

MATH 141 SECTION H01
FALL 2019

Time: Wednesday 9:40 a.m. to 10:30 a.m.
Tuesday and Thursday 10:05 a.m. to 11:20 a.m.

Place: Petigru 112 Wednesdays
LeConte 115 Tuesdays and Thursdays

Recitation: Fridays 9:40 a.m.–10:30 a.m. in LeConte 401

Instructor: George F. McNulty

Office: LeConte 302

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781-9509 (Home)

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Office Hours: 12:30 p.m. to 2:00 p.m. Monday and Friday

11:30 a.m. to 12:30 p.m. Tuesday and Thursday

(Actually, anytime is great except Friday morning and Tuesday and Thursday afternoon.)

Text: Thomas' Calculus, Early Transcendentals. Thirteenth Edition

Authors: George B. Thomas, Jr.

We will cover most material in chapters 1–6.

Midterm Exams: Thursday 12 September

Thursday 26 September

Thursday 31 October

Thursday 21 November

Please let me know as soon as possible if you have conflicts with these dates. My makeup policy is generous.

Final Exam: Tuesday 10 December at 9:00 a.m.

What should result from your efforts in this course

What your hard work should be gaining you in this course are a mastery differentiation of functions of one variable, a firm grasp of some of the most important applications of derivatives, a solid understanding of limits and continuity, and a fluency with the concept of integration and some of its uses. Your mathematical sophistication should also increase, making it possible for you to grasp advanced mathematical concepts.

While I plan to give lectures, some of our time in class will be spent in discussion and working in small groups. For this reason, active personal participation is a key to the course. Your attendance and efforts will be needed during every meeting of the class.

Homework is at the heart of our course. Generally, an assignment will be due at the beginning of every class. Homework will be collaborative. The class will be divided into small teams for the purposes of homework.

Every one of you is welcome to come to my office at anytime. I will generally be in every day from 9 am until 5 pm. While I have other responsibilities, your success is my first priority. Most of the time I will be able to set aside whatever I am doing, so don't hesitate to visit my office.

I hope you will find our course enjoyable, informative, and useful.

How Course Grades Will be Determined

The objectives of this course can be broken down into 16 sorts of problems. Samples of these 16 sorts are attached below. The course Final will resemble this collection of sample problems. In turn these 16 sorts fall into two categories: core problems and those which lie outside the core. Your grade for the course will be determined by how well you display mastery of these examination problems. For each sort of problem or project I identify three levels of performance: master level, journeyman level, and apprentice level. The examinations and quizzes given during the course provide you with opportunities to display your level of performance. The examinations will all be cumulative. The First Midterm will probably have 4 problems, the Second 8 problems (with 4 being variants of the ones occurring on the First Midterm), the Third Midterm will probably have 12 problems, and the Fourth Midterm as well as the Final will have 16. Along the way, those problems you have already mastered will be absent from your exam. I hope many of you will have mastered all sixteen problems before the final. If you think you are ready to master one of the problems, we can arrange a quiz outside of class for that purpose. Just ask me. Then you won't have any problems to do on the final.

I record how well you do on each problem and on each project (an M for master level, a J for journeyman level, an A for apprentice level) on each exam. After the final, I make a record of the highest level of performance you have made on each sort of problem and use this record to determine your course grade. If you have at some point during the semester displayed a mastery of each of the 16 sorts of problems, then your grade will be an A. If you have at some point during the semester displayed a mastery of each of the core problems projects, then you will get at least a C. The grade B can be earned by displaying mastery of all the core problems and mastery of about half of the rest of the problems. The grade D will be assigned to anyone who can master several problems but has not yet displayed a mastery of all the core problems or projects. In borderline cases, the higher grade will be assigned to those students who turn in their homework regularly.

This particular way of arriving at the course grade is unusual. It has some advantages. Each of you will get several chances to display mastery of almost all the problems. Once you have displayed mastery of a problem there is no need to do problems like it on later exams. So it can certainly happen that if you do well on the midterms you might only have to do one or two problems on the Final. (It is not unusual that a few students do not even have to take the final.) On the other hand, because earlier weak performances are not averaged in, students who come into the Final on shaky ground can still manage to get a respectable grade for the course.

This method of grading also stresses working out the problems in a completely correct way, since accumulating a lot of journeyman level performances only results in a journeyman level performance. So it pays to do one problem carefully and correctly as opposed to trying get four problems partially correctly. Finally, this method of grading allows you to see easily which parts of the course you are doing well with, and which parts deserve more attention.

The primary disadvantage of this grading scheme is that it is complicated. At any time, if you are uncertain about how you are doing in the class I would be more than glad to clarify the matter.