Syllabus for Differential Calculus – Eureka Campus		
Semester & Year	Spring, 2016	
Course ID and Section #	Math 50A, D9831, K9976, E9154	
Instructor's Name	David Arnold	
Day/Time	MWF, 1:15-2:30 pm	
Location	LRC-105 Telepresence	
Number of Credits/Units	4	
Contact Information	*Office location*	SC 216 H
	Office hours	MF 2:30-3:30, TTh 2:00-3:30, MW CCConfer online office hour 9:00-10:00 pm
	Phone number	476-4222
	Email address	David-Arnold@redwoods.edu
Textbook Information	*Title & Edition*	*Calculus, Early Transcendentals, 5th Edition*
	Author	Stewart
	ISBN	ISBN 0-534-39421-7

Course Description

A study of limits, continuity, and derivatives of algebraic, transcendental, and trigonometric functions. Applications of the derivative include optimization, related rates, examples from the natural and social sciences, and graphing of functions. The course introduces the integral and the connection between the integral and derivative.

Student Learning Outcomes

1. Evaluate the limit of a function at a real number and determine if a function is continuous at a real number. Use the limit to find the derivative of a function.
2. Use the derivative to find the equation of a tangent line to a function;
3. Use the differentiation formulas to compute derivatives and use differentiation to solve applications such as related rate problems and optimization problems.
4. Analyze the rate of change of an implicit function using implicit differentiation.
5. Graph functions using methods of calculus.
6. Evaluate a definite integral as a limit.

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 at 707-476-4280.

Academic Support

Academic support is available at Counseling and Advising and includes academic advising and educational planning, Academic Support Center for tutoring and proctored tests, and Extended Opportunity Programs & Services, for eligible students, with advising, assistance, tutoring, and more.

Academic Honesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.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 website.

Disruptive Classroom Behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process a disruptive student may be temporarily removed from class. In addition, he or she may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.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 website.

Emergency Procedures for the Eureka campus:

Please review the campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). The Eureka **campus emergency map** is available at: (http://www.redwoods.edu/Eureka/campus-maps/EurekaMap_emergency.pdf). For more information on Public Safety, go to http://redwoods.edu/safety/ In an emergency that requires an evacuation of the building:

- Be aware of all marked exits from your area and building.
- Once outside, move to the nearest evacuation point outside your building:
- Keep streets and walkways clear for emergency vehicles and personnel.
- Do not leave campus, unless it has been deemed safe by the Incident Commander or campus authorities. (CR's lower parking lot and Tompkins Hill Rd are within the Tsunami Zone.)

RAVE – College of the Redwoods has implemented an emergency alert system. In the event of an emergency on campus you can receive an alert through your personal email and/or phones at your home, office, and cell. Registration is necessary in order to receive emergency alerts. Please go to https://www.GetRave.com/login/Redwoods and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu." Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions.

David Arnold

Mathematics

- Department Home Page
- Canvas
- WebAdvisor
- Optimath
- David Arnold Home

Math 50A: Instructor's Syllabus

There are files on this site in PDF format. You will need to download a free copy of the Acrobat Reader to read them. Click the following icon to obtain a free copy of the Acrobat Reader.

It is important that you have the most current version of the Acrobat Reader that your system will allow. The above links will take you to the Adobe site. The Adobe site will analyze your system, but you may be asked to choose the appropriate version of the reader for your system. If this happens, carefully select the appropriate version of the reader.

Official Course Outline

The official course outline for Differential Calculus (Math 50A), including content, objectives, and student learning outcomes, can be viewed online via the following link:

Math 50A Course Outline

You'll find the following course learning outcomes on the course outline:

1. Evaluate the limit of a function at a real number and determine if a function is continuous at a real number.
2. Use the limit to find the derivative of a function.
3. Use the derivative to find the equation of a tangent line to a function;
4. Use the differentiation formulas to compute derivatives and use differentiation to solve applications such as related rate problems and optimization problems.
5. Analyze the rate of change of an implicit function using implicit differentiation.
6. Graph functions using methods of calculus.
7. Evaluate a definite integral as a limit.

Prerequisite Classes

Math 30 (College Algebra) and Math 25 (Trigonometry) with a grade of "C" or better

Instructor's Schedule

The following link contains a copy of my schedule, including office hours.

Schedule and Office Hours

Note: These are "official" office hours. However, I will make myself available whenever I can. Please do not be afraid to ask for help at any time as I am always eager to help.

Office Location and Phone

- Science building SC 216H
- Office phone: (707) 476-4222

Email

My email address is: David-Arnold@redwoods.edu

Getting Help

Help is available in many forms.

- Your instructor is always available for help in SC 216H when he isn't teaching class or attending a meeting. Take advantage.
- The Academic Support Center (ASC) in the library provides individual and group tutoring. You need to check in at the ASC desk and make an appointment to meet with a tutor.
- You can get wonderful assistance for your class in the Mathlab (again located in the ASC). Comprehensive information on the Mathlab is available at the following link:

  Information on the MathLab

Classroom Environment

It is expected that everyone involved in this class, teacher and students alike, will act in a manner conducive to providing a comfortable environment for learning, a classroom where students feel free to ask and answer questions without fear of embarrassment or ridicule.

It is important to stay on task when class is in session. Hence, conversation not pertaining to the subject at hand should be taken outside the classroom.

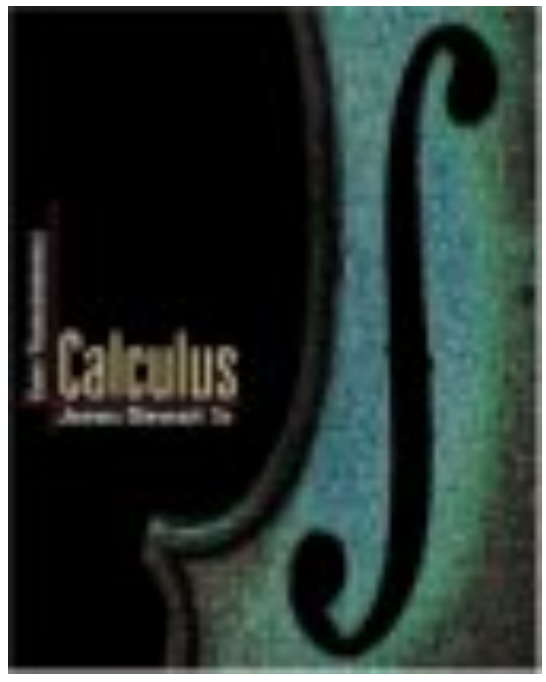
I understand that students will have to get up and leave the room for various reasons and I also understand that students will arrive late from time to time. However, courtesy requires that you enter and leave as quietly as possible, without disturbing discussion or lecture.

It is essential for student success to maintain a good environment in the classroom. If you have any personal difficulties with the learning envrionment in the classroom, please visit me in my office to discuss them.

Textbooks

We will be using:

- *Calculus, Early Transcendentals, 5th Edition*, Stewart, Thompson Brooks/Cole Publishers.



- The mathematics department has determined that the rising costs in textbooks presents a barrier to many students education in mathematics. Typically, a new calculus text runs in the neighborhood of $270, and constant new editions of the text seem to appear every two years, adding to the rising costs of the textbook. Consequently, the mathematics department has a policy for textbooks for its calculus sequence.
    - The deparment has purchased 100 copies and have put them in the library. If you do not have a textbook, you may check one out at the library. You are responsible to turn the book in at the end of the semester in good condition, as you would be with any other library book. The calculus books will only be checked out to registered calculus students.
    - If you prefer to buy your textbook, we recommend that you search online. Make sure you get *Calculus, Early Transcendentals, 5th Edition*, by James Stewart, Brooks Cole Publishers.The ISBN on my text is 0-534-39321-7. For example:
        - Amazon search: Calculus, Early Transcendentals, 5ed., James Stewart, Brooks Cole Publishing.
        - Campusbooks.com search: Calculus, Early Transcendentals, 5ed., James Stewart, Brooks Cole Publishing

      It's really important that you get the correct ISBN 0-534-39421-7. Note that this edition also contains the multivariable calculus material needed if you intend to take Math 50C, multivariable calculus.

    - Solution manuals are not available in the library, but they are available online. You need the second volume of two solutions manuals for Stewart's text. For example:
        - Amazon search: Calculus Early Transcendentals Single Variable (Student Solutions Manual) 5th Edition

      It's really important that you get the correct ISBN: 0534393330.

Reading the Textbook

It is important that you read and work the examples in the textbook before attemping the exercises. Many students will work the process in reverse. That is, they begin working the exercises, then if stuck, they page back through the narrative in the text seeking a similar example to the exercise on which they are working. This is **not** a recommended approach to the study of mathematics.

Computing Resources

The Eureka campus houses computing facilities for its calculus students. They are located in the Science building, room SC 212. There are a number of powerful software packages on the machines in this room that will aid in the study of calculus. See your instructor for login name and password.

- Your personal login gives you a folder where you can submit your work. This folder is secure and the files in this folder cannot be read or written to by anyone but you.

Computer Lab -- Code of Conduct

Please see Computer Labs --- Code of Conduct for a set of rules and guidelines for computer use and maintaining decorum in the study rooms available in the physical sciences building.

Calculators

Most of our computation and plotting will be done with Mathematica. Whatever graphing calculator you currently own will be sufficient for your needs in this course.

Mathematica

Mathematica is a powerful software package created by the engineers at the Wolfram Mathematica. Mathemaica software can be installed on several platforms, including Linux, Mac OS X, and Windows XP.

Mathematica is installed on the computers in the SC 212 computer lab. Mathematica is also installed on the computers in the ASC.

To obtain a free version of Mathematica for use on your personal, go to Mathematica at College of the Redwoods. Slide down to where it says **Student personally owned machines**. Make sure you use **Student personally owned machines** and not the sections for faculty or campus machine use. Once you are at the section **Student personally owned machines**, perform each of the following tasks:

1. In number one, part (a), click the **user.wolfram.com** link and fill out (completely) the form using your @mycr.redwoods.edu email address.
2. Once you have completed the first step, go to step 2 and click on the **Fill out this form** link to request an activation key. It usually takes less than a day or two to receive an email with an activation key and instructions for downloading and installing Mathematica.
3. If you experience any problems, contact me via a Canvas email.

Homework

Homework will be assigned daily and will be due the next class meeting. Each homework will be assigned a grade ranging from 0-10 points, bases on completeness, the following of directions, and the quality of work.

It is essential that students keep up with the homework on a daily basis. Each time you come to class without your homework, you are not prepared to take part in the class at a level geared to your success. Therefore, students are encouraged to hand in homework on time. However, I am acutely aware of the responsibilities that many students have to deal with outside the classroom. Consequently, I do allow a "grace period" of one class period for late work. That is, if you hand your homework in by the next class period, I will still accept the assignment. However, there is an automatic 2-point deduction for late work. Homework later than one class period will not be accepted.

If you are experiencing difficulty getting your homework in on time, or if you know an upcoming event will interfere with getting your homework in on time, please discuss this with your instructor. We can possibly make some arrangment to help facilitate the completion of your work.

In order to facilitate the recording of homework scores, students are required to place their name in the upper right-hand corner of their homework assignment and staple the pages together with a single staple in the upper left-hand corner. On the first line of the of the first page of your homework, please write down the assignement number, the pages that encompass the assignement, and list each exercise number assigned. For example, the first line of your homework might read:

Assignment #12, Page 150, #1, 3, 5, 7, 8, 10, 11, 23, 45

Examinations

We will have two midterm examinations and a comprehensive final examination. Students should sit for all examinations on the day that they are administered (Final Exams Schedule). If you miss an examination, there is no guarantee that you will be allowed to make up the examination. Indeed, makeup examinations are given only at the instructor's discretion. If you know ahead of time that you have a conflict that will prevent you from sitting for an examination, please meet with me to discuss alternatives.

Students who need special arrangements for examinations are expected to meet with the instructor before **each** examination to insure that all examination materials are on file in the Academic Support Center (the ASC is in the Learning Resource Center (library)).

Every student will be required to sit for a final, cumulative examination. The time and day of this examination is posted in the Schedule of Classes and students are expected to sit for the exam at the time and on the day posted. No exceptions. Any student failing to sit for the final examination will receive an F in the class. Please keep this in mind when making travel plans for the end of the semester. Plan ahead!

Quizzes

Over the years, when students know an exam is coming up, they put on hold studies in their other classes to "cram" for the upcoming test. This is perfectly understandable and I freely admit that I did much the same thing when I was a student.

However, this is really not a good way to learn. Often, students are frustrated to find themselves behind in their other classes as they stuggle to prepare for an exam. They are unable to participate in lectures and they cannot follow the material in class because they are sections behind in their work. This is also frustrating for the teacher as he often winds up talking to himself during lecture.

Consequently, you will regularly be given quizzes throughout the semester to take home and work on. In order for this to work, you must understand that any work on the quizzes must be your own. You are not allowed to work together on quizzes, nor are you allowed to ask for help of any kind from your fellow students, tutors, or other professionals. The work must be your own.

Important Dates

You can find some very important dates for the full semester at the following link, things such as census dates, last date for student withdrawal, etc.

Important Dates

Attendance Policy

A student who is absent from class for the amount of time equal to two weeks of classes, will be withdrawn from the course, unless there are extenuating circumstances that are communicated to the instructor in a timely manner. This "faculty withdrawal" can occur between Week 4 and Week 10 of the semester.

Attendance will be recorded each class session. If you know you will be missing class, you should let your instructor know. If you come in after roll has been taken, come up after class and let your instructor know you are here.

Grades

To determine your grade in the class, points from homework, quizzes, midterms, and final exams will be totaled. You will be able to keep up with your current grade by logging into the Gradebook throughout the semester.

Gradebook

When Problems Arise

Should problems arise during the semester, always contact your instructor to let me know what's going on. That's the only way I can help.

Emergency Procedures

Please review the campus evacuation sites, including the closest site to this classroom (posted by the exit of each room) and review http://www.redwoods.edu/safety/ for information on campus Emergency Procedures.

During an evacuation:

- Be aware of all marked exits from your area and building. Know the routes from your work area to the nearest exits.
- Once outside, move to the nearest evacuation point outside your building.
- Keep streets and walkways clear for emergency vehicles and personnel.
- Do not leave campus, unless it has been deemed safe by the Incident Commander or campus authorities. (Be aware CR's lower parking lot and 101 frontage are within the Tsunami Zone).

RAVE - College of the Redwoods has implemented an emergency alert system. Everyone is entered already to receive a message at their CR email address. In the event of an emergency on campus, you can also elect to receive an alert through your personal email, and/or phones at your home, office, and cell. This emergency alert system will be available to all students, staff, and other interested parties.

Registration is necessary in order to receive emergency alerts. Please go to https://www.GetRave.com/login/Redwoods and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu."

We will test the system each semester to be sure that you are getting alerts at all of your destinations. Please contact Public Safety, 707-476-4112, security@redwoods.edu, if you have any questions.

The Syllabus is Subject to Change

As instructor, I reserve the right to make adjustments to the syllabus should things not proceed as smoothly as expected. However, in general, I do not anticipate making changes.