

LOYOLA SCHOOLS
COURSE SYLLABUS

Course Number: CS 154
Title: Computer Networks and Data Communications
Department/Program: Information Systems and Computer Science
School: Science and Engineering
Semester and School Year: Second Semester 2005-2006
Instructor: William Emmanuel S. Yu

A. Course Description

A technical discussion on data communications, computer network structure and architecture, and the OSI reference model for computer networks interconnection, which consists of the physical, data link, network, transport, session, presentation, and application layers. Other topics discussed are data communications, including standards, electrical interfaces, transmission, and protocols; network equipment currently used; and computer network design.

B. Course Objectives

C. Course Outline and Timeframe

1. Network Basics (2-3 weeks)
 - Introduction to Networking
 - ISO/OSI Layers
 - LAN/WAN
 - Topology, Protocols, Media
 - Common Devices
2. Network Media (1 week)

- Basics
 - Guided
 - Unguided
3. Network Devices (1-2 weeks)
 - Repeaters
 - Bridges
 - Routers
 - Brouters
 - Gateways
 4. TCP/IP Networking (3-4 weeks)
 - Fundamentals
 - ISO/OSI vs. TCP/IP
 - Layers and Protocols
 - IP Addressing
 - Subnetting
 - Basic Routing
 5. TCP/IP Network Routing (1-2 weeks)
 - Static
 - Dynamic
 6. Linux Networking (2-3 weeks)
 - Hardware
 - Configuration
 - Firewall
 - Masquerading
 - Services
 - Security

D. Required Readings

E. Course Requirements

Requirements	Percentage
Long Exams and Labs	70%
Quizzes	30%

F. Grading System

Letter Grade	Numerical Equivalent
A	93%
B+	87%
B	81%
C+	75%
C	69%
D	60%
F	below 60%

1. Classroom Policies

- No eating and drinking in the classroom
- The 15 minute rule for free cuts do not apply. Announcements of free-cuts and online quizzes will be provided in the course website.

G. Consultation Hours

TTH 3:00 – 4:30 PM F 207