ZCOM H3201: Software Engineering for Web, Cloud and Mobile Apps

Module Title:	Software Engineering for Web, Cloud and Mobile Apps
Language of Instruction:	English

Credits:	10

NFQ Level:	7

Module Delivered In	No Programmes

Teaching & Learning Strategies:	Mix of tutorials, practicals delivery along with formative and summative assessments

Module Aim:	To give the learners the ability to develop successful software products for the Web, Cloud and Mobile sectors

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Describe state of the art techniques and principles for the development of successful software products for the Web, Cloud and Mobile Apps markets in a way that is convincing to other developers.
LO2	Select and use appropriate tools and technologies for the development of Web, Cloud and Mobile Apps by demonstrating their basic usage.
LO3	Solve technical problems in unfamiliar contexts using Object Oriented principles, concepts and techniques by efficiently communicating their solution to other developers.
LO4	Practice collaborative problem solving on technical tasks by explaining solutions.
LO5	Acknowledge the social and ethical duties of software developers by describing their impact on society.

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

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Module Content & Assessment

Indicative Content
Prerequisites 5% Review of module's prerequisites as necessary and working environment.
Software Engineering 10% Need for, issues, software development process models, agile software project management.
Entrepreneurship 5% Lean startups, Model Business Canvas.
Agile Software Requirements Analysis 10% Principles, prototyping, analysis modeling and notations, tools.
Agile Software Design 20% concepts and principles, software architecture of Web, Cloud and Mobile Apps, design notations and basic design patterns.
Agile Coding 20% Web, Cloud and Mobile technologies, supporting tools.
Agile Software Verification and Validation 20% Overview, defect testing, static verification, tools.
Social and Ethical Issues for Software Developers 5% Contributing and sharing knowledge, data privacy, whistle blowing legislation.
Blank 5% This part of the module is left undecided and will be agreed in conversations with the students.

Assessment Breakdown	%
Continuous Assessment	40.00%
Practical	10.00%
End of Module Formal Examination	50.00%

Continuous Assessment

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Examination	Individual Written Test	1	5.00	Week 3
Other	Group Research Report and Presentation	1,3,4	10.00	Week 8
Written Report	Take Home Assessment	3	10.00	Week 14
Case Studies	Individual Written Test	3,5	5.00	Week 19
Performance Evaluation	Active Participation	1,2,3,4,5	10.00	n/a

No Project

Practical

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Practical/Skills Evaluation	Individual Practical Test	2	5.00	Week 11
Practical/Skills Evaluation	Individual Practical Test	2	5.00	Week 20

End of Module Formal Examination

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	No Description	1,3,5	50.00	End-of-Semester

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Tutorial	20 Weeks per Stage	2.00
Practicals	20 Weeks per Stage	2.00
Estimated Learner Hours	20 Weeks per Stage	5.50
	Total Hours	190.00