



Mathematics (Math 114): Applied Calculus II

Instructor	DR. ABDELOUAHED EL KHALIL
Credits:	4 hours
Prerequisite:	Calculus I (Math 113)
E-Mail:	alakhil@imamu.edu.sa
Office:	
Office hours	

Textbook:

Calculus, Early Transcendental Functions, Robert Smith and Roland Minton, Third Edition McGraw-Hill International Edition, 2007.

Content:

Chapter	Topics	Week
Definite Integrals	Sums and Sigma Notation, Riemann sums, Area, The Definite Integral	1
	Average Value of a Function, The Fundamental Theorem of Calculus, Integration by Substitution	1
	Integration by Parts for a Definite Integral	1
	Improper Integrals, Numerical Integration	1
Infinite series	Sequences of Real Numbers, Convergence and Divergence of Infinite Sequences, Infinite Series	2
	Alternating Series Convergence Tests and Power Series	2
Functions of several variables and Partial Differentiation	Functions of several variables, Limits and Continuity	1
	Partial derivatives, Total derivative, Chain rule	1
Multiple Integrals	Double and triple integration	1
	Areas and volumes; change of variables in multiple integrals	1
Parametric equations	Plane Curves and Parametric Equations, Calculus and Parametric Equations	1
	Arc Length and Surface in Parametric Equations	1
Revision		1

Exams (common):

- Midterm1: 6th week
- Midterm2: 10th week
- Final: 16th week

Grading:

- Midterm1: 20%
- Midterm2: 20%
- Participation, home works & quizzes: 20%
- Final Exam: 40%

