

Course title: Fundamental Concepts in Cyber Security

Course number:	ISCG6407	Level:	6	Credits:	15
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Main programme:	BCS
Pre-requisites:	For BCS: 5403 For GDCMP: 5403
Co-requisites:	None
Restrictions:	
Compulsory/elective:	BCS Elective GDCMP Elective

Learning time:	150 hours
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(Lecturer) Contact hours	Non-contact hours	Total hours
32 (13 weeks)	118	150

Level descriptor:

<div> <div></div> <div></div> </div> The student is able to carry out processes that <ul style="list-style-type: none"> require a wide range of specialised technical or scholastic skills involve a wide choice of standard and non-standard procedures are employed in a variety of routine and non-routine contexts employing <ul style="list-style-type: none"> a broad knowledge base with substantial depth in some areas analytical interpretation of a wide range of data the determination of appropriate methods and procedures in response to a range of concrete problems with some theoretical elements and applied <ul style="list-style-type: none"> in self-directed and sometimes directive activity within broad general guidelines or functions with full responsibility for the nature, quantity and quality of outcomes with possible responsibility for the achievement of <u>group</u> outcomes.
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Course aim: To provide students with a clear understanding of fundamental concepts of cyber security as well as develop the knowledge needed to understand security risks and mitigation mechanisms associated with the implementation and management of IT infrastructure.

Learning outcomes:

	Learning outcomes
1.	Analyse and describe the principles of information in the context of cyber security threats and attacks, covering basic information security concepts
2.	Investigate techniques used by hackers to penetrate systems and launch attacks
3.	Differentiate and integrate legal, privacy and ethical aspects in the context of cyber security to develop a security policy
4.	Review basic security issues related to wired, wireless and mobile networks covering authentication, message encryption and key management
5.	Analyse different mitigation mechanisms and prevention to determine and evaluate possible security solutions