TIF21-22-46

Computer Network

Jaringan Komputer

BASIC INFORMATION

Course Credit	3 / 150 minutes per Week
Course Type	Required
Course Classification	Engineering Topics
Prerequisites	-

STUDENT AND LEARNING OUTCOMES

Covered Student Outcomes

Development of Engineering Solution (b)

Modern Tools Utilization (e)

Engineering Design (c)

Learning Outcomes

LO1 Students are able to explain basic computer network concept.

LO2 Students able to explain the utilization of computer network technology in everyday life.

LO3 Students are able to design local area network including network topology and addressing.

LO4 Students are able to configure network device to apply routing concept.

LO5 Students are able to analize and troubleshoot problems on computer networks.

COURSE DESCRIPTION

This course will discuss computer network focusses on OSI layer and protocols related to each layer. Students will use simulation tools to implement networking concept during the course.

TOPICS

1. Overview of computer netwok
2. OSI Reference Model and TCP/IP model.

3. Application layer function and protocol
4. Transport layer function and protocol
5. Network layer function and protocol
6. IP Addressing
7. Subnetting
8. Data link layer characteristic
9. Routing protocol
10. Wide area network
11. Virtual LAN
12. Wireless LAN
13. Computer network trend

REFERENCES

[1] Andrew S Tanenbaum, David J Wetherall, *Computer Networks, 5th edition*, Prentice Hall, 2011.

[2] Todd Lammle, *CompTIA Network+ Deluxe Study Guide*, Wiley Publishing Inc, 2009.

[3] Adolfo Rodriguez, John Gatrell, John Karas, Roland Peschke, *"TCP/IP Tutorial and Technical Overview" seventh edition*, IBM Redbook, 2001.