

Spring 2008 Course Information
MATH 152 – Calculus II
Section 002 – CRN 46134

1:00-1:50 PM, M-F; Wubben Hall, Room 280

Dr. Jane Arledge, Professor of Mathematics

Office Hours: M 12-12:50, T & W 3-3:50, Th & F 9-9:50

(or by appointment)

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What is calculus? You have already become familiar with introductory calculus, and you know that calculus is fundamentally different than subjects such as algebra and trigonometry; it is the study of change and motion, and of the infinitely large and the infinitely small. This branch of mathematics began to be understood with the groundbreaking work of Isaac Newton (1642-1727) and Gottfried Wilhelm Leibniz (1646-1716), although mathematicians as far back in history as Archimedes (287-213 B.C.E.) struggled with its ideas. The *limit* is the most fundamental concept in our study of calculus, and we will extend its use in this second semester. You will master techniques and applications of integration, and you will be introduced to the fascinating ideas and uses of infinite sums. Calculus is a beautiful subject, and I hope you enjoy your continuing introduction to this deep and important area of mathematics.

Brief outline of the course. The material covered will include exponential, logarithmic and inverse trigonometric functions and their derivatives; techniques of integration, including integration by parts, trigonometric substitution, and partial fraction expansion; improper integrals; applications of integration; an introduction to differential equations; parametric equations; polar coordinates; conic sections; sequences and series, including integral, comparison, alternating series, ratio and root tests; power series; and Taylor and Maclaurin series.

Prerequisites. You should have recently completed Calculus I (Math 151) with a grade of “C” or better. *If you do not meet this prerequisite, you must speak with me or risk being dropped from the course.* A grade of C or better is required for the prerequisite courses; however, if you have not done better than C work in Calculus I, this course will be very difficult to pass. If you completed Calculus I with a low C, you should come talk to me. Together, we will determine how you can adjust your work habits in order to be successful in this class.

Textbook. The book we will use is *Calculus*, 5th edition, by Stewart. You need to **read** the sections we cover. Mathematics cannot be read quickly; you must read the text slowly and carefully, sometimes rereading paragraphs, until the meaning becomes clear. You should have a pencil and paper in hand, and work through the examples in the text. You may see the examples again on quizzes! We will cover most of Chapters 7 through 12.

Calculators. You are required to have a graphing calculator in this course. The department recommends the TI-83 Plus, the TI-84, or the TI-86. Other graphing calculators are acceptable; however, **the TI-89, TI-92 and some HP calculators will not be allowed on exams.** Before each exam, I may clear the memory of your programmable calculator. If you have programs or other information stored in the calculator’s memory, you must transfer or download this information in order not to lose it. Let me know **well in advance of the exam** if you need help saving your calculator memory.

Special services. In coordination with Educational Access Services, reasonable accommodations will be provided for qualified students with disabilities. Please meet with me the first week of class to make arrangements. Educational Access Services can be contacted at 248-1856, or in person at 954 North Ave. (next to the Bike Shop), entrance in the alley.

Tutoring. Mesa State has the Tutorial Services Center in Houston 110, which provides walk-in help with homework and other math questions. I strongly advise you to take advantage of this FREE service.

Withdrawal from the course. Until February 6, you may drop this course. After March 24, you will get an F, even if you are passing, if you withdraw from the course. Watch these deadlines!

Course grade. Your grade will be determined by the percentage of problems you answer correctly, on a basis not more strict than the usual A – 90% to 100%, B – 80% to 89%, C – 70% to 79%, D – 60% to 69%, F – 0% to 59%. Your grade in this course will be computed according to the following chart; details are in the appropriate sections.

Class Participation		0%	(up to 3 points added to final exam grade)
Quizzes and projects		10%	
Homework		5%	
Exam 1	Friday, Feb. 22	20%	
Exam 2	Friday, Mar. 28	20%	
Exam 3	Friday, Apr. 25	20%	
Final Exam	Wednesday, May 14, 1 - 2:50	25%	
Total		100%	

The percentages above are computed by taking the number of points earned divided by the total number of points possible.

A grade of incomplete will be given in the case of a legitimate emergency *only* if you have a passing grade and the semester is almost complete at the time of the emergency. (See the MSC catalog for more information regarding receiving a grade of incomplete.)

Homework, quizzes, projects and class participation. You will be given homework exercises almost every day, which you must master in order to do well in this course. We will discuss the homework at the beginning of class *on the day after it is assigned*. I will collect the homework at the beginning of class the second day after it is assigned. **Homework must be neat, stapled, and have no rough edges** (from being torn from a spiral notebook) in order to be graded, and no late homework will be accepted, so be prepared! I am happy for you to work together with other students on your homework assignments; working together can be very productive as long as you finish with a clear understanding of the exercises. Homework assignments are posted on my web page.

We will have quizzes every couple of weeks, consisting mainly of problems similar to those that will be on exams. These quizzes will usually be announced in advance. We may also occasionally have in-class projects, which you will work on in groups. There will be **no makeup of homework, quizzes or projects**; you are expected to be in class every day. You may, however, turn in homework in advance. Your lowest homework, project and quiz grades will be dropped – this will allow the rare but necessary absence from class.

Class participation will include attendance and preparedness. Good attendance means not missing more than 7% of the course (five classes) and coming to class *on time*. See me if there is a legitimate reason for you to miss more than 15% of the course (eleven classes), since if you miss this much I may withdraw you from the course. Preparedness means asking questions about and being ready to discuss the math you are learning.

Exams. There will be three exams given during the semester and a comprehensive final exam. The three in-class exams will be written on the material we have covered in class. As a practical matter, we have a set amount of material we must cover, which is the same material as is covered in second semester calculus courses across the country. While it is easier to take frequent exams over smaller amounts of material, it is not as conducive to the deeper learning and retention expected at the college level. Learning large amounts of material over time gives you a bigger picture of the subject, and allows you to connect seemingly-diverse concepts into a cohesive whole. Bear in mind that since exams will cover a large quantity of material, you *must* study as you go. **You cannot cram large amounts of difficult information into your head at the last minute!** With more complicated material, it is much better to learn slowly and steadily, because then you retain information better; not only up to the final exam, but even into the next semester and beyond!

The dates for the exams are listed in the Course grade Section. *These dates may be changed; such changes would be announced during class.* Please note that in order to avoid receiving a grade of 0 due to an absence on the exam date, because of an illness or emergency, you must call me or the mathematics department **prior** to the beginning time of the exam, and you must present **documentation** which will convince me of the legitimacy of your absence. **No exams will be rescheduled for personal reasons such as flight plans or vacations.**

Student conduct. Please read the section in the Mesa State College Catalog regarding student conduct. Academic dishonesty is severely penalized. *If you are caught cheating in this course, in any way, you will fail this course* and will be punished further as allowed under the rules of the college.

Please turn off your cell phones and any other electronic devices (except your calculator) during class. Put all such devices away, and keep them off of your desk and out of sight. If you wish to take notes on a computer, please see me.

Please come to class *on time*, and stay until the class is finished. Coming and going during the lecture is very disruptive to other students. If you must leave early or know that you will be late for some reason, please let me know in advance.

Attendance. I will take attendance, and missing class too many times will directly affect your grade, as described above. Missing class also indirectly affects your grade; you need to attend class in order to do well in this course. I will not necessarily follow the book exactly, I will often offer perspectives not available from the book, and I will skip some of the material in the book. You are responsible for all material covered in class. Furthermore, when you miss class, you may not understand the material that was covered, and you will thus not be able to follow the next lecture.

If you do have to miss class for some reason, you should get notes from a classmate; Please do not ask me for the notes or the assignment; **getting the information you missed is your responsibility.** Write the names and phone numbers of some classmates below.

Name:	Phone:	.
Name:	Phone:	.
Name:	Phone:	.
Name:	Phone:	.
Name:	Phone:	.

I will follow your course catalog regarding attendance, which says: *Students are expected to attend all sessions of each course in which they are enrolled. Failure to do so may result in a lowered grade or exclusion from class at the discretion of the instructor. At any time during a semester, a student who fails to attend regularly may be dropped from class rolls. An instructor may initiate a drop or withdrawal for a student who fails to attend classes regularly.*

Advice. You must do the homework problems. Understanding what I do in class is not enough! YOU are the one that has to be able to work the problems, and the act of working problems uses different brain cells than watching ME work problems. Only you can make yourself do the outside work that is required in order to learn the material; this is a 5-credit-hour course, so you are expected to work approximately 10 *more* hours outside this classroom each week. (For example, 2 hours each evening after class.) In order to succeed, you must be capable of self-motivation.

Come to see me during my office hours. I am more than happy to give you extra help when you need it. If your schedule conflicts with my office hours, please set up an appointment with me.

You will find the material much easier to absorb if you read ahead, before the lecture. If you do this, you will be amazed at what you will learn and how much more you will pick up in class.

Speak up in class. If you have a question, I'm sure at least one third of the class is wondering the same thing, and everyone will learn something from the ensuing discussion.

Do not fall behind. As time passes, it gets harder and harder to catch up. If you are confused, come see me during one of my office hours as soon as possible. I am happy to help you. DO NOT WAIT until weeks have passed; it will be too late.

Take notes! You may be following what I write on the board, but it doesn't mean you'll remember it. Write down everything I write on the board, and even write down things I say that I don't write on the board. This record will be very useful to you when you are doing homework and studying for tests.