1. **Title of the module**

COMP5530 (CO553) Agile Development and Software Security B

1. **School or partner institution which will be responsible for management of the module**

School of Computing

1. **The level of the module (e.g. Level 4, Level 5, Level 6 or Level 7)**

Level 5

1. **The number of credits and the ECTS value which the module represents**

15 (7.5 ECTS)

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Spring

1. **Prerequisite and co-requisite modules**

COMP5520 (CO552) Agile Development and Software Security A

1. **The programmes of study to which the module contributes**

This module will be a compulsory module in Stage 2 in the following programmes:

* BSc Computing
* BSc Computing with a Year in Industry
* BSc Computing (Consultancy)
* BSc Computing (Consultancy) with a Year in Industry
* BSc Computer Science for Health
* BSc Computer Science for Health with a Year in Industry
* BSc Business Information Technology
* BSc Business Information Technology with a Year in Industry

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**
2. Identify and evaluate alternative solution strategies to a multi-tiered software problem;
3. Identify the roles and responsibilities of members of a software development team and the methods of intercommunication;
4. Plan and document the process by which a software solution is achieved using Agile software development and UML;
5. Construct a solution to an approved multi-tiered software problem;
6. Verify the solution to an agreed specification;
7. Present and demonstrate system software solution.
8. Critically evaluate the proposed solution and the means by which it was achieved;
9. Demonstrate a commitment to quality in the production of project deliverables;
10. Demonstrate a commitment to being a responsible member of a software development team.
11. **The intended generic learning outcomes.  
    On successfully completing the module students will be able to:**
12. Develop a strategy for solving a problem;
13. Develop a strategy for working with others;
14. Monitor progress and modify strategies to achieve agreed objectives;
15. Evaluate the realized solution;
16. Evaluate the experience of working as part of a team and suggest alternative actions that might have improved the eventual outcome.
17. Explain the role and importance of considering security when developing software, from the perspective of the system as well as the user.
18. **A synopsis of the curriculum**

Students will apply Agile Development techniques to a prescribed problem that involves the development of a software solution.

1. **Reading List (Indicative list, current at time of publication. Reading lists will be published annually)**

* Beck, K; Extreme Programming Explained: Embrace Change, 2e Addison-Wesley, 2005
* Beck, K; Fowler, M; Planning Extreme Programming (XP),1e, Addison Wesley, 2001
* Schwaber, K; Agile Project Management with Scrum, Microsoft Press, 2004
* Layton, MC; Agile Project Management For Dummies, John Wiley & Sons, 2012
* Pham, A; Pham, P-V Scrum in Action, 1e Delmar Cengage Learning, 2012
* Cohn, M; Succeeding with Agile: Software Development Using Scrum, 1e, Addison Wesley, 2010
* Fowler, M; UML Distilled: A Brief Guide to the Standard Object Modeling Language, 3rd edition, Addison-Wesley, 2004
* Rumbaugh, J; Jacobson, I; Booch, G; The Unified Modeling Language Reference Manual, 2nd edition, Addison-Wesley, 2004

1. **Learning and Teaching methods**

33 Contact hours  
117 private study hours

Total hours 150

1. **Assessment methods.**
   1. Main assessment methods

Group project 75% (60 hours)

2 page Individual evaluation report 25%

* 1. Reassessment methods: Project reassessment instrument

1. ***Map of Module Learning Outcomes (sections 8 & 9) to Learning and Teaching Methods (section12) and methods of Assessment (section 13)***

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | *8.1* | *8.2* | *8.3* | *8.4* | *8.5* | *8.6* | *8.7* | *8.8* | *8.9* | *9.1* | *9.2* | *9.3* | *9.4* | *9.5* | *9.6* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Practical classes | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |  |  | **x** |
| Supervision meetings |  |  |  | **x** | **x** |  |  |  |  |  |  | **x** | **x** |  | **x** |
| Private study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Coursework (software solution)* | **x** | **x** | **x** | **x** | **x** |  |  |  |  | **x** |  | **x** | **x** |  | **x** |
| *Individual report* |  |  |  |  |  |  | **x** | **x** | **x** |  | **x** |  | **x** | **x** | **x** |

1. **Inclusive module design**

The School recognises and has embedded the expectations of current equality legislation, by ensuring that the module is as accessible as possible by design. Additional alternative arrangements for students with Inclusive Learning Plans (ILPs)/declared disabilities will be made on an individual basis, in consultation with the relevant policies and support services.

The inclusive practices in the guidance (see Annex B Appendix A) have been considered in order to support all students in the following areas:

a) Accessible resources and curriculum

b) Learning, teaching and assessment methods

1. **Campus(es) or Centre(s) where module will be delivered:**

Medway

1. **Internationalisation**

The topics addressed by this module relate to a field which is of international importance, given the global role of software engineering in today's technological innovation. The modelling techniques and software development methodologies covered by this module are international, being identical worldwide and independent of traditional spoken language.

**FACULTIES SUPPORT OFFICE USE ONLY**

**Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date approved | Major/minor revision | Start date of the delivery of revised version | Section revised | Impacts PLOs( Q6&7 cover sheet) |
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