

MATH 142

Calculus II

Sections 001 and 002 - Fall 2014

Meeting times: TTh 2:50 - 4:05 PM at LeConte ([LC](#)) 113.

Instructor: Dr Peter G. Binev

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Office hours: TTh 4:10 - 5:50 PM at [LeConte](#) 425 or by appointment.

Teaching Assistant: Shuliang Bai

Recitations in [LC 121](#) - *Sect.001*: M 3:30 - 4:20 PM; *Sect.002*: M 4:40 - 5:30 PM

Maple Lab in [LC 102](#) - *Sect.001*: W 3:30 - 4:20 PM; *Sect.002*: W 4:40 - 5:30 PM

Text: *Calculus, Early Transcendentals* (Sixth Edition, USC variant), by James Stewart, Cengage Learning 2009; Chapters 6, 7, 8, 10, 11. See <http://www.cengagebrain.com/micro/USCCalc>.

Description: Methods of integration, sequences and series, approximations.

Credits: 4

Prerequisites: qualification through placement or a grade of C or better in MATH 141.

Learning Outcomes: Upon the successful completion of this course students will be able to:

- recall basic mathematical terms related to integration, area between curves, volumes of revolution, sequences, and series;
- master applications of integration using area, volume by disks or washers, and volume by cylindrical shells;
- apply the methods of calculus to solve integrals involving integration by substitution, integration by parts, trigonometric functions, trigonometric substitutions, partial fraction decomposition, and improper integrals;
- work with parametric curves and functions in polar coordinates;
- determine the convergence of series using p-series, alternating series test, ratio and root tests, telescoping series, integral test, nth term test, and the geometric series test;
- recognize and determine the radius of convergence and interval of convergence for power series.

Outline: The detailed tentative schedule with the covered sections and the assigned homework will be posted on Blackboard. The following shows the time allocated for each of the chapters (including reviews and examinations):

- Chapter 5 - 1 week;
- Chapter 6 - 2 weeks;
- Chapter 7 - 3 weeks;
- Chapter 8 - 1 week;
- Chapter 10 - 2 weeks;
- Chapter 11 - 5 weeks.

Cell Phones and Calculators: All electronic devices, especially cell phones, *must be disabled* during the class. No calculators are allowed.

ADA: If you have special needs as addressed by the Americans with Disabilities Act and need any assistance, please notify the instructor immediately.

Attendance: Regular class attendance is important. A grade penalty will be applied to any student missing three or more classes (10%) during the semester. The "10 percent rule" stated above applies to both excused and unexcused absences. Students who anticipate potential excessive absences due to participation in permissible events as described in the USC Academic Bulletin (http://www.sc.edu/bulletin/ugrad/acadregs.html#class_atten) should receive prior approval from the instructor to potentially avoid such penalty. Same rules apply for other potential cases of approved absences described in the Bulletin. Students should consult immediately with the instructor about the completion of the missed assignments. An incomplete grade I could be assigned if the student is unable to complete assigned work because of an unanticipated illness, accident, work-related responsibility, family hardship, or verified learning disability. In such a case, the student will have up to 12 months in which to complete the work before a permanent grade is recorded.

Academic Dishonesty: Cheating and plagiarism will not be allowed. You are expected to practice the highest possible standards of academic integrity. Any deviation from this expectation will result in a minimum academic penalty of your failing the assignment, and in additional disciplinary measures including referring you to the Office of Academic Integrity. The University of South Carolina has articulated its policy governing academic integrity and the students are encouraged to carefully review it: <http://www.housing.sc.edu/academicintegrity/violations.html>.

Supplemental Instruction: The SI Leader for this class is Mr **Emerson Coulibaly**. He attends the lectures and then holds study sessions three nights a week to answer your questions on the lecture, to help you with homework, and to work additional problems.

Maple Labs and Recitations: These are held by the Teaching Assistant, Ms **Shuliang Bai**. The grades assigned will constitute 30% of the grade for the class (15% for the Maple labs and 15% for the recitations). See the syllabus for the Maple labs and Recitations for details.

Homework and Quizzes: A few homework problems will be assigned each class. Be sure to solve and write these problems before the next class. No homework assignments will be collected or graded. There will be several five-minute quizzes at the end of most of the classes on problems similar to ones from the homework. Each quiz will be graded 1 for a correct answer with a possible partial score of 0.5 in case of a technical mistake. The quiz grade will be formed as the best ten scores. It will account for 10% of the final grade. There will be **no makeup quizzes**.

Exams: There will be four exams in a form of a test during the semester. The tentative dates of these exams are **September 9, September 30, October 21, and November 25**. The problems on the tests will be similar to the ones from the homework and the discussions in class. There will be **no makeup exams** (as described below, you can drop one exam).

Final Exam: The final exam in a form of a test will take place on **Wednesday, December 10 at 12:30 PM**. The problems will be from the entire material covered in the course.

Exam Score: The exam score accounts for 60% of the final grade. In case a student elects not to take the final exam, it is formed by the four exams during the semester (15% each). In case a student decides to take the final exam, it is formed as the best three scores on the exams during the semester, at 12% each, plus the final exam at 24%. The option not to take the final exam should be declared in writing by **December 5, 2014**.

Grading: The final grade will be determined from the quiz grade (10%), the exam grade (60%), the Maple Lab grade (15%), and the recitation grade (15%). The letter grades will be assigned as follows: **A** for at least 90%; **B+** for at least 86%; **B** for at least 80%; **C+** for at least 76%; **C** for at least 70%; **D+** for at least 66%; **D** for at least 60%; **F** for less than 60%.