Module (Course Syllabus) Catalogue

2022-2023

College/ Institute	Technology college	
Department	Automotive Technology Engineering	
Module Name	Mathematics II	
Module Code		
Degree	Technical Diploma ☐ Bachelor ☐ High Diploma ☐ Master ☐ PhD ☐	
Semester		
Qualification		
Scientific Title		
ECTS (Credits)		
Module type	Prerequisite ☐ Core ☐ Assist. ☐	
Weekly hours		
Weekly hours (Theory)	(3)hr Class	(1)Total hrs Workload
Weekly hours (Practical)	( )hr Class	( )Total hrs Workload
Number of Weeks	12	
Lecturer (Theory)	Prof.Dr.Basim Mohammed Fadhil	
E-Mail & Mobile NO.	Basim.fadhil@epu.edu.iq	
Lecturer (Practical)		
E-Mail & Mobile NO.		
Websites		

Course Book

Course Description	This is course is mathematics I which involves :.1st ODE ((separable, exact)), 2nd ODE(case, I case I,I case III), undetermined coefficient, Variation of parameter, Eular-Chachy eqn, Laplace transform, power series.
Course objectives	Upon completion of this course, students will be able to: Understand and solve the problems of 1st ODE ((separable, exact)), 2nd ODE(case, I case I,I case III), undetermined coefficient, Variation of parameter, Eular-Chachy eqn, Laplace transform, power series.
Student's obligation	The student's obligations are: 1-attending the lectures in the class and online, 2-doing homework, 3- doing assignments and quizzes.4- doing examinations.
Required Learning Materials	

Evaluation

Task		Weight (Marks)	Due Week	Relevant Learning Outcome
Paper Review				
Assignments	Homework	10%	4,8	
	Class Activity	2%	15	
	Report	8%	7	
	Seminar	8%	10	
	Essay			
	Project			
Quiz		8%	4,6,10	
Lab.				
Midterm Exam		24%		
Final Exam				
Total				

Specific learning outcome:

1- Students should be able to use mathematical symbols
3- Perform solutions of 1st ODE and 2nd ODE correctly
4- Evaluate correctly the Euler-chucy eqn.

	5-power series and L.T
Course References:	1- Advanced Engineering mathematics by Erwin Kreyszic **2-** Advanced Engineering mathematics by Alan Jeffrey

Course topics (Theory)	**Week**	**Learning Outcome**
Introduction,1st order DE, separable, exact, and linear	1,2	
2nd ODE, case I, case II, case III	3,4	
2nd ODE ,undetermined coeff, Variation of parameter, and Euler-Cauchy eqn,	5,6	
inverse of matrix, higher ODE	7,8	
Laplace transform, Laplace inverse, application of L.T	9,10	
Power series	11	
Dot and cross product	12	

Practical Topics	**Week**	**Learning Outcome**

Questions Example Design

Extra notes:

External Evaluator