

COURSE	Name : Communication System and Network Protocol Engineering
	Code : EE185634
	Credit(s) : 2
	Semester : (Elective Course)

Description of Course

The course of Communication System and Network Protocol Engineering discusses the basic principles of communication protocols, methods and techniques of formal protocol description, development of communication protocols: process, design, verification, performance evaluation, implementation and testing; and engineering cases on internet protocol .

Learning Outcomes

Knowledge

(P01) Mastering the concepts and principles of science in a comprehensive manner, and to develop procedures and strategies needed for the analysis and design of systems related to the field of power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics as a preparation for further education or professional career.

Specific Skill

(KK01) Being able to formulate engineering problems with new ideas for the development of technology in power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

(KK02) Being able to compose problem solving in engineering through depth and breadth of knowledge which adapts to changes in science and technology in power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

General Skill

(KU11) Being able to implement information and communication technology in the context of execution of his/her work.

Attitude

(S09) Demonstrating attitude of responsibility on work in his/her field of expertise independently.

(S12) Working together to be able to make the most of his/her potential.

Course Learning Outcomes

Knowledge

Mastering the technology development of system and network of wireless communication, and mastering the planning and performance of wireless communication networks.

Specific Skill

Able to explain basic communication protocols; methods and techniques for formal description of communication protocols; development of communication protocols: process, design, verification, performance evaluation; and implementation and testing of protocols and internet protocol engineering cases.

General Skill

Able to explain the concepts of wireless communication technology and characteristics of channel media on mobile communication.

Attitude

Demonstrating attitude of responsibility for work in his/her area of expertise independently.

Main Subjects

1. Basic communication protocol
2. Methods and techniques for formal description of communication protocols.
3. Development of communication protocols: process, design, verification, performance evaluation
4. Implementation and testing of protocols and engineering cases of internet protocol.

Reference(s)

- [1] Harmurt König, Protocol Engineering, Springer, 2003
- [2] Richard Lai, Ajin Jirachiefpattana, Communication Protocol Specification and Verification, Springer Science+Business Media, 1998
- [3] Behrouz A. Forouzan, TCP/IP Protocol Suite, Mc. Graw Hill, 2010
- [4] Thi-Thanh-Mai-Houang, Computer Network, the Internet and Next Generation Networks, Peter Lang, 2012.
- [5] Andrei Gurtov, Host Identity Protocol, Wiley, 2008

Prerequisite(s)

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