

1. Title of subject	Computer Security	
2. Subject code	TSC2211	
3. Status of subject	Major Subject	
4. Credit Hour	3 28 Hours of Lecture 28 Hours of Laboratory LAN's Credit Hours Equivalence: 3.00	
5. Semester	Trimester 3 (Gamma Level)	
6. Pre-Requisite	Computer Programming 11 (TCP1241)	
7. Methods of Teaching	28 Hours of Lecture 28 Hours of Laboratory	
8. Assessment	Coursework 40% Final Exam 60% Total 100%	
9. Teaching Staff (Proposed)	Mr. Nabeel Mr. Kamachi Ravi	
10. Objective of subject	To introduce the different security threats in computing environment and the solutions.	
11. Synopsis of Subject	The major area of this course includes: Potential threats such as Viruses, Worms, Basics of cryptography, encryption algorithms, Network security, database security and legal issues.	
	Bidang tumpuan kursus ini meliputi pelbagai jenis potensi ancaman seperti virus, cacing, asas kriptografi, algoritma kriptografi, jaringan dan pangkalan data securiti serta isu-isu yang berkaitan dengan undang-undang computer securiti.	
12. Learning Outcomes	By the end of the subject, students should be able to <ul style="list-style-type: none"> • Understand the Fundamental of Computer Security. • Identify the potential threats and security issues in stand-alone network and database computing environment. • Understand the Fundamentals of Networking and Telecommunication Security. • Identify the legal understanding issues on Computer Security, Software Violation and computer based Security Standards. 	
	Programmes Outcomes	Degree of contribution
	Ability to apply soft skills in work and career related activities	5

	Good understanding of fundamental concepts	35
	Acquisition and mastery of knowledge in specialized area	10
	Acquisition of analytical capabilities and problem solving skills	30
	Adaptability and passion for learning	5
	Cultivation of innovative mind and development of entrepreneurial skills	5
	Understanding of the responsibility with moral and professional ethics	10
13. Details of subject	Tajuk Pengajaran	Hours
	1. Fundamental of Computer Security Objectives, privacy and Ethics, Risk Analysis in computer security, Threats and security, security measures, physical protection (natural disaster, Physical facility, Access Control, Hardware and Software Security Control, Viruses (Trojan Horses, Worms and Logic Bomb), Encryption and Cryptography Techniques.	8
	2. Developing Secure Computer Systems External Security Measures, Issue, Security Models (Specification and Verification, Bell and LaPadulla Model, Clark-Wilson Model, Goguen-Meseguar, TCSED), Discretionary Access and Information Flow Control, Auditing and Intrusion Detection, Damage Control and Assessment, Microcomputer Security	6
	3. Network and Telecommunication Security Fundamentals, Issue, Objective and Threats, Security Services, Distributed System Security, The Trusted Network Interpretation, TNI Security Services, AIS Interconnection Issues, Firewalls (Gateway, Application, Cost and Effectiveness)	6
	4. Database Security Security Requirements to Databases, Designing the Security, Methods of	4

	Protection, Security of Multilevel Database	
Laboratory	5. Legal Issue and Current Legislation Computer Crime, Software Violation, Crimes, Privacy Considerations, Corporate Policy, Managerial Issues, Government – based Security Standards, New Techniques and future Plans : Ergonomics	4
	Total Contact Hours	28
14. Reference	Reference books	<ol style="list-style-type: none"> 1. Karen A.F, “ Computer Security Management ”, 1994. 2. Gregory, B.W, Eric A.F and Udo W.P., “ Computer Systems and Network Security”, CRC Press Ind. 1996. 2. David A.C., “ UNIX Systems Security : A Guide for user & System Administrator”, Addison-Wesley, 1992. 3. Deborah R. “ Computer Security Basics”, O’Reilly Associates Inc. 1991. 4. Edward A., “ Fundamental of computer Security Technology”, Prentica-Hall, 1994.