Math 1172: Calculus II Spring 2025

TF 9:30–10:45 Bannow 335, W 9-9:50 Nursing 410

Instructor Chris Staecker

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Office Hours: TF 11-12:30, W 10-1 or by appointment

Office hours are in my office or by Zoom: https://fairfield.zoom.us/j/5514910533

Course Website http://faculty.fairfield.edu/cstaecker/courses/2025s1172/



Textbook Stewart, Calculus, 8th or 9th edition

Final Exam Tuesday May 6, 8-11AM

Course Content

Topics include integration by substitution and by parts; areas between curves; volumes of revolution; inverse functions; logarithms and exponential functions; inverse trigonometric functions; indeterminate forms and L'Hospital's rule; improper integrals; and infinite sequences and series, including convergence tests, absolute and conditional convergence, power series, and Taylor series.

Mastery-based assessment

This is weird so pay attention!

This course is graded based on *topic mastery*. The course material has been broken down into about 25 different specific objectives to master. Each student's progress on each objective will be tracked in a checklist.

Students demonstrate their mastery of each objective by correctly answering quiz questions, each of which is clearly labeled as assessing one specific objective. If a student answers an exam question correctly, this objective will be marked as "mastered". Once an objective is mastered with full credit, the student does not need to answer any more questions on future tests & quizzes addressing that objective.

There is no penalty if a student answers a question incorrectly, but this objective will remain unmastered. The student can try again to master that objective by correctly answering questions on later exams. Each exam will include questions addressing *all* objectives covered so far, but students only need to answer questions covering objectives that they have not yet mastered.

Quizzes & mastery opportunities

Each Friday, a short quiz will be given at the beginning of class. The quiz will be an opportunity for students to earn mastery points on the new items for that week. Each quiz will consist of one question from each new mastery topic covered in the previous week.

Once every two weeks, students can make an appointment with the professor during office hours to attempt an "old" mastery question.

Students will not use calculators or any other electronic gadgetry during quizzes.

Homework

Homework is due every Wednesday evening. The homework does not need to be submitted during the class meeting, any time before midnight on the due date is acceptable. Assignments are posted at the class website.

The homework will be graded in the traditional way (not "mastery-based"). Students will get a grade on each assignment based on completeness and correctness of the answers, with partial credit given for wrong answers.

Late homeworks without excuse will lose 1/3 credit for each calendar day.

Exams

There will be 1 in-class midterm exam, completed during regularly scheduled class time on March 21. There will also be a final exam at the official date and time (see at the very top). Exam makeups or rescheduling will be permitted only in extreme circumstances. If you simply do not show up to an exam without letting me know ahead of time, you probably will not be allowed to retake it.

The exams are simply another chance to check off mastery items. Items which have already been mastered with full credit can be skipped entirely, and if students are fully up to date in their mastery list, the entire exam can be skipped.

Students will not use calculators or any other electronic gadgetry during exams.

Online submission

No assignments or tests will be submitted on paper. All work will be submitted online at Gradescope.com. Students will take phone pictures of their work and submit it to Gradescope.

Office hours

The Professor regards visits to office hours as part of the instruction for this course. Responsible students in this course are expected to visit the Professor occasionally for help with homework and other class material. Class assignments are meant to stretch the abilities of the students, and the Professor expects even the best students to benefit from individual discussion. Students are encouraged to come in small groups if they don't want to come alone.

Grading

Your course grade will be inspired by an average, with the lowest homework score dropped. The grading is in two categories:

 $\begin{array}{ll} \text{Mastery} & 75\% \\ \text{Homework} & 25\% \end{array}$

Should I show work?

The professor already knows the answers to the problems which are assigned, and so you do not need to tell him the answer. You need to demonstrate that you know how to derive the answer. Credit will not be given for answers which are given with no rationale or work shown, except in some rare cases where the problem is done entirely in your head.

Attendance

Attendance does not directly figure into your grade, so there is no penalty for missing class. Students who miss class are 100% responsible for making sure all assignments are still completed on schedule. The professor is happy to negotiate in case there are good reasons, but these negotiations must be initiated by the student.

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Counseling services

Fairfield University provides mental health services to support the academic and personal success and well-being of students. Counseling & Psychological Services offers confidential psychological services to help students manage personal challenges that may interfere with your well-being. Counseling & Psychological Services is free for full-time undergraduate students.

For help, contact Counseling and Psychological Services at (203) 254-4000 ext 2146.