

MAT 308 — Calculus and Analytic Geometry 2 — Fall 2011

Course Description: A continuation of MAT 250, this course further develop techniques and applications of integration and is an introduction to sequences and series. Topics include integration strategies, computing areas and volumes, arc length, parametric curves, polar coordinates, sequences and series, tests for convergence of series, power series, and Taylor series. (5 credit hours)

Prerequisites: MAT 250. **Instructional Activities:** Lectures and problem solving.

Field, Clinical, Laboratory Experiences, Resources: None.

Purpose & Course Objectives: About half of this course is about the important calculus topic of integration: techniques and applications of integration are thoroughly examined. Additional topics covered are sequences, series, polar coordinates and parametric equations of curves, with the last two important for Calculus 3. The objective is for the student to become familiar with concepts and proficient in solving problems related to these topics.

Instructor: Dubravko Ivanšić [pronunciation: DOO-brahv-ko EE-vahn-shich] Ivanšić is the last name.

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Office: Faculty hall 6A-1 (in the Department of Mathematics and Statistics annex)

Course webpage: (A link to this has also been placed on Blackboard.)
<http://campus.murraystate.edu/academic/faculty/divansic/11fall/308home.html>

Office Hours: Ask me or check the webpage.

Textbook & Content Outline: J. Rogawski, Calculus, early transcendentals. We plan to cover chapters 6–8, 10, and 11 of “Calculus”.

Homework: To promote a continuous effort in the course, homework problems will be assigned. Typically, a section will be assigned once we have covered it and selected problems will be discussed in class. The list of homework problems may be found on the webpage. A smaller portion of the homework problems is to be written up and handed in. In order to succeed in the course you will need to work on all the problems, since test problems will be based on *all* problems assigned for homework and those done in class, not just the ones you hand in.

The problems that you hand in should be reasonably neat and all the sheets should be stapled together. You do not have to write the statement of the problem, but should write brief explanations in words where necessary and should follow rules of “mathematical grammar” when writing. Points will be taken off if these guidelines are not followed or if the homework is late.

Don’t fall behind: Calculus 2 is a harder course than Calculus 1. You will need proficiency in all topics of Calculus 1 to do well in this course, so review any material from Calculus 1 that you had trouble with. In particular, taking derivatives of all kinds must not present a problem to you.

Mathematics is best learned by doing and to acquire proficiency it is essential that you do many homework problems. You should expect to spend at least one to two hours of study time for every hour of class time. Finally, if some things aren’t clear to you, come to me for help as soon as possible, and not the day before the exam...

Graphing calculator: A graphing calculator is required to take this course. The TI-84 is recommended, and is the one that I will use in class. Any other graphing calculator is OK, however, in this case, be aware that you are responsible to learn how to operate it, as I can offer only limited help here.

Attendance: is strongly encouraged every day, and roll will be taken. If you missed ten or fewer classes during the semester, you get 3% bonus points. Note that you are not penalized for missing a class (the points are in excess of your total grade), so an absence is counted as such regardless of the reason (“excused” or not).

Participation in class: is strongly encouraged, as your questions indicate what points need to be addressed in more detail. We will go over some homework in class. You are expected to have worked the problems at home in order to both ask and answer questions on the homework. To encourage participation, a portion of your final course grade will be based on how active you are in class. In order to earn points, you need to be able to answer a homework question when called on.

Exams: There will be seven exams (an exam every other week, approximately) whose dates will be announced well in advance. **On most exams calculators will not be allowed.**

Final exam: is comprehensive and will be held on Tuesday, December 6th at 8:00AM in our usual classroom.

Grading procedure: For your final grade, each of the seven exams is worth 12%, homework is worth 11% and participation in class is worth 5% of the total. Your final exam grade replaces your poorest two exam grades if it is better, hence, it is worth 24%. If you are happy with your exam scores during the semester, you don’t have to take it. (Note that getting a good grade on the final is more difficult than on a regular exam, since it covers the whole semester.) No extra credit work will be given to repair your grade. The final grade scale is approximately

90%–100%=A, 80%–89%=B, 70%–79%=C, 60%–69%=D, 0%–59%=E.

Make-ups: Make-ups for exams will be given only in cases of illness, field trips or other unavoidable circumstances. You will need to provide written verification of the reason for your absence in advance and as soon as possible. If you are unexpectedly absent from an exam, contact me by phone or e-mail **that same day** and arrange to take a make-up. The make-up should occur *soon*, which typically means “before I return the exam”. Make-ups for other graded work will be given at my discretion. Asking for a make-up more than once makes it less likely that I will grant it.

Academic honesty policy: In compliance with the Board of Regents policy on academic integrity, instances of academic dishonesty, as determined by the instructor, will result in zero points for the assignment and possibly a grade of “E” for the course.

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