Math 241: Calculus III

Fall 2019

1:25–2:15PM MWF in HSS 111
1:05*–1:55PM Thursday in Moss 212

Instructor: Dr. David White
Office: Ayres Hall 248
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Web page: Canvas
Office hours: 11AM–noon Monday, noon–1PM Thursday, or by appointment, in Ayres 248

Prerequisite: Math 142 or 148

Text: *Calculus, early transcendentals, 8th ed.*, by Stewart. The e-book is provided through WebAssign. See the class Canvas page for details.

Course Objectives: The main topics of this class include solid analytic geometry, partial differentiation, multiple integration, and selected topics in vector calculus. We will cover most of chapters 12–16 in the textbook. Major objectives include:

- Elementary vector analysis (including vectors in 2 and 3 dimensions, vector multiplication, equations for lines and planes, and the calculus of vector-valued functions)
- Differentiation of functions of several variables
- Maxima and minima of functions of several variables, including critical points and the method of Lagrange multipliers
- Iterated integrals (including double and triple integrals)
- Line integrals (including vector fields, conservative vector fields, Fundamental Theorem, and Greens Theorem)
- Surface integrals and vector analysis

Important Dates:

September 2	No class, Labor Day Holiday
Thursday, September 19	Exam 1
October 17–18	Fall Break
Thursday, October 24	Exam 2
Thursday, November 21	Exam 3
November 27–29	Thanksgiving recess
Monday, December 9	Final exam, 5–7PM

Campus Syllabus: The UT syllabus, which contains information on campus-wide expectations regarding Academic Integrity, Civility, and other matters is available at
`http://www.math.utk.edu/~davidwhite/241-Fall2019/pdf/University-Syllabus.pdf`

Disability: Students with disabilities that need special accommodations should contact the Student Disability Services and bring me the appropriate letter/forms.

Grading: Three exams: 20% each. (Tentative dates above) If your final exam percentage is higher than one of your hour exam scores, your lowest hour exam score will be dropped and replaced with the final exam percentage. There will be no make-up exams: if you miss an hour exam for any reason, that exam will count as your lowest and will be replaced by the final exam percentage. No student should miss two exams.

Quizzes: 15%. I plan to have 10–12 quizzes and I will drop one quiz grade. These will be on Thursday except when we have an exam. The problems will largely be based on the homework with the potential for some more conceptual questions thrown in. The lowest quiz score will be dropped. There will be no make-up quizzes.

Homework: 5%. There is a WebAssign course pack with practice problems available for you to work. You are encouraged to do these. I will also collect homework on paper each Monday. Assignments will be posted on the class web page. The lowest homework score will be dropped.

You are welcome to ask questions in my office hours before homework is due. You are also encouraged to work with other students on your homework, but the work you submit must be your own.

Final exam: 20%. Monday, December 9, 5–7PM, in HSS 111. No student may take the final exam early for any reason. The final exam will be cumulative. No student should miss the final.

If your final point total is in the range below, you are guaranteed the corresponding grade:

Percentage	Grade
89 – 100	A or A-
79 – 88	B+, B or B-
69 – 78	C+, C or C-
59 – 68	D+, D, or D-
0 – 58	F

If appropriate, final grades may be higher than given by this breakdown, but not lower.

Calculator/Technology Policy: You may use a pocket calculator or graphing calculator on exams and quizzes unless told otherwise. Calculators are limited to those without advanced alpha-numeric, internet, or symbolic equation solving capabilities. Typical allowed calculators include the TI-83, TI-82 and similar. The TI-89 is not allowed. If you are unsure about a calculator, check with me in advance. *Cell phones of any type may not be used.*

Wolfram Mathematica: Mathematica will occasionally be used in this class as a tool for visualization and to do some homework computations. Students are encouraged to install Wolfram Mathematica software on their personal computer. Follow the Wolfram Mathematica installation instructions. https://oit.utk.edu/software-hardware/software/

If the instructor finds it necessary to make informational changes (e.g. office hours, schedule adjustments) due to students needs or unforeseen circumstances, students will be notified in writing/email of any such changes.