# UNIVERSITY OF NORTHAMPTON

# MODULE SPECIFICATION

This document forms the definitive overview as to the nature and scope of this module and is used in the University’s quality assurance processes. The information in this document cannot be changed without approval (except for the Indicative Content).

[A glossary of key terms is available.](https://www.northampton.ac.uk/ilt/current-projects/defining-contact-time/types-of-student-contact-time/)

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| **FACULTY** | Faculty of Art, Science & Technology |
| **SUBJECT AREA** | Technology |
| **SUBJECT FIELD** | Computing |
| **MODULE TITLE** | Computer Communications |

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| **MODULE CODE** | CSY1062 |
| **LEVEL** | 4 |
| **CREDIT VALUE** | 20 |
| **MODULE LEADER** | Dr Triantafyllos Kanakis |

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| **DELIVERY MODE(S)** | Standard |
| **DELIVERY LOCATION(S)** | UON |

**PRE-REQUISITES:**

None

**CO-REQUISITES:**

None

**RESTRICTIONS:**

None

**SUPPLEMENTARY REGULATIONS**:

This module has no supplementary regulations

**MODULE OVERVIEW:**

This module develops student’s understanding of the principles of communication networks and how to classify the various network devices in the appropriate layer of the protocol stack. Students will learn how to manage IP addresses in a small network and will develop confidence in using network simulation software.

**INDICATIVE CONTENT:**

* The principles of layering
* The underlying physical medium
* The physical layer, sending 0 and 1 bits, synchronous v. asynchronous communication.
* The data link layer, sending data across a local area network, frames.
* The medium access sub layer, sharing the underlying medium, topologies.
* The Network layer, connecting heterogeneous networks, encapsulation.
* Using the telephone network to carry computer data
* The Transport Layer, offering reliability, connection-oriented v. connectionless transport.
* The Session layer and Presentation layers.
* Network applications, client/server interaction.

**LEARNING OUTCOMES:**

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| **Module Learning Outcome** |
| **On successful completion of the module with detailed guidance students will be able to:** |
| **Subject-Specific Knowledge, Understanding & Application** |
| 1. Explain fundamental concepts and principles of the communication networks protocol stack. |
| 1. Recognise network devices and their use in network structures |
| 1. Work with IP addressing and apply on basic communication networks. considering compliance with standards and business needs. |
| 1. Use simulator software to optimise flow control and identify end-to-end error in a communication network. |

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| **Changemaker & Employability Skills** |
| 1. Effectively communicate information using appropriate terminology for the purpose and context. |
| 1. Use suggested approaches to plan and complete set tasks within given deadlines. |

**Readers are referred to the Programme Specification document for the list of PSRB requirements met by this module.**

**TYPICAL LEARNING, TEACHING AND ASSESSMENT HOURS (for the module as delivered on-site at the University of Northampton):**

[View this table on how learning, teaching and assessment hours map to the KIS Categories.](https://www.northampton.ac.uk/ilt/current-projects/defining-contact-time/kis-guidance/)

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| **Learning and teaching information for this module when delivered off-site by UN partners is available from the partner institution’s NILE site (or equivalent). Any variation in study hours must be approved by the University of Northampton before students are enrolled, ensuring that study hours provision is always appropriate to support student achievement of the module learning outcomes.** |

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| **Learning, Teaching and Assessment activities** | **Study hours** |
| **Contact hours: (total)**  Comprising face-to-face and online contact hours as follows: | **48** |
| * **Face-to-face (total) -** this may include the following: * Face to face interactive small group session (generic space in groups of approx. 30 e.g. seminars/workshops/tutorials) * Specialist space (e.g. laboratories, studio space) * F2F (broadcast) Lectures  (e.g. guest speaker, cohort induction) | 36 |
| * **Online contact hours** **(total)**  (comprising online activities with mediated tutor input) | 12 |
| **Guided independent study hours  (including hours for assessment preparation)** | **152** |
| **Module Total** | **200** |

**ALIGNMENT OF LEARNING OUTCOMES AND ASSESSMENTS:**

**University of Northampton:**

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| **Assessment Activity** | | | **Learning Outcomes** | **Weighting (%)** |
| **Code** | **Assessment Type** | **Assessment Deliverables** |  |  |
| TC1 | Time Constraint Assessment | Online Tests  2 hours (50%) | a, b, e | 50 |
| TC2 | Time Constraint Assessment | Online Tests  2 hours (50%) | c, d, f | 50 |

The assessment items listed above are graded and contribute to the overall module grade (assessment *of* learning). In addition, there are opportunities for formative assessment (assessment *for* learning), which are ungraded, to support students in achieving the module learning outcomes. These are NOT listed.

**APPROVAL/ REVIEW DATES:**

**Version: 1 (was CSY1017)**

Date of approval: