

# Math 19B Syllabus Winter 2020

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## Course Learning Objectives

1. To understand the concept of the area under a graph.
  2. To understand how areas can be calculated using the concept of the antiderivative of a function.
  3. To understand the definite and indefinite integral concept.
  4. To learn how to find the anti derivatives of elementary algebraic and trigonometric functions.
  5. To understand how to apply the integral to finding volumes using Cavalieri's Principle.
  6. To understand how to find volumes using the method of cylindrical shells.
  7. To understand the application of the integral concept to the concepts of work and energy in physics.
  8. To apply the integral to determine lengths of arcs and surface area.
  9. To understand Taylor polynomials and the Taylor remainder formula.
  10. To understand infinite series, power series and Taylor series.
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## General Information

<b>Time:</b>	That's up to YOU
<b>Location:</b>	Wherever you have Internet!

<b>Course Authors:</b>	Tony Tromba, Frank Bäuerle
<b>Course Hosts:</b>	UCSC, UC Online
<b>Course Designers:</b>	Laura Rosenzweig, Alan Roper, Katrina Fullman
<b>Instructors:</b>	Frank Bäuerle and Tony Tromba
<b>Teaching Assistants (TAs):</b>	See the complete list at the bottom of the home page.
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## Office Hours (OH)

The instructor and TAs hold weekly office hours both in-person and 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 TAs (teaching assistants) will help facilitate the on-line discussion groups and also hold **on-line office hours**. There are face-face **discussion sections** at various times as well as on-line (the on-line sections are primarily for the remote students). Check the Support Options module for details.

## Small Group Tutoring

There will be small group tutoring (<https://cole2.uonline.edu/courses/1266106/pages/msi-modified-supplemental-instruction-in-santa-cruz>) at UCSC. The tutor is a trained fellow student who has already taken the course. The details will be announced on Canvas and the [tutoring options](https://cole2.uonline.edu/courses/1266106/modules/items/47105823) (<https://cole2.uonline.edu/courses/1266106/modules/items/47105823>) page.

## Study Groups

We are encouraging students from each UCSC college, as well as off-campus students, to volunteer to organize [study groups](https://cole2.uonline.edu/courses/1266106/pages/college-based-study-groups) (<https://cole2.uonline.edu/courses/1266106/pages/college-based-study-groups>).

## e-Textbook and Homework System (LaunchPad)

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

## Grading Policy

The grade in this class is comprised of the better of the following two options:

Option 1: Without Section Attendance (let's you decide for yourself whether you want to attend section)

<b>Homework (Online in LaunchPad and Written in Canvas)</b>	<b>15%</b>
<b>On-line Quizzes (in LaunchPad)</b>	<b>10%</b>

<b>Reading Assignments - Progress Check Questions (in LaunchPad)</b>	<b>5%</b>
<b>Proctored Midterm (in person or online)</b>	<b>30%</b>
<b>Comprehensive Final (in person or online)</b>	<b>40%</b>

Option 2: With Section Attendance (gives you a small incentive/reward for attending section)

<b>Section Attendance</b>	<b>2.5%</b>
<b>Homework (Online in LaunchPad and Written in Canvas)</b>	<b>14.62%</b>
<b>On-line Quizzes (in LaunchPad)</b>	<b>9.75%</b>
<b>Reading Assignments - Progress Check Questions (in LaunchPad)</b>	<b>4.88%</b>
<b>Proctored Midterm (in person or online)</b>	<b>29.25%</b>
<b>Comprehensive Final (in person or online)</b>	<b>39%</b>

The second option is obtained from the first by allotting 2.5% of the grade to section attendance and scaling everything else to 97.5% of what it was before.

Some detailed explanation for the grading is in order:

- **Section Attendance:** TA's will take attendance at all sections, including online sections. You can earn one point toward section attendance for each week that you attend a section, for a maximum of 5 points for the quarter. In other words, attending at least one section during five different weeks of the quarter will give you the full section attendance. To make it clear, section attendance is not necessary, but can contribute to your grade.
- **Online Homework:** All online homework assignments are available on Launchpad which is accessed directly from each lesson, or you can click on MacMillan Higher Education link in the left NavBar. Due dates are posted in the weekly schedule and are listed in the Syllabus link or in the Calendar link at the top of the page. **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, 6, 8, and 10 and are found in LaunchPad. 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 Launchpad. 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 final exam is required to pass the course.** Conversely, an exceptionally high score on the final exam can lead to a grade bump.
- **Extensions:** There are **NO EXTENSIONS** without justification. Contact our designated TA (To be determined) to ask for an extension and submit supporting documentation such as a doctor's note. Length of extension can vary based on the circumstances.

## 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>  (<http://drc.ucsc.edu>)

## 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 offered on-campus and online (a fee applies for the proctoring service.)

**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/ <b>Tests</b>	Assignments Due
1	1/6-1/12	Sections 5.1, and 5.2	<ul style="list-style-type: none"> <li>Wk 1 Homework and Reading due <b>Tue 1/14@</b> 11:59pm</li> </ul>
2	1/13-1/19	Sections 5.3, 5.4, and 5.6	<ul style="list-style-type: none"> <li>Wk 2 Homework and Reading due <b>Tue 1/21 @</b> 11:59pm</li> </ul>
3	1/20-1/26	Sections 6.1, 6.2, 6.3 and <b>Quiz 1</b>	<ul style="list-style-type: none"> <li><b>Quiz 1</b> on LaunchPad, due <b>Fri 1/24 @</b> 11:59pm</li> <li>Wk 3 Homework and Reading due <b>Tue 1/28 @</b> 11:59pm</li> </ul>
4	1/27-2/2	Sections 6.4, 6.5, and 7.1	<ul style="list-style-type: none"> <li>Wk 4 Homework (including written homework #1) and Reading due <b>Tue 2/4 @</b> 11:59pm</li> </ul>
5	2/3-2/9	Sections 7.2, 7.3 and <b>Midterm</b>	<ul style="list-style-type: none"> <li><b>Midterm (in person):</b> <b>Fri 2/7, Time: 5:20 - 6:50pm</b>, for location information see the <a href="https://cole2.uconline.edu/courses/1266106/modules/items/47105817">Exam Information (https://cole2.uconline.edu/courses/1266106/modules/items/47105817)</a> Page.</li> </ul>

			<ul style="list-style-type: none"> <li>• <b>Midterm (online): Fri 2/7, Time: 5:20 - 6:50pm</b>, by appointment with Proctor U</li> <li>• Wk 5 Homework and Reading due <b>Tue 2/11 @ 11:59pm</b></li> </ul>
6	2/10-2/16	Sections 7.5, 7.6 and <b>Quiz 2</b>	<ul style="list-style-type: none"> <li>• <b>Quiz 2</b> on LaunchPad, due <b>Fri 2/14 @ 11:59pm</b></li> <li>• Wk 6 Homework and Reading due <b>Tue 2/18 @ 11:59pm</b></li> </ul>
7	2/17-2/23	Sections 8.1 and 8.4	<ul style="list-style-type: none"> <li>• Wk 7 Homework (including written homework #2) and Reading due <b>Tue 2/25 @ 11:59pm</b></li> </ul>
8	2/24-3/1	Sections 10.1, 10.2, 10.3 and <b>Quiz 3</b>	<ul style="list-style-type: none"> <li>• <b>Quiz 3</b> on LaunchPad, due <b>Fri 2/28 @ 11:59pm</b></li> <li>• Wk 8 Homework and Reading due <b>Tue 3/3 @ 11:59pm</b></li> </ul>
9	3/2-3/8	Sections 10.4 and 10.5	<ul style="list-style-type: none"> <li>• Wk 9 Homework (including written homework #3) and Reading due <b>Tue 3/10 @ 11:59pm</b></li> </ul>
10	3/9-3/13	Sections 10.6, 10.7 and <b>Quiz 4</b>	<ul style="list-style-type: none"> <li>• <b>Quiz 4</b> on LaunchPad, due <b>Fri 3/13 @ 11:59pm</b></li> <li>• Wk 10 Homework and Reading due <b>Tue 3/17 @ 11:59pm</b></li> </ul>
11	Final's Week	<b>Final Exam</b>	<ul style="list-style-type: none"> <li>• <b>Final Exam (in person): March 20, 12:00 - 3:00pm</b>, for location information see the <a href="https://cole2.uconline.edu/courses/1266106/modules/items/47105817">Exam Information (https://cole2.uconline.edu/courses/1266106/modules/items/47105817)</a> Page.</li> <li>• <b>Final Exam (online): March 20, 12:00 - 3:00pm</b>, by appointment with Proctor U</li> </ul>

