Department of Mathematics and Statistics
MAT 250 — Calculus and Analytic Geometry 1 — Spring 2012

Course Description: First course in calculus develops main ideas of differentiation and integration of single-variable functions. Topics include limits, continuity, techniques of differentiation, graphing techniques, definite and indefinite integral, basic integration methods, and applications of the derivative and integral to natural and social sciences. (5 credit hours)

Prerequisites: ACT math standard score of at least 26 or MAT 150 or MAT 140 and 145.

Course Objectives: The student will learn the basic concepts and techniques of calculus, as well as some applications. Primary skills to be acquird involve calculating limits, derivatives and integrals, and applying these concepts to simple real-world problems.

Instructional Activities: Lectures and problem solving.

Field, Clinical, Laboratory Experiences, Resources: None.

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/12spring/250home.html

Office Hours: Ask me or check the webpage.

Textbook & Content Outline: J. Rogawski, Calculus, early transcendentals. We plan to cover chapters 2-5 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: Math 250 develops essential calculus ideas (e.g. the limit, derivative and integral) and their applications. In this course you will see and do a number of things you may have seen before, but don't think that you can do them independently until you have made sure by working out problems on your own. Knowledge of college algebra and trigonometry are essential in this course. Make sure you review the parts that you feel rusty with.

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. Furthermore, 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: Students are expected to adhere to the MSU Attendance Policy outlined in the current MSU Bulletins. 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 six exams (an exam every 2.5 weeks, 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, May 8th at 8:00AM in our usual classroom.

Grading procedure: For your final grade, each of the six exams is worth 14%, 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 28%. 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

$$90\%\text{--}100\%\text{=}A, \ 80\%\text{--}89\%\text{=}B, \ 70\%\text{--}79\%\text{=}C, \ 60\%\text{--}69\%\text{=}D, \ 0\%\text{--}59\%\text{=}E.$$

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: Cheating, plagiarism (submitting another persons material as ones own), or doing work for another person which will receive academic credit are all impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, or the presentation of unacknowledged material as if it were the students own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place. Note: Faculty reserve the right to invalidate any examination or other evaluative measures if substantial evidence exists that the integrity of the examination has been compromised.

Non-Discrimination Policy Statement: Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or the provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities. For more information, contact the Director of Equal Opportunity, 103 Wells Hall. 270-809-3155 (voice), 270-809-3361 (TDD).