

Computer Networks

Syllabus Number

4F202

Special Subjects

Elective 2 credit

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1. Course Description

It is important to have a knowledge of present computer networks including internet. Because it is becoming one of the basic need in our today's life styles. This lecture is intended to lean the basic concept, fundamental design and operation system of computer networks.

We learn about:

1. Internet technology

The feature of Internet, Data communications technology.

2. Network security

How to protect and manage the network.

3. Client server computing

Collaboration system of the client and server.

4. Wireless and mobile computing

Wireless and mobile network communication system such as smart-phone and PHS.

5. The system for distributing multimedia information

Data compression, image coding method.

2. Course Objectives

Students are expected to understand

1. Architecture and technologies in computer networks and the Internet.

2. Security technologies related to network information systems.

3. The practical technologies of wireless communication systems and information networks.

4. Structure of the WEB system.

5. Media processing theory such as data compression and image coding.

3. Grading Policy

The students submit all the issues in the end of the chapters.

When all subjects are accepted, students are considered to have met the eligibility requirements for an examination.

This course evaluates the result of the subject acquisition examination. Learners who received evaluation over the total of 60% will pass this course.

4. Textbook and Reference

Textbook

井口 信和著 ネットワーク 目には見えないしくみを構成する技術 森北出版

5. Requirements(Assignments)

6. Note

7. Schedule

- | | |
|------|----------------------------------|
| [1] | Introduction
p.1~p.12 |
| [2] | Introduction
p.13~p.19 |
| [3] | OSI Reference Model
p.20~p.27 |
| [4] | Physical Layer
p.28~p.39 |
| [5] | Data Link Layer
p.40~p.51 |
| [6] | Network Layer
p.52~p.59 |
| [7] | IP Address 1
p.60~69 |
| [8] | IP Address 2
p.70~p.77 |
| [9] | Routing
p.78~p.87 |
| [10] | Transport Layer
p.88~p.100 |
| [11] | Application Layer
p.101~p.108 |
| [12] | Application Layer
p.109~p.115 |
| [13] | Application Layer
p.116~p.122 |

- [14] Application Layer
p.123~p.131
- [15] Network Command
p.132~p.143