1. **Title of the module**

COMP3200 (CO320) - Introduction to Object-Oriented Programming

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 (Level 4, Level 5, Level 6 or Level 7)**

Level 4

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 or Spring

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

None

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

BSc Computer Science and variants, BEng Computer Systems Engineering, Applied Computing Joint Honours courses, including Year in Industry variants.

BSc Business Information Technology, BSc Computing, BSc Computing (Consultancy), including year in industry variants.

BSc Artificial Intelligence, BSc Data Science, BSc Software Engineering, including year in industry variants.

BA/BSc courses ‘with Data Science’.

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

8.1 Read, understand and modify small programs.

8.2 Use an object-oriented programming language to write small programs.

8.3 Write programs with the support of an integrated development environment.

8.4 Structure data and information as class definitions.

8.5 Use object-oriented analysis, design and implementation to identify and solve practical programming problems.

8.6 Test solutions to programming problems.

8.7 Discuss the quality of solutions through consideration of issues such as

encapsulation, cohesion and coupling.

8.8 Use effectively a range of software development tools, such as an integrated development environment, text editor and compiler.

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

9.1 Demonstrate comprehension of the trade-offs involved in design-choices.

9.2 Recognise and be guided by social, professional and ethical issues and guidelines.

9.3 Make effective use of IT facilities for solving problems.

9.4 Manage their own learning and development, through self-directed study and working on continuous assessment.

1. **A synopsis of the curriculum**

This module provides an introduction to object-oriented software development. Software pervades many aspects of most professional fields and sciences, and an understanding of the development of software applications is useful as a basis for many disciplines. This module covers the development of simple software systems. Students will gain an understanding of the software development process, and learn to design and implement applications in a popular object-oriented programming language. Fundamentals of classes and objects are introduced and key features of class descriptions: constructors, methods and fields. Method implementation through assignment, selection control structures, iterative control structures and other statements is introduced. Collection objects are also covered and the availability of library classes as building blocks. Throughout the course, the quality of class design and the need for a professional approach to software development is emphasised and forms part of the assessment criteria.

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

"Objects first with Java – A practical introduction using BlueJ", David J. Barnes and Michael Kölling, Pearson Education, 2016

1. **Learning and teaching methods**

Total contact hours: 44

Private study hours: 106

Total study hours: 150

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

Class definition *(*Programming) (15%) (approximately 16 hours)

Collections *(*Programming) (20%) (approximately 16 hours)

Code quality *(*Programming) (15%) (approximately 16 hours)

Class exercises (Weekly) (20%) (approximately 2 hours per week)

1.5 hour timed assessment *(*Programming) (30%)

13.2 Reassessment methods

100% coursework

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 outcomes** | **8.1** | **8.2** | **8.3** | **8.4** | **8.5** | **8.6** | **8.7** | **8.8** | **9.1** | **9.2** | **9.3** | **9.4** |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |
| Lectures | x | x | x | x | x | x | x | x | x | x |  |  |
| Classes | x | x | x | x | x | x | x | x | x | x | x | x |
| Private study | 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 |

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.**

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| Date approved | Major/minor revision | Start date of delivery of revised version | Section revised | Impacts PLOs (Q6&7 cover sheet) |
| 10/11/2020 | Minor | September 2021 | 1, 7, 13, 16 | No |
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