

Departmental Course Syllabus



MAT 240

Analytic Geometry and Calculus III

4 credit hours

4 contact hours

Catalog Description *This course covers multivariable calculus including vectors, partial derivatives and their applications to maximum and minimum problems with and without constraints, line integrals, multiple integrals in rectangular and other coordinates, and Stokes' and Green's Theorems.*

Prerequisite MAT 141 (C or higher)

What will I learn? At the end of this course, you should be able to:

1. Compute vector quantities such as dot product, cross product, and norm.
2. Differentiate and integrate vector-valued functions.
3. Compute partial derivatives and use them in application problems.
4. Evaluate multiple integrals.

Textbook and Required Materials

Calculus, Early Transcendental Functions, by Larson, Hostetler and Edwards (4th Ed., Houghton Mifflin, 2007)

TI-83 (or TI-84 or TI-85 or TI-86) Graphics Calculator (Texas Instruments)

Grading System and Policy The College-wide grading scale is

91-100 = A, 81-90 = B, 71-80 = C, 65-70 = D, below 65 = F

There will be a comprehensive departmental final exam, which everyone must take (no exemptions), and which counts 25% of the final grade. The remaining 75% will be specified by your instructor's syllabus addendum. All or part of your evaluation in this course may be without your calculator.

Attendance/ Withdrawal Before attending classes, you must meet all prerequisites and officially register for all courses. Prompt and regular attendance is your responsibility. You are responsible for all material covered and all assignments made in class. Any time you are absent from a class, laboratory or other scheduled events, it is your responsibility to make satisfactory arrangements for any make-up work permitted by the instructor.

An absence is defined as nonattendance for any reason, including illness, emergency or official leave. If you arrive late to class, you may not be allowed into the classroom and may be considered absent for that period. If you leave before the instructor dismisses class, you may also be considered absent. All class sessions are important. Any time you miss a class you increase your risk of making a failing grade.

If you quit coming or participating in the course and do not officially withdraw by the withdrawal date for each semester, you will receive a grade of F. Your instructor cannot assign a grade of W. If you receive financial aid or veterans' aid, your aid may be revised as a result of any changes in your course schedule.

Instructor availability Your instructor is available to you outside of class for academic assistance. Full-time faculty members maintain and post regularly scheduled office hours. Part-time faculty members are accessible in a variety of ways, which may include conferences before and after class or by appointment, telephone conferences, and E-mail. The phone number for reaching your instructor is provided on your syllabus addendum.

See your syllabus addendum This is a departmental syllabus for all sections of the course. As such, it tries to address issues common to all sections. There will be issues (grading details, office hours, and the like) that are specific to your section, and these details will be covered in an addendum issued by your instructor.

Activated Electronic Communication Devices

These devices, such as cell phones and pagers are NOT permitted in TTC classrooms. On-call emergency personnel are required to report to their instructors and cannot communicate by electronic means during a testing situation.

For Students Enrolled in Online or Other Distance-Learning Sections

To confirm that you are actively involved in this course you need to contact the instructor at least once per week. Forms of contact can include (but are not limited to) posting/receiving emails, participating in online class discussions or chat rooms, and completing and submitting course assignments. Please see the instructor's addendum for any additional instructions.

ADA Statement The College will make reasonable accommodations for persons with documented disabilities. Students with disabilities should notify Services for Students with Disabilities (located in the Student Success Center) and their instructors of any special needs. Instructors should be notified on the first day of classes.

Textbook Portions Covered

Unit 1	Vectors and the Geometry of Space	Ch. 11
Unit 2	Vector-Valued Functions	Ch. 12
Unit 3	Functions of Several Variables	Ch. 13
Unit 4	Multiple Integration	Ch. 14
Unit 5	Vector Analysis	Ch. 15

What's the course all about? In the prerequisite courses (MAT 140 and MAT 141), you studied single-variable calculus. In this course, you will see most of the topics of single-variable calculus extended to functions of several variables. This extension is important to future applications, because in most real-life settings there are several independent input variables. The choice of including vectors is standard today.

College Information TTC uses Campus Cruiser e-mail as the standard communication system to send information to students and uses TTC Express to post final course grades. To access your accounts go to www.tridenttech.edu.

Supplementary Help: Extra help is available from The Learning Center (920 bldg, rm 211).

Department Head Elizabeth White at 574-6538

Division Admin. Asst. 574-6015 (emergencies only)

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