MATH 1250-001, AP Calculus I, Fall 2020

Class Location & Meeting Times: MTuWF at 10:45AM-11:35 AM via Zoom

Instructor: Lei Wu (preferred pronouns: he/him/his)

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Zoom contact: u0748701@utah.edu.

Office Hours: Wednesdays, 9:35 AM - 10:35 AM or by appointment
Location: Online via Zoom.

Course Type: Interactive Video Conferencing (IVC - synchronous online)
Course Information: Math 1260 is a 4 credit course.
Prerequisite Information: AP Calculus AB score of at least 4 OR AP Calculus BC score of at least 3.
Course Description: Review of introductory calculus, applications of differential and integral calculus, introduction to differential equations, conic sections and polar coordinates, numerical approximation, sequences and series, power series.


Technical requirements: Students are expected to be computer literate, with the ability to navigate Canvas and Zoom. These skills are critical for accessing all features and resources of this course. It is strongly encouraged that students log into Zoom for class with audio and video enabled, as this will help foster the interactive environment that leads to successful learning. For the online synchronous course components (e.g., lectures and labs), a strong internet connection and adequate bandwidth is needed. Tests will be proctored using Zoom with video enabled, so students are required to have a working webcam (note: a phone with a webcam is sufficient if no laptop is available).

Course Lectures & Attendance: The lectures of this course will be given live over zoom at the scheduled time from 10:45AM-11:35 AM on MTuWF. Students are expected to join the live zoom session and participate in class. The zoom sessions will be accessed through Canvas. On-line Attendance is strongly encouraged but not required. Please do not come to class if you are experiencing COVID-19 symptoms.

Canvas: Canvas will be used for posting course announcements, lecture videos, homework assignments, grades, files and any relevant supplementary material. You are also welcome to make use if the Canvas discussion board to discuss course problems or topics. You can access the Canvas page through CIS or by logging in at utah.instructure.com. Students should check the Canvas page regularly for course information and resources. Email notifications and correspondence will be sent to the student’s UMail address ([u-number]@utah.edu); this email account must be checked regularly.

For technical assistance, review the Canvas Getting Started Guide for Students and/or contact TLT, Knowledge Commons, etc..

Homework: Weekly homework will be assigned and collected through Canvas under Assignments Tab. Scanned images of your homework must be submitted online through Canvas, preferably as a pdf. The homework will cover material up to and including the previous Friday (due Wednesday). Three of the problems will be selected for grading by the grader, each graded out of 5 points. There will also be 5 points given for completion. The two lowest homework scores will be dropped. Late homework is, in general, not accepted.

Quizzes: There will be weekly quizzes except the first week and test weeks. Quizzes will be posted on Canvas by Thursday morning and should be submitted via Canvas no later than 11:30 PM (MDT). Scanned images of your quizzes must be submitted online through Canvas, preferably as a pdf. Although you will have the whole day to submit it, the quizzes should take no more than 30 minutes. Quizzes are closed-book.
You should not use any resources, unless stated otherwise. The two lowest quiz scores will be dropped. There are no “make-up” quizzes. Students who miss a quiz will receive a “0” on the missed quiz.

**Exams:** Two 60-minute exams will be given during the semester. Midterm exams will be given through Canvas. Scanned images of your exams must be submitted online through Canvas, preferably as a pdf. No textbook notes or calculators will be allowed. Exams will be proctored through Zoom, so a webcam will be required. Online resources and communication with others (either in person or electronically) will not be allowed during the exams. Violations of these rules will be considered academic misconduct; a zero will be given on the exam and a report will be sent to the College of Science.

One cumulative 120 minute exam will be given at the end of the semester. It will be the same format and follow the same rules as the midterm exams, only it will be longer.

- Exam 1: Friday, Oct. 2 in class
- Exam 2: Friday, Nov. 6 in class
- Final: Tuesday, Dec. 15 10:30 am – 12:30 pm

It is the student’s responsibility to ensure the accuracy of all recorded homework, quizzes, online assignments, and exam grades. Also you should keep as record all your graded assignments. If you see any error in your grades on Canvas, reach out to the instructor as soon as possible, or at the latest within two weeks from when the assignment was returned.

**Grading:** The grades will be determined using the following weights:

- Homework: 10%
- Quizzes: 20%
- Exam 1 and 2: 20%\times2
- Final: 30%
- Note: no scores will be dropped.

**Grading Scale:** Semester letter grades will be converted from numerical semester scores (N) as follows:

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\begin{align*}
100 & \geq N \geq 93 & A \\
93 & > N \geq 90 & A- \\
90 & > N \geq 88 & B+ \\
88 & > N \geq 83 & B \\
83 & > N \geq 80 & B- \\
78 & > N \geq 78 & C+ \\
78 & > N \geq 73 & C \\
73 & > N \geq 70 & C- \\
70 & > N \geq 68 & D+ \\
68 & > N \geq 63 & D \\
63 & > N \geq 60 & D - \\
60 & > N : E
\end{align*}
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**Course Expected Learning Outcomes:**

1. This is an expedited Calculus sequence that will take us from the basics of real functions and their limits to Taylor approximations, improper integrals and optimization. We will learn to analyze functions from partial information, find average (integral) and extreme (optimization) values, understand infinitesimal (derivative) and long-term (integral) behavior and encode all this data into efficient bundles (Taylor approximations) that can be manipulated to our desire. We will also study curves, coordinate systems and the behavior of special functions that play an important role both in theory and applications.

2. The problems we will tackle will be more varied and intense than a basic Calculus course, and will require us to produce ideas and apply them correctly in unforeseen situations. To improve these skills, we will have dedicated interactive problem solving sessions every week.

3. Most calculus courses eschew conceptual depth to focus on computation. Here we will treat the two aspects of Calculus equally, and every computation will be carried in a precise conceptual framework. We will not focus on proofs, but remember that proof is the formalization of a convincing argument; in this course you will need to be able to convince other of the validity of your steps and computations.
Official Drop/Withdraw Dates: The last day to add, drop (delete), elect CR/NC, or audit classes is Friday 4th September; the last day to withdraw from this class is Friday, October 16. The last day to reverse CR/NC option is Friday 27 November. Please check the academic calendar for more information pertaining to dropping and withdrawing from a course. Withdrawing from a course and other matters of registration are the student’s responsibility.

Syllabus subject to change:: This syllabus is meant to serve as an outline and guide for our course. Please note that your instructor may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas.

ACADEMIC CODE OF CONDUCT Students are encouraged to review the Student Code for the University of Utah: https://regulations.utah.edu/academics/6-400.php. In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, research misconduct, misrepresenting one’s work, and/or inappropriately collaborating. A student who engages in academic misconduct as defined in Part I.B. may be subject to academic sanctions including but not limited to a grade reduction, failing grade, probation, suspension or dismissal from the program or the University, or revocation of the student’s degree or certificate. Sanctions may also include community service, a written reprimand, and/or a written statement of misconduct that can be put into an appropriate record maintained for purposes of the profession or discipline for which the student is preparing.

Inclusivity Statement: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

The Americans with Disabilities Act: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability and Access, 162 Olpin Union Building, 801-581-5020. CDA will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability and Access.

Safety Statement: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veterans status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).
University Counseling Center: The UCC staff is committed to supporting the mental health needs of our campus community, while mitigating COVID-19 risks in our department. As of Wednesday, March 18th, the UCC is providing all services as telephone and secure video conference appointments. Their phone number is 801-581-6826, Monday-Friday, 8:00am-5:00pm. For after-hours emergencies, contact the 24/7 Crisis Line: 801-587-3000. More information is at https://counselingcenter.utah.edu/.