

Modul Description

Module name	Course Module
Module level, if applicable	Bachelor of Electronics Engineering
Code, if applicable	5215-062-3
Subtitle, if applicable	-
Course, if applicable	Data Communication
Semester(s) in which the module istaught	IV
Person responsible for the module	Lecturer of Course
Lecturer	Dr.Aodah Diamah,M.Eng. ; Dr. Baso Maruddani, M.T.
Language	Indonesian Language [Bahasa Indonesia]
Relation to Curriculum	This course is a compulsory course and offered in the 4 th semester.
Type of teaching, contact hours	<p>Teaching methods used in this course are:</p> <ul style="list-style-type: none"> - Lecture (i.e., group investigation, small group discussion, casestudy, and video based learning) - Structured assignments (i.e., essays and case study) - Practice (i.e., computer simulation and case study in laboratory) <p>The class size for lecture is 30 students. Contact hours for lecture is 27 hours, assignments is 32 hours</p>
Workload	<p>For this course, students are required to meet a minimum of 91 hours in one semester, which consist of:</p> <ul style="list-style-type: none"> - 27 hours for lecture, - 32 hours for structured assignments, - 32 hours for private study,
Credit points	2 credit points (equivalent with 2.88 ECTS)
Requirements according to the examination regulations	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.
Recommended prerequisites	Students must have attended all classes and submitted all class assignments that are scheduled before the final tests.

<p>PLO-CLO-ILO</p>	<p>After completing the course and given with this case:</p> <p>Course Learning Objectives (CLO1): Mahasiswa mampu memahami prinsip dasar komunikasi data, sinyal analog dan digital (K1) (10)</p> <p>Course Learning Objectives (CLO2): Mahasiswa mampu melakukan konversi analog ke digital dan konversi digital ke analog (K1, C1, S1, S3) (30)</p> <p>Course Learning Objectives (CLO3): Mahasiswa mampu memahami transmisi digital, modulasi analog dan digital, media transmisi (K1) (10)</p> <p>Course Learning Objectives (CLO4): Mahasiswa mampu melakukan deteksi dan koreksi dalam transmisi digital, protokol data komunikasi. (K1, K2, S1, S3, C1) (50)</p> <p>Program Learning Outcomes (PLO3): Menerapkan kompetensi teknik elektronika untuk memecahkan masalah keteknikan</p> <p>Knowledge (K2): Untuk menerapkan prinsip-prinsip teknik elektronik untuk memecahkan masalah dalam sistem teknik elektronik</p> <p>Engineering and Education Skill (S3): Mampu mencari alternatif solusi dan pemecahan masalah di bidang teknik elektronika.</p> <p>Competence (C1): Menerapkan teknologi baru di bidang rekayasa dengan mempertimbangkan standar teknis, aspek kinerja, keandalan, penerapan, dan keberlanjutan</p>
<p>Content</p>	<p>Students will learn about: Basic principle of data communication, data and signal analog and digital, analog to digital conversion, digital to analog conversion, digital transmission, analog and digital modulation, transmission media, detection and correction in digital transmission, communication data protocol.</p>
<p>Forms of Assessment</p>	<p>Assessment is carried out based on written examinations, assessment/evaluation of the learning process and performance with the following components: Structured tasks: 20% ; Quiz 10% ; Mid Test : 35% Final Test: 35%</p>

Study and examination requirements and forms of examination	Study and examination requirements: <ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get final grade. Form of examination: Written exam: Essay
Media employed	Direct Whiteboard and Power Point Presentation.
Reading list	<ol style="list-style-type: none"> 1. Behrouz A Farouzan, 2007, Data Communications and Networking, Mc Graw Hill, New York, USA, ISBN 978-0-07-296775-3. 2. William Stallings, 2007, Data and Computer Communications, Pearson Prentice Hall, Pearson Education, Inc, New Jersey, ISBN: 0-13-243310-9.