Math 156 - Calculus II, Fall 2017
Course Syllabus

Instructor: Brian Leary
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Office: Learning Resource Center 323H
Office hours: Mon 2-3, Tues 1-2, Wed 2-4, Thurs 11-1, Fri 11-12
Math Tutoring Lab: Mon/Wed 11-12

Class Room/Time: INN-B 314, MTWF 12:00-12:50 pm
Course website: eCampus site (as a backup website, I will also try to keep my personal website updated: community.wvu.edu/∼bal0018)

Homework assignments will be posted on the course website. Course announcements may also be posted on the website or sent via email. Please be sure to check the website regularly, and to regularly check the email address you have on record. You are responsible for any information posted on the course website.
Textbook: James Stewart, *Calculus*, 8th edition

Catalog Data: MATH 156 Calculus I (4-0) Credits 4. Techniques of integration, applications of the definite integral, polar coordinates, indeterminate forms, and infinite series.
Prerequisite: MATH 155.

Course material: This course is a continuation of Calculus I and assumes basic knowledge of limits, derivatives, and integrals. We finish the material in Chapter 6, which includes hyperbolic functions and l'Hôpital's Rule. Chapter 7 gives us several additional techniques for solving more complicated integrals/antiderivatives. Chapters 8 and 10 study some applications of integration. Finally, Chapter 11 introduces the ideas of infinite sequences and series, including the fundamental topics of power series and Taylor series.
A rough outline of the topics covered can be found on the next page.

Course Objectives: Upon successful completion of the course, the student will be able to do the following:

1. Use the advanced integration techniques learned in the course to integrate a given function for which an antiderivative can be found.
2. Determine convergence or divergence of sequences and series, and analyze power series.
3. Write power series that represent given functions.
4. Use l'Hôpital's rule to compute indeterminate limits.
5. Describe and/or analyze parametric curves/equations and polar curves/equations, and use integration to compute lengths of curves, surface areas of solids, and centers of mass.
6. Apply the material learned in the course to solve various types of word problems.

Topics:

1. Hyperbolic Functions and l'Hôpital's Rule (3 days - Sections 6.7-6.8)
2. Techniques of Integration (15 days - Chapter 7)
3. Further Applications of Integrals (5 days - Sections 8.1-8.3)
4. Parametric Equations and Polar Coordinates (9 days - Chapter 10)
5. Infinite Sequences and Series (20 days - Chapter 11)

Grading: Your final grade will be based on homework, quizzes, four exams during the semester, and the final exam. Your final course score will be the maximum of the following two grading schemes:

- 10% Homework + 5% Quizzes + 15% Exam 1 + 15% Exam 2 + 15% Exam 3 + 15% Exam 4 + 25% Final Exam
- 10% Homework + 5% Quizzes + 25% (highest grade of the four exams) + 15% (2nd grade of the four exams) + 15% (3rd grade of the four exams) + 30% Final Exam

Letter Grade Cutoffs: A: 90%, B: 80%, C: 70%, D: 60%, F: below 60%

Homework: Homework assignments will be posted on the eCampus website. Homework sections assigned during the week will typically be due on Fridays. There will likely be about 12 total assignments, and your lowest 2 homework scores will be dropped from grade computation.

Exams: There will be four exams, tentatively scheduled for Wednesday, September 13; Friday, September 29; Friday, October 20, and Wednesday, November 15. These will be 50 minute exams taken during the regular lecture time. The final exam time has been set by the university, and will be on Monday, December 11 from 10:00 am to 11:50 am. Make-up exams will only be given to students with excused absences, and such make-up exams must be scheduled within 24 hours of the missed exam.

Quizzes: There will be a quiz given most weeks in which there is no exam. This will be a very brief quiz given at the beginning of class, intended to test you with more immediacy than the exams and with less consequence. The problems that appear on the quiz will be taken from the homework problems I assign. Only your best 5 quizzes will count toward your grade, and there will be absolutely NO make-up quizzes.

Class policies:

- Graphing calculators will never be allowed during any exams. Scientific calculators will be considered on an exam by exam basis. You may use any calculator to help you do the homework if you wish, but you should keep in mind that you may be required to solve similar problems without a calculator on the quizzes and exams.
- While class attendance does not directly factor into your grade computation, attendance of each lecture is highly recommended. Regular attendance will tend to lead to better understanding of the course material, which tends to lead to better performance on exams.
- If you believe a problem on a homework assignment or midterm exam has been graded incorrectly, you must notify the instructor of your complaint within 7 days of the date the exam is handed back. If you are unable to retrieve your graded material at the time it is handed back, it is your responsibility to make arrangements with the instructor to retrieve the material at another time.

Getting Help: Please feel free to come to office hours or email me if you have questions about the course material. If you are unable to make it to my regularly scheduled office hours, I am willing to make an appointment to meet at another time if possible. Additionally, you can get help in the Math Tutoring Lab in LRC 323 from 8 AM to 4:30 PM. Free tutoring is also available through Student Support Services, located in Benedum 130, and the Student Success Center, located in the library on the second floor of LRC. Finally, I would also encourage the formation of study groups, to learn from each other and help each other learn.

Academic Integrity: The integrity of the classes offered by any academic institution solidifies the foundation of its mission and cannot be sacrificed to expediency, ignorance, or blatant fraud. Therefore, I will enforce rigorous standards of academic integrity in all aspects and assignments of this course. For the detailed policy of West Virginia University regarding the definitions of acts considered to fall under academic dishonesty and possible ensuing sanctions, please see the Student Conduct Code at http://studentlife.wvu.edu/office_of_student_conduct/student_conduct_code. Should you have any questions about possibly improper research citations or references, or any other activity that may be interpreted as an attempt at academic dishonesty, please see me before the assignment is due to discuss the matter. [Available at: http://facultysenate.wvu.edu/r/download/15702]