APPROVED

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| **Programme Code** | MSCCYB | **Programme Duration** | 1 | | | | |
| **Programme Level** | 9 | | | **EQF Level** | 7 | **EHEA Level** | Second Cycle |
| **Programme Credits** | 90 | | | | | | |

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| **Semester Duration** | 1 Week(s) |
| **Language of Instruction** | English |
| **CAO Code; QQI Progamme Code etc** | **Code** |
| **Programme Extra Information** | Note 1: A student must pass Research in Computing and not repeat more than 10 ECTS credits to be eligible to register for the Internship Note 2: Learners must complete and pass Internship. |

# Programme Outcomes

On successful completion of this programme the learner will be able to :

| Description |
|---|
| MIPLO1: Compare and contrast technical concepts of security, technologies and tools that support secure application development, application and service vulnerability detection and patching, data and logs retrieval and analysis. MIPLO4: Utilise practical skills, technologies and tools that support secure programming, application and service vulnerability detection and patching, cryptanalysis, security incidents detection and log file analysis. MIPLO5: Integrate technologies and security concepts to solve a challenging Cyber Security problem and to successfully plan, develop and test a security product within a given context (e.g. cloud security and forensics). |
| MIPLO1: Compare and contrast technical concepts of security, technologies and tools that support secure application development, application and service vulnerability detection and patching, data and logs retrieval and analysis. MIPLO2: Research by applying standard and customised research methodologies and critically, analyse, evaluate and synthesise original works in a number of cutting-edge Cyber Security topics. |
| MIPLO2: Research by applying standard and customised research methodologies and critically, analyse, evaluate and synthesise original works in a number of cutting-edge Cyber Security topics. MIPLO3: Communicate effectively to a range of audiences in both written and verbal media. MIPLO5: Integrate technologies and security concepts to solve a challenging Cyber Security problem and to successfully plan, develop and test a security product within a given context (e.g. cloud security and forensics). MIPLO7: Analyse, identify and document measures to address vulnerabilities, risks, weaknesses, and other safety aspects relevant to computing systems within a given context (e.g. cloud security and forensics). MIPLO8: Identify knowledge gaps and undertake self-learning to acquire new knowledge and meet the requirements of the rapidly developing and expanding security industry. |
| MIPLO2: Research by applying standard and customised research methodologies and critically, analyse, evaluate and synthesise original works in a number of cutting-edge Cyber Security topics. MIPLO3: Communicate effectively to a range of audiences in both written and verbal media. MIPLO5: Integrate technologies and security concepts to solve a challenging Cyber Security problem and to successfully plan, develop and test a security product within a given context (e.g. cloud security and forensics). MIPLO8: Identify knowledge gaps and undertake self-learning to acquire new knowledge and meet the requirements of the rapidly developing and expanding security industry. |
| MIPLO5: Integrate technologies and security concepts to solve a challenging Cyber Security problem and to successfully plan, develop and test a security product within a given context (e.g. cloud computing, big data and forensics). MIPLO6: Make decisions and address security requirements through analytical thinking, communication and interaction. MIPLO7: Analyse, identify and document measures to address vulnerabilities, risks, weaknesses, and other safety aspects relevant to computing systems within a given context (e.g. Cloud computing or forensics). |
| MIPLO3: Communicate effectively to a range of audiences in both written and verbal media. MIPLO6: Make decisions and address security requirements through analytical thinking, communication and interaction. |
| MIPLO2: Research by applying standard and customised research methodologies and critically, analyse, evaluate and synthesise original works in a number of cutting-edge Cyber Security topics. MIPLO8: Identify knowledge gaps and undertake self-learning to acquire new knowledge and meet the requirements of the rapidly developing and expanding security industry. |
| MIPLO2: Research by applying standard and customised research methodologies and critically, analyse, evaluate and synthesise original works in a number of cutting-edge Cyber Security topics. MIPLO3: Communicate effectively to a range of audiences in both written and verbal media. |

# Semester Schedules

### Stage 1 / Semester 1

| Core Subject | |
|---|---|
| **Module Code** | **Title** |
| H9ITLW | IT Law and Ethics |
| H9NSPT | Network Security and Penetration Testing |
| H9SPW | Secure Programming for Web |
| H9SFND | Security Fundamentals |

### Stage 1 / Semester 2

| Core Subject | |
|---|---|
| **Module Code** | **Title** |
| H9CRYPT | Cryptography |
| H9RCOMP | Research In Computing |
| H9SPAD | Secure Programming for Application Development |

| Optional | |
|---|---|
| **Module Code** | **Title** |
| H9CS | Cloud Security |
| H9DCXT | Domain Context |
| H9FRED | Forensics and eDiscovery |
| H9IRSAN | Incident Response and Analytics |
| H9MWAN | Malware Analysis |

### Stage 1 / Semester 3

| Core Subject | |
|---|---|
| **Module Code** | **Title** |
| H9ITNS | Internship |

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| H9RTM | Research Methods |