

MAT 251: Calculus for Life Sciences Fall 2023 MWF

Instructor:	Section:
Office Hours:	
Email:	

The instructor reserves the right to make changes to this syllabus as necessary.
Any such changes will be announced in class and updated in the online syllabus

Course Description: Differential and integral calculus of elementary functions. Emphasizes applications to the life sciences. Not open to students with credit in MAT 210, 265, or 270.
 3 credits, fulfills university general studies MA requirement.

Pre-requisites: MAT 170 with C or better or completed the ALEKS Calculus Placement Exam with a score of 60% or higher or the Calculus Placement Exam with a score 36 or higher.

Textbook: Calculus and Its Applications: Brief Version, 12th edition by Bittinger, Ellenbogen, Surgent and Kramer. Published by Pearson. You can access the e-text in MyLab Math from our Canvas course site.

The required material for this course will be provisioned as an e-book and made available at a discounted price significantly cheaper than if purchased directly from the publisher. If you wish to take advantage of this discounted group price, no additional action is needed. **NOTE: Following the drop/add period, a charge of \$70.30 plus tax, will post to your student account under the header "Bkstr Publisher Negotiated Rate" and your access will continue uninterrupted.**

IF you'd rather purchase the material from an alternate source, you may choose to opt out of the program by using this link: <https://includedcp.follett.com/1230> *. Enter your ASU e-mail address AS IT APPEARS IN THE ASU DIRECTORY (<http://asu.edu/directory>), then follow the instructions provided. Be aware that if you do opt-out, your access to the e-book will be discontinued.

Please be on the look out for two emails:

- An email from Brytewave/RedShelf notifying them they have materials available to view. This email will contain the access code necessary for their registration.
- An email from "ASU Bookstore" with the subject line "Auto-Provisioned Course Materials--[Course Name]". This email details how the student can access content, how to opt out, and which ASU email to use.

Instructions for setting up MyMathLab and accessing e-textbook:

1. Students click on the Brytewave link in Canvas.
2. The MyLab title will be on the shelf. Clicking the title creates an access code. Copy the access code.
3. Students then click on the Pearson Access link. If they don't have an account, they'll be prompted to create one (use your ASU email address) .
4. Students should see the MyLab title associated with the course. They click on this and are prompted to either pay (at full price) or enter the access code they received. Paste the access code here.
5. This opens the MyLab access.

Please note: the ebook won't appear on your shelf until approximately 5 days prior to the start of classes. If you need assistance accessing the book or the opt-out portal, please email asuinclusiveaccess@gmail.com

Graphing Calculator: A graphing calculator is required for this course. Examples of highly recommended models are the TI 83/84 or TI *n*-spire (NOT the *n*-spire CAS) or Casio 9850GB Plus. Calculators with QWERTY keyboards or those that do symbolic algebra, such as the Casio FX2, Casio 9970Gs, TI *n*-spire CAS, TI-89, or TI-92 **may not** be used in class.

TENTATIVE SCHEDULE

Week of	Topics	Comments
8/17 – 8/18	Introduction, Limits	
8/21 – 8/25	Limits & Continuity: Numerically & Graphically Limits Algebraically	
8/28 – 9/1	Average Rates of Change Differentiation Using Limits of Difference Quotients Differentiation Techniques (Basic Derivatives)	
9/4 – 9/8	Derivative as Instantaneous Rates of Change Product & Quotient Rules	Labor Day: Sept. 4 (No classes)
9/11 – 9/15	Chain Rule <i>Review for Exam 1</i>	
9/18 – 9/22	<i>Exam 1</i> Using First Derivatives to find min/max values	Exam 1 (Assignments 1 – 6): 9/18
9/25 – 9/29	Using Second Derivatives to find min/max values Absolute max & min, EVT	
10/2 – 10/6	Optimization Problems	Fall Break Oct. 7 – 10 (No classes)
10/9 – 10/13	Implicit Differentiation and Related Rates Exponential and Logarithmic Function Review	
10/16 – 10/20	Derivative of Exponential and Logarithmic Functions Exponential Growth, Logistic Growth Models	
10/23 – 10/27	Exponential Decay, Newton's Law of Cooling <i>Review for Exam 2</i>	
10/30 – 11/3	<i>Exam 2</i> Indefinite Integrals Integration Techniques (Basic Integrals)	Exam 2 (Assignments 7 – 15): 10/30
11/6 – 11/10	Definite Integrals (Geometric Approach) Fundamental Theorem of Calculus Area Between Curves	Veterans Day: Nov. 10 (No classes)
11/13 – 11/17	Average Value Integration by Substitution	
11/20 – 11/24	Integration by Parts	Thanks-giving Holiday: 11/23-11/24 (No classes)
11/27 – 12/1	Regression and Analysis <i>Review for Exam 3</i>	
12/4 – 12/8	FINAL EXAM WEEK <i>Exam 3</i>	Exam 3 (Assignments 16 – 22, not cumulative): See Final Exam Schedule

Full ASU Calendar: <https://students.asu.edu/academic-calendar>

Grading Distribution:

Exam 1, 2, and 3	65%
Supper Quizzes 1, 2, and 3	10%
Quizzes	10%
Homework	15%

Grading Scale: A+ [97,100], A [90, 97), A- [89, 90), B+[87, 89), B [80, 87), B- [79,80), C+ [77, 79), C [68, 77), D [55, 68), E (or EN, or EU) [0, 55)

Failing grades (The E, EN and EU grades)

--- The **E** grade is for students who participated in the class but did not earn enough credit to pass or attain the D grade.

--- The **EN** grade is for student who never once participated in the class. At the instructor's discretion, any student who has not attended class during the first week of classes may be administratively dropped from the course. However, students should be aware that non-attendance would NOT automatically result in being dropped from the course. Thus, a student should not assume they are no longer registered for a course simply because they did not attend class during the first week. It is the student's responsibility to be aware of their registration status

--- The **EU** grade is for students who participated, but then stopped after a certain point and never resumed.

Withdrawal: A student may withdraw from a course with a grade of **W** during the course withdrawal period. The instructor's signature is not required.

The grade of Incomplete: A grade of incomplete will be awarded only in the event that a documented emergency or illness prevents the student who is doing acceptable work from completing a **small** percentage of the course requirements. The guidelines in the current general ASU catalog regarding a grade of incomplete will be strictly followed.

Instructor-Initiated Drop: At the instructor's discretion, any student who has not attended class during the first week of classes may be administratively dropped from the course. However, students should be aware that non-attendance will NOT automatically result in their being dropped from the course. Thus, a student should not assume they are no longer registered for a course simply because they did not attend class during the first week. It is the student's responsibility to be aware of their registration status.

Homework and Quizzes:

- Homework and quizzes will be graded. Students may work together on homework, but each individual student is required to submit their own work. Regular quizzes will be given and frequently reflect material that has recently been discussed in class. Students are expected to read relevant sections of the textbook or watch online videos prior to attending class. No make-up quizzes will be given. Missed quizzes will count as 0s in the student's grade. *I will drop the lowest two quizzes at the end of the semester for this reason*, but **NO HOMEWORK GRADES WILL BE DROPPED**.
- Homework and Super Quizzes will be submitted via the online homework system MyMathLab. It can be completed either your own computer or one in any of the ASU computer labs. You can access MyMathLab from the Canvas course site.

Further instructions regarding MyMathLab may be given in class.

Exams: You will take three exams during the term. Each exam may consist of a mixture of Multiple Choice, Matching, Short Answer, and/or Free Response questions. The exams will be given during regular class time. **The best possible preparation of them is regular attendance and completion of assigned homework.** There are NO test retakes or “corrections”, and **NO EXAM GRADES WILL BE DROPPED**.

Make-up exam: Make-up exams are given at the discretion of the instructor and only in the case of verified medical or other emergencies, which must be documented. The instructor must be notified before the test is given. If a make-up exam is given for any reason, it will not be the same as the original. Make every effort to take each exam on time.

Final Exam Policy:

The [final exam schedule](#) listed in the Schedule of Classes will be strictly followed. Except to resolve those situations described below. No changes may be made in this schedule without prior approval of the Dean of the college in which the course is offered. Under this schedule, if a conflict occurs, or a student has more than

three exams on one day, the instructors may be consulted about an individual schedule adjustment. If necessary, the matter may be pursued further with the appropriate dean(s). This procedure applies to conflicts among any combination of Downtown Phoenix campus, Tempe campus, Polytechnic campus, West campus, and/or off campus class. Make-up exams will NOT be given for reasons of a non-refundable airline tickets, vacation plans, work schedules, weddings, family reunions, and other such activities. Students should consult the final exam schedule before making end-of-semester travel plans.

Exam proctoring:

Any student who accesses a phone, camera during a proctored quiz or exam for any reason automatically receives a score of zero on the assessment. All such devices must be turned off and put away during quizzes and exams.

Student Success

To be successful:

- check the course daily
- read announcements
- read and respond to course email messages as needed
- complete assignments by the due dates specified
- communicate regularly with your instructor and peers
- create a study and/or assignment schedule to stay on track
- access [ASU Student Resources](#)

Communicating with the Instructor

ASU email is an official means of communication among students, faculty, and staff. All instructor correspondence will be sent to your ASU email account. Students are expected to read and act upon email in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned email regularly. For personal matters, please email your instructor directly. Include the class information (e.g., MAT 251, Section 12345).

Students Resources

- **Tutoring Center:** The **Math Tutoring Center** (free of charge) is in Wexler 116, STPV 321, Palo Verde, and online.
Website: <https://math.asu.edu/resources/math-tutoring-center>
Come in for help before it is too late, and several days before an exam day to strengthen your preparation. In order to be admitted to the Tutor Center each student must present their valid ASU Sun Card.
- You may also visit the University Academic Success Programs site at <https://studentsuccess.asu.edu/>

Disability Accommodations:

If you have a disability that needs accommodating, please report this privately to the instructor **by the end of the first week of class**. You should also contact the Student Accessibility and Inclusive Learning Services at (480) 965 – 1234 (voice) or (480) 965 – 9000 (TTY). All efforts will be made to ensure you have equal opportunity to succeed in the course.

Covid-19 Updates and Information

Information regarding the effect of COVID-19 on ASU can be found at:
<https://eoss.asu.edu/health/announcements/coronavirus#face-coverings>

The School of Mathematical and Statistical Sciences Policies and Procedures

ATTENDANCE: Your instructor reserves the right to take attendance and to incorporate your attendance as part of your overall grade. For classes that meet two days a week, the maximum number of absences is four. For classes that meet three days a week, the maximum number of absences is six. Students who exceed the number of allowed absences may receive a grade of **EN**. Your instructor reserves the right to take attendance and to incorporate your attendance as part of your overall grade.

Academic Status Report: During the semester you may be issued an academic status report from your instructor if your class grade is failing at that time. If you receive such a status report, you must act on it. Status reports are **not** a real-time running tally of your grades in the class, nor are they updated to reflect grades earned after the report has been issued.

Classroom behavior, etiquette, and academic integrity policies

- Classroom disturbances, including but not limited to arriving late, constant talking in class, using cellular devices, texting, listening to music, eating noisily. Each student is expected to show respect for every student registered in the class. Turn off any cellular phones, pagers, laptops, tablets, and other electronic devices and put them out of sight prior to entering class. The usage of laptops is prohibited in the classroom. Notes should be taken with pen/pencil on paper. If you wish to use an electronic device for note taking, talk to your instructor. Students who engage in disruptive classroom behavior may be subject to various sanctions. The procedures for initiating a disruptive behavior withdraw can be found at <http://clas.asu.edu/classroom/disruptive>. An instructor may withdraw a student from a course when the student's behavior disrupts the educational process under USI 201-10 <http://www.asu.edu/aad/manuals/usi/usi201-10.html>. Students are required to adhere to the ABOR Student Code of Conduct: <https://eoss.asu.edu/dos/srr/codeofconduct>.
- Athletes with travel schedules should meet with the instructor by the end of the first week of classes to discuss any necessary arrangements that need to be made.
- If you have a disability that requires special accommodations, it is your responsibility to bring this to your instructor's attention during the first week of class. You must also contact the ASU Disability Resource Center <https://eoss.asu.edu/drc>. All efforts will be made to ensure you have equal opportunity to succeed in the course, but there can be no retroactive accommodation.
- **Absences related to religious observance/practices or university sanctioned events and activities:** if you will be absent from class due to a religious observance or practice that are in accordance with ACD 304-04, or from participation in a university sanctioned event/activity in accord with ACD 304-02, it is your responsibility to inform the instructor during the first week of class. Your instructor will work with you on alternative and reasonable arrangements for any time missed
- **Academic Integrity:** Academic honesty is expected of all students in all assignments, examinations, papers, laboratory work, academic transactions, and records. Academic dishonesty, including inappropriate collaboration, will not be tolerated. There are severe sanctions for cheating, plagiarism, and any other form of dishonesty. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see <http://provost.asu.edu/academicintegrity> and <https://provost.asu.edu/sites/default/files/AcademicIntegrityPolicyPDF.pdf>

The grade of XE: A grade of XE is reserved for "failure due to academic dishonesty." The grade goes on the student's transcript and usually remains there permanently. Examples of academic dishonesty are signing an attendance sheet for another student or asking another student to sign an attendance sheet on your behalf, accessing unauthorized help while taking an exam, and attempting to influence a grade for reasons unrelated to academic achievement. Asking for a higher grade than the one you have earned because you need a higher grade to maintain a scholarship, or to satisfy your own or someone else's expectations constitutes academic dishonesty.

Copyrighted Materials:

Students must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's original work, unless the students first comply with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement. The content of this course, including lectures and other instructional materials, are copyrighted materials. Students may not share outside the class, including uploading, selling or distributing course content or notes taken during the conduct of the course. Any recording of class sessions is authorized only for the use of students enrolled in this course during their enrollment in this course. Records and excerpts of recordings may not be distributed to others. Any (parts of) exams, assignment, reports, or solutions to these, from current or previous semester, posted to any website not affiliated with ASU will result in academic integrity disciplinary actions against the students posting them and the students using them.

Title IX:

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at <https://sexualviolenceprevention.asu.edu/faqs>.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, <https://eoss.asu.edu/counseling>, is available if you wish discuss any concerns confidentially and privately.

Note: This syllabus is tentative and should not be considered definitive. The instructor reserves the right to modify it (including the dates of the tests) to meet the needs of the class. It is the student responsibility to attend class regularly and to make note of any change. The instructor also reserves the right to create class policies regarding homework due date, late assignments, etc.