

MATH 2411-003 Calculus II
Fall 2009

Class Sessions:	T/TH 9:00 – 10:50 AM
Class Location:	WC-139
Instructor/Course Captain:	Lance Lana
Lance Lana's Office:	CU-Denver Bldg., Rm. 634 (6th floor CU Building – 1250 14 th Street)
Office Hours: Note: These are subject to change. See my web page for the most current times.	Office hours below are in the MERC lab (NC 4015) Mondays & Wednesdays: 10:00 – 10:30 am; 12:20 – 12:50 pm; 2:30 – 3:00 pm. Tuesdays & Thursdays: 11:00 am – 12:00 noon. Other times are available – call or e-mail first.
Phone:	office/voice mail: (303) 556-2618 FAX: (303) 556-8550 (attn. Lance Lana)
E-mail:	Lance.Lana@ucdenver.edu Note: e-mail is frequently the best way to reach me.
Web Page	The syllabus & homework assignments are posted on my web page at: http://math.cudenver.edu/~llana/ Grades are updated weekly and posted at: http://blackboard.cuonline.edu/webapps/portal/frameset.jsp
Math Dept. Office	CU-Denver Bldg., 6th Floor (1250 14th Street) phone: 303-556-8442 (main line)
Dept Associate Chair	Lynn Bennethum CU-Bldg., Rm. 638 Phone: 303-556-4810

Description: The second of a three-semester sequence (MATH 1401, 2411, 2421) in calculus. Topics covered include exponential, logarithmic and trigonometric functions, techniques of integration, indeterminate forms, improper integrals and infinite series.

Prerequisite: MATH 1401

Required Materials:

Text: *Calculus, Early Transcendentals*, by Anton, Bivens, and Davis, **8TH EDITION**, 2005.
 ISBN: 978-0-471-47244-5

Note: We are using the 8th edition of this textbook, NOT the 9th edition.

If you took calculus I last semester here at UCD (in class, not online) then you will use the same textbook. If you take calculus III next semester then you will use the same text again next semester. If you are a transfer student or if you took Calculus I in high school then unfortunately you will probably need to purchase the text. In general Calculus textbooks are ridiculously expensive. Buying a hard copy of the text new at the Auraria bookstore is very expensive. Buying the text online is a more affordable option but you will need to get it delivered ASAP! There is a copy of the 8th edition of the text on reserve in the MERC lab (NC 4015) that you can reference until your text arrives. If you don't mind reading the text on your computer then an e-book is another less expensive option. For information on alternatives to purchasing the textbook, see "Textbook Options for Math 2411" on the following web page:

<http://math.cudenver.edu/~llana/students.htm>

Graphics Calculator: The recommended calculator for the course is the TI-89. This calculator contains a Computer Algebra System (CAS). I will be using a TI-89 in class. Other calculators with a CAS may be sufficient but please ask if you have a different calculator that you would like to use. It is also possible to use a calculator without a CAS (TI-83/84 or TI-86) for routine calculations and use the computer program DERIVE when you need a CAS. The computers in the MERC lab have DERIVE loaded on them. You can also obtain a free copy of DERIVE in the MERC for use on your own computer! Calculators and Computers are not allowed on exams.

How you will be evaluated:

Exams: Two tests, worth 125 points each, will be given plus a comprehensive final exam, counting 150 points. The dates of the tests and final exam are:

Test #1 – Thursday September 24th
Test #2 – Thursday October 29th
Final Exam – Saturday December 5th (9:00 AM – Noon)

Paper & Pencil Homework Assignments: Homework problems will be given over each section covered and collected each week. Approximately 12 assignments will be graded and will be worth a total of 100 points after the lowest two homework grades are dropped at the end of the semester. Please follow these guidelines when turning in homework assignments:

1. All assignments are to be done on green engineering paper. Engineering paper can be purchased at the bookstore. Please use only one side of paper when doing assignments.
2. All assignments should be done in pencil.
3. Show all work neatly since messy papers may not be graded.
4. Include graphs where appropriate. The graphs can either be a sketch or a computer printout with important information (axes, scale, intercepts, and important points) identified.
5. Staple your papers together.
6. Make sure that you do the assigned problems since no credit will be given for work on an incorrect problem.
7. Please circle or box your answers.

You are able to work together in doing homework assignments; however, copying another student's work will not be tolerated. If this occurs, all students involved will receive no credit on the assignment.

Points Summary: You will be accumulating a possible 500 points during the semester.

Exams:	250 points (125 points each)
Final Exam:	150 points
Homework Assignments:	100 points (after dropping two)

Total:	500 points

Grading Scale: Your final grade will be determined by the percentage of these points you have actually received

A 92.0 – 100%	A- 90.0 – 91.9%	
B+ 88.0 – 89.9%	B 82.0 – 87.9%	B- 80.0 – 81.9%
C+ 78.0 – 79.9%	C 70.0 – 77.9%	
D 60.0 – 69.9%		
F below 60.0%		

Late Work and Exam Makeup Policy:

Makeup Tests: I expect you to take all of the tests. If some emergency arises that causes you to miss a test, we will deal with it in such a way that you are not penalized. We will discuss the details if this happens. If at all possible, you must make arrangements with me beforehand, and I will ask for details regarding the emergency. If you miss a test without making prior arrangements, you will in all likelihood receive a zero. No makeup will be offered after the test has been passed back to the class.

Uniform Final Exam: The final exam is 9:00 AM – Noon on Saturday December 5th. Attendance at the final exam is mandatory. Having the final rescheduled is extremely rare and is not permitted for reasons such as a plane ticket that was purchased earlier, attendance at weddings or accommodation of your work schedule. If you have another UCD class/exam at the time of the math 2411 final exam then you are required to make up the final exam on Saturday afternoon. In all cases where a makeup is requested, you MUST MAKE ARRANGEMENTS BEFOREHAND if at all possible.

Late Homework Assignments: Homework will be assigned on Thursdays and it will be due the following Thursday. If assignments are turned in after their due date there is a huge penalty. Unless you make prior arrangements, expect a 50% reduction in grade for any item turned in late. No assignments will be accepted after the assignment has been returned to the class along with solutions.

Frequently Asked Question: How much time should I be spending on my Calculus each week? A "full-time job" is considered to be 40 hours per week and a "full-time student" is considered to have a schedule of 15 hours per week. If you subtract 15 hours of class time from the 40 hours, that leaves 25 hours of studying per week. $\frac{4}{15}$ of 25 hours is 6.7 hours of studying Calculus, outside of class time per week.

Attendance: Regular attendance and participation are important to your success in any college course but particularly in mathematics. Attendance of lecture is expected and required. *If you must miss a lecture, notify me by phone or send an e-mail message (in advance when possible).*

Cheating: Examples of cheating include (but are not limited to): using unauthorized references (e.g. another individual, notes, texts...) during an exam or online quiz, using a calculator on an exam or online quiz where a calculator is not allowed, altering a graded exam and coming back to request more points, turning in duplicate homework assignments, and plagiarism. The penalty for cheating will depend on the evidence and the intent of the student.

At a minimum, the penalty for deliberate cheating on an exam will be a zero on the exam. A letter will also be sent to the department Chair and the CLAS associate Dean and it is likely that depending on the circumstances, cheating of this kind may result in a course grade of **F** as well as possible expulsion from the university. It isn't worth it, so don't do it.

I encourage students to work together on homework. However, it is expected that you turn in your own work expressed in your own words. Never copy someone else's work and do not allow someone else to copy your work. If there are duplications of portions of homework where it is obvious that copying has occurred, then both parties will receive a zero on the assignment.

Student Code of Conduct: As members of the University community, students are expected to uphold university standards, which include abiding by state civil and criminal laws and all University policies and standards of conduct. These standards are outlined in the student code of conduct which can be found at: <http://thunder1.cudenver.edu/studentlife/studentlife/introduction.html>

Incomplete Grades: Incomplete grades (I) are not granted for low academic performance. To be eligible for an Incomplete grade, students must (1) *successfully* complete 75 percent of the course, (2) have special circumstances (verification may be required) that preclude the student from attending class and completing graded assignments, and (3) make arrangements to complete missing assignments with the original instructor using a CLAS Course Completion agreement.

Where to Get Additional Help: There are Teaching Assistants available to answer your questions in the MERC lab in the North Classroom Building (NC) room 4015. This is an excellent resource! Check with the lab to see their schedule. Try to form a study group to study and learn with; it really works for some people. Realize that there are many ways of learning and a study group may be helpful for you. Listening to a lecture and asking questions may work for someone else. The Learning Resource Center (see below) may be able to assist you in setting up a study group. And don't forget about me! Please, don't be afraid to ask me questions. Don't think "I must be the only one who doesn't understand." Feel free to ask questions before, during, or after class. You are always welcome to drop in and see me during my open office hours (see page 1), or you can ask questions by email. If your email contains math symbols, just type them as you would on your calculator.

Other Resources for this course:

The Learning Resource Center is designed to promote student success, retention, and graduation in the academic setting. Services which are available to UC Denver students include tutoring, and study groups, study strategies seminars, peer advocacy, a test file and minority resource library.

Tutoring Services – North Classroom Building (NC) Room 2004
(303) 556-2802

First-generation college students may be eligible for intensive services through Student Support Services and the Ronald McNair programs; both are TRIO programs federally funded by the Dept. of Education. For more information, please contact them via email at cla@carbon.cudenver.edu.

TRIO Program - North Classroom Building (NC) 2506
(303) 556-3420 (office)
(303) 556-2803 (peer mentors)

The Academic Success and Advising Center serves as the first point of contact for students who are pre-business, pre-engineering, or who have not declared a major in CLAS or CAM. In addition the center provides general information and resource referral to all students.

North Classroom Building (NC) Room 1503
(303) 352-3520

Disability Accommodations The University of Colorado Denver is committed to providing reasonable accommodation and access to programs and services to students with disabilities. To be eligible for accommodations, students **must** be registered with the UC Denver Office of Disability Resources and Services (DRS) – North Classroom 2514; 303-556-3450, 303-556-4766 TDD). The DRS staff has experience to assist faculty in determining reasonable accommodations, and to coordinate these accommodations. If a student is given accommodations, they must be followed. If a student chooses not to accept the accommodations set forth by the DRS, they **MUST** complete all assignments and do all course work in the same manner as all other students. No exceptions or alternate forms of evaluation can be used except those mandated by the DRS. Faculty cannot arbitrarily decide to give a student extra time, extra assistance or other forms of aid unless it is formally mandated by the DRS.

The Career Center offers a full array of services that prepare students for career success, such as resume help, internship and career counseling and they have a large career library.

Tivoli Student Union Room 259

Fall 2009 CLAS Academic Policies

The following policies pertain to all students and are strictly adhered to by the College of Liberal Arts and Sciences (CLAS).

- Every student **MUST** check and verify their schedule prior to the published drop/add deadlines. Failure to verify a schedule is not sufficient reason to justify a late add or drop later in the semester. It is the student's responsibility to make sure that their schedule is correct prior to the appropriate deadlines.
- CLAS students must use their ucdenver.edu email address. Email is the official method of communication for all University of Colorado Denver business. All email correspondence will take place using your UCDHSC email address. Go to <http://www.ucdenver.edu/student-services/resources/registrar/students/policies/Pages/EmailPolicy.aspx> to activate your email address.
- Students **are NOT automatically added** to a course off a wait list after wait lists are dropped. If a student is told by a faculty member that they will be added off the wait list, *it is the responsibility of the student to complete the proper paperwork to add a course.*
- Students are *not automatically notified* if they are added to a class from a wait-list. Again, it is the responsibility of the student to verify their schedule prior to any official dates to drop or add courses.
- Students must complete and submit a drop/add form to make any schedule changes. *Students are not automatically dropped from a class if they never attended, stopped attending or do not make tuition payments.*
- Late adds will be approved **only** when circumstances surrounding the late add are beyond the student's control and can be documented independently. This will require a petition and documentation from the student. Please note that the signature of a faculty member on an add form does not guarantee that a late add petition will be approved. Petitions are available in NC 4011.
- Late drops will be approved **only** when circumstances surrounding the late drop have arisen **after** the published drop deadlines, are beyond the student's control, and can be documented independently. This will require a petition and documentation from the student. Pre-existing circumstances (circumstances that existed prior to the published drop deadlines) regarding illness, work, family, or other confounding issues will not be considered adequate reason to drop or withdraw from courses after the published University and/or College drop deadlines. Please note that the signature of a faculty member does not guarantee that a late drop petition will be approved. Petitions are available in NC 4011.
- **Undergraduate students wishing to graduate in fall of 2009** must meet with their academic advisor by census date to obtain a graduation application. This application must be completed and submitted by 5 PM on **September 2, 2009**. You can obtain an application **ONLY** after meeting with your academic advisor. **There are no exceptions to this policy or date.**
- **Graduate students wishing to graduate in fall semester 2009** must complete their Intent to Graduate form and have a Request for Admissions to Candidacy on file with the CLAS Dean's office no later than 5 PM, **September 2, 2009**.
- Students are responsible for completing financial arrangements with financial aid, family, scholarships, etc. to pay their tuition. Students will be responsible for all tuition and fees for courses they do not officially drop using proper drop/add procedures and forms.

Students who drop after the published drop/add period will not be eligible for a refund of the COF hours or tuition.

Important Dates

- **August 17, 2009:** First day of Class
- **August 23, 2009:** Last day to add a class or be added to a wait list for a class using the SMART system.
- **August 24, 2009: LAST DAY TO DROP WITHOUT DROP CHARGE – THIS INCLUDES SECTION CHANGES.**
- **August 24, 2009: Wait Lists are dropped.** Any student who was not added to a course automatically from the wait list by this date and time **MUST** complete a schedule adjustment form to be added to the class. Students are **NOT** automatically added to the class from the wait list after this date and time. If your name is not on the official student roster, you are not registered for the course.
- **August 25-September 2, 2009:** Students are responsible for verifying an accurate fall 2009 course schedule via the SMART registration system. Students are **NOT** notified of their wait-list status by the university. All students must check their scheduled prior to September 2, 2009 for accuracy.
- **August 25, 2009:** First day instructor may approve request to add a student to a full course with a Schedule Adjustment Form.
- **September 2, 2009:** Census date.
- **September 2, 2009 at 5 PM:** Last day to add structured courses without a written petition for a late add. **This is an absolute deadline and is treated as such.** This deadline does not apply to independent study, internships, project hours, thesis hours, dissertation hours, and late-starting modular courses.
- **September 2, 2009 at 5 PM:** Last day to drop a fall 2009 course **or** completely with draw from all fall 2009 courses with a tuition adjustment **minus the drop charge** and no transcript notation – this includes section changes. Drops after this date will appear on your transcript. **This is an absolute deadline and is treated as such.**
- **September 2, 2009 at 5 PM:** Last day to request pass/fail or no credit option for a course.
- **September 2, 2009 at 5 PM:** Last day for a graduate student to register for a Candidate for Degree.
- **September 2, 2009 at 5 PM:** Last day for a Ph.D. student to petition for a reduction in hours.
- **September 2, 2009 at 5 PM:** Last day to apply for fall 2009 graduation. You must make an appointment and see your academic advisor before this date to apply for graduation if you are an undergraduate; you must complete the intent to graduate and candidate for degree form if you are a graduate student.
- **September 7, 2009:** Labor Day (campus closed/ no classes)
- **October 26, 2009 at 5 PM:** Last day for **non CLAS students** to drop or withdraw from all classes without a petition and special approval from the student's academic Dean. **This is treated as an absolute deadline.**
- **November 9, 2009 at 5 PM:** Last day for **CLAS students** to drop or withdraw from all classes with signatures from the faculty and Dean. **This is treated as an absolute deadline.**
- After **November 9, 2009** all schedule changes require a full petition. Petitions are available in NC 4011.
- **November 26, 2009:** Thanksgiving Day Holiday (campus closed)
- **No schedule changes will be granted once finals week has started. There are NO exceptions to this policy.**

Math 2411-003 (Fall 2009)

		Schedule	
Week	Dates	Textbook Sections	Material Covered
1	Aug 18, 20	6.2 – 6.8	Review of basic integration techniques for definite and indefinite Integrals, Fundamental Theorem of Calculus and u-substitution. Rectilinear motion.
2	Aug 25, 27	6.9, 7.1, 7.2	Logarithmic Functions from the Integral Point of View. Area Between Two Curves. Volumes by Slicing; Disks & Washers.
3	Sept 1, 3	7.3, 7.4	Volumes by the Shell Method Length of a Plane Curve.
4	Sept 8, 10	7.5, 7.6, 7.7	Area of a Surface of Revolution Average Value of a Function and its Applications Work
5	Sept 15, 17	8.1, 8.2, 8.3	Overview of Integration Methods Integration by Parts Trigonometric Integrals
6	Sept 22, 24	Catch-up/Review Test #1	Catch-up and Review (if time allows) TEST #1
7	Sept 29, Oct 1	8.3, 8.4	Trigonometric Integrals Trigonometric Substitutions
8	Oct 6, 8	8.5, 8.8	Integrating Rational Functions by Partial Fractions Improper Integrals
9	Oct 13, 15	9.1, 9.3	First-order Differential Equations and Applications Modeling with first-order differential equations
10	Oct 20, 22	10.1, 10.2, 10.3	Sequences Monotonic Sequences Infinite Series
11	Oct 27, 29	Catch-up/Review Test #2	Catch-up and Review (if time allows) TEST #2
12	Nov 3, 5	10.4, 10.5	Convergence Tests Comparison Test, Ratio Test and Root Test
13	Nov 10, 12	10.6, 10.7, 10.8	Alternating Series; Conditional Convergence Maclaurin and Taylor Polynomials Maclaurin and Taylor Series; Power Series
14	Nov 17, 19	10.10, 11.1	Differentiating and Integrating Power Series; Modeling Polar Coordinates
	Nov 23 - 28	No Classes	
15	Dec 1, 3, 5	11.3 Catch-up/Review	Area in Polar Coordinates Catch-up and Review (if time allows) Final Exam: Saturday Dec 5th (9:00 am – noon)