1. Course and Instructor Information

College:	**Science**
Department:	**Information Technology and Information System Department**
Course Title:	**IT Security and Management**
Course Code:	**IS 328**
Pre-Requisite:	
Co-Requisite:	
Credit Units:	**2 units lecture / 1 unit laboratory**
Instructor:	**DR. CARMELITA H. BENITO, NSE, MTA, CSFPC, ISA, ITS**
Consultation Hours:	

2. Course Description

This course prepares the student to employ the theoretical and conceptual underpinning to improve information security behavior and develop skills in a work-related context in private, public, or government enterprises. The course is designed to assess decisions and policies to improve information security management.

3. Institutional Graduate Outcomes (IGO) and Relationship to Student Outcomes (SO) & Course Outcomes (CO)

Course Outcome	Student Outcomes	Institutional Graduate Outcome
1. Create Risk Analysis and Management	g. Apply knowledge through the use of current techniques and tools necessary for the IT profession.	IGO No. (1) Generate ideas, plans and multiple perspective in various field to solve current needs and issues of society with preference for the socially disadvantaged. IGO No. (2) Utilize appropriate technologies, methods and techniques to provide practical and innovative solutions that achieve their intended purpose. IGO No. (5) Make decisions and courses of actions by integrating concepts theories, practical approaches based on Christian principles.
2. Create Incident Response Policy and Procedure	f. Integrate IT-based solutions into the user environment effectively.	
3. Apply ethics in demonstrating security processes	e. Design, implement and evaluate computer-based systems or applications to meet desired needs and requirements l. Understand professional, ethical, legal, security and social issues and responsibilities in the utilization of information technology.	

4. Course Outcome-Student Outcome Matrix

COURSE OUTCOMES	Course Intended Learning Outcomes	STUDENT OUTCOMES												
		a	b	c	d	e	f	g	h	i	j	k	l	m
1. Create Risk Analysis and Management	1							D						
	2							D						
	4							D						
2. Create Incident Response Policy and Procedure	4						D							
	5						D							
	7						D							
3. Apply ethics in demonstrating security processes	1					D								
	5					D								
	6					D								

I - Introductory, **E** – Enabling, **D** – Demonstrative

5. Course Output

As evidence of attaining the above course intended learning outcomes (CILO), the student is required to accomplish and submit the following during the indicated period/dates within the term:

COURSE OUTCOMES	Course Intended Learning Outcomes	Required Output
1. Create Risk Analysis and Management	1	Application Document from Week 7
	2	
	4	
2. Create Incident Response Policy and Procedure	4	Application Documents from Week 11 Week 17
	5	
	7	
3. Apply ethics on demonstrating security processes	1	Application Laboratories from Week 5 Week 10 Week 13 Week 15 Week 16
	5	
	6	

6. Rubrics

Program Outcome E: Design, implement and evaluate computer-based systems or applications to meet desired needs and requirements.						
Performance Indicators	(1) Poor	(2) Below Average	(3) Average	(4) Above Average	(5) Excellent	Score
1. Ability to design computer-based systems or applications to meet desired needs and requirements	Unable to design computer-based systems or applications to meet desired needs and requirements	Ability to design unnecessary needs and requirements to develop computer-based system or applications	Ability to design minimal computer-based system or applications based on the needs and requirements	Ability to design appropriate computer-based system or applications based on the needs and requirements	Ability to design the best computer-based system or applications based on the needs requirements	
2. Ability to implement computer-based systems or applications to meet desired needs and requirements	Unable to implement computer-based systems or applications to meet desired needs and requirements	Ability to implement unnecessary computer-based system or applications based on the requirements.	Ability to implement minimal computer-based system or applications based on the needs and requirements	Ability to implement appropriate computer-based system or applications based on the needs and requirements	Ability to implement the best computer-based system or applications based on the needs and requirements	
3. Ability to evaluate computer-based systems or applications to meet desired needs and requirements	Unable to evaluate computer-based systems or applications to meet desired needs and requirements	Ability to evaluate unnecessary computer-based system or applications based on the needs and requirements	Ability to evaluate minimal computer-based system or applications based on the needs and requirements	Ability to evaluate appropriate computer-based system or applications based on the needs and requirements	Ability to evaluate the best computer-based system or applications based on the needs and requirements	
					Total Score	
					Mean Score = (Total Score / 5)	
					Percentage Rating = (Total Score / 15) x 100%	

Program Outcome F: Integrate IT-based solutions into the user environment effectively.						
Performance Indicators	(1) Poor	(2) Below Average	(3) Average	(4) Above Average	(5) Excellent	Score
1.Ability to create IT-based solutions into the user environment effectively	Unable to create IT-based solutions into the user environment effectively	Create acceptable IT-based solutions into the user environment effectively to some extent	Create fairly acceptable IT-based solutions into the user environment effectively	Create more appropriate IT-based solutions into the user environment effectively	Create the most acceptable IT-based solutions into the user environment effectively	
2.Ability to evaluate IT-based solutions into the user environment effectively	Unable to evaluate ITbased solutions into the user environment effectively	Evaluate the less suitable ITbased solutions into the user environment effectively	Evaluate the suitable ITbased solutions into the user environment effectively	Evaluate the more suitable IT-based solutions into the user environment effectively	Evaluate the most suitable IT-based solutions into the user environment effectively	
3.Ability to integrate IT-based solutions into the user environment effectively	Unable to integrate ITbased solutions into the user environment effectively	Integrate suitable but less accurately IT-based solutions into the user environment effectively	Integrate suitable and accurately IT-based solutions into the user environment effectively	Integrate suitable and more accurately IT-based solutions into the user environment effectively	Integrate suitable and most accurately IT-based solutions into the user environment effectively	
					Total Score	
					Mean Score = (Total Score / 5)	
					Percentage Rating = (Total Score / 15) x 100%	

Program Outcome G: Apply knowledge through the use of current techniques and tools necessary for the IT profession.						
Performance Indicators	(1) Poor	(2) Below Average	(3) Average	(4) Above Average	(5) Excellent	Score
1. Ability to choose techniques and tools appropriate for the IT profession	Unable to choose any techniques and tools appropriate for the IT profession	Choose the less suitable techniques and tools appropriate for the IT profession	Choose the suitable techniques and tools appropriate for the IT profession to some extent	Choose the more suitable techniques and tools appropriate for the IT profession	Choose the most suitable techniques and tools appropriate for the IT profession	
2. Ability to adapt techniques and tools suitable for the IT profession	Unable to adapt techniques and tools suitable for the IT profession	Able to adapt less appropriate techniques and tools suitable for the IT profession	Able to adapt appropriate techniques and tools suitable for the IT profession	Able to adapt more appropriate techniques and tools suitable for the IT profession	Able to adapt most appropriate techniques and tools suitable for the IT profession	
3. Ability to apply techniques and tools appropriate for the IT profession	Unable to apply techniques and tools appropriate for the IT profession	Apply suitable techniques and tools appropriate for the IT profession less accurately	Apply suitable techniques and tools appropriate for the IT profession accurately	Apply suitable techniques and tools appropriate for the IT profession more accurately	Apply suitable techniques and tools appropriate for the IT profession most accurately	
					Total Score	
					Mean Score = (Total Score / 5)	
					Percentage Rating = (Total Score / 15) x 100%	

7. Learning Plan

Course Outcomes	Course Intended Learning Outcome (CILO)	Topics	Week No.	Teaching and Learning Activities (Traditional)	Teaching and Learning Activities (Asynchronous)	Teaching and Learning Activities (Synchronous)	Assessment Task
1	1	Define Information Security Define Information Security Management	1	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab1 – Job Hunting
1	1	The State of Cybersecurity The CIA (Confidentiality, Integrity, Availability) Triad	2	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab2 – Searching People
1	1	Insider Hacker Software Engineering	3	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab3 – Digital Certificates
1	2	Cryptography Symmetric Asymmetric	4	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab4 – Cryptography
3	3	Ethical Concepts Computer Ethics	5-6	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab5 – CLI Commands Online Prelim Exam
1	4	Risk Management	7	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab7 – Risk Management Plan

1	4	Security Culture	8	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab8 – Business Impact Analysis

Course Outcomes	Course Intended Learning Outcome (CILO)	Topics	Week No.	Teaching and Learning Activities (Traditional)	Teaching and Learning Activities (Asynchronous)	Teaching and Learning Activities (Synchronous)	Assessment Task
1	4	Stakeholder Communication	9	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab9 – Security Tool
3	4	Information Security Governance Decision Making	10	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab10 – Metasploit
2	5	Information Security Policy Management	11-12	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab11 – Security Policy Online Midterm Exam
3	5	Security and Usability Access Control Buffer Overflows	13	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab13 – Penetration Testing
2	5	Protocol Spoofing DMZ Network Zone Hardware Firewalls	14	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab14 – Firewall Rules

3	6	Vulnerability Assessments Network Mapper	15	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab15 – Packet Capturing using Nmap
Course Outcomes	**Course Intended Learning Outcome (CILO)**	**Topics**	**Week No.**	**Teaching and Learning Activities (Traditional)**	**Teaching and Learning Activities (Asynchronous)**	**Teaching and Learning Activities (Synchronous)**	**Assessment Task**
3	6	Network Sniffing Wireshark Hardening End-User Systems	16	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab16 – Network Sniffing using Wireshark
2	7	Incident Response	17-18	Class Discussion	The student will use the PowerPoint presentation for advance reading	The class will use Google meet for discussion	Application Lab17 – Incident Response Policy and Procedure Online Final Exam

8. Other Requirements and Assessments

Aside from the course output, the student will be graded: Quizzes /Assessment and Attendance

9. Textbooks/References

Ciampa, M. (2012). *Security + guide to network security fundamentals* . Singapore: Course Technology/Cengage Learning.
Ghai, N. (2015). *Network security.* New Delhi: S.K. Kataria & Sons.
Kim, D., & Solomon, M. G. (2018). *Fundamentals of information systems security.* Burlington, Massachusetts: Jones & Bartlett Learning.
Schneier, B. (2015). *Secrets and lies : digital security in a networked world.* Indianapolis, Indiana: Wiley.
Carter, K. (2015). *Information security : principles and new concepts.* New York : Arcler Press.

Carter, K. (2015). *Computer security and cryptography* . New York: Arcler Press.

Cyberlab. (n.d.). *Cyberlab Academy* . Retrieved from Cyberlab Academy : http://cyberlabsacademy.com/cyber-security-training/cissp-training-course/

10. Grading System

Prelim Period	**Midterm Period**	**Final Period**	**Semestral Grade**
Class standing = 60% Prelim exams = 40%	Class standing = 60% Midterm exams =40%	Class standing = 50% Final = 50%	
Term Grade = + 70% lecture + 30% lab	Term Grade = + 70% lecture + 30% lab	Term Grade = + 70% lecture + 30% lab	P+M+F = Semestral Grade
Class standing = 60% Prelim exams = 40%	Class standing = 60% Midterm exams = 40%	Class standing = 50% Final = 50%	65≥69 (removal) ≥ 70 (to pass)

11. Classroom Policies

1. Regular attendance is expected. Attendance policy as stipulated in the student manual handbook will be implemented.
2. Cheating:
    a. Final Exam: All parties involved will automatically receive 5.0 as final grade.