1. **Title of the module**

COMP5270 (CO527) - Operating Systems and Architecture

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

School of Computing

1. **The level of the module (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 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**

Pre-requisites: COMP3240: Computer Systems or equivalent background knowledge for direct-entry students

COMP3200: Introduction to Object-Oriented Programming or COMP5230: Fundamentals of Programming and Logic

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

Computer Science, CS (AI), CS (Networks), CS (Consultancy);

Applied Computing joint honours programmes;

Computing and Business Administration;

Web Computing;

Plus year in industry variants of these programmes.

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

8.1 Have an appreciation of modern computer architecture. [A1]

8.2 Understand the operation of computer systems, both at the hardware and software level, and understand the relationship between hardware and software within the system as a whole. [A2,C1]

8.3 Understand the need for operating systems and be aware of their overall structure. [A1]

8.4 Be able to identify and explain issues relating to performance of systems and user programs. [C2,C4]

8.5 Understand hardware support for high level languages and be aware of the relationship between compilers, compiled code and the operating system, and its effect on performance. [C1]

8.6 Be able to understand and modify existing operating systems as necessary. [B5]

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

9.1 Communicate their understanding of technical problems and their solutions. [D2]

9.2 Make effective use of IT facilities. [D3]

9.3 Manage their time and resources effectively. [D5]

1. **A synopsis of the curriculum**

This module aims to provide students with a more in-depth understanding of the fundamental behaviour and components (hardware and software) of a typical computer system, and how they collaborate to manage resources and provide services. It will consider systems other than the standard PC running Windows, in order to broaden students’ outlook. The module has two strands: “Operating Systems” and “Architecture”, which each form around 50% of the material.

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

Introduction to Operating Systems: Behind the Desktop, John English. Published by Palgrave Macmillan, 2004. ISBN 0-333-99012-9.

Structured Computer Organization (International Edition), 6th edition, Andrew S Tanenbaum and Todd Austin. Published by Pearson, 2012. ISBN 0-273-76924-3.

Applied Operating System Concepts (most variants), Abraham Silberschatz, Peter Galvin and Greg Gagne. Published by John Wiley and Sons Inc. 1999. ISBN 0-471-36508-4.

1. **Learning and teaching methods**

Total contact hours: 24

Private study hours: 126

Total study hours: 150

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

A1 – On line quiz (10%)

A2 – Practical class (10%)

A3 – Assessment, 10 hours (20%)

Two-hour examination (60%)

13.2 Reassessment methods

Like for like.

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* | *9.1* | *9.2* | *9.3* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |  |
| **Private Study** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| *Lectures* | **X** | **X** | **X** | **X** | **X** | **X** |  |  |  |
| *Practical Class* | **X** | **X** |  |  |  |  | **X** | **X** | **X** |
| **Assessment method** |  |  |  |  |  |  |  |  |  |
| *Online quiz* | **X** | **X** |  |  |  |  |  |  |  |
| *Practical class* | **X** | **X** |  |  |  |  | **X** | **X** | **X** |
| *Assessment* |  | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |
| *Examination* | **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.

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**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) |
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Revised FSO Jan 2018