Toyama College	Year	2022		Course Title	Communication Systems I

Course Information

Course Code	0104		Course Category	Specialized / Elective
Class Format	Lecture		Credits	School Credit: 1
Department	Department of Electronics and Computer Engineering		Student Grade	4th
Term	First Semester		Classes per Week	2
Textbook and/or Teaching Materials				
Instructor	Aso Tsukasa			

Course Objectives

At the completion of this course, students will be able to:
1)Explain the netowrok communication system and the protocol.
2)Explain the TCP/IP technology used in LAN and WAN communications.
3)Explain the overview of netoworking based on TCP/IP.

Rubric

	Ideal Level of Achievement (Very Good)	Standard Level of Achievement (Good)	Unacceptable Level of Achievement (Fail)
Evaluation 1	Can explain the network communication system and the protocol almost perfectly.	Can explain the network communication system and the protocol correctly.	Can't explain the network communication system and the protocol correctly.
Evaluation 2	Can explain the TCP/IP technology used in LAN and WAN communications almost perfectly.	Can explain the TCP/IP technology used in LAN and WAN communications correctly.	Can't explain the TCP/IP technology used in LAN and WAN communications correctly.
Evaluation 3	Can explain the overview of networking based on TCP/IP perfectly.	Can explain the overview of networking based on TCP/IP correctly.	Can't explain the overview of networking based on TCP/IP correctly.

Assigned Department Objectives

JABEE B4
ディプロマポリシー 1

Teaching Method

Outline	TCP/IP is the common technology in internetworking and the understanding of it is inevitable to operate network systems. This lecture provides the basic knowlege about TCP/IP networking, which includes network topology, network devices, transmission control procedures, and protocols in terms of hardware and software.
Style	The lecture includes exercises and practice of programing, in order to check the students' understanding.
Notice	The recognition of credit requires 60 points or more rating. A person who has a rating of less than 60 points may be subjected to an approval test by request. As the result of the approval test, the evaluation is made to be 60 points in the person who the mastery of the unit is recognized.

Characteristics of Class / Division in Learning

☑ Active Learning	☐ Aided by ICT	☑ Applicable to Remote Class	☐ Instructor Professionally Experienced

Course Plan

			Theme	Goals
1st Semester	1st Quarter	1st	Guidance	Can explain the lecture structure and the goals.
		2nd	Basis of networking in TCP/IP	Can explain the basis of networking in terms of network topology, the OSI reference model and data transfer.
		3rd	Basis of Ethernet LAN	Can explain the basis of Ethernet devices and the data transfer.
		4th	IP addressing	Can explain the basis of IPv4 addressing.
		5th	Subnetting	Can explain the role of subnetting and the structure of address.
		6th	The other protocols in the network layer.	Can explain ICMP and ARP in terms of the role and the data structure.
		7th	TCP and UDP	Can explain the role and protocols.
		8th	Exercise and practice	Can explain the overview of TCP/IP and IPv4 address.
	2nd Quarter	9th	Midterm exam	Confirm the level of understandings.
		10th	Basis of Router and routing control.	Can explain the role of network layer in terms of IP routing.
		11th	Basis of static routing	Can explain the routing table with static routing.
		12th	Basis of dynamic routing	Can explain the role of dynamic routing.
		13th	Basis of WAN	Can explain devices and protocols in WAN.
		14th	Exercise and practice	Can explain the OSI reference model from physicsl layer to application layer.
		15th	Final exam	Can explain the OSI reference model and TCP/IP in the practical netowk system.
		16th	Comments to the final exam, class questionnaire etc.	Can understand and recover the weak points of study.

Evaluation Method and Weight (%)

	Examination	Report	Mutual Evaluations between students	Behavior	Portfolio	Other	Total
Subtotal	70	30	0	0	0	0	100
Basic Ability	30	20	0	0	0	0	50
Technical Ability	30	10	0	0	0	0	40
Interdisciplinary Ability	10	0	0	0	0	0	10