student will submit a case study report addressing learning outcomes 1 and 2 to highlight the significant role of one or more EDTs in the chose company and their relevance to the company; the report will also identify and define the relevant EDTs and distinguish their key definitions and components.

Assessment Type	Assignment 2	**% of Total Mark**	40
Timing	n/a	**ASSESSMENT_LearningOutcomes**	3,4
Non-Marked	No		

Assessment Description
The student will submit a final report that assesses and analyses the impact of EDTs in the chosen company. The report should also include an evaluation of how the EDT or EDTs were integrated into the business based on a relevant business framework to highlight how the company has innovated, automated and/or simplified business practice with the emerging digital technology.

No End of Module Assessment Approved

No Workplace Assessment Approved

Reassessment Requirement

Coursework Only
This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.

Reassessment Description
If a pass grade is not achieved, students must undertake a continuous assessment that assesses all learning outcomes. This could be a different project or the same that was previously submitted provided that significant modifications have been made in consultation with the lecturer.

NCIRL reserves the right to alter the nature and timings of assessment

Module Workload

Module Target Workload Hours 0 Hours

Workload: Blended

Workload Type	*Contact Type*	*Workload Description*	*Frequency*	*Average Weekly Learner Workload*	*Hours*
Lecture	Contact	No Description	Per Semester	1.00	12
Directed Learning	Contact	Directed eLearning	Per Semester	1.00	12
Independent Learning	Non Contact	No Description	Per Semester	17.83	214
Tutorial	Contact	No Description	Per Semester	1.00	12
			Total Weekly Contact Hours		3.00

Workload: Part Time

Workload Type	*Contact Type*	*Workload Description*	*Frequency*	*Average Weekly Learner Workload*	*Hours*
Lecture	Contact	No Description	Per Semester	2.00	24
Independent Learning	Non Contact	No Description	Per Semester	17.83	214
Tutorial	Contact	No Description	Per Semester	1.00	12
			Total Weekly Contact Hours		3.00

Module Resources

Recommended Book Resources

Peter H. Diamandis,Steven Kotler. (2020), The Future Is Faster Than You Think, Simon & Schuster, p.384, [ISBN: 1982109661].

Victor Del Rosal. (2015), Disruption, CreateSpace, p.184, [ISBN: 1514173948].

Supplementary Book Resources

Clayton M. Christensen. The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail, [ISBN: 1633691780].

This module does not have any article/paper resources

This module does not have any other resources

Discussion Note: