



Instructor Policy - Section 07 (MWF)

Math 129 - Calculus II - Fall 2019

Bio West 237, 12:00–12:50

Instructor and Contact Information

Leonid Friedlander

Office: ENR2-351S

Tel: 6212742; e-mail: friedlan@math.arizona.edu

Office Hours: M 11:00–11:50, W 2:00–2:50 (both in ENR2 351S); F 11:00–11:50 in MTL 121

Course Webpage: <https://math129.math.arizona.edu>

Section Webpage: www.math.arizona.edu/~friedlan/teach/129

Course materials will be delivered digitally via D2L through the Inclusive Access program.

A computer grading program called WebAssign will be used throughout the course.

Course Communications

It is the student's responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes and on the section webpage.

Course Prerequisites or Co-requisites

MATH 122B, 124, 125 or 129 with C or higher.

Description of Course

Continuation of MATH 122B or MATH 125. Techniques of symbolic and numerical integration, applications of the definite integral to geometry, physics, economics, and probability; differential equations from a numerical, graphical, and algebraic point of view; modeling using differential equations, approximations by Taylor series.

Course Goals and Objectives

Math 129 covers the fundamentals of the integral calculus, including:

- developing the techniques of analytical and numerical integration, including improper integrals;
- applying the definite integral to problems arising in geometry and in either physics or probability;
- developing the concept of infinite series and the ability to calculate and use Taylor series;
- analyzing first order differential equations from a graphical and algebraic point of view and modeling physical and biological situations by differential equations;
- promoting problem-solving and critical thinking skills through the application of calculus concepts to various situations.

Learning Outcomes

Upon completion of the course, the student will:

- identify appropriate integration technique(s) and successfully execute them;
- for a given geometric, probabilistic, or physical quantity, set up an integral that measures the quantity, and use integration techniques to calculate it;
- determine if an infinite series or improper integral converges to a finite value; calculate, manipulate, and determine the radius of convergence of Taylor series;
- solve first order differential equations analytically and graphically and determine an appropriate differential equation to model various physical and biological situations.

Course Materials

The course materials include the textbook (*Calculus Single Variable*; Sixth Edition by Hughes-Hallett et al.; published by Wiley) and access to the online homework system (WebAssign).

Course materials are being delivered digitally via D2L through the Inclusive Access program. Please access the material through D2L the first day of classes to make sure there are no issues in the delivery, and if you are having a problem or question it can be addressed quickly.

You automatically have access to the course materials FREE through September 8, 2019. You **must** take action (even if you have not accessed the materials) to opt-out if you do not wish to pay for the materials, and choose to source the content independently. **The deadline to opt-out is 9:00pm MST, September 8, 2019. If you do not opt-out and choose to retain your access, the cost of the digital course materials will appear on your October Bursars account.** Please refer to the Inclusive Access FAQs at <https://shop.arizona.edu/textbooks/Inclusive.asp> for additional information.

Calculator Policy

Models that can perform symbolic calculations (also known as CAS) are NOT allowed on exams and quizzes. CAS models include (but are not limited to) the TI-89, TI NSpire CAS and HP 50g. Students are not allowed to share calculators during exams and quizzes. Calculators of any type will not be allowed on the first and the second mid-semester tests.

Absence and Class Participation Policy

Participating in the course and attending lectures and other course events are vital to the learning process. As such, attendance is required at all lectures and discussion section meetings. Absences may affect a student's final course grade. If you anticipate being absent, are unexpectedly absent, or are unable to participate in class online activities, please contact me as soon as possible. To request a disability-related accommodation to this attendance policy, please contact the Disability Resource Center at (520) 621-3268 or drc-info@email.arizona.edu. If you are experiencing unexpected barriers to your success in your courses, the Dean of Students Office is a central support resource for all students and may be helpful. The Dean of Students Office is located in the Robert L. Nugent Building, room 100, or call 520-621-7057.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, <http://policy.arizona.edu/human-resources/religious-accommodation-policy>.

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <https://deanofstudents.arizona.edu/absences>

Classroom Behavior Policy

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Threatening Behavior Policy

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

UA Nondiscrimination and Anti-harassment Policy

The University is committed to creating and maintaining an environment free of discrimination; see <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

Accessibility and Accommodations

At the University of Arizona we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

Assignments and Examinations

Homework: (100 points) Homework will be submitted in two formats throughout the semester. A computer grading program called WebAssign will be used for problems assigned from the text. Hand-written homework showing all work with proper notation will also be submitted. These problems will come from the text and/or from a set of problems created by your instructor.

Written homeworks will be usually assigned on Wednesdays, and they are due on Wednesday in the following week. The assignment will be made on the section webpage. WebAssign homeworks and written homeworks are worth 50 points each.

In-Class Exams: (400 points) Four in-class exams are tentatively scheduled for Wednesday, September 18th; Monday, October 14th; Friday, November 8th; and Friday, December 6th. Each exam will be worth 100 points. All electronic devices must be turned off during all exams. According to university policy, no exams will be held on the week of December 9th.

Final Examination

(200 points) The final exam is a comprehensive common exam. It is scheduled for Monday, December 16th from 8:00 – 10:00 am (see the University's Final Exam Schedule at <http://www.registrar.arizona.edu/schedules/finals.htm>). Additional information and a study guide can be found at <https://math129.math.arizona.edu>.

The University's Exam regulations will be strictly followed

<https://www.registrar.arizona.edu/courses/final-examination-regulations-and-information>.

Grading Scale and Policies

Your final course grade will be determined by a percentage of the 700 total possible points in the course. Grades will be no lower than the following:

A: 100-85% B: 84-75% C: 74-65% D: 64-55% E: 54-0%

No extra credit or bonus points are offered in this course.

Note: A grade of C or better in Math 129 is a necessary prerequisite for Math 223 (Vector Calculus) and Math 254 (Differential Equations). Students who receive a D in Math 129 will receive credit for the course towards graduation requirements, and will be able to use their course for the general education math requirement, but will not be automatically qualified to register for Math 223 or 254.

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at

<http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete> and

<http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal> respectively.

You may drop the class without a W through September 8 using UAccess. The class will appear on your UAccess record, but will not appear on your transcript. You may withdraw with a W through November 3 using UAccess. The University allows withdrawals through November 24, but only with the Dean's approval. Late withdrawals are dealt with on a case by case basis, and requests for late withdraw without a valid reason may or may not be honored.

Dispute of Grade Policy: Any questions regarding the grading of any assignment, quiz, or exam need to be cleared up within one week after the graded item has been returned.

Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See:

<http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.

The University Libraries have some excellent tips for avoiding plagiarism, available at

<http://new.library.arizona.edu/research/citing/plagiarism>.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions.

Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

Additional Resources for Students

UA Academic policies and procedures are available at <http://catalog.arizona.edu/policies>

Student Assistance and Advocacy information is available at <http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>

Confidentiality of Student Records

<http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa>

Scheduled Topics/Activities

Week	Topics	WebAssign	HW/Exams
1: Aug 26 - Sep 1	Integration by substitution and parts	Sec 7.1	
2: Sep 2 - Sep 8	Tables of integrals	Sec 7.2	HW #1
3: Sep 9 - Sep 15	Partial fractions & trig substitution, numerical methods of integration	Sec 7.3	HW #2
4: Sep 16 - Sep 22	Improper integrals	Sec 7.4 & 7.5	Exam #1
5: Sep 23 - Sep 29	Comparison of improper integrals	Sec 7.6	HW #3
6: Sep 30 - Oct 6	Areas & volumes, applications to geometry	Sec 7.7	HW #4

7: Oct 7 - Oct 13	Density	Sec 8.1 & 8.2	HW #5
8: Oct 14 - Oct 20	Applications to physics	Sec 8.4	Exam #2
9: Oct 21 - Oct 27	Sequences, geometric series, convergence of series	Sec 8.5 & 9.1	HW #6
10: Oct 28 - Nov 3	Tests for convergence, power series & intervals of convergence	Sec 9.2 & 9.3	HW #7
11: Nov 4 - Nov 10	Taylor polynomials	Sec 9.4 & 9.5 & 10.1	Exam #3
12: Nov 11 - Nov 17	Taylor series, finding & using Taylor series		HW #8
13: Nov 18 - Nov 24	What is a differential equation, slope fields	Sec 10.2 & 10.3	HW #9
14: Nov 25 - Dec 1	Separation of variables, growth & decay	Sec 11.1 & 11.2	HW #10
15: Dec 2 - Dec 8	Applications & Modeling	Sec 11.4 & 11.5 & 11.6	Exam #4
16: Dec 9 - Dec 11	Review		

Subject to Change Statement

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.