Bachelor of Engineering in Information and Communications Technology (Information Security)

Students admitted as First year students in AY2020 and onwards

Modules and pre-requisites

Study Year	Core	Elective	Total
1	74		**74**
2	82	-	**82**
3	76		**76**
4	8		**8**
TOTAL	**240**		**240**

Module Code and Title	Type	CR	Pre-req/Remarks
YEAR 1 TRIMESTER 1			
ICT1001 Introduction to ICT	Core	5	
ICT1002 Programming Fundamentals	Core	8	
ICT1003 Computer Organisation and Architecture	Core	8	Co-req: ICT1001, ICT1002
ICT1004 Web Systems and Technologies	Core	8	
ICT1005 Mathematics and Statistics for ICT	Core	8	
TOTAL		**37**	
YEAR 1 TRIMESTER 2			
ICT1006 ICT in Organisations	Core	5	
ICT1007 Operating Systems	Core	8	Co-req: ICT1003
ICT1008 Data Structures and Algorithms	Core	8	Pre-req: ICT1002 or knowledge such as C++, C, Java, Python, or C# in a related diploma module with a grade of B+ Co-req: ICT1005
ICT1009 Object-Oriented Programming	Core	8	Pre-req: ICT1002 or knowledge such as C++, C, Java, Python, or C# in a related diploma module with a grade of B+
ICT1010 Computer Networks	Core	8	Co-req: ICT1002
TOTAL		**37**	
YEAR 1 TRIMESTER 3			
ACADEMIC BREAK			
YEAR 2 TRIMESTER 1			
ICT2201 Introduction to Software Engineering	Core	8	Pre-req: ICT1009 or knowledge such as C++, C, Java, Python, or C# in a related diploma module with a grade of B+.
ICT2202 Digital Forensics	Core	8	Pre-req: ICT1003 Co-req: ICT1007
ICT2203 Network Security	Core	8	Co-req: ICT1010#
ICT2204 Ethical Hacking	Core	8	Pre-req: ICT1004 Co-req: ICT1010
ICT2901 Career and Professional Development 1	Core	5	
TOTAL		**37**	
YEAR 2 TRIMESTER 2			
ICT2205 Applied Cryptography	Core	8	Co-req: ICT1009, ICT2203

ICT2206 Web Security	Core	8	Pre-req: ICT1004
ICT2207 Mobile Security	Core	8	Pre-req: ICT1001, ICT1003 Co-req: ICT1007, ICT1010
ICT2208 Security Governance, Risk Management and Compliance	Core	8	Pre-req: ICT1006 Co-req: two modules in ICT22xx
ICT2902 Career and Professional Development 2	Core	5	Pre-req: ICT1006 and at least 43 credit units
TOTAL		**37**	

YEAR 2 TRIMESTER 3			
ICT2209 Global/Regional Exposure to Advances in Technology (GREAT)	Elective	0	Pre-req: At least 2 study trimesters
ICT3210 Industry Certification Module	Core	4	P/F Module
ICT3211 Integrative Team Project	Core	4	Pre-req: Exemption or Pass of 15 ICT modules prior to second-year Trimester 3 Co-req: ICT2201
TOTAL		**8**	

YEAR 3 TRIMESTER 1			
ICT3201 Operations Security and Incident Management	Core	8	Co-req: ICT2204
ICT3202 Malware Analysis and Defence	Core	8	Pre-req: ICT1003 Co-req: ICT2204
ICT3203 Secure Software Development	Core	8	Pre-req: ICT1009, ICT2201
ICT3204 Security Analytics	Core	8	Pre-req: ICT1005 Co-req: ICT2203
ICT3001 Self-Learning Module	Core	5	Pre-req: Successfully completed 12 Modules
TOTAL		**37**	

YEAR 3 TRIMESTER 2			
ACADEMIC BREAK			

YEAR 3 TRIMESTER 3			
ICT4001 Capstone Project	Core	15	Pre-req: Maintain a CGPA of 2.0 at the start of IWSP and exempted from/passed ICT10xx, ICT29xx, ICT30xx, ICT22xx (except ICT2209), ICT32xx (except ICT3210) Co-req: ICT4002
ICT4002 Integrated Work Study Programme	Core	20	Pre-req: Maintain a CGPA of 2.0 at the start of IWSP and exempted from/passed ICT10xx, ICT29xx, ICT30xx, ICT22xx (except ICT2209), ICT32xx (except ICT3210) Co-req: ICT4001 P/F Module
ICT4004 Design Thinking	Core	4	During IWSP Co-req: ICT4002
TOTAL		**39**	

YEAR 4 TRIMESTER 1			

ICT4001 Capstone Project	Core	-	Continuation from previous trimester
ICT4002 Integrated Work Study Programme	Core	-	
ICT4003 Productivity Management	Core	4	During IWSP Co-req: ICT4002
TOTAL		**4**	
YEAR 4 TRIMESTER 2			
ICT4001 Capstone Project	Core	-	Continuation from previous trimester
ICT4002 Integrated Work Study Programme	Core	-	
ICT4005 Change Management	Core	4	During IWSP Co-req: ICT4002
TOTAL		**4**	
GRAND TOTAL		**240**	
Graduate with Bachelor of Engineering in Information and Communications Technology (Information Security)			

Note:

* If the student is taking IWSP (ICT4002) from **1810 onwards**, their billing credits for IWSP will be split across 3 trimesters. Please refer to the below table:

Trimester	Year 3 Trimester 3	Year 4 Trimester 1	Year 4 Trimester 2
Credits	7	7	6

\# With effect from AY2020 Trimester 2, ICT1010 Computer Networks will be updated from the pre-requisite to the co-requisite for ICT2203 Network Security. All AY2020 students who have not taken ICT2203 before AY2020 Trimester 2 will take ICT1010 as the co-requisite for ICT2203.