

<b>Module Title:</b>	Software Engineering
<b>Language of Instruction:</b>	English
<b>Credits:</b>	5
<b>NFQ Level:</b>	7
<b>Module Delivered In</b>	<a href="#">2 programme(s)</a>
<b>Teaching &amp; Learning Strategies:</b>	Mix of tutorials, practicals delivery along with formative and summative assessments
<b>Module Aim:</b>	To teach practical contemporary software engineering fundamentals in agile software development, object-oriented design and software testing.
<b>Learning Outcomes</b>	
<i>On successful completion of this module the learner should be able to:</i>	
LO1	Describe contemporary techniques and principles for the development of successful software products in a way that is convincing to other developers.
LO2	Use appropriate processes, tools and technologies for the development of Web, Cloud and Mobile Apps by demonstrating their usage.
LO3	Complete Object-Oriented design and software testing on authentic tasks and efficiently communicate the outcomes to other developers.
<b>Pre-requisite learning</b>	
<b>Module Recommendations</b> <i>This is prior learning (or a practical skill) that is recommended before enrolment in this module.</i>	
No recommendations listed	
<b>Incompatible Modules</b> <i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module.</i>	
No incompatible modules listed	
<b>Co-requisite Modules</b>	
No Co-requisite modules listed	
<b>Requirements</b> <i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.</i>	
No requirements listed	

**Module Content & Assessment**

Indicative Content
<b>Prerequisites</b> 15% Review of module's prerequisites as necessary (agile OOA, Agile Process) and working environment.
<b>Software Engineering</b> 10% Need for, issues, software development process models, agile software project management.
<b>Entrepreneurship</b> 5% Lean startups, Model Business Canvas.
<b>Agile Software Design</b> 35% concepts and principles, software architecture of Web, Cloud and Mobile Apps, design notations and basic design patterns.
<b>Agile Coding</b> 15% Web, Cloud and Mobile technologies, supporting tools.
<b>Agile Software Verification</b> 20% Defect testing practice, static verification, tools.

Assessment Breakdown	%
Continuous Assessment	10.00%
Project	20.00%
Practical	20.00%
End of Module Formal Examination	50.00%

Continuous Assessment				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Examination	Individual Written Test	1	10.00	Week 3

Project				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Group Research Report and Presentation	1	10.00	Week 6
Project	OO Design	3	10.00	Week 10

Practical				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Practical/Skills Evaluation	Individual Practical Test	3	10.00	Week 8
Practical/Skills Evaluation	Individual Practical Test	2	10.00	Week 12

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

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

**Module Workload**

<b>Workload: Full Time</b>		
<i>Workload Type</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecture	12 Weeks per Stage	2.00
Tutorial	12 Weeks per Stage	1.00
Practicals	12 Weeks per Stage	1.00
Estimated Learner Hours	15 Weeks per Stage	5.13
Total Hours		125.00

**Module Delivered In**

Programme Code	Programme	Semester	Delivery
CW_KCSOF_B	<a href="#">Bachelor of Science (Honours) in Software Development</a>	5	Mandatory
CW_KCSOF_D	<a href="#">Bachelor of Science in Software Development</a>	5	Mandatory
Discussion Note:	ADF		