



Prince Sultan University

Department of Mathematical Science

SYLLABUS

MATH 002 (Term 112)

Course : MATH 002

Pre-Requisite course: MATH 001

Title : Orientation Mathematics II

Textbook : Algebra and Trigonometry, Fourth Edition; Robert Blitzer; Prentice Hall, 2010.

Mathematics Department Website: www.psu.edu.sa/math

Objectives: The students are expected: to comprehend the material of this course, to improve their computational skills in basic Algebra, and to demonstrate their writing ability in Mathematics with logical steps.
The medium of instruction will be strictly ENGLISH from the first day of classes.

Week #	Date	Section	Topic
1	January 28 – Feb. 01	4.1	Introduction Exponential functions Exponents
2	February 04 – 08	4.2 4.3	Logarithmic functions Properties of logarithms
3	February 11 – 15	4.3 4.4	Properties of logarithms Exponential and logarithmic equations
4	February 18 – 22	4.4 5.1	Exponential and logarithmic equations Angles and their measure
5	February 25 – 29	5.1 5.2	Angles and their measure Right triangle trigonometry
6	March 03 – 07	5.3 5.4	Trigonometric functions of any angle Trigonometric functions of real numbers
7	March 10 – 14	5.5 5.7	Graphs of sine and cosine functions Inverse trigonometric functions
8	March 17 – 21	5.7 6.1	Inverse trigonometric functions Verifying Trigonometric Identities
	March 24 – 28	Midterm Vacation	
9	March 31 – April 04	6.2 8.1	Sum and Difference Formulas Systems of linear equations in two variables
10	April 07 – 11	8.2 8.5	Systems of linear equations in three variables Systems of inequalities
11	April 14 – 18	9.1 9.2	Matrix solutions of linear systems Inconsistent and dependent systems
12	April 21 – 25	9.3 9.4	Matrix operations and applications Matrix inverses and matrix equations
13	April 28 – May 02	9.5 10.1	Determinants and Cramer's Rule The Ellipse
14	May 05 – 09	10.1 10.2	The Ellipse The hyperbola
15	May 12 – 16	10.3	The parabola Review
16	May 17 – May 29	Final Exams	

Omitted Objectives (Topics)					
Section	Objectives	Section	Objectives	Section	Objectives
4.1	4	8.5	3	10.1	4
5.1	8	9.2	3	10.2	5
5.5	5 & 6	9.3	7	10.3	4
6.2	3	9.4	3		
8.1	5	9.5	5 & 6		

Class attendance:

- Students are required to attend all classes starting from **the first day of the semester**.
- Attendance will be taken at the start of the lecture. If the student enters the classroom **after 5 minutes**, he will be marked **absent**.
- **5 points** will be assigned to the attendance. **One point will be deducted** from the student's total grade for every one absence he has after missing four (4) classes.
- **No excuses for missing classes, including medical reasons, are accepted.** Any excuse, legitimate or not, will be counted against the student's limit for DN (16 Absences).
- "DN Grade" will be issued to a student who **misses 16 classes**. This means he cannot enter any more classes or exams. (**1st warning: 6 absences** ; **2nd warning: 11 absences**)
- In case a student **misses** a class, he must contact any one of his classmates to get all information and topics covered of classes he **missed**.
- From the past experience, **absence** is the biggest reason for failing, so make sure you are in class at all times.

Class work (Participation, Quizzes, and Homework)

- The class work grade is expected to reflect the performance of the student throughout the semester and is based on quizzes, homework, and class participation.

QUIZZES

- **At least 10 Quizzes** will be given at the beginning of some lessons. The quiz material will be picked from the list of suggested PRACTICE PROBLEMS you are given along with the syllabus.

(Remember that if you are absent or late for the lesson, then you will get a **zero** for the quiz.)
(There is no make up for the quizzes). Quizzes will count for **10 points** of the total grade.

- You need to do the PRACTICE PROBLEMS that are given to you along with the SYLLABUS for practice
(Quizzes and exams are either picked from these problems or from problems that are very similar to them.)

HOMEWORK

- There is an online tool "**Coursecompass**" which is a very helpful tool that should improve your performance in the course with all the helping features available. Your instructor will give you all the details about registering and using it.
- **Online Homeworks** will be given during the term. A deadline for submitting each homework will be determined by your instructor. **5 points** will be assigned to the Homework.

CLASS PARTICIPATION

- **5 points** will be assigned to Class Participation.
 - i. **5 points** will be assigned to the active participation.(Asking questions, solving examples, being attentive, and attending office hours).
 - ii. Some points will be assigned to the student's readiness in class (having pens and notebook), and for taking good notes.
- Points may be deducted for using mobiles in the classroom.
- The department offers an Extra class on **Wednesdays**. This class is used to solve some homework problems, previous exams, and offer extra help. Some quizzes are also held during this class. All students are recommended and required to attend these tutorial classes.

Math Tutorial Lab

- The Math Department offers extra help for all PYP students in a Math Tutorial Center located in the Research & Translation Center (**Room A-307**). An instructor will be available to help you with any aspect of the course. The lab will be available 3 days a week(Sunday, Monday, and Tuesday from 12:30 --- 1:00)

Math Department Website:

- A student can visit "The Math Department Page" through the Mathematical Sciences Website (www.psu.edu.sa/math) where he can find several helping information such as the syllabi for all math courses, useful links to help the student in his study, and a huge collection of the previous midterm and final exams that were administered by the Department through the previous semesters.

Exams:

- At least **Two Class Tests** will be given during the term. These tests count for **25 points** of the total grade. The dates and materials for these tests will be provided by your instructor.
- A Final exam will be given at the end of the term covering all the subjects taken during the term and is worth **50 points**.

Calculators:

- Only Scientific Calculators are allowed in this course (No Graphing Calculators). We recommend **Casio fx-991ES**

Office Hours:

- You are advised and encouraged to seek help to clarify matters that are not clear to you as soon as possible.
- Check the table posted on your instructor's door for the office hours incase you need assistance or you need to inquire about matters concerning your marks, absence, and so on. If you need to see him at a different time, arrange with him in advance.

Grading Policy	
Attendance	5%
Class Participation	5%
Quizzes	10%
Homework	5%
Class Tests	25%
Final Exam	50%
Total	100%

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SECTION	PAGE	PRACTICE PROBLEMS			
		Exercises	Practice Plus	Application	Critical Thinking
4.1	420	5,9,13,17,27,29,35,39,45,49,51	59,61	65,67,73	91
4.2	434	5,11,19,21,29,35,41,43,49,55,59,73, 77,79,83,89,91,99	101,107, 111	113,119	143,144
4.3	445	7,11,15,23,27,33,35,39,47,53,59,65,67,69,73	83,87,95, 99	---	127,129, 131
4.4	456	5,13,15,19,23,31,35,37,41,45,47,55,61,69,71 ,73,77,81,89	91,99	101,115	139,140
5.1	494	9,17,19,25,31,37,43,47,53,55,61,65,73	77,85	89,95	122
5.2	509	7,11,15,17,19,21,29,37,43,47,51,53,55,61	65,69,71	73,75,79	99,100
5.3	525	5,9,13,19,25,27,31,35,39,41,45,51,57, 61,65,69,73,77,85	89,91,93 103	---	---
5.4	532	3,7,11,17,19,23,25,29	37,41	43	59
5.5	554	5,9,13,21,25,29,39,41,47,51,55,59	61,65,69	85	115
5.7	584	5,9,21,25,29,33,39,41,49,53,59,61,67,69,71	85,89	95	120
6.1	614	1,7,9,11,17,19,27,33,37,45,49,51,55,59	69,71	---	92,93
6.2	623	1,3,5,7,9,13,15,19,25,33,39,41,45,57,59,61	73,74	---	99,101
8.1	758	3,7,15,19,27,33,37,41,43	47,51	77,78	---
8.2	769	3,7,11,15,21	25,27	39	---
8.5	803	3,7,15,17,27,33,41,47,51,57,59,61	65,75	---	111,112
9.1	830	1,5,9,15,21,23,31,35,37,41	39,41	45	---
9.2	840	1,5,7,11,15,21,23	---	---	41
9.3	854	3,7,15,19,25,27,31,35,39,43	47	---	---
9.4	869	1,5,9,11,17,19,23,27,31,35,37,39,41	43,47	---	87,90,91
9.5	882	1,5,13,17,21,25,29,31,33,37,39,41,43	45,47,51	53,55,57	75
10.1	899	1,17,23,25,27,29,31,33,35,39,41,43,45,49,51 ,53,55	57,61	65	85,86
10.2	913	3,5,7,11,17,23,29,33,37,41,43,45,47	51,57	63	87,89
10.3	925	5,9,13,15,19,23,27,35,39,43,47	53,59	67	83

- You are advised to do as many questions as possible, class-by-class, week by week. These questions will help to strengthen your understanding of the material taught in class. If you have any problems see your instructor.