

**MATH 1080-002 Polynomial Calculus
Fall 2009**

Class Sessions:	M/W 1:00 – 2:15 PM
Class Location:	NC-1314
Instructor	Lance Lana
Course Captain	Lance Lana - office/voice mail: (303) 556-2618
Office:	CU-Denver Bldg., Rm. 634 (6th floor CU Building – 1250 14 th Street)
Office Hours:	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.ucdenver.edu/~llana/ Grades are updated regularly 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

Course Description: A one-semester course in single-variable calculus. Topics include limits, derivatives, differentiation rules, integration and integration rules. Emphasis is on applications to business and social sciences. Note: No knowledge of trigonometry is required. Those planning to take more than one semester of calculus should take MATH 1401 instead of MATH 1080.

Prerequisite: Math 1070 or Math 1110. No co-credit with MATH 1401.

Required Materials:

MyMathLab **OR** Text with MyMathLab: You may purchase MyMathLab online for \$70.00. An online copy of the text is included with MyMathLab. The students solutions manual is also included. If you don't mind reading the text online then purchasing MyMathLab online is all you need to do. This is probably the least expensive option! Note: If you are retaking this course or switching sections you do not need to pay for a new access code.

On the other hand, if you want a hard copy of the text in addition to an online copy of the text then you should purchase: *Calculus and its Applications + MyMathLab Package*, 9th Edition, Bittinger and Ellenbogen, Addison-Wesley, 2007, Package ISBN# 0321454138.

Note: If you purchase a used textbook you will still need to purchase MyMathLab online for \$70.00. Access codes cannot be used more than one time.

Graphics Calculator: A graphics calculator is required for this class. The recommended calculator is one of the TI-83/84 calculators or the TI-*n*spire. I will be using these very similar calculators in class. Other graphics calculators may be sufficient but please ask if you have a different calculator that you would like to use. Any calculator such as the TI-89 or TI-*n*spire CAS that can perform symbolic algebra and calculus **will not be allowed** on any test or quiz and is not to be used for homework, chapter reviews, or other similar activities. Just as we expect you to be able to do basic arithmetic without a calculator, we expect you to be able to do basic algebra and calculus without a calculator.

How you will be evaluated:

Exams: There will be three in-class tests, worth 100 points each, and a comprehensive final exam, counting 200 points. The dates of the tests and final exam are:

- Test #1 – Wednesday September 16th
- Test #2 – Wednesday October 14th
- Test #3 – Wednesday November 18th
- Uniform Final Exam – Saturday December 5th (9:00 AM – Noon)

Paper and Pencil Homework Assignments:

Weekly homework assignments will be given over each section covered. Approximately 12 assignments will be graded and will be worth 15 points each. The lowest homework assignments will be dropped at the end of the semester so that your highest 10 assignments will count. Please follow these guidelines in 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 your work! You must show your work to get full credit. Partial credit is usually possible but only if you show your work. A correct answer with now work shown may receive no credit.
4. Show all work neatly since messy papers may not be graded.
5. 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.
6. Staple your papers together.
7. Make sure that you do the assigned problems since no credit will be given for work on an incorrect problem.

MyMathLab Homework:

In addition to paper and pencil homework above, online homework will be assigned over each section covered. There will be approximately 22 graded assignments that are worth a total of 100 points. The lowest 2 assignments will be dropped at the end of the semester. You will use MyMathLab to do the online homework. It is highly recommended that you do the online homework for each section of the text **before** doing the paper and pencil homework for that section. You get immediate feedback while doing the online homework since the problems are graded as you do them. You can also get help on a problem if necessary and you have three attempts to get each problem correct. Additionally, if you want to improve your score on a particular assignment you can return and try that assignment again, up until its due date.

Points Summary: You will be accumulating a possible 750 points during the semester.

Exams:	300 points (100 points each)
Final Exam:	200 points
Homework Assignments:	150 points (after 2 are dropped)
MyMathLab Homework:	100 points (after 2 are dropped)

Total:	750 points

Grading Scale: Your final grade will be determined by the percentage of these points you 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 in class tests. If some emergency arises that causes you to miss a test, I 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 – 12:00 PM 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 1080 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: Paper and pencil assignments are due on Wednesdays. Unless you make prior arrangements, expect a 50% reduction in grade for any item turned in late. No assignments will be accepted after the beginning of class the following Monday.

Late Online Homework: If you do not do an online homework by its due date you will receive a zero on that homework. So, start the online homework early in case you run into technical difficulties!

Frequently Asked Question: How much time should I be spending on my Math 1080 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. $3/15 = 1/5$ of 25 hours is 5 hours of studying Math 1080, outside of class time per week. Note: If your last math class was several years ago or if your prerequisite math skills are weak then you may need to spend considerably more time on this class in order to be successful.

Attendance: Regular attendance and participation are important to your success in any college course but particularly in mathematics. I expect you to attend all class sessions. *If you must miss a class, 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, using a calculator on an exam 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 then both parties will receive a zero on the entire 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>

Incompletes: Incomplete grades (IW or IF) are not granted for low academic performance. To be eligible for an Incomplete grade, students must (1) *successfully* complete 75 percent of the course (i.e. be passing 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 email.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.***

Schedule for Math 1080 – Fall 2009

Week	Beginning	Sections to be covered
1	Aug 17	1.1 Limits: Numerical and Graphical Approach 1.2 Algebraic Limits and Continuity
2	Aug 24	1.3 Average Rates of Change 1.4 Differentiation Using Limits of Difference Quotients
3	Aug 31	1.5 Differentiation Techniques: The Power and Sum-Difference Rules 1.6 Differentiation Techniques: The Product and Quotient Rules
4	Sept 7	Labor Day - Monday Sept. 7 th – No Class. 1.7 The Chain Rule
5	Sept 14	1.8 Higher Order Derivatives TEST 1 – Wednesday September 16th
6	Sept 21	2.1 Using First Derivatives to Find Extrema and Sketch Graphs 2.2 Using Second Derivatives to Find Extrema and Sketch Graphs
7	Sept 28	2.3 Graph Sketching: Asymptotes and Rational Functions 2.4 Using Derivatives to Find Absolute Maximum and Minimum Values
8	Oct 5	2.5 Maximum-Minimum Problems; Business and Economics Applications 2.6 Marginal Cost, Revenue and Profit (Skip Differentials)
9	Oct 12	Catch up and review TEST 2 – Wednesday October 14th
10	Oct 19	3.1 Exponential Functions and Their Derivatives 3.2 Logarithmic Functions and Their Derivatives
11	Oct 26	3.5 The Derivatives of a^x and $\log_b x$ 4.1 The Area under a Graph and Summation Notation
12	Nov 2	4.2 Area, Antiderivatives, and Integrals 4.3 Area and Definite Integrals
13	Nov 9	4.4 Properties of Definite Integrals 4.5 Integration Techniques: Substitution
14	Nov 16	Catch up and Review TEST 3 – Wednesday November 18th
15	Nov 23	FALL BREAK
16	Nov 30	5.1 An Economics Application: Consumer Surplus and Producer Surplus Summary and Review Final Exam – Saturday December 5th (9:00 am – Noon)