LYCEUM
OF ALABANG INC.
ISO 9001:2015 CERTIFIED

General Education Department
OBE SYLLABUS

COURSE TITLE	**INFORMATION ASSURANCE AND SECURITY 1**		**COURSE CODE**		
TYPE/CLASSIFICATION	**MAJOR SUBJECT**	**CREDIT UNITS**	**3**	**LEC/ HRS**	**1: 30 HRS**
					NONE
Course Pre-Requisites	**NONE**	**Course Co-requisites**	**NONE**		

INSTITUTIONAL

PHILOSOPHY

Taken from the book of Ps 32:8,"An institution that provides quality and relevant instruction and innovation for the next generation to improve the life of individuals; physically, emotionally, morally, & spiritually adhere to the principles of God."

VISION	MISSION
Lyceum of Alabang envisions becoming one of the nation's leading institutions involved in the pursuit of the advancement of knowledge, skills, and values for personal, community, and national development.	Lyceum of Alabang shall provide world-class education & training through competent personnel, high-end facilities, advanced technology, & equipment and accredited industry-based programs.

OBJECTIVES	**1. To understand the security of the different components of information systems.** **2. To apply encryption techniques & their applications in security,** **3. To analyze the importance of security system to apply for the improvement of the security system.**

Prepared by:	**RODOLFO B. MALIG-ON** NAME of Faculty	**Date:** **6-18-2024**
Checked & reviewed by:	**REGIE C. ELLANA** Dean/Program Chairperson	**Date:**
Recommending Approval:	**FREDERICK F. ERIBAL** Director for Curriculum Development	**Date:**
Approved by:	**Dr. LEAH P. DIGO, PhD** Vice President for Academic Affairs	**Date:**

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Course Description	This course covers essential topics in cybersecurity, providing a comprehensive understanding of how to safeguard information assets against various threats. Students will explore the fundamental concepts of information security, risk management, and the implementation of effective security measures.
Course Intended/ Learning Outcomes (LO): All the end of the course, the student should be able to:	Cognitive: • Understand key principles of information security (confidentiality, integrity, availability). • Identify and evaluate risks and vulnerabilities in information systems. • Learn cryptographic techniques and network security fundamentals. Affective: • Appreciate the importance of ethical behavior in cybersecurity. • Recognize the impact of security policies and compliance on organizational security. • Develop a proactive attitude towards continuous learning in information security. Psychomotor: • Implement security measures such as firewalls, encryption, and access control. • Develop and execute incident response and recovery plans. Use security tools and technologies to protect information assets.

COURSE OUTLINE

Time Frame (week/s)	STUDENT LEARNING OUTCOMES	OUTLINE TOPICS	TEACHING LEARNING ACTIVITIES (TLAs)/METHODOLOGY			RESOURCES	ASSSESSMENT/ACTIVITIES
			SYNCHRONOUS	ASYNCHRONOUS	F2F		
Week 1		**CLASS ORIENTATION / SYLLABUS**	DISCUSSION VIA MS TEAMS	ASSIGNMENT	N/A	STUDENT MANUAL	VIRTUAL RECITATION
Week 2	I.	**Introduction – Information Assurance Security 1** • Security Threats in Information systems • Programs, operating system, and database security and integrity • Network security models	Interactive Lecture, Discussion and Virtual Demonstration via MS Teams	Self-Paced and time Independent Learning using the module (Digital Copy)	N/A	Principles of Information Security 3d Edition, Whitman and Mattord, Thompson Course Technology, ISBN: 970-1-4-2390177-0	MS TEAMS ASSIGNEMENT
Week 3-4	II.	**Computer Security** a. Hardware Vulnerabilities b. Virus and other malicious programs c. Virus countermeasures d. Intrusion techniques and detection	Interactive Lecture, Discussion and Virtual demonstration via MS Teams	Self-Paced and time Independent Learning using the module (Digital Copy)	N/A	Principles of Information Security 3d Edition, Whitman and Mattord, Thompson Course	MS TEAMS ASSIGNEMENT

		e. Password management				Technology, ISBN: 970-1-4-2390177-0	
Week 5	**PRELIMS EXAMINATION**						
Week 6-7	III.	**Operating System Security** a. Overview and policies for database security b. Models for database access control c. Information flow model **d.** Authorization techniques auditing and control	Interactive Lecture, Discussion and Virtual demonstration via MS Teams	Self-Paced and time Independent Learning using the module (Digital Copy)	N/A	Principles of Information Security 3d Edition, Whitman and Mattord, Thompson Course Technology, ISBN: 970-1-4-2390177-0	MS TEAMS ASSIGNEMENT
Week 8-9	IV	**Database Security and Integrity** a. Overview and policies for database security b. Models for database access control c. Information flow model	Interactive Lecture, Discussion and Virtual demonstration via MS Teams	Self-Paced and time Independent Learning using the module (Digital Copy)	N/A	Principles of Information Security 3d Edition, Whitman and Mattord, Thompson Course Technology, ISBN: 970-1-4-2390177-0	MS TEAMS ASSIGNEMENT
Week 10	**MIDTERM EXAMINATION**						
Week 11 -12	V	**Encryption Techniques** a. Authorization techniques Auditing and control b. Block & stream encryption c. Advanced encryption standard d. Key distribution & random number generation e. Public key cryptography and RSA **f.** Has functions	Interactive Lecture, Discussion and Virtual demonstration via MS Teams	Self-Paced and time Independent Learning using the module (Digital Copy)	N/A	Principles of Information Security 3d Edition, Whitman and Mattord, Thompson Course Technology, ISBN: 970-1-4-2390177-0	MS TEAMS ASSIGNEMENT
Week 13-14	VI	**Digital signatures and authorization protocol** a. Digital signatures standards **b.** Authentication services and protocols	Interactive Lecture, Discussion and Virtual demonstration via MS Teams	Self-Paced and time Independent Learning using the module (Digital Copy)	N/A	Principles of Information Security 3d Edition, Whitman and Mattord, Thompson Course Technology, ISBN: 970-1-4-2390177-0	MS TEAMS ASSIGNEMENT
Week 15	**PRE-FINAL EXAMINATION**						
Week 16 – 17	VII	**IP and Web Security** **a. IP security architecture** **b. IPSec protocol** **c. Web security considerations** **d. Secure socket layer and transport layer security** **e. Secure electronic transactions**	Interactive Lecture, Discussion and Virtual demonstration via MS Teams	Self-Paced and time Independent Learning using the module (Digital Copy)	N/A	Principles of Information Security 3d Edition, Whitman and Mattord, Thompson Course Technology, ISBN: 970-1-4-2390177-0	MS TEAMS ASSIGNEMENT
Week 18	**FINAL PRESENTATION / EXAMINATION**						
	HOURS		**PRINTED & ONLINE PREFERENCES**				
20		**FINALS**	Review Test & Exam (1.5hrs)			Test Questionnaires (40items)	
						✓	✓
						✓	✓
						✓	✓
Total No. of Hours			**PRINTED & ONLINE REFERENCES**				
SUMMARY OF REQUIREMENTS:							

FINAL GRADE EVALUATION METHOD

CRITERIA	PERCENTAGE	
CLASS STANDING		60%
Student Participation(Group/Individual Works)	30%	
Quizzes / Seatwork	20%	
Research Output/ Homework	25%	
Performance	25%	
MAJOR EXAMINATION		40%
	TOTAL	**100%**

MS TEAMS

ASSIGNEMENT

COMPUTATION

Prelim Grade (PG) = (60% Class Standing + 40% Major Exam)
Midterm Grade (MG) = (60% Class Standing + 40% Major Exam) * 70% + PG * 30%
Pre-Final Grade (PFG) = (60% Class Standing + 40% Major Exam) * 70% + MG * 30%
Final Grade (MG) = (60% Class Standing + 40% Major Exam) * 70% + PFG * 30%
SUBJECT GRADE **=** Final Grade

Passing Grade : 75%