

Global Learning Semesters

Course Syllabus

Course: CENG-358 Data Communication and Computer Networks

Department: Engineering

Host Institution: Intercollege, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
CENG-358	Data Communication & Computer Nets.	3
Semester Offered	Contact Hours	Prerequisites
Spring	42	CENG-200 Digital Systems I, MATH-190 Calculus & Analytical Geometry I. General knowledge of digital logic and systems; differential and integral calculus.
Department	Level of Course	Language of Instruction
Engineering	Upper Division	English

Course Description

This course develops the fundamental concepts of network architecture, proceeding from the physical layer to the network layer. More specifically the course covers the following topics: network services and layered architectures, data communication fundamentals (analog and digital), transmission media, data-Link layer control and protocols, medium access control protocols, network layer switching and routing (emphasis on IP), internetworking protocols, routing algorithms and protocols. The course also briefly introduces students to transport layer services (TCP, UDP) and the networked applications supported by them.

Instructor

Dr.Charalambos Christou

Course Aims and Objectives

To introduce students to fundamental data communications and network architecture concepts and to their application in emerging communication networks.

Teaching Methods

The course is delivered through a mixture of lectures, presentations, practical exercises and assignments.

Course Teaching Hours

The course is 42 hours long and is delivered in 14 weeks (3 hours/week).

Evaluation and Grading

Homework: 20%

Test(s):	30%
Final Exam:	50%

Readings and Resources

Required Textbook

Leon-Garcia and Widjaja, Communication Networks, McGraw Hill, 2000

Recommended Readings

- Tanenbanum A., Computer Networks, 4th Edition, Prentice Hall PTR, 2003
- Larry L. Peterson and Bruce S. Davie, Computer Networks: A Systems Approach, Second Edition, Morgan Kaufman, 1999
- Halsall, Data Communications, Computer Networks and Open Systems, Addison-Wesley, 1995