



Title:	Group Project APPROVED
Long Title:	Group Project
Module Code:	SOFT7003
Duration:	1 Semester
Credits:	5
NFQ Level:	Intermediate
Field of Study:	Computer Science
Valid From:	Semester 1 - 2017/18 (September 2017)
Module Delivered in	5 programme(s)
Next Review Date:	December 2021
Module Coordinator:	Sean McSweeney
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Module Description:	Students work within a team to develop a product using an agile development process; the students will apply previously learned practices to work in a self organizing team in a simulation of a real work environment where team work, communication, collaboration and application of the development process are essential skills in producing valuable finished product to the customer's satisfaction.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
LO1	Apply an project management process, such as Scrum, to the group project.
LO2	Define the project goals and system requirements from a presented case study.
LO3	Plan the project and delegate individual tasks and responsibilities.
LO4	Develop a working solution by adopting an iterative process to the development of the solution and employing appropriate quality mechanisms.
LO5	Work and communicate effectively as a team by using best practices in team management and document/code control.
Pre-requisite learning	
Module Recommendations	
<i>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 CIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i>	
12786	SOFT7007 Requirements Engineering
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>	
No requirements listed	

Module Content & Assessment

Indicative Content

Case study

A problem scenario will be presented to the project team. The team must then devise and implement a solution using knowledge and skills acquired from other modules on their programme using an Agile development process. A team will normally consist of 4 members.

Agile Development Processes

The students will have prior skills in agile development process. As part of this module they will have learnt how to set up a product backlog, sizing, and sprints. Sprint planning – sprint duration, select target backlog, agile requirements and user stories. Break requirements or stories into tasks. Estimate tasks in hours. Delegate tasks. They will be expected to apply this existing knowledge as part of the group project. Planning and team organisation, Product Backlog, Sprint Backlog, Product Owner, Scrum Master, Use Case, User Stories, Mock-Up, Sequence Diagrams, Use Case elaboration, Product Development, Testing, Automated Testing

Communication and Team Work

The students will apply existing knowledge in self agile team management processes. Communication and team work. The scrum team. Self-organisation and management - agile process meetings such as sprint planning, daily scrum, sprint retrospectives, iteration planning, release planning. Scrum meetings.

Development and Quality Processes

Document and source code control, pair programming, reviews and inspections, testing, automated testing, re-engineering, customer feedback.

Assessment Breakdown

%

Course Work

100.00%

Course Work

Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Other	Given the case study the students will be expected to understand the requirements and create stories following the agile development process.	2	10.0	Week 3
Project	Working as a team the students will create a product backlog, define sprints and undertake time/effort sizing. They will define tasks in the sprint and will delegate or assign individuals to complete the tasks. Using an agile development process the students will develop the project prototype iteratively using best practices in code quality and control.	1,3,4,5	50.0	Every Second Week
Presentation	In this presentation the students will be expected to present a demonstration of the working prototype and summary goals/highlights etc the project.	1,2,3,4,5	15.0	Week 13
Oral Examination/Interview	Each member of the team individual contribution will also be assessed through the use of peer review feedback and an interview.	1,2,3,4,5	25.0	Week 13

No End of Module Formal Examination

Reassessment Requirement

Coursework Only

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

The institute reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Lecturer-Supervised Learning (Contact)	Meeting with team supervisor	0.25	Every Week	0.25
Independent & Directed Learning (Non-contact)	Independent study and development work.	6.75	Every Week	6.75
Total Hours				7.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				0.25

Workload: Part Time				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Tutorial	Meeting with Team supervisor	0.25	Every Week	0.25
Independent & Directed Learning (Non-contact)	Independent study and development work.	6.75	Every Week	6.75
Total Hours				7.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				0.25

Module Resources

Recommended Book Resources

- Chris Sims, Hillary Louise Johnson 2012, *Scrum: a Breathtakingly Brief and Agile Introduction*, Dymaxicon [ISBN: 9781937965044]
- Suzanne Robertson, James Robertson 2012, *Mastering the Requirements Process: Getting Requirements Right*, Addison-Wesley Professional [ISBN: 9780321815743]

Supplementary Book Resources

- Robert C. Martin 2013, *Agile Software Development, Principles, Patterns, and Practices*, Pearson [ISBN: 9780135974445]

Recommended Article/Paper Resources

- Beck, K., Beedle, M., Van Bennekum, A., Cockburn, A., Cunningham, W., Fowler, M., Grenning, J., Highsmith, J., Hunt, A., Jeffries, R. and Kern, J. 2001, *Manifesto for agile software development*. <http://nlp.chonbuk.ac.kr/SE/ch05.pdf>
- Highsmith, J. and Cockburn, A. 2001, *Computer*, Agile software development: The business of innovation., 34(9)

Other Resources

- Website: *The Agile Movement*
<http://agilemethodology.org>
- Website: *Agile Alliance*
<https://www.agilealliance.org>
- Website: *Scrum Alliance*
<https://www.scrumalliance.org/>
- Website: *Agile Methodology*
<http://agilemethodology.org/>

Module Delivered in

Programme Code	Programme	Semester	Delivery
CR_KSDEV_8	<u>Bachelor of Science (Honours) in Software Development</u>	5	Mandatory
CR_KDNET_8	<u>Bachelor of Science (Honours) in Computer Systems</u>	5	Mandatory
CR_KITMN_8	<u>Bachelor of Science (Honours) in IT Management</u>	5	Mandatory
CR_KITSP_7	<u>Bachelor of Science in Information Technology</u>	5	Mandatory
CR_KCOMP_7	<u>Bachelor of Science in Software Development</u>	5	Mandatory