

CCS2201 Introduction to Networks

COURSE INFORMATION

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
CCS1302	2	3	2	2	0	3

COURSE AIM

- Differentiate between circuit switching and packet switching.
- Master principles of network applications (Web and HTTP, FTP, Email, and DNS).
- Master transport layer services (connection- oriented (TCP) and connectionless (UDP) services).
- Experiment with TCP congestion control.
- Know the innerworkings of the IP protocol (Forwarding and addressing in the Internet) and sample routing algorithms.
- Outline the design of Ethernet and multiple access protocols.
- Design and implement simple network applications.

COURSE WEEKLY CONTENTS

- 1 Introduction
- 2 Network Edge and Network Core
- 3 Delay, Loss, and Throughput. Protocol Layers. Network Under Attack
- 4 Principles of Network Applications. HTTP protocol
- 5 SMTP and DNS
- 6 Trans Layer Services. UDP
- 7 Principles of Reliable Data Transfer
- 8 TCP
- 9 Internet Protocol
- 10 Forwarding and SDN
- 11 Routing Algorithms part 1
- 12 Routing Algorithms part 2
- 13 Wireless and Mobile Networks part 1
- 14 Wireless and Mobile Networks part 2
- 15 Revision

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	←		3 0	M A R K S		→	30
8 to 12	←		2 0	M A R K S		→	20
1 to 15	←		1 0	M A R K S		→	10
16 or 17	40	Final					40

REFERENCES

Textbook James Kurose and Keith Ross, Computer Networking: A Top-Down Approach, Pearson.