

**Math 116 Section ???**  
**Applied Calculus for Business**  
**Course Policy - Spring 2017**

**Instructor:**

**Office:**

**Phone:**

**E-mail:**

**Office Hours:**

Required Materials:

- MyMathLab access code for *Calculus with Applications, 11<sup>th</sup> ed.*, Lial, Greenwell, & Ritchey, Pearson Publishing.
- Graphing calculator (see below for specific details).

Main websites: <http://d2l.arizona.edu>  
<http://math.arizona.edu/~math116/>  
<http://www.mymathlab.com>

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### **Catalog Course Description**

Introductory topics in differential and integral calculus, with particular emphasis on understanding the principal concepts and their applications to business. Microsoft Excel and graphing calculators will be used as tools for further understanding these concepts. Except as per University policy on repeating a course, credit will not be given for this course if the student has credit in a higher level math course. Such students may be dropped from the course.

### **Course Prerequisites**

Appropriate Math Placement Level or Proctored/Prep for College Algebra 88+ or Proctored/Prep for Calculus 65+ or one of MATH 109C, 112, 116, 120R, 125 and either MIS 111 or ABE 120.

### **Course Objectives**

- To apply mathematical tools to obtain quantitative information that is relevant to business decisions.
- To promote problem-solving and critical thinking skills.
- To prepare students for subsequent work in the Business College and for their future careers in business.
- To apply the use of computer technology in solving mathematics problems.
- To help strengthen students' general academic skills.

### **Communication with Students**

Announcements and important course information may be sent out via official University email or through D2L. It is the student's responsibility to check for messages and announcements regularly.

### **Accessibility and Accommodations**

It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please meet with your instructor to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Resources (621-3268; [drc.arizona.edu](http://drc.arizona.edu)) and notify your instructor of your eligibility for reasonable accommodations by Friday, January 20, 2017. You will then be able to work with your instructor to plan how best to coordinate your accommodations. Please be aware that the accessible table and chairs in the classroom should remain available for students who find that standard classroom seating is not usable.

### **Academic Integrity**

Students are responsible to inform themselves of University policies regarding the Code of Academic Integrity. Students found to be in violation of the Code are subject to penalties ranging from a loss of credit for work involved to a grade of E in the course, and risk possible suspension or probation. The Code of Academic Integrity will be enforced in all areas of the course, including, but not limited to, homework, quizzes, and tests. For more information about the Code of Academic Integrity policies and procedures, including information about your rights and responsibilities as a student, see the following website: <http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>

### **Attendance/Administrative Drops**

Daily attendance is expected from every student. Students who miss the first class meeting will be administratively dropped unless they have made other arrangements. In addition, students with more than 3 unexcused absences may be administratively dropped from the course. (See Administrative Drop Policy at <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>) Other actions that may result in an administrative drop from this course include failing to sign up for MyMathLab by January 18, 2017, or missing more than 5 assignments. If you need to miss class for unavoidable circumstances, see your instructor as soon as possible.

- All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion.
- Absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.

It is the student's responsibility to notify the instructor in advance of an absence related to religious observation or an activity for which a Dean's excuse has been granted, and to arrange for how any missed work will be handled.

### **Student Code of Conduct**

Students at The University of Arizona are expected to conform to the standards of conduct established in the Student Code of Conduct. Prohibited conduct includes:

1. All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism.
2. Interfering with University or University-sponsored activities, including but not limited to classroom related activities, studying, teaching, research, intellectual or creative endeavor, administration, service or the provision of communication, computing or emergency services.
3. Endangering, threatening, or causing physical harm to any member of the University community or to oneself or causing reasonable apprehension of such harm.
4. Engaging in harassment or unlawful discriminatory activities on the basis of age, ethnicity, gender, handicapping condition, national origin, race, religion, sexual orientation, or veteran status, or violating University rules governing harassment or discrimination.

Students found to be in violation of the Student Code of Conduct are subject to disciplinary action. For more information about the Student Code of Conduct, including a complete list of prohibited conduct, see the following website: <http://deanofstudents.arizona.edu/accountability/students/student-accountability>

### **Other Relevant University Policies Relating to Conduct**

Please take note of the following University policies:

- Policy on Threatening Behavior by Students:  
<http://policy.web.arizona.edu/education-and-student-affairs/threatening-behavior-students>
- Nondiscrimination and Anti-Harassment Policy:  
<http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

### **Expected Classroom Behavior**

Students should turn off all electronic devices during class unless the device is deemed necessary for the class by the instructor. This includes, but is not limited to cell phones, tablets, mp3 players, and laptops. If you have a disability-related accommodation that involves the use of a computer during class, please discuss this with your instructor in advance.

### **Calculators**

A graphing calculator (such as the TI-83, 84, or 86) is required for this course. Calculators that perform symbolic manipulations (such as the TI-89 or TI-92 and certain models of the TI-Nspire) cannot be used. Students must supply their own calculator for in-class exams and the final exam. There is absolutely no calculator sharing on exams. Although some cell phones have the capabilities of a scientific calculator, these are not allowed and will be confiscated during an exam. For in-class exams and the final exam, the only program allowed in your calculator is the QUADRATIC FORMULA program. Also note that it is your responsibility to learn to use the calculator appropriately. Questions about using the calculator will not be answered during an exam.

## MyMathLab

The course textbook and several graded components for Math 116 are found in MyMathLab. MyMathLab can be accessed through the University of Arizona's D2L website (<http://d2l.arizona.edu>). Students will need to purchase access to MyMathLab. This can be done by one of the following two methods:

1. Purchase access using a credit card or PayPal account.
2. Purchase an access code from the University of Arizona bookstore.

Students may only **register for MyMathLab** by enrolling through <http://d2l.arizona.edu>. When registering for MyMathLab, students will need to enter a valid email address and password. If you have previously used a MyMathLab (or other My Labs) product, you should use your previous login credentials. If you have not used a MyMathLab product before, you are **STRONGLY** encouraged to use your University of Arizona email address.

## Learning Catalytics

Learning Catalytics is a tool within MyMathLab which allows the students to respond to questions in class posed by the instructor. Students will log into MyMathLab via cell phone, tablet, or laptop during each class. If a student does not have one of these devices in class, they are expected to bring paper and pencils to submit the answers in written form before the end of the class.

Learning Catalytics is worth 30 points of your course grade. Points will be awarded based on participation and correctness. No makeups will be extended. Submitting answers for another student through Learning Catalytics is against course policies and will be pursued as a violation of the Code of Academic Integrity. It is the student's responsibility to make sure they are enrolled in MyMathLab in a timely manner and that their device connects to Learning Catalytics. Students may always submit written solutions.

## Homework Assignments

Two forms of homework will be regularly assigned - online homework and written homework. Late homework is generally not accepted. Students who register for the class after the first class meeting may not be able to make up missed assignments. Exceptions may be considered by the student's instructor. Grading disputes regarding homework must be addressed within one week after the homework has been returned.

1. Online homework is worth 80 points of your course grade. Online homework will be assigned using MyMathLab. There will be two assignments for each section covered - a part A and a part B. For the part A assignments, the help features are enabled, there are 3 attempts for each problem, and you may print the assignment. For the part B assignments: the help features are disabled, there is 1 attempt for each problem, and you may not print the assignment. The part B assignments have very similar problems to the part A assignments and are generally due the day after the part A assignments. *It is highly suggested that you print the part A assignments - work through the problems on the printout - and use the worked out problems on the printout as notes for the part B assignments. These printouts will also be useful for preparing for exams!*  
The due dates for all assignments are posted in MyMathLab - it is your responsibility to know when the assignments are due. Late online homework will not be accepted.

2. Written homework is worth 40 points of your course grade. Written homework will be assigned in class and on D2L. Approximately 2 problems will be collected and graded per week. The problems could come from the MyMathLab homework, the textbook, or the study guides. The problems will emphasize business applications and the grading will take particular note of the written explanations and interpretations, as well as the mathematical notation. While students are permitted to work together on their written work, the work submitted must be one's own. Copying work from another student will not be tolerated. Students who copy another person's work are violating the university's Code of Academic Integrity and may be subject to penalties described in the Code.

Students are expected to complete the following procedures to receive full points on their written work assignments.

- Show and clearly explain the method(s) used to solve the problem as well as providing correct interpretations for each solution. Proper mathematical notation should be used and the student's work should be neat and well-organized in the final draft that is submitted. Points will be awarded for correctness and completeness. Simply giving an answer is not acceptable and will receive little or no credit.
- Clearly indicate the final answer.
- No late homework is accepted.

### Unit Exams

There will be three in-class exams, worth 100 points each. All exams are closed-book and closed-notes. The tentative dates for the exams are **February 10th**, **March 10th**, and **April 28th**. Any changes to the exam dates will be announced in advance by your instructor. As indicated above, all electronic devices must be turned off during exams. Silent and vibrating modes are not allowed. Any questions regarding the grading of exams need to be cleared up within one week after the exam has been returned.

### Missed Exams

Students are expected to be present for all exams. If a verifiable emergency arises which prevents you from taking an in-class exam at the regularly scheduled time, you must notify your instructor as soon as possible, and in any case, prior to the next regularly scheduled class. Make-up exams will be administered only at the discretion of the instructor. If a student is allowed to make up a missed exam, (s)he must take it at a mutually arranged time. No further opportunities will be extended. Failure to contact your instructor as stated above or inability to produce sufficient evidence of a real emergency will result in a penalty in the grade, or possibly a grade of zero on the exam.

### Final Exam

There is a mandatory comprehensive final exam, worth 150 points of your course grade. It is a common department exam and it is scheduled for **Thursday, May 11th from 1:00-3:00 pm**. Please put this date in your calendar immediately. The location of the final exam will be posted on the Math Department website.

The study guides for the final exam and previous final exams are posted as a PDF document on the Math 116 website.

Please note the following:

- University rules relating to final examinations may be found at:  
<http://registrar.arizona.edu/courses/final-examination-regulations-and-information?audience=students&cat1=10&cat2=31>
- The University final exam schedule may be found at:  
<http://www.registrar.arizona.edu/students/courses/final-exams>

### Grades

3 Unit Exams	300 pts (50%)
Learning Catalytics	30 pts (5%)
Homework	120 pts (20%)
Final Exam	150 pts (25%)
<b><i>Total possible points</i></b>	<b>600 pts</b>

### You will earn a grade of:

- A if you earn at least 540 points (90%)
- B if you earn at least 480 points (80%)
- C if you earn at least 420 points (70%)
- D if you earn at least 360 points (60%)

**Please note that neither exam scores nor final grades will be curved. No extra credit or bonus points are offered in this course.**

A grade of Incomplete will be given only at the instructor's discretion, according to University Policy as described at <http://www.registrar.arizona.edu/gradepolicy/incomplete.htm>

### Withdrawal

A student may withdraw from the course with a deletion from record through January 25, 2017, using UAccess. A student may withdraw with a grade of "W" through March 28, 2017, using UAccess.

## Tentative Weekly Schedule

Week	Dates	Topics Covered	MyMathLab Assignments Due
1	1/11-1/15	Slopes and Equations of Lines, Linear Functions	
2	1/16-1/22	Properties of Functions, Quadratic, Polynomial, and Rational Functions	1.1a
3	1/23-1/29	Exponential and Logarithmic Functions, Applications of Functions	1.1b, 1.2a, 1.2b, 2.1a, 2.1b, 2.2a, 2.2b, 2.3a, 2.3b, 2.4a
4	1/30-2/5	Limits, Rates of Change	2.4b, 2.5a, 2.5b, 2.6a, 2.6b, 3.1a
5	2/6-2/12	Definition of the Derivative	3.1b, 3.3a, 3.3b, 3.4a, 3.4b
6	2/13-2/19	Techniques for Finding Derivatives, Product and Quotient Rules	4.1a
7	2/20-2/26	The Chain Rule, Derivatives of Exponential Functions	4.1b, 4.2a, 4.2b
8	2/27-3/5	Derivatives Logarithmic Functions, Increasing and Decreasing Functions	4.3a, 4.3b, 4.4a, 4.4b, 4.5a
9	3/6-3/12	Relative Extrema	4.5b, 5.1a, 5.1b, 5.2a, 5.2b
10	3/20-3/26	Absolute Extrema, Applications of Extrema	
11	3/27-4/2	Elasticity of Demand, Antiderivatives	6.1a, 6.1b, 6.2a, 6.2b
12	4/3-4/9	Substitution	6.3a, 6.3b, 7.1a
13	4/10-4/16	Area and the Definite Integral, The Fundamental Theorem of Calculus	7.1b, 7.2a, 7.2b,
14	4/17-4/23	The Area Between Two Curves	7.3a, 7.3b, 7.4a, 7.4b
15	4/24-4/30	Continuous Money Flow	7.5a, 7.5b, 8.3a, 8.3b
16	5/1-5/3	Review for Final	

### Changes to the Course Policies

The information contained in the course policies, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.