Module Details

Module Code:	SWRE C7003
Full Title:	Introduction to Software Engineering APPROVED
Valid From::	Semester 1 - 2019/20 (June 2019)
Language of Instruction:	English
Duration:	1 Semester
Credits::	5
Module Owner::	Tony McCarron
Departments:	Unknown
Module Description:	Students completing this module will understand the software development process, will be capable of specifying and analyzing system requirements and will be able to quantify the quality of software product.

Module Learning Outcome	
On successful completion of this module the learner will be able to:	
#	**Module Learning Outcome Description**
MLO1	Discuss various software process models.
MLO2	Apply acquired skills and techniques to develop functional requirements specifications.
MLO3	Define the characteristics of quality software in measurable terms.

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named DkIT 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

Module Indicative Content	
Software Development Process Software development lifecycle, various process models.	
Gathering Requirements Stakeholders, techniques, managing requirements, characteristics of good requirements, emergent requirements.	
Functional Requirements Specification Behavioural, structural and dynamic models.	
Software Quality Quality characteristics, sub-characteristics, relationships, Quantitative Specification.	

Module Assessment

Assessment Breakdown	%
Course Work	40.00%
Final Examination	60.00%

Module Special Regulation

Assessments

Full Time On Campus

Course Work			
Assessment Type	Continuous Assessment	**% of Total Mark**	20
Marks Out Of	0	**Pass Mark**	0
Timing	Week 11	**Learning Outcome**	2
Duration in minutes	0		
Assessment Description Students will generate a requirements and analysis model from a problem domain of their choice.			
Assessment Type	Continuous Assessment	**% of Total Mark**	20
Marks Out Of	0	**Pass Mark**	0
Timing	Every Second Week	**Learning Outcome**	1,2,3
Duration in minutes	0		
Assessment Description Students will be required to participate in lab works and tutorial discussions in topics related to software process models, system requirements and generating matrices for software quality measurements.			

No Project

No Practical

Final Examination			
Assessment Type	Formal Exam	**% of Total Mark**	60
Marks Out Of	0	**Pass Mark**	0
Timing	End-of-Semester	**Learning Outcome**	1,2,3
Duration in minutes	0		
Assessment Description n/a			

Part Time On Campus

Course Work			
Assessment Type	Continuous Assessment	**% of Total Mark**	20
Marks Out Of	0	**Pass Mark**	0
Timing	Week 11	**Learning Outcome**	2
Duration in minutes	0		
Assessment Description Students will generate a requirements and analysis model from a problem domain of their choice			
Assessment Type	Continuous Assessment	**% of Total Mark**	20
Marks Out Of	0	**Pass Mark**	0
Timing	Every Second Week	**Learning Outcome**	1,2,3
Duration in minutes	0		
Assessment Description Students will be required to participate in lab works and tutorial discussions in topics related to software process models, system requirements and generating matrices for software quality measurements.			

No Project

No Practical

Final Examination			
Assessment Type	Formal Exam	**% of Total Mark**	60
Marks Out Of	0	**Pass Mark**	0
Timing	End-of-Semester	**Learning Outcome**	1,2,3
Duration in minutes	0		
Assessment Description n/a			

Reassessment Requirement
A repeat examination *Reassessment of this module will consist of a repeat examination. It is possible that there will also be a requirement to be reassessed in a coursework element.*

Module Workload

Workload: Full Time On Campus

Workload Type	Contact Type	Workload Description	Frequency	Average Weekly Learner Workload	Hours
Lecture	Contact	No Description	Every Week	1.00	1
Tutorial	Contact	No Description	Every Week	1.00	1
Practical	Contact	No Description	Every Week	2.00	2
Independent Study	Non Contact	Students will prepare answers to tutorial questions and practical exercises.	Every Week	4.00	4
				Total Weekly Learner Workload	8.00
				Total Weekly Contact Hours	4.00

Workload: Part Time On Campus

Workload Type	Contact Type	Workload Description	Frequency	Average Weekly Learner Workload	Hours
Lecture	Contact	No Description	Every Week	1.00	1
Tutorial	Contact	No Description	Every Week	1.00	1
Practical	Contact	No Description	Every Week	2.00	2
Independent Study	Non Contact	Students will prepare answers to tutorial questions and practical exercises.	Every Week	4.00	4
				Total Weekly Learner Workload	8.00
				Total Weekly Contact Hours	4.00

Module Resources

Recommended Book Resources

Rod Stephens. (2015), Beginning Software Engineering, John Wiley & Sons, Indianapolis, [ISBN: 9781118969144].

Len Bass, Paul Clements, Rick Kazman. (2013), Software Architecture in Practice, 3rd. Pearson International, [ISBN: 9780321815736].

Supplementary Book Resources

Kendall & Kendall. (2013), Systems Analysis and Design, 9. Prentice Hall, [ISBN: 9780133023442].

Noushin Ashrafi, Hessam Ashrafi. (2008), Object Oriented Systems Analysis and Design, Prentice Hall, [ISBN: 9780131824089].

Dean Leffingwell. (2010), Agile Software Requirements, [ISBN: 9780321635846].

Ian Sommerville. (2010), Software Engineering, 9. Addison Wesley, [ISBN: 9780137035151].

This module does not have any article/paper resources

This module does not have any other resources