ACADEMIC YEAR	2020-2021		
Course Code & Title	INTE330 Network Defense		
Credit hours	03	Level of study	
College / Centre	College of Business Administration		
Co-requisites		Pre-requisites	INTE309

1. COURSE OUTLINE

The course "INTE330 Network Defense" is designed to provide the students with an understanding of underpinnings of network security techniques, network security best practices, and computer security research security challenges. The course will help the students in understanding and assessing security threats, the students will become more familiar with security engineering best practices, and hands-on practice on the latest network security tools.

2. AIMS

the course aims to equip the students with knowledge and skills related to network security issues e.g. network infrastructure design weaknesses; security flaws in the network infrastructure protocols, threats, and attacks. The students will also get hands-on practice on network security.

3. LEARNING OUTCOMES, TEACHING, LEARNING ,ASSESSMENT METHODS , and Graduate Attributes Mapping

Learning Outcomes (Definitive) Upon successful completion of this course, students will be able to:	Teaching and Learning methods (Indicative)	Assessment (Indicative)	Graduate Attributes Mapping
1. Describe thoroughly network security information security and outline major component of network security	Lectures and seminars, Case Studies, Group work, presentations, lab work	Class Presentation, Written Examination, Class Presentation, Written Examination, Assignment Project	Knowledge of a discipline.
2. Analyze, Design and implement firewall solutions.	Lectures and seminars, Case Studies, Group work, presentations, lab work	Class Presentation, Written Examination, Class Presentation, Written Examination, Assignment Project	Knowledge of a discipline. Global insight.

3.	Identify and describe the major types of threats to the computer network and the associated attacks.	Lectures and seminars, Case Studies, Group work, presentations, lab work	Class Presentation, Written Examination, Class Presentation, Written Examination, Assignment Project	Knowledge of a discipline.
4.	Describe the role of cryptography in network security and implement security solutions.	Lectures and seminars, Case Studies, Group work, presentations, lab work	Class Presentation, Written Examination, Class Presentation, Written Examination, Assignment Project	Knowledge of a discipline.

4. ASSESSMENT WEIGHTING

Assessment	Percentage of final mark (%)
Final	30
Mid	30
Assignment / Project	30
Partiception	10
TOTAL	**100%**

5. ACHIEVING A PASS

Students will achieve 3 credit hours for this course by achieving a minimum overall score of 50%
NB *Ensure that ALL learning outcomes are taken into account

6. COURSE CONTENT (Indicative)

LECTURE TOPIC	TIME (HOURS)
Introduction to the Course	03
Fundamental of network Security and Defense	04
IP Packet Structure and Analysis	02
Routing and Access Control Lists	05
Attack Techniques	05
Configuring and Designing Firewall	05
Configuring Virtual Private Network	04
Designing, configuring, and analysis Intrusion Detection System (IDS)	04
Cryptography Fundamentals	04
Implementation of Secure E-Mail	04
PKI Fundamentals, and standards,	04

	04
TOTAL HOURS	**48**
Plus **RECOMMENDED INDEPENDENT STUDY HOURS**	
TOTAL COURSE HOURS	**48**

7.   RECOMMENDED READING

Core text/s:

Wang, C. and Lu, Z. eds., 2019. *Proactive and Dynamic Network Defense.* Springer International Publishing.

Network Security Assessment: Know Your Network 3rd Edition
by McNab (Author)

Library + online resources:

ASU library
ASU online resources (ProQuest and ebrary)
Sultan Qaboos University Library (by agreement)