

Math 309-101
Mathematical analysis for technology
Course syllabus and Outline

Course: Math 309-101, Mathematics Analysis for technology

Semester: Fall 2012

Meeting: Tuesday 5:45 Pm - 9:40 Pm

Location: **KUPF 104**

Instructor: Professor F. Jamedar

Email: fjamedar@yahoo.com

Text Book: **Calculus** Concepts and Contexts, James Stewart 4th Edition

Prerequisite: Calculus I

Optional Material: TI-83,83 plus, 84,84 plus, 85,86 graphing calculator

Grading Policy:

- 1) There will be three exams given including a comprehensive final exam. **each exam counts as 25%** of the course total grade. Final exam counts **As 35% and homework counts as 15%.**
- 2) Taking all the exams is mandatory. **Taking the final exam is Mandatory.**
- 3) The Weighted average of the exams and Final and homework will determine the Final Grade.
- 4) Home work will be collected and counted as 15% of course grade.

Homework: All the homework assignments are included in the course outline. Homework will be collected on the night of each exam for the topics Covered in the exam only. Five percentage points is **given for a Complete set of home work.**

Make up Policy: Make ups are given for missed exams with verifiable proof such as Doctor's note, Accident's report for the day of the exam or other Legitimate excuses.

Important dates

Fall 2012 Academic Calendar

Sep. 1	NJIT Saturday Classes Begin
Sep. 3	Labor Day-No Classes
Sep. 4	NJIT/Rutgers Classes Begin
Sep. 11	Last day to add a course
Sep. 11	Last day for 100% refund
Sep. 12	W grades posted
Sep. 25 90% refund)	Last day for a refund based on partial withdrawal (Last day of
Oct. 15	Deadline for Applying for January Graduation
Oct. 23 25% refund)	Last day for a refund based on complete withdrawal (Last of
Nov. 6	Withdrawal Deadline
Nov. 12	Winter & Spring Registration Begins
Nov. 15	Deadline for Applying for May Graduation
Nov. 20	NJIT/Rutgers classes follow a Thursday Schedule
Nov. 21 Nov. 22-25	NJIT/ Rutgers classes follow a Friday Schedule Thanksgiving Recess
Dec. 12	NJIT/Rutgers Classes End
Dec. 13	NJIT Reading Day
Dec. 14-20	NJIT Final Exam period

Course outline

<i>Week</i>	<i>Chapter</i>	<i>Topic</i>
1	3.1	Derivative of polynomial function
	3.2	Product and Quotient Rules
	3.3	Trigonometric functions Derivatives
	3.4	Chain Rule
	3.5	Implicit differentiation
2	3.6	Inverse trigonometric functions
	3.7	Derivatives Of Logarithmic function
	4.8	Anti Derivatives
	5.3	Definite integrals
3	5.5	Integration by Substitution
	5.6	Integration by parts
4	5.7	Integration by partial fractions
5		<u>Test 1 Home work Due</u>
6	6.2	Volumes
	6.4	Arc Length
	6.5	Average value of a function
7	6.6	Moments and Center of mass
	7.1	Solutions of differential equations
	7.3	Separable equations
8	8.7	Taylor & Maclaurin Series
9		<u>Test 2 Home work Due</u>
10	Appendix	Polar coordinates
	9.1	Three Dimensional Coordinate System
	9.2	Vectors
	9.3	The Dot Product
11	9.4	The cross product
	9.6	Functions of two or more variable
	10.2	Derivatives & Integrals of Vector fuctions
	10.3	Arc Length & Curvature
		Review for test
	11.3	Partial Derivatives
12	11.5	The chain rule
	11.7	Maximum & Minimum Values
	12.2	Iterated integrals
13	12.3	Double integrals over general region

13	Triple Integrals
14	<i>review for final exam</i>
15	<i>Final exam</i>