

DOCUMENT: SYLLABUS	COURSE CODE: CBASNET1/L	COPIES ISSUED TO: College of Computing and Information Technologies Faculty
DATE OF EFFECTIVITY: AY 2022-2023	COURSE TITLE: BASIC NETWORKING	

Program Educational Objectives (PEO)	ILO											
After 3 to 5 years on the job, BS Information Technology graduates of NU are expected to:	A	B	C	D	E	F	G	H	I	J	K	L
1. Our graduates have professional careers in industry or academe or are engaged in advanced studies.	✓			✓	✓	✓		✓	✓		✓	
2. Our graduates continue to seek knowledge to thrive in an increasingly globalized society.		✓										
3. Our graduates are successful team members or team leaders.		✓	✓									
4. Our graduates conduct themselves with integrity and incorporate proper ethical considerations in development and administration of computing-based systems that contribute to nation building.			✓	✓	✓	✓	✓	✓	✓			

Program Outcomes (PO)	PEO	PEO	PEO	PEO
At the time of graduation, the student must be able to:	1	2	3	4
1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.	✓			
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.	✓			✓
3. Communicate effectively in a variety of professional contexts.	✓	✓	✓	✓
4. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.		✓		✓
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.			✓	
6. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing-based systems.		✓		✓

COURSE DESCRIPTION

This course introduces the basic concepts, principles, and techniques of computer networking. It covers the fundamentals of networking including network models, network architectures, and protocols. The course explores various types of networks, such as local area networks (LANs), wide area networks (WANs), and wireless networks. Topics covered in the course include network topologies, network devices such as routers, switches, hubs, and firewalls, network addressing, subnetting, routing protocols, network security, and network management. The course also covers the OSI and TCP/IP models, network performance and troubleshooting.

PRE-REQUISITE(S)

CCOMPORG
CCPLTFRL

Computer Organization and Architecture
Platform Technologies

COURSE OUTCOMES (CO)

At the end of the course, the student must be able to:	Program Outcomes (PO)					
	1	2	3	4	5	6
1. Understand the fundamental concepts and principles of computer networking.	D					
2. Design and implement simple network configurations using wired and wireless technologies.				D		
3. Be aware of emerging network technologies and their impact on computer networking.						D

I- Introduce

R- Reinforced

D- Demonstrate

CREDIT

3 Units

TIME ALLOTMENT

2.67 hours Lecture every week

4 hours Laboratory every week

COURSE REQUIREMENTS

Quizzes and Assignments

Laboratory Exercises

Major Examinations

CLASS POLICIES

1. Attendance is necessary for each student to obtain maximum benefits for instruction, 80% attendance or 69 hours for one trimester is required.
2. Failure to wear complete uniform will be considered an absence and the student will not be allowed to take any examination.
3. Special examination is only given for excused absences. Excuse letter duly signed by the parents/guardian, or a medical examination (in case of sickness) is required.
4. Students may bring their cellular phones to class provided these are placed on silent mode. These should not be used during class hours except during extreme necessities. Cellular phones should be switched off during examinations.
5. Students should be in complete uniform and exam permit should be presented during major examinations.
6. Any form of cheating will not be tolerated.
7. Students are expected to wait for 15 minutes for a one (1) hour class and 20 minutes for a one and a half (1½) hour class before leaving if the instructor is not around. However, the class president is expected to check with any CCIT professor if a substitute professor will take over.

GRADING SYSTEM

Quizzes (15%)
Midterm Exam (25%)
Final Exam (40%)
Class Participation (15%)
(Assignments, Laboratory Exercises, Board Work)
Attendance (5%)

Grade Equivalent

Grade Range (%)	Grade Point
96 – 100	4.0
90 – 95	3.5
84 – 89	3.0
78 – 83	2.5
72 – 77	2.0
66 – 71	1.5
60 – 65	1.0
59 and below	R

COURSE CONTENTS/COURSE OUTLINE

WEEK	COURSE OUTCOMES	TOPIC OUTCOMES	TOPICS	METHODOLOGY	RESOURCES	ASSESSMENT
1		Articulate on School and class policies, laboratory policy, laboratory tolls and safety	Orientation on National University VMGs, Core Values, GAINS and Class Policies ➤ Introduction to Course ➤ Occupational Health and Safety (OHS)	<ul style="list-style-type: none"> Lecture SYNCHRONOUS CLASS FACE-TO-FACE (F2F)	Student Handbook Course Materials PPT	
2 - 3		Understand how network structure works	➤ Introduction to Computer Networks ➤ Network Devices, equipment, Structures and Topologies	<ul style="list-style-type: none"> Lecture Demonstration Lab Activity SYNCHRONOUS CLASS FACE-TO-FACE (F2F)	Course Materials PPT	
4 - 5	CO1	Understand how Network media used in different Network architecture	➤ Network Media, Wireless network and Broadband Technology	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	Short Exam
6 - 7		Articulate on different computer networking models	➤ Network Standards and Protocols	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	
7	C02	MIDTER EXAM	➤ Fundamentals of computer network	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	Long Exam
8 - 9		Identify different IP Address class and how it works	➤ IP Addressing	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	
10 - 11	CO1	Understanding Dynamic IP addresses	➤ IP Subnetting and VLSM	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	Short Exam
12		Demonstrate the use of network switches	➤ VLAN	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	
13		Articulate the management of IP addresses on different network devices	➤ Network installation, configuration, and troubleshooting	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	
13.5	CO3	FINAL EXAM	➤ Routing and Switching	<ul style="list-style-type: none"> Lecture Lab Activity 	Course Materials PPT	Long Exam

RESOURCES

1. "Computer Networking: A Top-Down Approach" by James F. Kurose and Keith W. Ross (2020 edition)
2. "Computer Networks: A Systems Approach" by Larry L. Peterson and Bruce S. Davie (2020 edition)
3. "Data Communications and Networking" by Behrouz A. Forouzan and Catherine Ann Coombs (2020 edition)
4. "Computer Networking: Principles, Protocols, and Practice" by Olivier Bonaventure (2021 edition)
5. "Computer Networking Essentials" by Walter J. Goralski (2020 edition)
6. "Networking Essentials: A CompTIA Network+ N10-008 Textbook" by Jeff T. Parker (2021 edition)
7. "TCP/IP Illustrated, Volume 1: The Protocols" by Kevin R. Fall and W. Richard Stevens (2020 edition)
8. "Interconnections: Bridges, Routers, Switches, and Internetworking Protocols" by Radia Perlman (2020 edition)
9. "Hands-On Networking Fundamentals" by Michael Palmer (2021 edition)
10. "Computer Networking Problems and Solutions: An Innovative Approach to Building Resilient, Modern Networks" by Russ White and Ethan Banks (2020 edition)

PREPARED:

**PLATFORM, NETWORK AND SECURITY
CLUSTER**
CCIT FACULTY

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