

Course	Name	: Standards and Reliability in Telecommunication
	Code	: EE184932
	Credits	: 3
	Semester	: Elective

Description of Course

The Standard and Reliability course discusses general Telecommunication standards and Regulations, the Telecommunications Law specifically concerning the implementation of telecommunication (network, service & telephone), UU-ITE specifically the implementation of electronic transactions as well as the standard criteria and provisions applicable to Telecommunications Systems and Services. Standard and Reliability courses also study standards and regulations in the fields of Data Communication, Networking, Multimedia Communication and Signal Processing. Standards and regulations in the field of Transmission / Propagation, Frequency Management and Allocation of Spectrum are also examined in this course, in addition to Security & Safety, Concepts of Reliability, Reliability Parameters and examples of their application in Telecommunication System Design.

Learning Outcomes

Knowledge

(P03) Mastering the concepts and principles of design procedure in power systems, control systems, multimedia telecommunications, or electronics.

(P05) Mastering the factual knowledge about information and communication technology, and the latest technology and its applications in power systems, control systems, multimedia telecommunications, or electronics.

Specific Skill

(KK03) Able to describe system design for problem solving in power systems, control systems, multimedia telecommunications, or electronics by concerning technical standards, performance aspect, reliability, ease of application, and assurance of sustainability.

(KK05) Able to utilize analytical and engineering design tools based on appropriate information and computation technology to perform engineering activities in power systems, control systems, multimedia telecommunications, or electronics.

General Skill

(KU05) Able to take decisions appropriately in the context of problem solving in the area of expertise based on the results of information and data analysis.

(KU12) Able to implement information and communication technology (ICT) in the context of implementation of his/her work.

Attitude

(S07) Law abiding and disciplined in community and state life.

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

Course Learning Outcomes

Knowledge

Mastering the concepts of Telecommunications System performance and quality standards for Telecommunication Services in general.

Specific Skill

Able to find and solve the problems that have the potential to disrupt the telecommunications process.

Able to accommodate the performance parameters of a Telecommunication System that affect the quality of Telecommunications Services.

General Skill

Able to evaluate the results of the Telecommunications System measurement data is related to the quality criteria of standards and applicable regulatory provisions.

Attitude

Demonstrate responsibility (professional), discipline in rules (standards) and obey the law (regulation) related to the field of work.

Main Subjects

1. Telecommunications standards and regulations
2. UU-Telekomunikasi & UU-ITE
3. Standardization of Telecommunications Systems and Services
4. Standards and regulations for Communicas Data and Networks
5. Standards and regulations for Multimedia Communication and Signal Processing
6. Standards and regulations for the field of Transmission / Propagation, Frequency Management and Spectrum Allocation
7. Standards and regulations for Security & Safety
8. The concept of reliability of the Telecommunication System.
9. Reliability parameters of the Telecommunications System
10. Reliability analysis in Telecommunication System Design.

Reference(s)

- [1] ITU Recommendation (ITU-T, ITU-R)
- [2] UU Telekomunikasi, UU ITE, UU Penyiaran dll.
- [3] Peraturan Menteri Kominfo dan turunannya
- [4] Martin L. Shooman, Reliability of Computer Systems and Networks, John Willey & Sons, 2002
- [5] Greg Utas, Robust Communications Software, John Willey & Sons, 2005
- [6] Mark L. Ayers, Telecommunications System Reliability Engineering, Theory and Practices, IEEE,2012
- [7] Lazzaroni, Massimo, Reliability Engineering Basic Concepts and Applications in ICT,2011

Prerequisite(s)

EE184302 Introduction to Telecommunication Systems and Networks
