MATH 245

Instructor: Dr. A. Malki

Contact information:
- **Phone:** (818)364-7898  
  **E-mail:** malkiaj@lamission.edu
- **Office hours:** MW: 2:00-4:00PM, TTH: 1:00-2:00PM, Room: Bungalow D

Course: Math 245, College Algebra


Class Section: 3293

Time: TTH 5:25-6:50PM

Room: BUNG-1

Monday, Sept. 1            Labor Day Holiday, college closed
Tuesday, Sep. 2            classes begin
Friday, Sep. 12           last day to add classes
Friday, Sep. 26           last day to drop classes without “W”
Friday, Nov. 7            last day for section transfers
Monday, Nov. 10           Veterans Day, college closed
Friday, Nov. 21           last day to drop with a “W”
Thursday Nov. 27-30      Thanksgiving Holiday, college closed
Saturday, Dec. 13         classes end
Sunday, Dec. 14-20       final exams week

**FINAL EXAM TIME:** Thursday, Dec. 18, 5:30-7:30PM

Course Description: We will cover the following topics:
- Chapter 1: Fundamental Concepts of Algebra
- Chapter 2: Equations and Inequalities
- Chapter 3: Functions and Graphs
- Chapter 4: Polynomial and Rational Functions
- Chapter 5: Inverse, Exponential, and Logarithmic Functions
- Chapter 6: Systems of Equations and Inequalities
- Chapter 7: Sequences, Series, and Probability
- Chapter 8: Analytic Geometry

Course Objectives:
- Model and solve equations and inequalities, including quadratics and complex numbers.
- Perform operations with complex numbers including exponentiation.
- Perform operations on functions, draw their graphs, and find their inverses.
- Model, solve and graph linear and non-linear systems of equations and inequalities
- Model and solve systems of equations and inequalities (two variables and more).
- Analyze and graph polynomial and rational functions
- Perform operations with polynomial functions.
- Perform operations with exponential and logarithmic functions.
- Model, solve, and graph exponential and logarithmic functions.
- Identify and manipulate sequences and series.
- Interpret summation notation and determine sums of sequences.
- Decompose algebraic fractions into partial fractions.
- Solve systems of equations using matrix theory.
- Evaluate determinants and utilize their properties.
- Analyze and graph conic sections: parabolas, ellipses, and hyperbolas.
- Prove mathematical statements by mathematical induction.

Class Structure:
Most of the class time will be used for lecturing and answering questions. Some time will also be used for students to work in groups. Students should also expect to be called upon to solve problems on the board. Class environment is to be informal, open and relaxed; hence students are strongly encouraged to participate fully in class and to ask questions.

Exams:
1. There will be five examinations of 100 points each. The lowest grade of these six examinations will be dropped. There will be no make-up examinations, since the missed exam will be the one dropped. Any other missed examination will receive a grade of 0.

2. A comprehensive final examination of 200 points. There are no make-ups for the final and all students must take the final exam.

Exams will be announced in class in advance

Homework:
Homework will be assigned on a regular basis, but will not be collected nor will it be counted in the grades. Questions on the homework will be answered in the class.

Attendance:
Students are expected to attend all class meetings. Unexcused absences of four meetings may result in excluding students from class. Students themselves are responsible for dropping a class they no longer attend; failure to do so may result in a grade of F.

Grades:
Grades will be based on the total number of points earned for tests and the final:

<table>
<thead>
<tr>
<th>TOTAL POINTS</th>
<th>GRADE</th>
</tr>
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<tbody>
<tr>
<td>540-600</td>
<td>A</td>
</tr>
<tr>
<td>480-539</td>
<td>B</td>
</tr>
<tr>
<td>420-479</td>
<td>C</td>
</tr>
<tr>
<td>360-419</td>
<td>D</td>
</tr>
<tr>
<td>BELOW 360</td>
<td>F</td>
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NO "INCOMPLETE" GRADES WILL BE GIVEN

NOTE: STUDENTS THEMSELVES ARE RESPONSIBLE FOR DROPPING THE CLASS, ACCORDING TO COLLEGE REGULATIONS.

Study Tips:

General:
- Attend all class meetings
- Do not fall behind on your homework or study
- Math is cumulative, what you study now will be needed later
- Avoid anxiety, the best way to do that is by being well-prepared
- Motivate yourself by remembering what a good education means for the future
- Do not rely too much on memorization; concentrate on understanding ideas
- Math is like a foreign language, it must be practiced-- often
- Develop responsibility for your education

Before the test:
- Do the Chapter tests in the book
- Do not stay up late the night before the test
- Arrive ahead of time

During the test:
- Read the instructions
- Begin with the problems that you know how to do
- Show all your work neatly
- Review your work