1. **Title of the module**

FOUN0051 (LZ051) Programming for University Study

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

Centre for English and World Languages

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

Level 3

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

30 credits (15 ECTS)

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

Autumn and Spring

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

Co-requisite FOUN0012 (Philosophy for University Study) for entry into Computer Science (Artificial Intelligence); FOUN0036 Academic Skills Development (15 credits) and either FOUN0035 Foundation Project (15 credits) OR FOUN0037 English for Academic Study (15 credits)

**JYA English Plus Programme Students:**

There are no co-requisite modules for JYA English Plus students

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

International Foundation Programme and JYA English Plus

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

8.1 Demonstrate familiarity with fundamental concepts of imperative programming (sequence, selection, iteration).

8.2 Read, understand and modify simple programs in a standard programming language.

8.3 Understand the concepts of development tools (editor, compiler, execution).

8.4 Use an integrated development environment.

8.5 Select relevant information from a corpus of reading and lecture material and apply it to simple software development problems.

8.6 Find and use documentation of a programming system.

8.7 Test solutions to programming problems.

8.8 Reason about correctness of small programs.

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

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

9.2 Make effective use of IT facilities for solving problems.

9.3 Make effective use of a range of tools, such as a web browser and email client.

9.4 Be able to manage their own learning and development, through self-directed study and working on continuous assessment.

9.5 Develop skills of working and communicating with peers.

1. **A synopsis of the curriculum**

This module provides an introduction to programming. 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 programs. Concepts common to all types of programming – such as sequence, selection and iteration – are covered to provide an understanding of the basic principles of software. In addition, object-oriented concepts are introduced, including classes, objects, constructors, methods and fields. The module includes an introduction to an educational software development environment, as well as other electronic tools, such as electronic mail, a web browser and printing facilities.

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

Core Text:

Kölling, M. (2015). *Introduction to Programming Using Greenfoot: Object-Oriented Programming in Java with Games and Simulations*. London: Pearson Education.

Recommended Reading:

Barnes, D.J. and Kölling, M. (2016) *Objects First with Java - A Practical Introduction using Blue J.* London: Pearson Education.

Resnick, M. (1997). *Turtles, Termites, and Traffic Jams: Explorations in Massively Parallel Microworlds* *(Complex Adaptive Systems).* Massachusetts: MIT Press.

1. **Learning and teaching methods**

Total contact hours: 88

Private study hours: 212

Total study hours: 300

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

In-class exercises (10 hours per term submitted as one cumulative mark per term) (2 x 10%)

2 x take-home assignments (2 x 40%)

2 x In-class pass/fail assessments (2 x 1 hour) (0%)

13.2 Reassessment methods

Reassessment Instrument: 100% coursework

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* | *8.8* | *9.1* | *9.2* | *9.3* | *9.4* | *9.5* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private Study | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Lectures | **X** |  | **X** |  | **X** |  |  | **X** | **X** |  |  |  |  |
| Workshops | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| In-class exercises | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Take home Assignments | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| Pass/fail assessments | **X** | **X** | **X** | **X** | **X** | **X** | **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**

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.

**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) |
| 21/02/19 | Major | September 2019 | 2 | No |
|  |  |  |  |  |

Revised FSO Jan 2018