Syllabus for: Math 50B

Semester & Year:	Spring 2015
Course ID and Section Number:	E7050
Number of Credits/Units:	4
Day/Time:	MTuThF 11:40-12:45
Location:	SC 214
Instructor's Name:	Bruce Wagner
Contact Information:	Office location and hours: SC 216K, M 12:45-11:05, F 11:00-11:30 & 12:45-11:05 Phone: 476-4207 Email: bruce-wagner@redwoods.edu

Course Description (catalog description as described in course outline):
The second in the series of three calculus courses. Integral Calculus develops a set of advanced symbolic and numerical integration techniques, building on skills developed in the first course in the series, Differential Calculus. The course includes applications of integration, sequences and series, and the use of the Taylor polynomial to approximate functions. Students are introduced to parametric and polar equations and to the solution of differential equations.

Student Learning Outcomes (as described in course outline) :
1. Evaluate definite and indefinite integrals using a variety of integration formulas and techniques including the evaluation of improper integrals.
2. Apply integration to areas and volumes, and other applications such as work or length of a curve.
3. Apply convergence tests to sequences and series and represent functions as power series.
4. Graph, differentiate, and integrate functions in polar and parametric form.

Special accommodations: College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS.

Academic Misconduct: Cheating, plagiarism, collusion, abuse of resource materials, computer misuse, fabrication or falsification, multiple submissions, complicity in academic misconduct, and/ or bearing false witness will not be tolerated. Violations will be dealt with according to the procedures and sanctions proscribed by the College of the Redwoods. Students caught plagiarizing or cheating on exams will receive an "F" in the course.

The student code of conduct is available on the College of the Redwoods website at:
http://redwoods.edu/District/Board/New/Chapter5/AP%205500%20Conduct%20Code%20final%2002-07-2012.pdf

Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the college catalog and on the College of the Redwoods homepage.

College of the Redwoods is committed to equal opportunity in employment, admission to the college, and in the conduct of all of its programs and activities.

COURSE DESCRIPTION: Integral Calculus is the second in the series of three calculus courses. Integral Calculus develops a set of advanced symbolic and numerical integration techniques, building on skills developed in the first course in the series, Differential Calculus. The course includes applications of integration, sequences and series, and the use of the Taylor polynomial to approximate functions. Students are introduced to parametric and polar equations.

PREREQUISITES: Grade of C or better in Math 50A (or the equivalent).

TEXTBOOK: *Calculus (Early Transcendentals)*, 5th edition, by Stewart. Portions of chapters 5-11 will be the focus of this course. You do not need to purchase the textbook. The Math Department has provided copies for you to borrow for the semester (available at the library). It is your responsibility to return the textbook in good condition at the end of the semester.

EXAMS: There will be four midterm exams and one final exam. The final exam will be comprehensive over the entire semester. Dates for the midterms will be announced later on the course homepage. There may also be some quizzes.

Makeup exams will only be given if there is a very good and verifiable reason for missing the exam, such as illness or emergency. Notify me immediately if you cannot take an exam. If you know you are going to be away, then you are expected to arrange to take the exam early.

Calculators will be allowed (and may be necessary) on most quizzes and exams. However, there may be some quizzes and portions of exams on which a calculator cannot be used.

HOMEWORK: There will be daily reading and homework assignments that will be mostly computational and routine, and assigned mostly for practice. You are expected to complete these assignments each day, and come to class prepared to discuss them. You are also required to keep a neatly organized binder with your completed written homework assignments, and I will collect and check these before each exam. However, you are encouraged to submit these daily assignments early, and you will receive extra credit in that case.

In addition, there will be (approximately) weekly homework assignments that will be collected and graded carefully. These assignments will generally be more challenging and will involve more intermediate steps, synthesis of concepts, experimentation, and writing.

In general, the homework will be indicative of the type and difficulty of material that you need to know for the exams. You are expected to complete homework assignments on time.

GRADING:

Homework, quizzes, activities, and class participation:	250 points
Midterm exams:	40 points each
Final exam:	100 points

Your course grade is guaranteed if you make the grade cutoffs given in the table below.

85-100%	A
70-84%	B
60-69%	C
50-59%	D

USE OF CALCULATORS AND COMPUTERS: A good graphing calculator is required. The calculator must be able to do usual plots of functions, and should be able to solve equations numerically. Recommended calculators for students in calculus are the TI-83+, TI-84+, TI-89, TI-92, TI-86, or TI-85. However, brands from other manufacturers can also be used. You will be expected to be able to use your calculators to numerically solve equations, analyze graphs, and work with data in the course of solving some problems.

The TI-89 and TI-92 can do symbolic calculations, including differentiation and integration. While these calculators are powerful and useful tools, you must be able to both differentiate and integrate functions without the use of the calculator. Therefore, you will be expected to show all steps on your homework when performing any differentiation or integration to receive full credit for your work.

Our class will also learn to use some computer software as a computational and visual aid to understanding the course material. This software is available in the computer lab in Science 212, and you may use it to help with homework and projects. However, no prior computer knowledge is required for the course.

AVAILABLE HELP: Office hours and Math Lab hours are listed on the "Help" page on the course web site. However, I'm also quite willing to answer questions outside of those hours unless I have some time constraint, so don't hesitate to ask. You can also send me questions via email. See the "Help" page for more details on help resources.

COURSE INFORMATION ON THE WEB: Course information will be available throughout the semester on the World Wide Web. You should consult the homepage for this course (listed above) regularly for information on homework assignments, exams, etc.

ATTENDANCE POLICY: Any student who is absent from class for the amount of time equal to two weeks of classes through week 10 will be withdrawn from the course, unless there are extenuating circumstances that are communicated to the instructor in a timely manner. This policy conforms with Mathematics Department guidelines regarding Faculty Withdrawal of students after census day.

DISABILITIES: Any student who feels that s/he may need an accommodation based on the impact of a disability should contact the instructor as soon as possible. The student will also need to visit the Disabled Student Programs and Services office (476-4280) and obtain a DSPS Support Services Agreement. Every effort will be made to meet accommodation requests. However, no retroactive accommodations will be provided.