1. **Title of the module**

COMP7020 (CO702) Networks

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

School of Computing/Mid Kent College

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)**

Spring and Summer

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

COMP4000 (CO400) Introduction to Computer Architecture (prerequisite)

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

Foundation Degree in IT, HND in IT; HNC in IT

1. **The intended subject specific learning outcomes.  
   On successfully completing the module students will be able to:**
2. Discuss computer communication network concepts and communication between computers and people and carry out the control and operation of computer systems.
3. Identify and analyse criteria and specifications appropriate to specific problems and plan strategies for their solution.
4. Effectively communicate information, arguments and analysis, in a variety of forms, to specialist and non-specialist audiences and deploy key IT techniques effectively.
5. Specify, design and implement computer-based systems.
6. **The intended generic learning outcomes.  
   On successfully completing the module students will be able to:**
7. Analyse the extent to which a computer-based system meets the criteria defined for its current use and future development.
8. Deploy appropriate theory, practices and tools for the specification, design, implementation, and evaluation of computer-based systems.
9. Develop existing skills and acquire new competences that will enable them to assume significant responsibility within organisations.
10. Manage their own learning and development including time management and organisational skills.
11. **A synopsis of the curriculum**

This module builds on the concepts of topologies and infrastructure developed in the Introduction to Computer Architecture module. The OSI model is used as a basis for networking theory, and issues concerning architecture of networks and infrastructure are considered. The concept of the provision of reliable network services and the inherent management responsibility is developed.

The module starts with an examination of the Ethernet topology followed by the OSI model and its implementation with TCP/IP. This is followed by service and performance considerations. On the practical side students will configure an open source Linux server providing a range of services to a LAN comprising Microsoft work stations. The module includes Network Management issues and responsibilities.

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

Computer Networks; 2013; Tanenbaum and Wetherall; Pearson

Networking: A Beginner’s Guide; 6th edition; 2014; Hallberg B; McGraw Hill

Computer Networking: A Top-Down Approach; 2012; Kurose & Ross; Pearson

Networking for Dummies; 2012; Lowe D; Wiley

Computer Networks; 4th ed, 2003; Tanenbaum A S; Prentice Hall

# Multimedia Communications: Apps, Networks, Protocols and Standards; 2001; Halsall F; Addison-Wesley

1. **Learning and teaching methods**

Total contact hours: 70

Private study hours: 80

Total study hours: 150

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

Online examination (1 hr) - 30%

Written assignment - 35%

Practical/written group assignment - 35%

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* | *9.1* | *9.2* | *9.3* | *9.4* |
| **Learning/ teaching method** |  |  |  |  |  |  |  |  |
| **Private Study** | √ | √ | √ | √ | √ | √ | √ | √ |
| *Lecture* | √ | √ | √ |  | √ |  | √ |  |
| *Laboratory* |  | √ | √ | √ |  | √ | √ | √ |
| *Tutorial* | √ |  | √ | √ | √ | √ |  | √ |
| **Assessment method** |  |  |  |  |  |  |  |  |
| *Individual Assignment* | √ | √ | √ | √ | √ | √ | √ | √ |
| *Group assignment* | √ | √ | √ | √ | √ | √ | √ | √ |
| *Examination* | √ | √ | √ |  | √ | √ | √ |  |

1. **Inclusive module design**

The Partner Institution 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**

Mid Kent College (Maidstone)

1. **Internationalisation**

The topics addressed by this module relate to a field of international importance, given the global role of computers in today's technological innovation. The protocols used by the computer communication systems that the students will study as part of this module are international, being identical worldwide and independent of traditional spoken language.

1. **Partner College/Validated Institution**

Mid Kent College

1. **University School responsible for the programme**

School of Computing

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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) |
| 18/05/17 | Minor | September 2018 | 10-14 | No |
|  |  |  |  |  |

Revised FSO Feb 2018