



TH010011 - ADVANCED MATHEMATICS

Credits: Theory 3 - Practice 0



EXPECTED LEARNING OUTCOMES

Indicators	By completing this course, students can:	ELO of Program
Knowledge		
K1	Recognize the concepts: Matrix, inverse matrix, system of linear equations, multivariate functions, differential equation.	ELO1
K2	Apply the operations with matrices	
K3	Apply the properties of determinant and inverse matrix to calculate the determinant, inverse matrix of a given matrix and to solve a Cramer system of linear equations.	
Skills		
K4	Solve a general system of linear equations.	ELO9, ELO10 ELO12
K5	Calculate the derivative of a function; use derivatives to solve real-world problems	
K6	Find the antiderivative of a function, find an integral and its applications; find improper integral.	
K7	Analyze multivariate functions: Partial derivative, total differential, and extremum of a function.	
K8	Solve some first order differential equations	
Competence		
K9	Working independently and self-study	ELO14

Nội dung học phần

- Chapter 1: Matrix and system of linear equations
- Chapter 2: Differential and integral calculus
- Chapter 3: Differential of a multivariate function
- Chapter 4: Differential equations

Nhiệm vụ của sinh viên

- Attend at least 80% of lessons
- Prepare for lectures, read reference books, do homework before class
- Take the midterm exam and the final exam

Phương pháp đánh giá

- Grade: **10**
- Including:
 - Attendance: **10%**
 - Midterm exam: **30%**
 - Final exam: **60%**



PIC

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Teachers

Teachers in Math Department

