

# BSc (Hons) Cybersecurity

## Year 2 & 3 of a 3 Year Degree

This programme aims to give students a fundamental understanding of how to protect organisations, networks, IT systems and individuals against Cyber attacks and Cyber threats. This course includes an understanding of Cyber threats and attacks, and the criminal sub-culture which is increasingly profiting from those attacks, how to manage information and the risks to that information, practical approaches to implementing physical and process controls to reduce information threats, and the design of secure systems and products which will enable businesses to withstand Cyber attacks.

The course also includes aspects of Cryptography and Forensic Computing, and students will have the opportunity to engage with the latest software and forensic approaches.

Gain an understanding of cyber security architecture and operations by making use of specialist tools and equipment to develop your knowledge of computer networks and will gain technical understanding of how to protect computer systems and networks. Students will gain experience within ethical hacking and web development techniques. In the final year, students will further develop and apply their knowledge in different applications and technologies, techniques, tools and methods in relation to cyber security.

Employment in the area of Cyber security is predicted to increase five fold in the next years, and there is already a severe shortage of trained graduates able to work in this area. Therefore, the likelihood of gaining well-paid employment at the end of the degree is extremely high.

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**Study Options**  
Full Time or Part Time

**Duration**  
2 Academic Years  
or 4 Academic Years (Part Time)  
240 CATS (120 ECTS)

**Assessment**  
Assessment through examinations  
and coursework assignments

**Entry Requirements**  
Level 4 Computing Award such as:  
Higher National Certificate Computing  
NCC Diploma in Computing  
English Language Certification

**Location**  
STC Higher Education  
Block D, Giorgio Mitrovich Street,  
Pembroke, Malta

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## Year 2 of Degree

### Cybersecurity Architecture and Operations

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This module provides an in-depth understanding of the physical controls and surrounding processes that need to be implemented to reduce cyber risks. Different physical architectures and operations are explored, in order to align with best practice guidelines and ensure protection of services, systems and information.

### Computer Networking

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Learn the principles of a modern networked environment, and how this extends to the internet. It is a practical orientated view of networks with many opportunities to set up and configure typical network equipment such as switches and routers as used in real networks.

### Network Security

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Students will learn about the potential threats that are continuously experienced in computer networks today through hands on practical tasks. This module covers topics such as active and passive attacks on networks, and how to protect your network from them.

### Ethical Hacking

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The purpose of this module is to provide knowledge in ethical hacking, penetration testing, and vulnerability assessment (VA). Security concepts and methodologies (e.g. penetration testing, VA) are extensively covered in this module as part of the technical skills required. The module will involve you performing ethical hacking tasks with the emphasis on 'ethics' throughout your work.

### Web Development

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This module allows you to further develop an understanding of Web Development. The lecture material covers the technologies involved in the production and support of secure, dynamic websites using a server-side scripting language and a database. During workshop sessions, you have the opportunity to practice lecture-taught material to develop your own website.

### Collaborative Development

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This module aims to integrate the subject material studied in other modules and give students experience of developing an artefact in a team. Students will learn to work in teams to coordinate and manage a project.

## Year 3 of Degree

### Advanced Networks

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This module will cover the more advanced areas of networks and in particular current trends in network design and management. Students will have the opportunity to make use of popular software that supports the design of commercial networks.

### Cyber Threat Intelligence

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Students will utilise and evaluate successful threat intelligence strategies and tactics. An overview of related cybersecurity tools and techniques will be covered with students gaining fundamental as well as advanced knowledge and skills to perform risk assessments and develop actionable threat intelligence that enables organisations' security systems to anticipate, respond, and take appropriate action.

### Risk and Cybersecurity Management

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This module will help students develop an understanding of the risk and threats that may affect IT systems and electronic business through analysing the threats, vulnerability of systems and through selecting appropriate countermeasures to prevent such risks for impacting the confidentiality, integrity and availability (CIA) of data and systems.

### Digital Forensics

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This module provides students with the environment to learn key theories and methodologies before conducting an appropriate computer forensic investigation. This module covers the phases of an investigation from seizure, evidence handling, data presentation, investigation, interpretation and report/documentation of findings.

### Project and Professionalism

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Learn about professional issues related to working in the Computing and IT industry. Students will consider professional conduct and the social, legal and ethical implications related to the profession. Students will be assigned a mentor who will be able to provide guidance and support throughout the final year project.