1. **Title of the module**

COMP5470 (CO547) – Agile Software Development
COMP5471 (CO547) – Agile Software Development

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

School of Computing

1. **The level of the module (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 credits (7.5 ECTS)

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

Autumn

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

Pre-requisites: COMP3200 Introduction to Object Oriented Programming; COMP3230 Databases and the Web

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

BSc Computing

BSc Computing (consultancy)

BSc Information Technology

BSc Information Technology (consultancy)

BSc Business Information Technology

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**
	1. Understand and discuss the principles and practices employed in the production of a software system using an Agile methodology. [A2, B1, B2, B3, B5, C2]
	2. Identify the benefits to be gained by adopting an Agile approach to software development when compared to previous software development paradigms [B1, B3, B9, D2]
	3. Understand the role and expected behaviour of key members of the development team and overall inherent values of the team [A3]
	4. Determine the product requirements and devise a corresponding product roadmap [A2, B3, C1].
	5. Describe Agile incremental development and its associated activities [B1, B5, C1, C4],
	6. Plan releases and sprints and complete the corresponding backlogs [B3, B4, B5]
	7. Explain how product scope and procurement is managed in Agile [A4]
	8. Describe the management of time and cost, quality and risk in Agile [C3],
	9. Understand key metrics used to gauge development performance. [A4, B4, B7, C2]
	10. Appreciate how to deal with electrical components commonly encountered computing systems, including safe working practices, to the standard of A+ certification. (A1, B6).
2. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**
	1. Make effective use of IT facilities for scholarship and research. [D3]
	2. Be able to manage their own time, learning and development. [D5]
	3. Present and discuss a topic of study [B2, D2]
	4. Recognise and be guided by social, professional and ethical issues and guidelines [B6].
3. **A synopsis of the curriculum**

The module studies in detail the activities and artefacts associated with software development process as performed by a development team that adopts an Agile methodology.

Indicative topics are:

* Concepts, principles, practice and philosophy of an Agile approach to software development
* Collaboration: environment, programmer collaboration, team values, customer involvement, standards and reporting
* Planning: release and iteration/sprint planning, risk assessment, stories and estimating
* Development: incremental requirements, customer tests, test-driven development, refactoring, simple design, incremental design and architecture, spike solutions, performance optimisation
* Agile project management: roles, values and team philosophy; management of scope and the business/economic issues such as: time, cost, quality and risk.
* Ethics and professional responsibility
1. **Reading list (Indicative list, current at time of publication. Reading lists will be published annually)**

Beck, K. (2004). *Extreme Programming Explained: Embrace Change*. 2e Addison-Wesley.

Beck, K; Fowler,M. (2000). *Planning Extreme Programming (XP)*, 1e Addison Wesley.

Cohn,M. (2009). *Succeeding with Agile: Software Development Using Scrum*. 1e, Addison Wesley.

Layton, M C (2012). *Agile Project Management For Dummies*. John Wiley & Sons.
Pham,A; Pham, P.V. (2011). *Scrum in Action*. 1e Delmar Cengage Learning.
Schwaber, K (2004). *Agile Project Management with Scrum*. Microsoft Press.

1. **Learning and teaching methods**

Total contact hours: 33 hours

Private study hours: 117 hours

Total study hours: 150 hours

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

Group Assignment: Scrum Case Study – 25%

Version Control – 5%

Report – 20%

2 hour - Examination 50%

13.2 Reassessment methods

Like for like.

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* | *8.10* | *9.1* | *9.2* | *9.3* | *9.4* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Private Study** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Lectures | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |  |  |  |  | **X** |
| Supervised practical classes | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Coursework* | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| *Examination* | x | x | x | x | x | x | x | x | x |  |  | x | x | x |
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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**

Canterbury

Medway

1. **Internationalisation**

Please highlight aspects of this module where internationalisation is actively incorporated or intended. Refer to any relevant internationally-focused learning outcomes and, where possible, identify internationalisation in any of the following: subject content, assessment tasks, teaching methods/activities and support activity.

*Support and explanation will be provided via a separate curriculum internationalisation toolkit, available from the Dean for Internationalisation. For further guidance contact Anthony Manning or see* [*https://www.kent.ac.uk/global/curriculum.html*](https://www.kent.ac.uk/global/curriculum.html)*.*

The topics addressed by this module relate to a field which is of international importance, given the global role of computers in today's technological innovation. The topics covered by this module are international in nature, 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.**

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| --- | --- | --- | --- | --- |
| 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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Revised FSO Jan 2018