1. KentVision Code and title of the module

COMP8710 - Advanced Java for Programmers

## Division and School/Department or partner institution which will be responsible for management of the module

Division of Computing, Engineering and Mathematical Sciences

School of Computing

## The level of the module (Level 4, Level 5, Level 6 or Level 7)

Level 7

## The number of credits and the ECTS value which the module represents

15 credits (7.5 ECTS)

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

Autumn

## Prerequisite and co-requisite modules and/or any module restrictions

A good working knowledge of imperative programming and of the fundamentals of structured software development is assumed.

## The course(s) of study to which the module contributes

Compulsory to the following courses:

MSc Networks and Security with and without Year in Industry

Optional to the following courses:

MSc Computer Science with and without Year in Industry

MSc Computer Science (Cyber Security) with and without Year in Industry

MSc Computer Science (Artificial Intelligence) with and without Year in Industry

MSc Advanced Computer Science with and without Year in Industry

MSc Artificial Intelligence with and without Year in Industry

MSc Cyber Security with and without Year in Industry

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

8.1 Apply the principles of the object-oriented paradigm and understand its relationship to 'traditional' methods.

8.2 Develop (design, implement and test) OO applications in Java using encapsulation, data hiding, inheritance and polymorphism to write compact, reusable, distributable code, and reuse existing class libraries to implement more complex and substantial programs.

8.3 Use online and library resources to research topics in this area, and to be able to communicate programming concepts and design ideas to other programmers.

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

9.1 Time management and organisation.

9.2 Effective information retrieval skills and ability to undertake online research.

9.3 Communications skills.

9.4 Problem solving.

9.5 Ability to plan, work and study independently and to use relevant resources in a manner that reflects good practice.

9.6 Appreciation of the importance of continued professional development as part of lifelong learning.

## A synopsis of the curriculum

This module provides for well-qualified computer science students entering the MSc programme from a range of backgrounds. These students will have good programming skills but will not necessarily have used Java or another object-oriented language extensively. This module seeks to ensure that students have the Java and object-oriented design skills necessary for the rest of their programme.

## Reading list

## The University is committed to ensuring that core reading materials are in accessible electronic format in line with the Kent Inclusive Practices.

## The most up to date reading list for each module can be found on the university's [reading list pages](https://kent.rl.talis.com/index.html).

Books in this subject area become out of date very quickly.

See current reading list for suggestions.

## Contact Hours

Private Study: 122

Contact Hours: 28

Total: 150

## Assessment methods

* 1. Main assessment methods

## Two programming assessments, 30 hours (50%) each

13.2 Reassessment methods

100% coursework.

## Map of module learning outcomes (sections 9 & 10) to learning and teaching methods (section 13) and methods of assessment (section 14)

**Module learning outcomes against learning and teaching methods:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | *8.1* | *8.2* | *8.3* | *9.1* | *9.2* | *9.3* | *9.4* | *9.5* | *9.6* |
| Private Study | **x** | **x** | **x** | **x** | **x** | **x** | **x** | **x** |  |
| Lectures | **x** | **x** |  |  |  |  |  |  | **x** |
| Classes | **x** | **x** | **x** |  |  |  | **x** | **x** | **x** |

**Module learning outcomes against assessment methods:**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Module learning outcome** | *8.1* | *8.2* | *8.3* | *9.1* | *9.2* | *9.3* | *9.4* | *9.5* | *9.6* |
| Programming assessments | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **x** | **x** |

## 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

## Campus(es) or centre(s) where module will be delivered

Canterbury

## 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**

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

| Date approved | New/Major/minor revision | Start date of delivery of (revised) version | Section revised  (if applicable) | Impacts PLOs (Q6&7 cover sheet) |
| --- | --- | --- | --- | --- |
| 23/11/2021 | Minor | September 2022 | 7, 12 | No |
|  |  |  |  |  |