Course Code	TKEE163245P
Course Name	Management of Telecommunication System Lab Work
Course Instructors	Budi Setiyanto
Course Type	Required
Course Classification	Engineering Topics
Credit / Contact Hour per Week	1 / 150 minutes per Week
Course Description	In this Lab Work, the students learn about the operations of a digital telephony systems, digital transmission process, radio communication systems, the concepts in code division multiple access, building a computer network using a UNIX-based operating system, as well as routing and switching processes.
Prerequisites Courses	-
Covered Student Outcome	**Data and Experiment (d)** **Modern Tools Utilization (e)** **Multidisciplinary Teamwork (h)**

Learning Outcome	1. The students are able to show and demonstrate the operations of a digital telephony system using an advanced telephony tutorial 2. The students are able to perform analysis on digital transmission process using an analyzer equipment 3. The students are able to show and demonstrate radio communication systems, which include transmitter and receiver equipment 4. The studets are able to explain the fundamental concepts in code division multiple access within a cellular communication systems 5. The students are able to build a computer network using a UNIX-based operating system 6. The students are able to explain routing and switching processes using packet tracer
Topic	7. Digital Central Telephone 8. Digital Transmission Analysis 9. Radio System Testing 10. CDMA simulator 11. Computer Network with Linux 12. Package Tracer

Direct Asessment

Direct Asessment Plan	Measured Learning Outcome
Lab Work Report	LO1 LO2 LO3 LO4 LO5 LO6
Pretest	LO1 LO2 LO3 LO4 LO5 LO6
Post Test	LO1 LO2 LO3 LO4 LO5 LO6

Indirect Asessment	Questionnaire (EDOM)
References	[1] B. Setiyanto, 2010, Dasar-dasar Telekomunikasi, Sakti [2] A. Goldsmith, 2005, Wireless Communications, Cambridge Univercity Press [3] W. Stallings, 2013, Data and Communications, Pearson