# Math 1131 - Calculus I - Summer 2023

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**Instructor:** Vince Longo **Email:** vincent.2.longo@uconn.edu
**Office:** MONT 306 (but usually online via link below)
**Class Time (Optional):** 11:00am-1:00pm M-F
**Office Hours:** 1:30-2:30 M-F (and by appointment)
**Text:** *A First Course in Differential Equations with Modeling Applications*, 11th ed., Dennis G. Zill

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**Lecture:** Each class day (except for exam days), I will hold a live lecture from 11am-1pm on Webex. These lectures will be recorded and posted for anyone who chooses not to attend the live lectures (or wants to review anything).

**Webex Link:** https://uconn-cmr.webex.com/uconn-cmr/j.php?MTID=ma766e53e4be5c99cb2e1e74c57f388fa
**Password:** calculus
**Meeting Number:** 2623 781 4845

**Office Hours:** I will hold office hours daily from 1:30-2:30pm and by appointment. Additionally, the TA's will have office hours throughout the week as well. Please refer to HuskyCT for a schedule of the TA's office hours.

**Problem Sessions:** Every class day from 2:30-4:00pm, an optional problem session will be held where students can come to meet and work on problems together. Think of this as a dedicated time for you to spend working on problems with classmates. These problem sessions will usually be run by a TA.

**Link for Problem Sessions and Office Hours:** We will use the same Webex link for all problem sessions, instructor office hours, and TA office hours. (Note: this link is different from the Lecture Webex link).

**Webex Link:** https://uconn-cmr.webex.com/uconn-cmr/j.php?MTID=mf4aa281e78c696c319c71cc5b94f8798
**Password:** calculus
**Meeting Number:** 2623 445 7283

**Textbook:** The textbook for the course is Calculus Early Transcendentals, Single Variable by James Stewart (8th Edition), which is bundled with a WebAssign code for doing online homework.

This course is part of the campus' course material delivery program. **If you do not opt out of the Husky Book Bundle, the digital required materials for this course have been integrated with Blackboard and can be found in the Course Materials link in your Blackboard course. Please sign into Blackboard to access your course and course materials.**

If you opt out of the Husky Book Bundle, **you only need to buy ONE** of the three textbook/WebAssign bundles listed at the bookstore, OR a 1-term Cengage Unlimited Subscription; your choice will depend on what math classes you plan to take in the future. Below is a PDF detailing your different options for buying the textbook and WebAssign online homework access:

**Link:** Math 1131 Textbook Purchasing Instructions for students who opt out of Husky Book Bundle

NOTE: the least expensive way to get WebAssign access for all courses (MATH 1131Q, 1132Q. 2110Q, and 2410Q) in the Calculus sequence is to purchase a $125, 1-term Cengage Unlimited subscription online, directly from WebAssign, at the start of the term. This will give you access to all four courses and corresponding eBooks whenever you take them, even after the 1-term subscription expires. The only downside to this is that you do not get any physical textbook(s) included with it, or any textbook to keep for reference when you are not actively enrolled in one of the above courses.

**Calculators:** The use of calculators is NOT allowed on exams.

**Course Description:** This course is an introduction to differential and integral calculus, which is the mathematical language used in any science concerned with dynamically changing quantities. The main topics it covers are limits,

derivatives, integrals, the Fundamental Theorem of Calculus, and some basic applications of these ideas.

**Prerequisites:** A qualifying score of 22 on the mathematics placement exam (MPE). Students who fail to achieve this minimum score are required to spend time on the preparatory and learning modules before re-taking the MPE, or to register for a lower level Mathematics course. Not open for credit to students who have passed MATH 1132Q or 1152Q.

**Campuswire:** I highly recommend asking all your (non-private) questions about the class on Campuswire. Campuswire is a free online space for communicating with each other in the class. It has public and private chatrooms, making it easy for students to talk to each other and ask me questions. The main benefits of Campuswire for us are 1. students can ask content related questions, which can then be answered by anyone (usually me or a TA, but other students are welcome to answer questions as well!), and then *everyone* can view the question and answer, and 2. it makes it much easier for students to talk to each other and build a small community (especially for an online class).
You can sign up for our CampusWire class by visiting https://campuswire.com/p/G902279C6 and/or using the code 4105.

**WebAssign:** Online homework will be submitted via WebAssign, which is accessible via HuskyCT. Assignments will be due in four batches, split up by exam material. Please use these assignments as a way to measure your understanding of the presented material, as well as a way to learn. While they are due in batches, I would strongly advise you to tackle them as soon as you can, as it can be *very* easy to fall behind quickly in a class as fast paced as ours.

**Worksheets:** In addition to online homework, students will complete worksheets on the relevant material. Worksheets will be due at the same time as the WebAssign homework. Worksheets will be submitted by uploading a pdf of their work to HuskyCT. A random set of problems from each worksheet will be graded on correctness, and the rest will be graded on a "good faith effort." A "good faith effort" means that so long as a student puts a good amount of effort into completing the problem, the student will earn full credit for that problem. Solutions to worksheets will be made available the morning after they are due.

**Exams:** There will be four exams. The exams will be held on Monday July 17, Wednesday July 26, Thursday August 3, and Friday August 11. Please note that there will *not* be a cumulative final. Exams will be held online using Lockdown Browser and Respondus (LB&R). Students are *strongly encouraged* to complete the LB&R practice exam on HuskyCT before taking the first exam. Students will be given a 22 hour window to start the exam, and will be given 1.5 hours to complete each exam.

**Exams Redos:** For each exam, students will have an opportunity to retake the exam to earn a better score. If a student chooses to retake the exam, they will earn the average of their two scores. If a student scores *lower* on their second try, the student can keep the score from their first attempt (meaning that attempting an exam redo cannot hurt any student's score).

**Point Distribution:**

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|---|---|
| WebAssign | 16 percent |
| Worksheets | 12 percent |
| Exams 1-4 | 72 percent (18 percent each) |

The grading scale is as follows.

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|---|---|---|---|---|---|---|---|
| **A** | [93, 100] | **B** | [83, 87) | **C** | [73, 77) | **D** | [63, 67) |
| **A-** | [90, 93) | **B-** | [80, 83) | **C-** | [70, 73) | **D-** | [60, 63) |
| **B+** | [87, 90) | **C+** | [77, 80) | **D+** | [67, 70) | **F** | [0,60) |

**Course Schedule:**

| Day | Sections |
|---|---|
| Monday July 10 | 2.1 - The Tangent and Velocity Problems |
| | 2.2 - The Limit of a Function |
| Tuesday July 11 | 2.3 - Calculating Limits Using the Limit Laws |
| | 2.4 - The Precise Definition of a Limit |
| Wednesday July 12 | 2.5 - Continuity |
| | 2.6 - Limits at Infinity; Horizontal Asymptotes |
| Thursday July 13 | 2.7 - Derivatives and Rates of Change |
| | 2.8 - The Derivative as a Function |
| Friday July 14 | Catch up and review |
| | Homework Batch 1 due at midnight |
| Monday July 17 | Exam 1 (Covers Chapter 2) |
| Tuesday July 18 | 3.1 - Derivatives of Polynomials and Exponential Functions |
| | 3.2 - The Product and Quotient Rules |
| Wednesday July 19 | 3.3 - Derivatives of Trigonometric Functions |
| | 3.4 - The Chain Rule |
| Thursday July 20 | 3.5 - Implicit Differentiation |
| | 3.6 - Derivatives of Logarithmic Functions |
| Friday July 21 | 3.8 - Exponential Growth and Decay |
| | 3.9 - Related Rates |
| Monday July 24 | 3.10 - Linear Approximations and Differentials |
| Tuesday July 25 | Catch up and review |
| | Homework Batch 2 due at midnight |
| Wednesday July 26 | Exam 2 (Covers Chapter 3) |
| Thursday July 27 | 4.1 - Maximum and Minimum Values |
| | 4.2 - Mean Value Theorem |
| Friday July 28 | 4.3 - How Derivatives Affect the Shape of a Graph |
| | 4.4 - Indeterminate Forms and l'Hospital's Rule |
| Monday July 31 | 4.7 - Optimization Problems |
| | 4.8 - Newton's Method |
| Tuesday August 1 | 4.9 - Antiderivatives |
| Wednesday August 2 | Catch up and Review |
| | Homework Batch 3 due at midnight |
| Thursday August 3 | Exam 3 (Covers Chapter 4) |
| Friday August 4 | 5.1 - Areas and Distances |
| | 5.2 - The Definite Integral |
| Monday August 7 | 5.3 - The Fundamental Theorem of Calculus |
| | 5.4 - Indefinite Integrals and the Net Change Theorem |
| Tuesday August 8 | 5.5 - The Substitution Rule |
| | 6.1 - Areas Between Curves |
| Wednesday August 9 | 6.2 - Volumes |
| Thursday August 10 | Catch up and Review |
| | Homework Batch 4 due at midnight |
| Friday August 11 | Exam 4 (Covers Chapters 5 and 6) |