

## Programme Regulations: 2023/24

### Programme Titles:

**Degree of Master of Computing with Honours in Computer Science (Cyber Security)– UCAS Code: I198**

**Degree of Master of Computing with Honours in Computer Science with Industrial Placement (Cyber Security) – UCAS Code: I197**

### Notes

- (i) *These programme regulations should be read in conjunction with the University's Taught Programme Regulations.*
- (ii) *All optional modules are offered subject to the constraints of the timetable and to any restrictions on the number of students who may be taught on a particular module. Not all modules may be offered in all years.*
- (iii) *Unless otherwise stated under 'Type', modules are not core.*
- (iv) *A compulsory module is a module which a student is required to study.*
- (v) *A core module is a module which a student must pass, and in which a fail mark may neither be carried nor compensated; such modules are designated by the board of studies as essential for progression to a further stage of the programme or for study in a further module. Unless otherwise stated, modules are not core.*
- (vi) *All modules are delivered in Linear mode unless stated otherwise as Block, eLearning or distance learning.*
- (vii) *Programme transfers for Tier 4 students may be restricted by current Tier 4 rules. Please refer to the Visa Team for advice.*

### 1. Stage 1

- (a) All candidates shall take the following compulsory modules:

| Code    | Descriptive title                         | Total Credits | Credits Sem 1 | Credits Sem 2 | Level | Type |
|---------|---|---------------|---------------|---------------|-------|------|
| CSC1031 | Fundamentals of Computing                 | 20            | 10            | 10            | 4     |      |
| CSC1032 | Computer Systems Design and Architectures | 20            | 10            | 10            | 4     |      |
| CSC1033 | Foundations of Data Science               | 20            | 10            | 10            | 4     |      |
| CSC1034 | Programming Portfolio 1                   | 30            | 30            |               | 4     |      |
| CSC1035 | Programming Portfolio 2                   | 30            |               | 30            | 4     |      |

### 2. Stage 2

- (a) All candidates shall take the following compulsory modules:

| Code    | Descriptive title                            | Total Credits | Credits Sem 1 | Credits Sem 2 | Level | Type  |
|---------|--|---------------|---------------|---------------|-------|-------|
| CSC2031 | Security and Programming Paradigms           | 20            | 20            |               | 5     |       |
| CSC2032 | Algorithm Design and Analysis                | 10            | 10            |               | 5     |       |
| CSC2033 | Software Engineering Team Project            | 30            |               | 30            | 5     | Block |
| CSC2034 | Introducing Contemporary Topics in Computing | 30            |               | 30            | 5     | Block |
| CSC2035 | Software Systems Design and Implementation   | 30            | 30            |               | 5     |       |

### 3. Intercalating Year – I194 only

Upon completion of Stage 2 and before entering Stage 3, all candidates shall spend the equivalent of one academic year in a placement approved by the Placement Coordinator. If a candidate is not successful in securing an approved placement, or fails the assessment of the placement year, then the candidate will be required to transfer to Stage 3 of I192.

| <i>Code</i> | <i>Descriptive title</i>                              | <i>Total Credits</i> | <i>Credits Sem 1</i> | <i>Credits Sem 2</i> | <i>Level</i> | <i>Type</i> |
|-------------|---|----------------------|----------------------|----------------------|--------------|-------------|
| ICM0043     | Intercalating Module for Computing Science Programmes | 120                  | 60                   | 60                   | 6            |             |

#### 4. Stage 3

(a) All candidates shall take the following compulsory modules:

| <i>Code</i> | <i>Descriptive title</i>                           | <i>Total Credits</i> | <i>Credits Sem 1</i> | <i>Credits Sem 2</i> | <i>Level</i> | <i>Type</i> |
|-------------|--|----------------------|----------------------|----------------------|--------------|-------------|
| CSC3094     | Major Project and Dissertation in Computer Science | 60                   |                      | 60                   | 6            |             |
| CSC3631     | Cryptography                                       | 10                   | 10                   |                      | 6            |             |
| CSC3632     | System and Network Security                        | 20                   | 20                   |                      | 6            |             |

(b) All candidates shall select a further 30 credits of optional modules from the table below. Candidates may not select more than one 10 credit module.

| <i>Code</i> | <i>Descriptive title</i>                        | <i>Total Credits</i> | <i>Credits Sem 1</i> | <i>Credits Sem 2</i> | <i>Level</i> | <i>Type</i> |
|-------------|---|----------------------|----------------------|----------------------|--------------|-------------|
| CSC3121     | Distributed Systems                             | 10                   | 10                   |                      | 6            |             |
| CSC3231     | Graphics for Games                              | 10                   | 10                   |                      | 6            |             |
| CSC3232     | Gaming Technologies and Simulations             | 20                   | 20                   |                      | 6            |             |
| CSC3334     | Science of Computing                            | 20                   | 20                   |                      | 6            |             |
| CSC3431     | Introduction to BioDesign and Natural Computing | 20                   | 20                   |                      | 6            |             |
| CSC3432     | Biomedical Data Analytics and AI                | 20                   | 20                   |                      | 6            |             |
| CSC3634     | Fault Tolerant and Cyber-Physical Systems       | 20                   | 20                   |                      | 6            |             |
| CSC3731     | Human Computer Interaction: Interaction Design  | 20                   | 20                   |                      | 6            |             |
| CSC3831     | Predictive Analytics, Computer Vision & AI      | 20                   | 20                   |                      | 6            |             |
| CSC3833     | Data Visualization and Visual Analytics         | 10                   | 10                   |                      | 6            |             |
| NCL3007     | Career Development for Final Year Students      | 20                   | 10                   | 10                   | 6            |             |

(c) Candidates may take modules from other Schools to a value of 20 credits, subject to the approval of the Degree Programme Director. NCL3007 is treated as 20 credits from another School and is subject to the approval of the Degree Programme Director.

#### 5. Stage 4

(a) All candidates shall take the following compulsory modules:

| <i>Code</i> | <i>Descriptive title</i>                                      | <i>Total Credits</i> | <i>Credits Sem 1</i> | <i>Credits Sem 2</i> | <i>Level</i> | <i>Type</i> |
|-------------|---|----------------------|----------------------|----------------------|--------------|-------------|
| CSC8103     | Distributed Algorithms  | 10                   | 10                   |                      | 7            | Block       |
| CSC8106     | System Evaluation   | 10                   | 10                   |                      | 7            | Block       |
| CSC8202     | Information Security and Cryptography                         | 10                   | 10                   |                      | 7            | Block       |
| CSC8204     | Secure Software Development                                   | 10                   | 10                   |                      | 7            | Block       |
| CSC8208     | Research Methods and Group Project in Security and Resilience | 20                   |                      | 20                   | 7            | Block       |
| CSC8216     | Risk & Trust Management                                       | 10                   | 10                   |                      | 7            | Block       |
| CSC8498     | Project and Dissertation for MComp                            | 30                   |                      | 30                   | 7            |             |

(b) All candidates shall choose one of the following optional modules:

| <i>Code</i> | <i>Descriptive title</i> | <i>Total Credits</i> | <i>Credits Sem 1</i> | <i>Credits Sem 2</i> | <i>Level</i> | <i>Type</i> |
|-------------|--------------------------|----------------------|----------------------|----------------------|--------------|-------------|
| CSC8110     | Cloud Computing          | 10                   | 10                   |                      | 7            | Block       |
| CSC8111     | Machine Learning         | 10                   | 10                   |                      | 7            | Block       |

(c) All candidates shall choose one of the following optional modules:

| <i>Code</i> | <i>Descriptive title</i>    | <i>Total Credits</i> | <i>Credits Sem 1</i> | <i>Credits Sem 2</i> | <i>Level</i> | <i>Type</i> |
|-------------|-----------------------------|----------------------|----------------------|----------------------|--------------|-------------|
| CSC8101     | Engineering for AI          | 10                   |                      | 10                   | 7            | Block       |
| CSC8207     | Security of Complex Systems | 10                   |                      | 10                   | 7            | Block       |

#### **6. Assessment methods**

Details of the assessment pattern for each module are explained in the module outline.

#### **7. Progression and transfer to other programmes**

Candidates wishing to progress to Stage 3 must pass Stage 2 with a stage average mark of at least 50%. Candidates who fail to satisfy this criterion are normally required to transfer to the degree of Bachelor of Science with Honours in Computer Science (Security and Resilience).

For students entering in 2018/19 onwards, candidates wishing to progress to Stage 3 must pass Stage 2 with a stage average mark of at least 60%. Candidates who fail to satisfy this criterion are normally required to transfer to the degree of Bachelor of Science with Honours in Computer Science (Security and Resilience).

Candidates wishing to progress to Stage 4 are normally required to pass all Stage 3 modules with a stage average mark of at least 60%. Candidates who fail to satisfy this criterion shall be considered for the award of Bachelor of Science with Honours in Computer Science (Security and Resilience).

#### **8. Degree title**

Candidates who fail to satisfy the requirements for the award of Master of Computing with Honours in Computer Science (Security and Resilience) shall be considered for the award of Bachelor of Science with Honours in Computer Science (Security and Resilience).

Candidates who fail to satisfy the requirements for the award of Master of Computing with Honours in Computer Science with Industrial Placement (Security and Resilience) shall be considered for the award of Bachelor of Science with Honours in Computer Science with Industrial Placement (Security and Resilience).

#### **9. Degree classification**

Candidates will be assessed for degree classification on the basis of all the modules taken at Stages 2, 3 and 4 with the weighting of the stages being 1:2:2 for Stage 2, Stage 3 and Stage 4 respectively.