



**MCAST**

**MQF Level 6**

**IT6-A07-23**

**Bachelor of Science (Honours) in Cybersecurity**

**Course Specification**

## **Course Description**

The Cybersecurity Degree is a 3-year programme that provides students with a comprehensive understanding of concepts, techniques, and tools required to secure software applications, computer systems and networks. Students will increase their proficiency in the usage of open source operating systems, network security, database programming, digital forensics, and offensive security. They will also develop practical skills in mitigating cyber threats.

The programme includes work-based component, whereby one's own skills are put to good use by working alongside experienced cybersecurity professionals. Additionally, the programme has a research component, whereby the student would undertake a dissertation. This applied research will draw on the skills and knowledge gained throughout the course to explore a specific area of cybersecurity in depth.

Graduates of this programme will gain sufficient hands-on experience to thrive in the dynamic field of cybersecurity. The expertise acquired will enable them to pursue careers in the cybersecurity sector, including roles such as cybersecurity specialists, information security analysts, network security engineers, penetration testers, and digital forensic experts alongside others.

## **Programme Learning Outcomes**

At the end of the programme the learner will be able to:

- 1. Identify fundamental concepts and principles of computer platforms, networking and security.*
- 2. Apply critical thinking and problem-solving skills to design, implement and secure computer systems, databases and networks.*
- 3. Evaluate digital evidence, and apply forensic techniques to investigate breaches in a context of security.*
- 4. Communicate ethical and professional behaviour in the domain of cybersecurity.*

## **Entry Requirements**

MCAST Advanced Diploma in IT

Recommended streams: Computer Systems and Networks OR Software Development

OR

2 A-Level passes and 2 I-Level passes

Compulsory A-Level: Computing

AND

Compulsory A-Level or I-Level: Mathematics (Pure or Applied) or Physics

**Current Approved Programme Structure**

<b>Unit Code</b>	<b>Unit Title</b>	<b>ECTS</b>	<b>Year</b>	<b>Semester</b>
ITNET-506-2006	Linux Fundamentals	6	1	1
ITSYS-506-1604	Computer Platforms	6	1	1
ITDBS-506-1603	Database Programming I	6	1	1
ITNET-506-1602	Networking Concepts	6	1	1
CDKSK-503-2328	English for Academic Purposes	3	1	1
ITCSN-506-2301	Server Administration	6	1	2
ITSFT-506-2007	Software Test Automation	6	1	2
ITSFT-506-1609	Low Level Programming 1	6	1	2
ITSTY-506-1601	Security Fundamentals	6	1	2
CDWBL-506-1901	Work Based Learning I	6	1	2
ITCSN-503-2302	Scripting for Networking I	3	1	2
CDWBL-506-1902	Work Based Learning II	6	2	1,2
ITMTH-506-2303	Maths for Cybersecurity	6	2	1
ITSFT-506-1612	Server Side Scripting	6	2	1
ITNET-506-2008	Digital Forensics	6	2	1
ITCSN-503-2303	Scripting for Networking II	3	2	1
ITNET-506-1806	Network Security	6	2	2
ITNET-506-2009	Linux Server Administration	6	2	2
ITSFT-506-2012	Securing Applications	6	2	2
ITRSH-506-2101	Research Design I	6	2	2
CDKSK-604-2336	Entrepreneurship	4	2	2
CDKSK-602-2335	Community Social Responsibility	2	2	2
CDKSK-503-2329	English for Dissertation Writing	3	2	2
ITCYB-606-2301	Malware Analysis	6	3	1
ITCYB-606-2302	Cyber Threat Intelligence	6	3	1
ITCYB-606-2303	Mobile Device Security	6	3	1
ITSFT-606-2303	Systems Programming	6	3	1
ITCSN-606-2304	Advanced Digital Forensics	6	3	2
ITCYB-606-2304	Offensive Security	6	3	2
ITNET-606-1614	Cloud Infrastructures	6	3	2
ITRSH-606-2102	Research Design II	6	3	2
ITDIS-612-1601	Dissertation	12	3	2
<b>Total ECTS</b>		<b>180</b>	<b>/</b>	<b>/</b>