

MATH002: COURSE DESCRIPTION

The second course in the Preparatory Year Math Program is Math 002 (College Algebra and Trigonometry II) which contains trigonometry and extended topics in college Algebra

The program aims to:

1. Reinforce and Review the student's knowledge of mathematical and analytical skills through the medium of English.
2. Develop student's writing skills in Math through interrelated logical procedures.
3. Provide students with the ability to use their understanding to produce and communicate mathematics.
4. Prepare students to apply Math skills in advanced degree programs.
5. Prepare students to acquire a solid foundation in algebra and trigonometry.
6. Shape students' Mathematics study habits by emphasizing useful Math study habits and skills that will facilitate their academic success at KFUPM.

The program is designed such that students are continuously involved in lectures, class work, and self-learning activities, mainly solving problems during the recitation classes and through weekly online assignments and knowledge tests to enable them to master course topics through a continuous cycle of mastery, knowledge retention, and positive feedback.

Peer tutoring is an essential component of the learning process, weekly training in-person sessions and online sessions are conducted in which students can enhance their knowledge and can share and exchange ideas with fellow students and their instructors. Moreover, students can benefit from resources made available through the LMS (Blackboard) by their instructors and the Prep-Math Program.

PREREQUISITE

MATH 001 or its equivalent.

LEARNING OUTCOMES

Upon completion of the Prep-Year Math 002 course, a student should be able to:

1. Use one-to-one, exponential, logarithmic, and trigonometric functions and identities to simplify and evaluate related expressions
2. Find the coterminal and reference angles in degrees and radian measures
3. Sketch and analyze the graphs of functions and their inverses, particularly, exponential, logarithmic, and trigonometric functions
4. Solve exponential, logarithmic, trigonometric, and systems of equations
5. Carry out algebraic operations on vectors and matrices, including inverses and determinants
6. Determine conic sections' equations and conclude their properties
7. Formulate real-life word problems mathematically

SKILLS AND VALUES

1. Critical Thinking
2. Problem-Solving
3. Team-Work
4. E-Learning
5. Self-Confidence
6. Cooperation

STUDY RESOURCES

1. Textbook Examples and Exercises
2. Lecture Notes
3. Home-Work (ALEKS) through Blackboard.
4. Old Exam Questions
5. Online video courses

Important study resources are available on the Prep-Math Program Link on Blackboard (BB)

RULES AND REGULATIONS

Attendance

- Every 5 registered late will convert into 1 absent.
- A student is registered absent in a class if he joins after 10 minutes or he did not attend.
- A student is registered as late in a class if he joins within 10 minutes from the start of the class time.
- A student will receive 1st warning if he has 3 unexcused absences.
- A student will receive 2nd warning if he has 6 unexcused absences.
- A student will be awarded a 'DN' grade if he reaches 8 unexcused absences.
- A student will be awarded a 'DN' grade if he reaches 11 total absences.
- Starting from the fifth absence,
- 1/2 point will be deducted from the student's total grade for each absence onward.
- It's the responsibility of the student to keep a record of his absences. Students will have only one week to submit their official excuses to the office of the Chairman, Prep Year Program.
- **If a student uses a mobile phone for non-academic purposes (learning use must be directed by the instructor), he/she will be considered absent.**

Missing an Exam

No makeup exam will be given under any circumstance. When a student misses Exam I or Exam II for a legitimate reason (such as medical emergencies), his grade for this exam will be determined based on the Department's policy. Furthermore, the student must provide an official excuse within one week of the missed exam. "The same applies to the quizzes and class Tests".

Change of Section

- Change of section is NOT allowed.

Passing and Failing Rules

- The passing grade is “D”

Lectures and Recitation

Three lectures and one recitation per week (50 minutes). In recitation class, students should interact with their instructor to solve the recitation questions related to the material covered in lectures.

GRADES AND ASSESSMENT POLICY

ASSESSMENT AND GRADES POLICY	TOTAL WEIGHT
CLASS-WORK - Five written quizzes (15 points) - One written class test (5 points)	20%
Classwork average for each section = x x = average (Exam1 & Exam 2)/20	
Active Learning Activities	3%
Online Homework on ALEKS	7%
Major Exam 1 (20 MCQ)	20%
Major Exam II (20 MCQ)	20%
Final Comprehensive Exam (30 MCQ)	30%
TOTAL:	100%

SERVICES AND EVENTS

- Office hours
- Online video lecturers
- Help Sessions
- Student Peer program
- RAM Contest (Real-life Application in Mathematics)
- Factorization Contest
- 1MBA Contest 2024 (1 Minute Basic Algebra)

TEXTBOOK

Algebra Trigonometry, Stewart, Redlin and Watson, Fourth edition. An online textbook version is available in ALEKS.