1. **Title of the module**

COMP5550 (CO655) Software Project

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

Division of Computing, Engineering, Mathematical Sciences (CEMS)

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**

COMP3200 (CO320) Introduction to Object Oriented Programming
COMP3830 Problem Solving with Algorithms
COMP5180 Algorithms, Correctness and Efficiency
COMP5590 Software Development

1. **The course(s) of study to which the module contributes**

BSc Software Engineering

BSc Software Engineering with a Year in Industry

1. **The intended subject specific learning outcomes.
On successfully completing the module students will be able to:**

The aim of this module is to provide an opportunity for students to apply a disciplined and structured approach in the development of a software system.

Students who successfully complete this module will be able to:

1. Identify and evaluate alternative solution strategies to a software problem;
2. Plan and document the process by which a software solution is achieved;
3. Construct a solution to an approved software problem;
4. Verify the solution to an agreed specification;
5. Present and demonstrate system software solution.
6. Critically evaluate the proposed solution and the means by which it was achieved;
7. Demonstrated a commitment to quality in the production of project deliverables;
8. **The intended generic learning outcomes.
On successfully completing the module students will be able to:**

Students who successfully complete this module will be able to:

1. Develop a strategy for solving a problem;
2. Monitor progress and modify strategies to achieve agreed objectives;
3. Evaluate the realized solution;
4. Evaluate the experience of working in an individual project and suggest alternative actions that might have improved the eventual outcome.
5. **A synopsis of the curriculum**

Students undertake an individual project, which involves the specification and development of a software solution. A member of the academic staff will be involved in the supervision and monitoring of the project work. Students will meet weekly with the supervisor to review progress and validate development to-date, checking that the desired functionality is interpreted correctly and to encourage the adoption sound software engineering principles.

Towards the end of the project, each student will prepare a technical report that describes their solution strategy, the result of their project and reflections on what the student earned from the project;

1. **Reading List (Indicative list, current at time of publication. Reading lists will be published annually)**
* Beck, K, Extreme Programming Explained: Embrace Change, 2nd Edition, Addison-Wesley, 2004
* Cohn,M, Succeeding with Agile: Software Development Using Scrum, 1st Edition, Addison Wesley, 2009
* Barnes, D J; Kolling, M Objects First with Java: A Practical Introduction using BlueJ, 5th Edition, Pearson, 2011
1. **Learning and Teaching methods**The module comprises 150 hours of study over one term and includes 22 hours of academic supervision.
2. **Assessment methods.**The module will be assessed by 100% project.

Successful completion of the module will require students to provide evidence that they are able to develop a satisfactory solution to a prescribed problem in a disciplined and structured fashion observing acknowledged good practice.

The assessment will be based on student involvement in the production of a software solution. Students will be required to produce documentation appropriate to the software development methodology employed.

Students will be assessed individually based on the quality of their software solution. This will represent 85% of the overall mark.

Further, individual students will be required to hand in technical report that describes their solution strategy, the result of their project and analyses critically their experiences undertaking the module. This will form 15% of the overall assessment and students will need to pass this “*prescribed element of assessment*” as a requirement for passing the module.

Reassessment will be via a project reassessment instrument.

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** |  | *8.1* | *8.2* | *8.3* | *8.4* | *8.5* | *8.6* | *8.7* | *9.1* | *9.2* | *9.3* | *9.4* |
| **Learning/ teaching method** | **Hours allocated** |  |  |  |  |  |  |  |  |  |  |  |
| Supervision meetings | 22 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| Private study | 117 | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |
| *Coursework (software solution)* |  | **x** | **x** | **x** | **x** | **x** |  |  | **x** |  | **x** | **x** |
| *Technical report* |  |  |  |  |  |  | **x** | **x** |  | **x** |  | **x** |

1. **Inclusive module design**

The Division 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

1. **Internationalisation**

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.

**DIVISIONAL 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 delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
|  | Minor | September 2021 | 6, 7, 16 | No |
| 19/11/2021 | Minor | September 2022 | 6, 7, 10, 11, 14 | No |