Syllabus for **Math 50B** *Integral Calculus*

Course Information

Semester & Year:	Fall 2019
Course ID & Section #:	Math 50B E7325
Instructor's name:	Tami Matsumoto
Day/Time:	MWF 11:40am-12:55pm
Location:	SC206 at College of the Redwoods Eureka Campus
Number of units:	4 units

Instructor Contact Information

Office location:	SC205B, behind the copier upstairs in SC Bldg, CR Eureka Campus
Office hours:	Wed 2:45-3:45; TTh 12:30-1:00. Note: I'll be in MathLab Mondays 3:00-4:30 Also available by chance and by appointment.
Phone number:	Office: (707) 476 4543
Email address:	tami-matsumoto@redwoods.edu Note: Include "**Math 50B**" as part of the Subject Line
Social Media:	https://twitter.com/tamimathcr, https://www.instagram.com/TamiMathCR/, https://www.facebook.com/TamiMathCR

Required Materials

Textbook Title:	"***Calculus Early Transcendentals***" 5th edition
Edition:	5th
Author:	James Stewart
ISBN:	0534393217 (10), 978-0534393212 (13)

Other requirements: materials, equipment or technology skills

- **Graphing Calculator**: A Graphing Calculator, such as a TI-83 Plus, TI-84, or TI-89. A limited number are available for rent – in the Math Lab, ASC 101, CR Eureka Campus.
- **Bound notebook with Grid Paper**: Roaring Spring #77475 or Ampad #26-251 (about $2 - $6), for example. Check to make sure it is bound and has graph paper in it. You will use this to build yourself a reference book (see the "Reference Book Information" also).
- **Time.** ***Lots!!*** In your own weekly schedule, please block out at least 15 more hours (possibly as much as 20 hours), per week, to devote to this class.
- **Supplemental Handouts**. There will be lots of handouts some of which you may have to print from "myCR". It is your responsibility to make sure that you get a copy of all supplemental material, even if you miss class.
- **Paper**: Homework Paper and scratch paper, lots of it! It is fine with me if you RE-USE paper. Paper that's only been used on one side is still fine (in general) on the other side. You will also need some graph paper. Get it in a pad or a package of loose-leaf sheets (rather than stuck in a notebook), or print it from the web. Many people find it helpful to get graph paper with heavier lines on every fifth line to make counting easier.
- **Pencils**: Lots. Math problems should be done in pencil in this class (as in math classes in general). If you like softer lead (I find it writes darker easier) then you might like "2B" mechanical pencil lead (for my use, I prefer "2B" to "HB").
- **Erasers**: At least one.
- **A ruler**: Important for drawing tables and graphs carefully and correctly.
- **Computer Access** for:
  - *Email*: I expect you to have regular access to a computer and expect to be able to contact you easily. The College

uses your "mycr.redwoods.edu" email address to communicate with you so it is important that you receive those email messages; you can set it up to autoforward those emails to another email address if you prefer.

- *Online resources, including Canvas*. We will have some course materials available using Canvas. (This is separate from your email but you need access to a computer for this also.)

Recommended (Note: These are also available on reserve in the Library)

- **Solutions Manual**: Single Variable Calculus Early Transcendentals - Student Solutions Manual for 5th ed ET. By Daniel Anderson, Jeffrey A. Cole, Daniel Drucker. ISBN: 0534393330(10), 978-0534393335 (13)
- **Study Guide**: Study Guide for Stewart's Calculus: Early Transcendentals Single Variable, 5th edition. By James Stewart. ISBN: 0534393314 (10), 978-0534393311 (13)

Math 50B Catalog Description

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.
Note: A graphing calculator is required.
Prerequisite: Math 50A

Math 50B Course Student Learning Outcomes *(from course outline of record)*

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.

Mathematics Placement Statement for Math 50B

We want every student to be in the right mathematics class.
Is Math 50B the appropriate mathematics class for you?
You may feel that your previous mathematics experience indicates that you should start at a higher-level course than Math 50B (Integral Calculus).
If one of the following criterion holds, then you should consult with your instructor to move to a higher-level mathematics course.

- You completed two semesters of calculus at another college.
- You earned a score of 4 or more on the AP Math BC exam.

Evaluation & Grading Policy

The Final Grade will be determined (as listed below) by

- Average on Exams and Quizzes
- Assignments: Homework from the textbook and Supplemental Assignments
- In-class Work
- Your own personal Reference Book that you will create in this class

IMPORTANT NOTE: The "Gradebook" in Canvas is NOT your official grade and is for informational purposes only.

Final Course Grade

For "A/A-" you must do all of the following:

- Participate in class with at least 90% of in-class work completed satisfactorily*
- Homework: complete at least 90% of Practice Problems; at least 90% of "Basic" problems in a legible, satisfactory way; have good work done on majority of "Advanced" problems.**
- Reference Book: Create your own excellent Reference Book with Title Page, all or most topics covered with a corresponding Table of Contents.
- Exams/Quizzes: at least 85% average

For "B-/B/B+" you must do all of the following:

- Participate in class with at least 80% of in-class work completed satisfactorily*
- Homework: complete at least 80% of Practice Problems; do 80% of "Basic" problems in a legible, satisfactory way; have good work done at least some "Advanced" problems.**
- Reference Book: Create your own good Reference Book with Title Page, majority of topics covered with a corresponding Table of Contents.
- Exams/Quizzes: at least 75% average

For "C-/C/C+" you must do all of the following:

- Participate in class with at least 70% of in-class work completed satisfactorily*
- Homework: at least 70% of Practice Problems; 70% of "Basic" problems in a legible, satisfactory way**
- Reference Book: Create your own basic Reference Book.
- Exams/Quizzes: at least 65% average

For "D" you must do all of the following:

- Participate in class with at least 60% of in-class work completed satisfactorily*
- Homework: complete a majority of Practice Problems and "Basic" problems in a legible, satisfactory way**
- Reference Book: Create your own Reference Book.
- Exams/Quizzes: at least 50% average

For determination of +/- course grades, the entire class spread will be considered at the end of the term.

*regarding in-class work, exceptions are allowed if make-up arrangements are made in advance and missed work is made up

** Homework includes problems from the textbook, along with other handouts and assignments.

CAVEAT: The above procedures are subject to change.

Due Dates: Each assignment will have a "due date" associated with it. Homework assignments will generally have a "due date" of the next class; you should try to finish the assignment before the next class, but, if you have questions, you can get help and then finish up the assignment and turn it in at the *following* class (without being considered late). December 20 is the last day to submit any late work. Work that is returned for revision will have revised "due dates" (and will not be considered "late").

Reference Book: — You will be constructing your own personal "Reference Book" throughout the course (see "Bound Notebook with Grid Paper" under "Other Required Materials"). Follow the separate instructions. There will be some specific directions prescribing some of the contents, and you will also have freedom to include other pertinent information, definitions, examples, notes, that you think will be helpful for you as reference material. ***Create a Reference Book that helps your future You!***

Prerequisites/co-requisites/ recommended preparation

Prerequisite: Math 50A (see also statement above about placement)

Policies for this Class

Participation in Class Activities: Attendance and participation are essential to the learning process. In addition, everyone benefits from your input and participation, and some work we do will be in groups! One important aspect of this course is the incorporation of active learning in class; this requires everyone's participation, particularly during in-class activities. Also, the best way to insure having a successful experience in any course is to come to every class meeting and keep up with the assignments. There will often be handouts during class to be turned in at the end of class. If you miss more than four class sessions, you may be dropped from the course.

I realize that sometimes things come up and getting to class is impossible. In those cases, just communicate with me as soon as you possibly can. This is especially important if you are missing class on a day we are scheduled to have an exam!

Note that ALL students remain responsible for ALL assignments given and those assignments are expected to be turned in ON TIME. If you miss a class, the assumption is that you will get the necessary information to complete the assignment by the due date and be prepared to continue in the normal flow of the course.

CAUTION: the material builds from one week to the next and so
IT IS STRONGLY URGED THAT ALL STUDENTS ATTEND ALL CLASSES.

Problem Sets, assigned from the textbook: Problems will be assigned every class. There will be "Practice Problems" and "Written Problems" – "Basic" and "Advanced" – (see "Homework Information"). Work neatly and legibly. There will not be time for problems to be graded carefully, so it is very important that you check your own work before turning it in, and ask questions if you want to make sure you are on the right track.

Pop Quizzes: There may be pop quizzes. You should always bring a pencil with you to class each day to be ready for a quiz. Bring your reference book (which may be allowed for some quizzes).

Other assignments: There will be some assignments other than problems from the book. Some will be explained on handouts, some will be writing assignments, and some will be done in class. Also you will build your own Math Reference Book throughout the course.

Reference Book: Each student is required to create his/her own personal Math Reference Book throughout the term. It should be made in a bound notebook. It should have a title page at the front, followed by a table of contents. The contents should include material learned in the course. For the most part, it is up to you to decide exactly what to include, though there will be a few items I will direct you to be sure to include. Each page should be one separate topic. Suggestion: note the ***textbook*** page # to refer back to, if needed.

Exams: There will be three exams amid the term and a Final Exam during finals week. The Final Exam will be comprehensive and will be given in two parts: For one part of the Final Exam you will be able to refer to your own Reference Book which you will be making throughout the term. About a week before each test you will be provided with a study guide for the exam. You do not need scantrons. You should always bring pencils, erasers, and your Reference Book (for grading) on test days, which will be announced at least one week in advance. — NOTE: Missing a scheduled exam without making prior arrangements could result in "F" on that exam

Final exam official date and time: Monday December 16, 10:45am-12:45pm, during finals week. Note that this is a *different time* from our regular class meetings.

HELP?! If you have questions, please get help! It is ***your*** responsibility to seek help if you need it. We will go over some questions in class, but we will not have enough time to answer all of everyone's questions.