	Course name: MATH 101 Calculus I	Department: Mechanical Engineering	Semester
			1

	Methods of Education						Credit (ECTS)
Lecture	Recitation/ (Etud)	Lab	Project/Field Study	Homework	Other	Total	6
56	45		19	60		180	

Language	English
Compulsory/Elective	Compulsory
Prerequisites	None
Course Contents	Functions of a Single Variable, Limits and Continuity, Derivatives, Applications of Derivatives, Sketching Graphs of Functions, Asymptotes, Integration, Fundamental Theorem of Calculus, Applications of Integrals, Polar Coordinates, Transcendental Functions, Techniques of Integration, Indeterminate Forms, L'Hopital's Rule.
Course Objectives	1.To provide the concepts of functions, limits, continuity, differentiation and integration 2.To provide the knowledge of applications of differentiation and integration 3.To give an ability to apply knowledge of mathematics on engineering problems
Learning Outcomes and Competences	Student, who passed the course satisfactorily can: 1. Compute the limit of various functions, use the concepts of the continuity, use the rules of differentiation to differentiate functions 2. Sketch the graph of a function using asymptotes, critical points and the derivative test for increasing/decreasing and concavity properties. 3. Set up max/min problems and use differentiation to solve them 4. Evaluate integrals by using the Fundamental Theorem of Calculus 5. Apply integration to compute areas and volumes, volumes of revolution and arclengths 6. Learns transcendental functions and evaluate integrals using techniques of integration
Textbook and /or References	G.B Thomas, R. L. Finney, M.D.Weir, F.R.Giordano, 2005, Thomas' Calculus, 10th Edition, Addison Wesley, ISBN:0201441411.

Assessment Criteria		If any, mark as (X)	Percentage (%)
	Midterm Exams	X	40
	Quizzes		
	Homeworks		
	Projects		
	Term Paper		
	Laboratory work		
	Other		
	Final Exam	X	60

Instructors	