

Syllabus

MAC 2311.0001: Calculus & Analytical Geometry, Fall 2006

TIME and ROOM of Lectures: MW 12:00-1:15 pm, F: 12:00-12:50 pm MAP 204

Professor: Dr. Warren Y. W. Qi, **Office:** MAP 127, **Telephone:** 823-2810,

Email: yqi@pegasus.cc.ucf.edu

OFFICE HOURS: M: 10:30 am–11:50 am, T: 10:30 am–11:50 am, W 10:30 am –11:30 am, R: 11:00am-12:00pm or by appointment

TEXT: *Calculus, 5th edition* by James Stewart.

EXAMS: **3 Tests,** **1 Final** & Unannounced quizzes.

Testing Dates: Test 1, **Sep. 13;** Test 2, **Oct. 11;** Test 3, **Nov. 8;** Final, TBA

GRADING POLICY: Each test 20 %, Final 30 %, Attendance 5 %, Quizzes 5 %.

Grading Scale: A: 90-100 %, B: 80-89 % C: 70-79 % F: 0-69 %

NC: You need to attend class regularly, take all quizzes, Tests and Final to Qualify for consideration of NC.

ATTENDANCE: We check attendance. Absence from class: 1st -1 %, next two -2 % each. We do not give any exceptions.

HOMEWORKS: Homeworks will be assigned at each class meeting but *not collected*. The student is expected to attempt every problem before coming to class.

PREREQUISITE: Two years of high school algebra, one year of high school geometry and one semester of high school trigonometry.

Academic Honesty: Academic dishonesty is strictly forbidden and disciplinary action in accordance with University policy will be taken in response to such behavior. Please see UCF's Golden Rule Handbook or <http://www.ucf.edu/goldenrule/> for more information.

Makeup Policy: In case of documented absence due to religious holidays, family emergencies, illness or official university functions, the university policy for make-up tests, quizzes will be followed. Any other make-up is at the the discretion of the instructor.

In addition:

1. MathLab, MAP 113 is open M-R: 0900-1900, F: 0900-1500, Sunday: 1400-1800.
2. Add/Drop period is Aug. 21-25
3. Deadline for withdraw is Oct. 13
4. University holidays are: Sep. 4 (Labor Day), November 10-11 (Veteran's Day), Nov. 23-25 (Thanksgiving)
5. Students need disabilities accommodations must contact professor at the beginning of the course. No accommodation will be provided until the student meet with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Student Resources Center Room 132, phone: (407)-823-2371, TTY/TDD only phone: (407)-823-2116, before requesting accommodations from the professor.

Remarks: 1) This is a **tough course**, hence please **Work Hard**.

2) Please bring your photo ID to all exams.

Suggested sections for MAC 2311:

Chapter 1: Functions and Models

- 1.1 Four ways to represent a function
- 1.2 Mathematical Models (**optional**)
- 1.3 New functions from old functions

Chapter 2: Limits and Rates of Change

- 2.1 The tangent and velocity problems
- 2.2 The limit of a function
- 2.3 Calculating limits using the limit laws
- 2.5 Continuity
- 2.6 Tangents, velocities and other rates of change

Chapter 3: Derivatives

- 3.1 Derivatives
- 3.2 The derivative as a function
- 3.3 Differentiation formulas
- 3.4 Rates of change in the natural and social sciences (**optional**)
- 3.5 Derivatives of trigonometric functions
- 3.6 The chain rule
- 3.7 Implicit differentiation
- 3.8 High derivatives
- 3.9 Related rates (**optional**)

Chapter 4: Application of Differentiation

- 4.1 Maximum and minimum values
- 4.2 The mean value theorem
- 4.3 How derivatives affect the shape of a graph
- 4.4 Limits at infinity; horizontal asymptotes
- 4.5 Summary of curve sketching
- 4.7 Optimization problems

Chapter 5: Integrals

- 5.1 Areas and distances
- 5.2 The definite integral
- 5.3 The fundamental Theorem of Calculus
- 5.4 Indefinite Integrals and the net change theorem
- 5.5 The substitution rule

Chapter 6: Applications of Integration

- 6.1 Areas between curves
- 6.2 Volumes
- 6.3 Volumes by cylindrical shells
- 6.4 Work
- 6.5 Average value of a function