	Calculus and Analytic Geometry I — Course Syllabus — Spring 2016					
Department:	Mathematics and Statistics					
Course Number:	MAT 250		Credit Hou	ours: 5		
Course Section: 3	Entry Number: 11705					
Time and Place:	11:30 - 12:20 I	MTWThF -	FH 308			
Instructor:	Edward Thome	e	Phone:	809-3718		
Office:	FH 6C-09		email:	ethome@murraystate.edu		
Course web Address:	http://campus.r	nurraystate.edu	u/academic/facul	lty/ethome/calculus.html		
Office Hours:	8:00 - 9:00	MTWTh H	F in FH 6C-09			
	12:30 - 1:30	M T W Th	in FH 6C-09			
	3:30 - 4:30	M T W Th	in FH 109			
	and by request,	when possible.				

COURSE PREFIX: MAT **COURSE NUMBER: 250 CREDIT HOURS: 5**

I. TITLE:

Calculus and Analytic Geometry I

II. COURSE DESCRIPTION AND PREREQUISITE(S):

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.

Prerequisite(s): ACT math standard score of at least 26 or MAT 150 or MAT 140/145.

III. COURSE OBJECTIVES:

The student will be able to:

A.limits, if they exist, in the context of their computation for functions;

B.continuity:

C.implications of the Intermediate Value Theorem;

D.derivation, in the context of its definition, calculation, and interpretation;

E. the Mean Value Theorem;

F. the relationship between the first and second derivative and the graphical implications of a function;

G.the Extreme Value Theorem;

H.the Chain Rule;

I. the relationship between the integral and derivative;

- J. the relationship between the integral and area;
- K.the Fundamental Theorem of Calculus, and
- L.Riemann Sums.

IV. CONTENT OUTLINE: (Most of chapters 1-5 of the textbook)

- Limits A.
- Β. Continuity
- Differentiation C.
- D. Applications of differentiation and curve sketching
- E. L'Hopital's Rule
- F. The Integral

V. INSTRUCTIONAL ACTIVITIES:

Lecture, daily assignments, group work, reading assignments, oral presentations, and quizzes over the material.

VI. FIELD. CLINICAL. AND/OR LABORATORY EXPERIENCES:

None. A scientific calculator will be helpful for some computations. A graphing calculator might prove useful for some investigations, but is not required. Exams will be written so as to not require a calculator and thus calculators will not be permitted on exams.

VII. TEXT(S) AND RESOURCES:

Essential Calculus Early Transcendentals, 2nd Edition by James Stewart.

VIII. EVALUATION AND GRADING PROCEDURES:

A. The course grade will be based upon Exams (60% of the grade: 12% from each regular semester exam), Participation (10% of the grade), Quizzes (6% of the grade), and the (comprehensive) Final Exam (24% of the grade). [If there are a lot of class cancellations due to weather, I reserve the possibility to have only 4 exams and reschedule their dates.] The grading scale is:

Grading Scale:

90 - 100 %	A
80 - 89 %	В
70 - 79 %	C
60 - 69 %	D
Below 60%	E

Exams: The Exams will test your comprehension of concepts and skills not covered on a previous exam. Exams may contain both problem-solving questions and essay questions. Our four semester exams will be February 5, February 24, March 15, April 8, and April 28.

Missed Exams: Exams occur for *everyone* (to be fair to everyone) on the scheduled date. Sometimes, however, extenuating circumstances do exist. If you absolutely must miss an exam and can tell me sufficiently in advance, we will schedule an opportunity for you to take the exam before the scheduled date. If something comes up at the last minute which forces you to miss an exam, you are to stop by or call me (or leave a message with the office if I am not in when you call) before the exam to tell me why you cannot be at the exam. In addition, you must complete the enclosed form (see the end of the syllabus) within one week. In this case, the missed exams will be made up by a verbal exam in my office as soon as is reasonable, with the grade to be determined as explained at that time. Except in extreme circumstances, if you miss an exam and have not notified me by 4:30 on the day of the exam, you will get a zero or that exam with no opportunity to make it up.

Final: The Final will be a comprehensive exam covering any material addressed that semester. The Final exam will be on Tuesday, May 10th at 10:30 a.m. in our usual classroom: FH 308.

Quizzes: There will be occasional quizzes, perhaps on most Fridays in class, to help us keep up with each other and consolidate our understanding of the material. Any quiz grade can be converted to full credit by two visits to see me for help; the visits can be for as little as 5 minutes, but actual questions have to be asked.

Participation: Teaching and learning require good communication, and the participation component of the course will be aimed at this. At the beginning of **each** class period each student is to hand in a sheet of paper on which is written their work towards solving at least one homework problem about which they have questions or which they were unable to completely solve. It is completely ok to hand in just one problem. I will chose at least one at random and that student will present that problem and explain their question(s). The class and I will answer those questions and completely solve the problem. I will give feedback on the remaining problems and they'll be returned as soon as possible with the target date being the next day. Full credit will be earned for following this requirement, as long as a reasonable attempt is made to solve the problem(s), even if the problem solution(s) are very flawed. Credit is not earned for participation on a day on which you are not there to hand in your own submission.

B. Auditing: If you seek to change your status to audit, you must continue to do all the graded assignments, to attend classes regularly after the audit is given, to miss no more than 5 class periods for the entire semester, and to maintain a grade of at least 60% of the grade they had upon taking the Audit. If these requirements are not followed, then an "E" will be earned for this course.

C. Electronic Devices: It is well documented* that use of electronic devices in class harms the learning in the class not just for the student using the device but for the students around that person. On the rare occasion that you need to monitor your communications (ie: father is in hospital), let me know and you may have your phone out. Otherwise phones and laptops need to be put away with the ringer volume muted; the penalty is loss of a Participation day.

*eg: http://www.facultyfocus.com/articles/effective-classroom-management/cell-phones-in-the-classroom-whats-your-policy/ and http://bokcenter.harvard.edu/blog/use-mobile-devices-college-classroom

D. Important Grade-dates: The last day to drop a course without receiving a grade (or a W) is Monday, January 25th. The last day to change from Audit to Credit is Monday, January 25th. The last day to drop individual courses and receive a grade of "W" is Monday, April 18th. The last day to change from Credit to Audit is Monday, April 18th, if you qualify for an Audit. (See the Audit policy below.) Mid-Term grades will be posted on March 7th after the second semester exam.

E. Vacations: We will not have class on March 21st through March 25th for Spring Break.

F: Office Help: I can't emphasize enough the value of individual help in my office. Please give it a try. If we keep up-to-date with one another, your visit doesn't have to be a long visit to impart real value because I can address your specific questions.

IX. ATTENDANCE POLICY:

Students are expected to adhere to the MSU Attendance Policy outlined in the current MSU Bulletins. In addition, our class has the following provisions. If you miss class you are responsible for obtaining the day's notes and assignments. Not attending class will affect your performance in the course because the contents of each class period will impart some value. Not attending class will affect your Participation grade because submitted problems will not count if handed in by another student (they must be brought to class by you) unless you have a university-excused absence (gone to a university event). To help reduce the disruption to the entire class, (a) every two tardies (arriving late) may count as an absence (loss of 1 participation day), (b) leaving class early may count as an absence (loss of one participation day) unless you provide me with a reason in advance, and (c) using an electronic device may count as an absence (loss of one participation day) unless you inform me in advance that for some special circumstance (ie: sick child) you have. That having been said, I will drop 3 Participation days to allow for absences such as being sick or taking care of a sick child, etc.

X. ACADEMIC HONESTY POLICY:

Murray State University takes seriously its moral and educational obligation to maintain high standards of academic honesty and ethical behavior. Instructors are expected to evaluate students' academic achievements accurately, as well as ascertain that work submitted by students is authentic and the result of their own efforts, and consistent with established academic standards. Students are obligated to respect and abide by the basic standards of personal and professional integrity.

Violations of Academic Honesty include:

Cheating - Intentionally using or attempting to use unauthorized information such as books, notes, study aids, or other electronic, online, or digital devices in any academic exercise; as well as unauthorized communication of information by any means to or from others during any academic exercise.

Fabrication and Falsification - Intentional alteration or invention of any information or citation in an academic exercise. Falsification involves changing information whereas fabrication involves inventing or counterfeiting information.

Multiple Submission - The submission of substantial portions of the same academic work, including oral reports, for credit more than once without authorization from the instructor.

Plagiarism - Intentionally or knowingly representing the words, ideas, creative work, or data of someone else as one's own in any academic exercise, without due and proper acknowledgement.

Instructors should outline their expectations that may go beyond the scope of this policy at the beginning of each course and identify such expectations and restrictions in the course syllabus. When an instructor receives evidence, either directly or indirectly, of academic dishonesty, he or she should investigate the instance. The faculty member should then take appropriate disciplinary action.

Disciplinary action may include, but is not limited to the following:

- 1) Requiring the student(s) to repeat the exercise or do additional related exercise(s).
- 2) Lowering the grade or failing the student(s) on the particular exercise(s) involved.
- 3) Lowering the grade or failing the student(s) in the course.

If the disciplinary action results in the awarding of a grade of E in the course, the student(s) may not drop the course.

Faculty reserve the right to invalidate any exercise or other evaluative measures if substantial evidence exists that the integrity of the exercise has been compromised. Faculty also reserve the right to document in the course syllability further academic honesty policy elements related to the individual disciplines.

A student may appeal the decision of the faculty member with the department chair in writing within five working days. Note: If, at any point in this process, the student alleges that actions have taken place that may be in violation of the Murray State University Non-Discrimination Statement, this process must be suspended and the matter be directed to the Office of Equal Opportunity. Any appeal will be forwarded to the appropriate university committee as determined by the Provost.

XI. NON-DISCRIMINATION POLICY AND STUDENTS WITH DISABILITIES:

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 Executive Director of Institutional Diversity, Equity and Access, 103 Wells Hall, (270) 809-3155 (voice), (270) 809-3361 (TDD).

Students with Disabilities

Students requiring special assistance due to a disability should visit the Office of Student Disability Services immediately for assistance with accommodations. For more information, students should contact the Office of Student Disability Services, 423 Wells Hall, Murray, KY 42017. 270-809-2018 (voice) 270-809-5889 (TTD).

Absence (from Exam) Form:

If you must miss an exam, you must provide proof of your excuse. If you will be gone on university business, I will need a note from a faculty sponsor saying why and when you must be away from campus. If you were sick, I will need a note from the doctor (on their stationary) that includes when (s)he saw you, as well as a statement indicating that you were too ill to take an exam at the time of the exam. Cut off this form at the line below, answer the two questions below, and attach a supporting letter.

Reason for missing the exam:

Time which you had to be absent:

Attach a statement from an official (Doctor, coach, faculty sponsor) as to necessity of missing the exam. In the case of a doctor's excuse, this must be written on the doctor's stationary, and the doctor must state that you were too ill to take the exam on that day.

AUDIT CONTRACT

Initiated on the date:

I will receive a grade of 'Audit' in this course provided that I have met each of the following requirements:

- a) The course average must be at least 60% of the course average upon taking the Audit. (write in the course average)
- b) I must attend at least 93% of the class periods remaining after the above date.
- c) I must not miss more than 5 class period for the entire semester.
- d) The instructor of MAT 250-03 has signed below.

I understand that if I miss fail to meet these criteria, then my grade for MAT 250-03 will be an 'E.'

I understand and agree to the above provisions:

Signature and Date:

Validating Instructor signature and Date: