

Module Description

Module name	Course Module
Module level, if applicable	Bachelor of Electrical Engineering
Code, if applicable	5115-075-3
Subtitle, if applicable	-
Course, if applicable	Mathematics 1 (Matematika 1)
Semester(s) in which the module is taught	1 st (odd semester)
Person responsible for the module	Lecturer of Course
Lecturer	Nur Hanifah Yuninda, S.T., M.T.
Language	Indonesian
Relation to Curriculum	This course is a compulsory course given in 1 st semester (odd semester)
Type of teaching, contact hours	<p>Teaching methods used in this course are:</p> <ul style="list-style-type: none"> - <u>Lecture method plus discussion and assignments</u>: The lecturer presented the theory in fourteen meetings which was divided into two parts namely before and after the mid-semester examination. The discussion opened with a question from the lecturer in the form of a case study covering the material from the previous meeting. The case study is carried out by a student who is a representative in a group of 4 students so that students learn more actively in small groups. Assignments in the form of quizzes. Quizzes are conducted twice, namely a week before the midterm exam, and a week before the end of the semester exam. - <u>Project Method</u>: make group papers/reports as the final assignment for the course, namely the application of differential - <u>Recitation Method</u>: create lesson resumes in their own words <p>The class size for lecture is 30 students. Contact hours for lecture is 40 hours, assignments (structured tasks) is 48 hours and learn individually is 48 hours</p>
Workload	<p>For this course, students are required to meet a minimum of 131 hours in one semester, which consist of:</p> <ul style="list-style-type: none"> - 35 hours for lecture - 48 hours for structured assignments - 48 hours for learn individually
Credit points	3 credit points (equivalent with 4.5 ECTS)

Requirements according to the examination regulations	Students must attend at least fourteen lessons and submit all scheduled assignments before the final exam
Recommended prerequisites	-
Module objectives/intended learning outcomes	Course Learning Objectives : 1. Determining the domain, range and graph of the function (20) 2. Analyzing differential solutions and integration techniques (30) 3. Applying complex number operations in engineering field (50)
Content	Students will learn about: provide analytical understanding to students about real number systems, complex numbers and their operations, Cartesian coordinate systems and polar coordinate systems, equations and inequalities, functions and graphs, differentials (differential theorems and differential implicit functions) as well as differential applications, indeterminate integrals (integration techniques) includes basic function integrals, substitution methods, trigonometric methods and partial methods).
Forms of Assessment	Assessment components and weights include: attendance with a weight of 10%, General skills from class discussion assessments with a weight of 30%, Special skills from final project assignments and mid-term and end-of-semester examinations with a weight of 30% and Knowledge from quiz assessments 30%
Study and examination requirements and forms of examination	Study and examination requirements: <u>Attendance:</u> Students who are not present at the online meeting or face-to-face, whether with notification or not, more than 10% of the total meeting are not allowed to take the end-of-semester exam and are considered not to have passed (getting an E grade) <u>Lateness:</u> - Late joining online meeting more than 20 minutes is not allowed to attend lectures (online meeting) - Late submission of assignments for 1-7 days from the set deadline will result in a 5 point deduction from a total of 100 points. - Late submission of assignments for more than 7 days will result in a deduction of 10 points from a total of 100 points <u>Academic Cheating :</u> Students are required to comply with standard rules and policies regarding academic honesty and avoid plagiarism and cheating in exams. Acts of plagiarism and cheating in the exam will be given an E score on the exam <u>Ethics in class:</u> - Students are not allowed to wear tight/transparent clothes - Students do not use communication tools for purposes that are not related to learning. - Students do not make noise that disturbs the order of learning.

	<p>Form of examination:</p> <p>a. Test (essay).</p> <p>b. Non-test (portofolio, observation, and presentation)</p>
Media employed	Direct Whiteboard and Power Point Presentation
Reading list	<ol style="list-style-type: none"> 1. Alan, Jeffrey. Advanced Engineering Mathematics. Harcourt Academic Press. USA. 2002. 2. BSc, Ceng, CSci, Cmath, FIET, MIEE, FIIIE. FIMA, FcollP, Bird John. Higher Engineering Mathematics. fifth edition. Elsevier Ltd. USA, 2006. 3. Nur Hanifah, MT. RPS Matematika 2. Jakarta. 2020 4. Purcell J. Edwin, Varberg Dale. Kalkulus dan Geometri analitis. jilid 1. Erlangga, 1997.