

MATH 3404 - Multivariate Calculus

Fall 2009

Professor: Dr. Christy Graves

Email: cgraves@uttyler.edu

Phone: 566-7277

Office: RBN 4013

Office Hours: MWF 9:00-9:50, TR 2:15-3:15, or by appointment

Course Web Site: <http://www.math.uttyler.edu/cgraves/math3404>

Class Time: MWF 10:00-11:15 (Section 1), MWF 11:30-12:45 (Section 2)

Class Location: RBN 4027

Text: *Essential Calculus, Early Transcendentals*, James Stewart, ISBN 0-495-01428-1.

Prerequisites: C or better in MATH 2414 - Calculus II (or equivalent)

Course Description: Vector calculus in Euclidean n -space, functions of several variables, partial differentiation and multiple integration.

Student Learning Outcomes: By the end of the course, successful students should be able to:

- Compute calculus operations on vector-valued functions, including derivatives, integrals, the TNB frame, curvature, velocity, acceleration, and torsion.
- Compute calculus operations on functions of several variables, including partial derivatives, directional derivatives, find extrema, find tangent planes, and multiple integrals.
- Demonstrate knowledge of the important theorem of vector calculus by solving problems using the Fundamental Theorem of Line Integrals, Green's Theorem, Stokes' Theorem, and the Divergence Theorem.
- Apply the computational and conceptual skills obtained from this course to solve applied problems.

Blackboard: A BlackBoard site has been set up for this course. All announcements will be posted here.

Attendance: Students are expected to attend every lecture, and are responsible for any announcements made during lecture. The course moves quickly, and any absence will be detrimental to the student's performance.

Homework: Homework is vital to your success in this course. A significant amount of what you gain from this course will be learned through homework assignments. There will be a homework assignment every day. Each assignment will consist of 5 given problems which will be graded on correctness and presentation and 10 problems which will be graded on completeness. The 10 extra problems are not specific numbers, and can be chosen from the section by the student. Late homework is not accepted and all homework is due at the *very beginning* of class - so be sure to come to class on time!

Exams: There will be 4 in class exams. There will be NO make-up exams. For students with an *excused* absence who talk to me *before* the missed exam, the portion of the final exam corresponding to the missed exam will be substituted for the missing score. Exact dates for these exams are in the schedule attached to the syllabus.

Final Exam: The final exam will be cumulative and will take place on
Wednesday, December 16.

The time for Section 1 will be 10:15-12:15, and the time for Section 2 will be 12:30-2:30.

Grading: Your final grade in this course will be based on your performance on homework, quizzes, in-class exams, and the final exam. These items will be weighted as follows:

Homework	15%
Exam 1	15%
Exam 2	15%
Exam 3	15%
Exam 4	15%
Final Exam	25%

Final Letter Grade: Final letter grades will be based on the standard scale:

90 - 100:	A
80 - 89:	B
70 - 79:	C
60 - 69:	D
0 - 59:	F

Out-of-Class Assistance: I will be available during regular office hours to answer any questions you may have. I also have an open-door policy - if I am in my office, please stop by and I will help you if I am not busy. Also, I may be able to answer some questions by email.

Calculators: Calculators are not allowed on exams.

Cell Phones: Cell phones, watch alarms, pagers, and other electronic devices must be silent during class. Use common sense and respect the learning environment.

University Policies

The following policies must appear in all course syllabi. You can view these policies for yourself at:

<http://www.uttyler.edu/academicaffairs/syllabuspolicies.pdf>

Students Rights and Responsibilities: To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link:

<http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html>

Grade Replacement/Forgiveness: If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to do so will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates will receive grade forgiveness (grade replacement) for only three course repeats; graduates, for two course repeats during his/her career at UT Tyler.

State-Mandated Course Drop Policy: Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the 12th day of class (See Schedule of Classes for the specific date).

Exceptions to the 6-drop rule include, but are not limited to, the following: totally withdrawing from the university; being administratively dropped from a course; dropping a course for a personal emergency; dropping a course for documented change of work schedule; or dropping a course for active duty service with the U.S. armed forces or Texas National Guard.

Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

Disability Services: In accordance with federal law, a student requesting accommodation must provide documentation of his/her disability to the Disability Support Services counselor. If you have a disability, including a learning disability, for which you request an accommodation, please contact Ida MacDonald in the Disability Support Services office in UC 282, or call (903) 566-7079.

Student Absence due to Religious Observance: Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities: If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement: It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.