University of Kent

MODULE SPECIFICATION

1 **Title of the module** CO012 Programming for University Study

2 **Department which will be responsible for management of the module** Computer Science

3 **Start Date of the module:** September 2010

4 The cohort of students onwards to which the module will be applicable: 2010/11

5 **Number of Students** 50

6 **Modules to be withdrawn on the introduction of this proposed module and consultation with other relevant Departments and Faculties regarding the withdrawal:** None.

7 **The Level of the module** F [Foundation]

8 **The number of credits which the module represents** 30

9 **Which term(s) the module is to be taught in (or other teaching pattern)** Autumn and Spring

10 **Prerequisites/Co-requisites** Co-requisite LZ012 (Philosophy for University Study) for entry into Computer Science (Artificial Intelligence); none otherwise.

11 **The Programmes of Study to which the module contributes**: International Foundation Programme

12 **The intended subject-specific learning outcomes and, as appropriate, their relationship to programme learning outcomes:**

Note: Learning Outcomes refer to the undergraduate programme specification for Computer Science and related programmes unless prefixed by ELU in which case they refer to the International Foundation Year Programme owned by the Faculty of Humanities.

Students who successfully complete this module will be able to:

a) Be familiar with fundamental concepts of imperative programming (sequence, selection, iteration). [A2, ELUB7]

b) Read, understand and modify simple programs in a standard programming language. [A2 ELUC17]

c) Understand the concepts of development tools (editor, compiler, execution). [C4]

d) Use an integrated development environment. [C14]

e) Select relevant information from a corpus of reading and lecture material and apply it to simple software development problems. [D24]

f) Find and use documentation of a programming system. [C4, ELUB7]

g) Test solutions to programming problems. [C16]

h) Reason about correctness of small programs. [B8, B9]

13 **The intended generic learning outcomes and, as appropriate, their relationship to programme learning outcomes:**

Students who successfully complete this module will be able to:

i) Recognise and be guided by social, professional and ethical issues and guidelines [B6]

j) Make effective use of IT facilities for solving problems. [D25, ELUD25]

k) Make effective use of a range of tools, such as a web browser and email client. [C4]

l) Be able to manage their own learning and development, through self-directed study and working on continuous assessment. [A3, D20, ELUD24]

m) Develop skills of working and communicating with peers. [C17, D19, ELUD19]

14 **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 course 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.

15 **Indicative Reading List**

"Introduction to Programming Using Greenfoot: Object-Oriented Programming in Java with Games and Simulations", Michael Kölling, Pearson Education, 2009, ISBN 0136037534.

16 **Learning and Teaching Methods, including the nature and number of contact hours and the total study hours which will be expected of students, and how these relate to achievement of the intended learning outcomes:** Acquisition is through supervised classes supported by lectures. Self-directed learning is facilitated by directed programming tasks, directed reading and web-based material. One one-hour lecture and one two-hour class per week. 300 total study hours spent acquiring practical facility in and understanding of programming principles and tools.

17 **Assessment Methods and how these relate to testing achievement of the intended learning outcomes**

Assessment is through a combination of coursework and end-of-term examinations. Coursework (learning outcomes a, b, c, d, e, f, g, i, j, k, l, m) consists of two programming assignments (one in term 1 and one in term 2). Examinations (learning outcomes a, b, c, d, g, h, j) consist of small unseen individual programming tasks (one at the end of each term) to be completed in limited time under examination conditions at a computer. Examinations are assessed on a pass/fail scale; passing these examinations is a requirement for passing this module. Programming assignments are marked and form the basis of the module mark. Requirement for passing the module: pass mark in programming assignments AND pass result in both examinations.

18 **Implications for learning resources, including staff, library, IT and space**

Staff will be required to deliver this module, through teaching, supervision and marking. Materials from the reading list should be available through the library. IT resources will be required to support practical activities.

19 **A statement confirming that, as far as can be reasonably anticipated, the curriculum, learning and teaching methods and forms of assessment do not present any non-justifiable disadvantage to students with disabilities**

The department recognises and has embedded the expectations of SENDA, and supports students with a declared disability or special (educational) need in its teaching, through the establishment of Inclusive Learning Plans agreed between student, department and the Disability Support Unit. We liaise with the Disability Support Unit in order to provide specialist support where needed

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Statement by the Director of Learning and Teaching: "I confirm I have been consulted on the above module proposal and have given advice on the correct procedures and required content of module proposals."

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Director of Learning and Teaching Date

Statement by the Head of Department: "I confirm that the Department has approved the introduction of the module and will be responsible for its resourcing"

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Head of Department Date

21 August 2009

2 November 2009

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