

1. Course Name:					
Engineering Mathematics					
2. Course Code:					
CIV21201					
3. Semester / Year:					
First Semester - Second Stage					
4. Description Preparation Date:					
9-12-2025					
5. Available Attendance Forms:					
6. Number of Credit Hours (Total) / Number of Units (Total)					
4					
7. Course administrator's name (mention all, if more than one name)					
M.M. Makarim Noori Ali					
8. Course Objectives					
Course Objectives	1- The lecture aims to improve student mathematical literacy and communication skills. They should be able to read and interpret mathematical notation, formulae and graphs. 2- The math. Lecture aims to develop students' thinking and solving problems through mathematical exercises and application. Students should be able to analyze engineering problems.				
9. Teaching and Learning Strategies					
Strategy	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills, this will be achieved through class interactive tutorials by considering types of simple experiments involving so sampling activities that are interesting to the students.				
1. Course Structure					
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction of Matrices	Introduction of Matrices	Theoretical	Several ways (exam, quiz, home work)
2	4	Solving problems for special types of Matrix	Special types of Matrix	Theoretical	Several ways (exam, quiz, home work)

3	4	Solving problem for determination of matrix	Determination of Matrix	Theoretical	Several way (exam, quiss home work
4	4	Solving problem for simultaneous alegberic equati	Solving Simultaneous Alegberic equation by using types of Matrix	Theoretical	Several way (exam, quiss home work
5	4	Solving problems for vectors	Vectors in Space	Theoretical	Several way (exam, quiss home work
6	4	Solving problem for vectors in coordinate plan	Vectors in Cooridinate Plane	Theoretical	Several way (exam, quiss home work
7	4	Solving problem for vectors in sp	Vectors in Space	Theoretical	Several way (exam, quiss home work
8	4	Solving problem for vectors for d and cross produ	The dot product and the cross product	Theoretical	Several way (exam, quiss home work
9	4	Solving problem for poolar coordinate	Poolar coordinate	Theoretical	Several way (exam, quiss home work
10	4	Solving problem for poolar coordinate	Equation relating to poolar and cartesion equation	Theoretical	Several way (exam, quiss home work
11	4	Geaph problems poolar coordina	Graph of poolar coordinate	Theoretical	Several way (exam, quiss home work
12	4	Solving problem for partial differential equation	Partial differential equation	Theoretical	Several way (exam, quiss home work
13	4	Solving problem for first order differential equation	Fist order differential equation	Theoretical	Several way (exam, quiss home work
14	4	Solving problem for second orde differential equation	Second order differential equation	Theoretical	Several way (exam, quiss home work
15	4		Final exam of term		

2. Course Evaluation

3. Learning and Teaching Resources

Required textbooks (curricular books any)	Calculus 1 by :Mr Munter 2020-2021
Main references (sources)	Calculus 1 by :Mr Munter 2020-2021
Recommended books and references (scientific journals, reports...)	

Electronic References, Websites	
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Course Description Form