

Math 121

Calculus I

Fall 2011

Who: Jim Bentley Office: 227 AHN (ext. 8621)
When: MWF 8:00–9:20
Where: AHN 216
Text: Hughes-Hallett, *et. al.*, *Single and Multivariable Calculus*, 5th edition.
WeBWork <https://courses.webwork.maa.org/webwork2/redlands-math121-01/>
Note that it is https.
Web: <http://newton.uor.edu/facultyfolder/jim.bentley>
E-mail: jim_bentley@redlands.edu

GOALS: Math 121, *Calculus I*, is the first course in a sequence of courses that will introduce you to an important set of tools used by scientists, economists, and applied mathematicians. Emphasis of the course will be on both the application of the techniques of calculus and an understanding of the underlying theory that supports them. Whenever possible we will use real-world examples in applications of the topics. Mastery of the material presented in class will prepare you for your next calculus class or for applications of calculus within your other coursework. Math 121 will also help:

- improve your ability to think abstractly, logically, and analytically
- improve your problem solving ability
- improve your ability to communicate mathematical ideas and results to your peers in verbal and written form

TOPICS: We will cover most of the sections from chapters 2 through 6, and a few sections from chapter 11. Review topics will be taken from chapter 1. You will be exposed to the concepts and techniques from calculus including functions and their graphs, successive approximation and limits, local linearity and derivatives, applications of differentiation to graphing and optimization, definite integrals, antiderivatives, and differential equations.

GRADING:

- 30% Homework/Quizzes/Activities: Work will not be accepted for credit once grading of the assignment has begun. If you are unable to turn in your solutions yourself, either have a friend turn them in for you during class, place them in the grader's box (under the counter

across from the copier in the AHN 223 copy center), or *hand* them to me. Do *NOT* place them in my box or under my door — the graders do not look in these places and it is likely that your paper will be lost in the mix of the other paperwork that is passing through my office this way.

Since answers for some of the problems are given in the back of the book, to gain credit you must support *your* answers by showing evidence of *your* thought process—*your* reasoning. Use one side of the page, write legibly (in pencil unless you are perfect and never need to erase), and staple your pages together. Please be sure to order your answers sequentially and place them in a single column. In short, put yourself in the grader's place and think about how you can make their life easier.

The use of WeBWork in Math 121 is new for this semester. The assignments will be made un/available by the server on which they reside (see above). The problems are similar to those in the text, but you will be allowed to check your answer before submitting it. It is hoped that the use of WebWork will allow you to get a feel for your understanding of the material before you do the textbook problems.

Some of what we will do in this class will take more time than is available during an exam. Since your time is essentially “unlimited” outside of the classroom (yes, I know you have other classes), homework problems are a perfect place to see what you can do with problems which are less contrived than would be appropriate for a test. Homework is thus an important part of the learning process in this course. Please feel free to work together, but *be sure to turn in your own version of the solution*. If you choose to get help from others (including faculty), be sure that you fully understand whatever information they have given you. If you choose not to do the homework, or receive failing grades for those assignments you do turn in, the highest overall course score you can achieve is a 70% (or a C-). Historically, those individuals who did not earn a passing grade on their homework also earned low scores on their exams and thus failed the course. Please take the homework assignments seriously... I will.

Quizzes are a means of making sure that you remain current with the material. They also provide me with information beyond the homework as to how well material is being absorbed. And, yes they do encourage being present in class. No make-up quizzes will be given.

- 45% Three midterms (Mon. Oct. 3, Fri. Oct. 28, and Mon. Nov. 21): Make up exams will only be given if you let the instructor know *in advance* that you will not be able to make the scheduled test. You must possess a reasonable excuse for your absence.

Midterms are intended to encourage you to review the material presented in class and in the text. They also test *your* knowledge of the key topics and *your* ability to combine these topics in a creative manner. If you have not taken an active part in producing solutions to homework problems, it will become apparent during the exams. Remember, test time is limited, so as you study focus on the important ideas.

- 25% Final (Thurs., Dec. 15, 12:00 noon. This date was determined by the registrar and cannot be changed. The room is TBD but will probably be somewhere on the second floor of AHN.): The final will be 50% cumulative and 50% material from the last quarter of the class.

OFFICE HOURS: MWF 7:30–8:00 and 9:30–10:50, MW 2:30–3:00, and TTh by appointment. These are times when I will be in, or near (*ex.* in the computer lab or near the copier machine) my office. I'll be around at other times, so if my door is open and nobody else is getting help, *turn your cell phone off*, knock and then come on in. If I'm busy I'll ask you to come back at another time. Don't be offended, just come back later.

ATTENDANCE: You are encouraged to attend all class sessions. Remember that mathematics builds upon itself. You may not realize that the material you missed by being absent for a day is really important until knowledge of it is assumed a couple of weeks later. If you must miss a class, be sure to get notes from a classmate and fully understand the material before the next class meeting. You should make a habit of reading the text. You paid a lot for it, so you might as well get as much information as you can from it. Along those lines, the consensus (amongst students) is that you will spend at least two hours reading and doing homework for every hour we share in class. Of course, if you want to do well you'll probably spend a bit more.

The last day to drop or change your grade status is Oct. 14. Fall Break is Oct. 8 through Oct. 11. Thanksgiving Break is Nov. 23 through Nov. 27. The last day of classes is Dec. 12.

ACADEMIC HONESTY: Please familiarize yourself with the University's policy on academic honesty (see the Catalog). You are encouraged to work together when appropriate. However, it is expected that the work you turn in on individual assignments and exams will be yours alone. **If there is evidence that any work you turn in is not your own, you will be subject to University disciplinary action for plagiarism.**

CELL PHONE: In consideration of your classmates, please turn your cell phone off before entering our classroom. You may not be able to hear the vibration when your phone rings or the clicking as you send text messages, but many of your classmates and I can. By distracting me you are detracting from the quality of the experience that I can provide for everyone else in the room.

TUTORS: The Math Department provides tutors to aid you in your studies. They are available in the afternoons Monday through Thursday and in the evenings Sunday through Thursday. The student tutors are there to help you with your homework or answer questions on the material. They are *not* supposed to do your homework for you.

As a courtesy to the tutors, please remember that they are students and that they may not be comfortable with every topic that is covered in our class. If a tutor says that they are not sure about something, don't press them for more information, ask someone else. Also be aware that they are probably going to be helping a number of people at the same time. Be respectful of others and wait your turn.

The tutoring sessions are a great place to work together with your classmates. You can help each other, and if you have questions that no one in the group can answer, then the tutors are available. If the tutoring sessions and my office hours are not sufficient for your needs, consider requesting a tutor through Student Services. These tutors are also free of charge, but you must fill out the appropriate paperwork. Student Services tutors are in short supply, so if you feel you might need one make the request early.