King Fahd University of Petroleum and Minerals
Department of Mathematical Sciences
2006-2007 (061)

Math 102 – Common Policy

Coordination

Math 102 is a multiple-section course. The Course is fully coordinated in order to ensure comparability of objectives, quality, substance and grading. The coordination is carried out by a committee of math faculty members appointed by the chairman of the math department. It takes effect in the following sense:

- The syllabus, homework, recitations, and exams will be the same for all sections.
- The final letter grades will be curved for all sections during a deliberation of the committee.
- The other clauses of this policy apply to all sections.

Exams

- There are three (3) major exams and one (1) final exam. The format consists of multiple choice questions only. The final exam is comprehensive.
- Exam questions range over varying levels of depth and difficulty and cover different types. They are similar in type and difficulty to those of the textbook. Some (but not all) of them may be similar in form and content to those listed in the homework and recitation sheet.
- No makeup exam will be given under any circumstance. When you miss an exam for a legitimate reason (such as medical emergencies with official confirmation) your grade for that exam will be determined based on your final exam grade.
- The use of books, cell phones, calculators or notes of any sort is not permitted in any of the exams.

Homework

The graded homework sets comprise only a small part of the assigned homework. Twenty-seven (27) homework sets should be turned in for grading. The five (5) lowest homework grades will be dropped (including zeros in case of missed homework sets).

Grading Policy & Exam Format

Exam	Duration	# Questions	Score
Major Exam 1	**1**h**30**mn	**15**	**100**
Major Exam 2	**1**h**30**mn	**15**	**100**
Major Exam 3	**1**h**30**mn	**15**	**100**
Final Exam	**2**h**30**mn	**25**	**175**
Homework	-	-	**25**
		TOTAL	**500**

Exam Questions Attributes

Reference	Percentage
Recitation	**15 %**
Graded Homework	**15 %**
Homework	**30 %**
Book	**40 %**

Attendance

Full class attendance is requested. DN policy will be adopted according to KFUPM regulations from a total of (12) absences in lectures & recitation sessions.

Academic Integrity

All KFUPM policies regarding ethics apply to this course.

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Math 102 - Syllabus

Title : Calculus II
Textbook : Calculus (Early Transcendentals): by J. Stewart; 5th edition, 2003
Objectives : Definite and indefinite integrals. Fundamental Theorem of Calculus. Techniques of integration. Hyperbolic functions. Applications of integration. Improper integrals. Sequences and series: convergence tests. Alternating series. Absolute and conditional convergence. Power series. Taylor and Maclaurin series

Week	Date	Sec.	Topics
1	Sept. 09-14*	5.1 5.2	Areas and Distances The Definite Integral
2	Sept. 16-20	5.3 5.4	The Fundamental Theorem of Calculus Indefinite Integrals and the Net Change Theorem
Saturday, September 23: National Holiday			
3	Sept. 24-27	5.5 5.6	The Substitution Rule The Logarithm Defined as an Integral
4	Sept. 30-Oct. 04	6.1 6.2	Areas between Curves Volumes
5	Oct. 07-11	6.2 6.3	Volumes (continued) Volumes by Cylindrical Shells
Exam 1: Monday, October 9 (Material: 5.1→6.1)			
Eid Al-Fitr Vacation			
6	Oct. 28-Nov. 01	6.5 7.1	Average Value of a Function Integration by Parts
7	Nov. 04-08	7.2 7.3	Trigonometric Integrals Trigonometric substitution
8	Nov. 11-15	7.4 7.5	Integration of Rational Functions by Partial Fractions Strategy for Integration
9	Nov. 18-22	7.8 8.1	Improper Integrals Arc Length
10	Nov. 25-29	8.2 11.1	Area of a Surface of Revolution Sequences
Exam 2: Tuesday, November 28 (Material: 6.2→7.8)			
11	Dec. 02-06	11.2 11.3	Series The Integral Test and Estimates of Sums
12	Dec. 09-13	11.4 11.5	The Comparison Tests Alternating Series
13	Dec. 16-20	11.6 11.7	Absolute Convergence and the Ratio and Root Tests Strategy for Testing Series
Eid Al-Adha Vacation			
14	Jan. 06-10	11.8 11.9	Power Series Representation of Functions as Power as Power Series
Exam 3: Wednesday, January 10 (Material: 8.1→11.7)			
15	Jan. 13-17	11.10	Taylor and MacLaurin Series
Final: Saturday, January 27 – 7:00 a.m.			

* Thursday, September 14, 2006: Normal Saturday Classes.

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Math 102
Homework & Recitation Problems

Section	Homework	Graded Problems*	Recitation	CAS**
5.1	2,11,15,19	**2,15,19**	5,13,16,20	-
5.2	3,11,18,22,28,34,36,48,56,62	**3,22,48**	2,19,24,38,52	-
5.3	9,12,14,25,26,32,50,55	**14,25,26**	10,16,28,67	-
5.4	8,12,22,26,31,38,53	**12,26,38**	10,24,34,56	41
5.5	4,7,12,15,21,26,32,37,42,52,57,70,79	**12,26,79**	11,25,38,55, 62	-
5.6	1(a),10(c)	**1(a),10(c)**	7,9,10(a)	-
6.1	3,7,11,15,17,20,29,44	**11,15,17**	4,10,19,28,46	43
6.2	4,5,14,16,22,36,41,49,58	**5,14,49**	6,13,18,26,54	-
6.3	4,11,17,20,21,41	**4,17,20**	2,6,18,42	-
6.5	2,7,10	**2,7,10**	5,9	-
7.1	5,12,16,29,35,45,52,58,63	**12,29,45**	10,21,30,34,57	38,54
7.2	2,8,27,38,42,48,55,61	**2,48,61**	16,44,46,66	57
7.3	4,10,25,30,34,39	**10,25,39**	26,29,35	37
7.4	4(b),9,16,30,38,39,46,50,54	**16,38,46**	6(b),18,24,43,62	66(a)
7.5	14,23,32,44,55,64,68,79	**14,44,68**	31,46,63,80	-
7.8	1,8,14,28,33,56,58	**14,33,58**	2(d),17,37,59	4
8.1	7,10,16,19,31,37	**10,31,37**	9,20,29	3
8.2	8,14,25,29	**8,14,25**	11,16	23
11.1	8,12,18,25,32,36,56	**25,32,56**	14,34,39,60	41,42,43
11.2	9,20,24,25,34,39,43,50	**9,24,43**	12,16,26,38,53	8,54
11.3	7,10,20,26,30,33	**20,26,33**	11,28,32	-
11.4	5,9,26,31,35,45	**5,26,31**	6,16,32,38	-
11.5	2,8,15,18,23,28,32	**2,15,23**	10,20,33	22
11.6	5,16,18,21,26,30	**16,26,30**	11,19,27,33	-
11.7	14,18,26,29,38	**18,29,38**	31,32,34	-
11.8	11,20,28,30(a,d),31	**11,28,30(a)**	21,29,40	32
11.9	9,11,14,18,23,32,39	**18,23,32**	7,16,29,38	-
11.10	1,10,14,28,40,46,51,56		18,30,48,52,60	-

* Please do **all** the homework assignments on time, **but** turn in only the graded problems.

****** CAS problems require the use of a technology tool (e.g., graphing calculators or computers). You are encouraged to do these problems in order to enhance your understanding of the concepts involved.

Tips on how to enhance your problem-solving abilities:

1. You are urged to practice (but not memorize) more problems than the above lists.
2. You should always try to solve a problem on your own before reading the solution or asking for help.
3. If you find it difficult to handle a certain type of problems, you should try more problems of that type.
4. You should try the recitation problems before coming to class.
5. You are encouraged to solve some of the review problems at the end of each chapter.
6. The practice you get doing homework and reviewing the class lectures and recitations will make exam problems easier to tackle.