Mathematics 1310-001: Engineering Calculus I
Spring 2019 Syllabus

Instructor: Amanda Alexander
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Office hours: Tues 9am-10am, Wed 9:30am-11am, in LCB 318


Prerequisites: “C” or better in ((MATH 1050 AND MATH 1060) OR MATH 1080 OR (MATH 1060 AND (Accuplacer AAF 263+ OR Accuplacer CLM 80+))) OR AP Calc AB 3+ OR Accuplacer AAF 276+ OR Accuplacer CLM 90+ OR ACT Math 28+ OR SAT Math 650+ OR Department Consent.

Homework: Problems will be assigned every Friday and they are due the following Friday at the beginning of the class. Homework will only be accepted in class, no electronic copies. No late homework will be accepted. The lowest three homework assignments will be dropped.

Quizzes: A 10-minute quiz will be given on every Friday at the end of class, unless there is a midterm that week. The lowest two quizzes will be dropped, but no make-up quizzes will be given.

Midterms: Three 50-minute midterm exams will be given (dates TBD). Practice problems and a knowledge checklist will be posted roughly a week prior to each midterm. Midterms can be rescheduled if absolutely necessary if I am notified at least a week prior to the date of the midterm (or as soon as possible in extenuating circumstances).

Final Exam: A two-hour comprehensive final exam will be given. Students must take the final exam to pass the course.

Grading policy:

- Homework: 10%
- Quizzes: 10%
- Lab sheets: 20%
- Midterms: 30%
- Final: 30%

Grading scale: A (93-100), A- (90-92.9), B+ (87-89.9), B (83-86.9), B- (80-82.9), C+ (77-79.9), C (73-76.9), C- (70-72.9), D+ (67-69.9), D (63-66.9), D- (60-62.9), E (0-59.9)
Tentative weekly schedule and corresponding textbook sections:

*Week 1*
1.3-1.6: Function transformations and compositions, exponential functions, logarithms and inverse functions

*Week 2*
1.7-2.2: Parametric curves, tangents and velocity, limits

*Week 3*
2.3-2.5: Limit laws, continuity, limits at infinity

*Week 4*
2.6-2.7: Derivatives and rates of change, derivatives as a function

*Week 5*
2.8-3.2: Functions and their derivatives, product and quotient rules

*Week 6*
3.3-3.5: Trig functions, chain rule, implicit differentiation

*Week 7*
3.6-3.9: Inverse trig functions, log functions, linear approximation

*Week 8*
4.1-4.2: Related rates, max and min values

*Week 9*
4.3-4.6: Derivatives and shapes of curves, L’Hospital’s rule, optimization

*Week 10:*
4.7-5.1: Newton’s method, antiderivatives, areas and distances

*Week 11:*
5.2-5.4: The definite integral, fundamental theorem of calculus

*Week 12:*
5.5-5.6: Substitution rule, integration by parts

*Week 13:*
5.7-5.10: Other integration techniques, improper integrals

*Week 14:*
6.1-6.3: Areas between curves, volumes

*Week 15:*
Review

Math tutoring center and computer lab:
T. Benny Rushing Mathematics Student Center (adjacent to JWB and LCB), Room 155
Monday - Thursday 8:00 am - 8:00 pm
Friday 8:00 am - 6:00 pm
Closed Saturdays, Sundays and Holidays
**Academic dishonesty:** Academic dishonesty is strictly not tolerated and subject to an automatic E in this course; your enrollment in this course indicates that you understand and will follow my and University policies regarding academic dishonesty. As defined in the University Code of Student Rights and Responsibilities, academic misconduct includes, but is not limited to, cheating, misrepresenting one’s work, inappropriately collaborating, plagiarism, and fabrication or falsification of information. It also includes facilitating academic misconduct by intentionally helping or attempting to help another student to commit an act of academic misconduct.

**ADA statement:** 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 Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

**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, veteran’s 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).

**Student names and personal pronouns statement:** Class rosters are provided to the instructor with the student’s legal name as well as “Preferred first name” (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, etc. Please advise me of any name or pronoun changes (and update CIS), so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your UID card, please visit the LGBT Resource Center Room 409 in the Olpin Union Building to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm and 8am-6pm on Tuesdays.

**Wellness statement:** Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student’s ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.