Math 23a Syllabus WIN 21

Course Learning Objectives

- Master the differential calculus of several variables at a high level.
- Topics to be mastered are the nature of the derivative as a matrix, vectors, vector fields, applications to physics and the theory of extrema including Lagrange Multipliers.

General Information

| Time: | That's up to YOU | | | |
|----------------------------|--|--|--|--|
| Location: | Wherever you have Internet! | | | |
| Course Authors: | Tony Tromba, Frank Bäuerle | | | |
| Course Hosts: | UCSC, UC Online | | | |
| Course Designer: | Laura Rosenzweig, Alan Roper | | | |
| Instructors: | Frank Bäuerle, Longzhi Lin, Ed Migliore and Tony Tromba. Contact: calculus-group@ucsc.edu | | | |
| Teaching Assistants (TAs): | See the complete list at the bottom of the home page. | | | |

Office Hours (OH)

The instructors and TAs hold office hours online via ZOOM, our webinar software. A range of times are available. Check the Office Hours page in the Support Options module for details

Discussion Sections/T.A.'s

Your TA's (teaching assistants) will help facilitate the on-line discussion groups and also hold **on-line office hours**. There are **discussion sections** at various times on-line. Check the Support Options module for details.

Small Group Tutoring/MSI

There may be **MSI** (Modified Supplemental Instruction) and/or small group tutoring (SGT)at UCSC which can be thought of as class-specific drop-in tutoring. The MSI section leader is a trained fellow student who has already taken the course. If available, details will be announced on Canvas and the MSI page.

Study Groups

We are encouraging students from each UCSC college, as well as off-campus students, to volunteer to organize **study groups**.

E-Textbook (LaunchPad)

The textbook (a customized version of *Calculus, Early Transcendentals, 2nd ed*, by Jon Rogawski) and *Vector Calculus, 6th ed*, by Marsden/Tromba and reading assignments are located on a web-based platform called LaunchPad. For details on how to access LaunchPad, go to the **Quick Start Guide** in the **Technical Setup Module**.

Homework System (Achieve)

The homework assignments are located on a web-based platform called Achieve. For details on how to access Achieve, go to the **Quick Start Guide** in the **Technical Setup Module**.

Grading Policy

The grade in this class is comprised of

| Homework (Online in Achieve and Written in Canvas) | 20% |
|---|-----|
| On-line Quizzes (in Achieve) | 20% |
| Reading Assignments - Progress Check Questions (in LaunchPad) | 10% |
| Midterm | 20% |
| Final | 30% |

Some detailed explanation for the grading is in order:

- **Section Attendance:** This quarter section attendance does not contribute to your grade. We encourage attendance and the list of available sections can be found in the corresponding page in the support options module.
- Online Homework: All online homework assignments are available on Achieve. Due dates are posted in the weekly schedule. You have an unlimited number of attempts on all online homework questions and most questions provide feedback or hints if you answer incorrectly.

Words of advice re homework: Think of the homework as your opportunity to learn the material and expect to spend MANY hours doing homework. The system will provide solutions to many problems for you to check your answers and work, but do not use this to short cut your homework. The process of struggling to find a solution, while possibly aggravating and stressful, is a necessary part in your comprehension of the material for many of you. If you go to the solutions too soon and too often, you may not learn the material well enough to do well on the tests. Good scores on the homework are easy to get, but getting a solid understanding of the material is not easy.

- Written Homework: There will be three written assignments, due in weeks 4, 7 and 9. These can be found and submitted in the assignments section in Canvas.
- On-Line Quizzes: On-line quizzes take place in weeks 3, 5, 8, and 10 and are found in Achieve. Unlike regular on-line homework assignments, they are limited in time and do not give hints or feedback for incorrect answers. There will be partial credit (where appropriate) on on-line quizzes. Your TA and instructors will check your answers and may assign partial credit after the computer score has been calculated. That is, your final score on a quiz or other on-line test may be higher than what you see after you submit your test to Achieve. See the schedule below or click on Calendar at the top of the page to find due dates/times.
- Reading Assignments: No, we are not watching you when you read, so your reading score is determined by your performance on the progress check questions in the found in various sections in LaunchPad. You have three attempts on each question. You will encounter them regularly when you read the assigned sections in your E-book. All readings are due on the dates noted below in the weekly schedule. You can also find the due dates by clicking on Calendar at the top of the page.
- Discussion on Piazza and Study Group Participation: This is a tricky one. Research shows that student success in on-line learning increases with active participation in discussion groups. On the other hand, we understand that not everybody needs help nor may want to collaborate with others. Now if you don't need help, you can still help others, and the fact is that explaining math to others helps you understand the math more deeply, so it is to your benefit also. Active participation on Piazza is strongly encouraged and can contribute to a grade bump for the final grade.
- **Curve:** We do not curve individual tests, but there **may** be a curve for the class in the sense that grade ranges that lead to certain grades are adjusted based on overall results. In addition, a sufficiently high score on the comprehensive exam is required to pass the course. Similarly, an exceptionally high score on the final exam can lead to a grade bump.
- Extensions: There are NO EXTENSIONS beyond the following grace periods and late submission policy:
 - A) Reading assignments in LaunchPad, written homework in Canvas and Quizzes in Achieve: there is a 10 hour grace period and no penalty if you submit your assignment within 10 hours of the due date.
 - B) Homework assignments in Achieve: you can submit your assignment late up to five days, with a 10% penalty for each day the assignment is late.

Accommodations

Students with disabilities (in particular learning disabilities) should contact one of the instructors during office hours, on-line or virtual, as soon as possible. This is *absolutely necessary* to insure that there is sufficient time to accommodate your needs to give you an equal chance of success in the course.

If you have questions about disabilities contact the UCSC Disability Resource Center (DRC) at (831) 459-2089 or at http://drc.ucsc.edu

(Links to an external site.)

Academic Honesty

Any violation of the university's policy on academic integrity will result in a failing grade for the class and administrative sanctions imposed by the provost of your college. The details of the policy can be found at

https://www.ue.ucsc.edu/academic misconduct.

Midterm and Final Exams

Please go to our **Exam Information Page** in the Course Overview and Policies module for details on Midterm and Final dates, times, locations and requirements. Exams will be online on Achieve.

Important: There are **no make-up exams** given. If you miss the midterm, your score on the final will count for both the midterm and the final. **If you miss the final exam, you**

will fail the class. We CANNOT accommodate individual travel plans. You need to take the final when it is scheduled.

Students often fail to understand that the course ends with the final exam which by its very name is *final*. Grades cannot be adjusted afterwards for extra work or other reasons unrelated to the actual course.

Tentative Weekly Schedule

| Week | Dates | Sections to be covered/Tests | Assignments Due |
|------|----------------|-------------------------------|---|
| 1 | 1/4 - 1/10 | Sections 11.1, and 11.2 | Wk 1 Homework and Reading due Sun 1/10 @ 11:59pm |
| 2 | 1/11 - 1/17 | Sections 11.3 and 11.5 | Wk 2 Homework and Reading due Sun 1/17 @ 11:59pm |
| 3 | 1/18 - 1/24 | Sections 11.6,11.7 and Quiz 1 | Quiz 1 on Achieve, due Fri 1/22 @ 11:59pm Wk 3 Homework and Reading due Sun 1/24 @ 11:59pm |
| 4 | 1/25 - 1/31 | Sections 12.1,12.2,12.3 | Wk 4 Homework (including written homework #1) and Reading due Sun 1/31 @ 11:59pm |
| 5 | 2/1 - 2/7 | Sections 13.1,13.2 and Quiz 2 | Quiz 2 on Achieve, due Fri 2/5 @ 11:59pm Wk 5 Homework and Reading due Sun 2/7 @ 11:59pm |

| 6 | 2/8 - 2/14 | Sections 13.3 and Midterm | Midterm: Saturday, 2/13, due @ 11:59pm Wk 6 Homework and Reading due Sun 2/14 @ 11:59pm |
|----|----------------|---|--|
| 7 | 2/15 - 2/21 | Sections 13.4, 13.5 | Wk 7 Homework (including written homework #2) and Reading due Sun 2/21 @ 11:59pm |
| 8 | 2/22 - 2/28 | Sections 14.1, 14.2 and Quiz 3 | Quiz 3 on Achieve, due Fri 2/26 @ 11:59pm Wk 8 Homework and Reading due Sun 2/28 @ 11:59pm |
| 9 | 3/1 - 3/7 | Sections 14.3 and 14.4 | Wk 9 Homework (including written homework #3) and Reading due Sun 3/7 @ 11:59pm |
| 10 | 3/8 - 3/12 | Sections 14.5, 14.6, 14.7 and Quiz 4 | Quiz 4 on Achieve, due Fri 3/12 @ 11:59pm Wk 10 Homework and Reading due Sun 3/14 @ 11:59pm |
| 11 | Finals Week | Final Exam | Final Exam: Wednesday, 3/17, due @ 11:59pm |