# Math 1132Q – Calculus II (Spring 2022)

*Instructors (Storrs): Keith Conrad, Maksym Derevyagin, and David McArdle*

**Description:** Transcendental functions, formal integration, polar coordinates, infinite sequences and series, parametric equations, with applications to the physical sciences and engineering.

**Prerequisites:** MATH 1131 or advanced placement credit for calculus (a score of 4 or 5 on the Calculus AB exam or a score of 3 on the Calculus BC exam). Recommended preparation: A grade of C- or better in MATH 1131.

**Textbook Information:** You can choose from (3) options at the UConn bookstore (based on how many math courses you intend to take at UConn) and (1) option online through Cengage directly.

1. **Option 1** (Choose if you are only taking 1132). *Single Variable Calculus: Early Transcendentals*, 8th Edition, by James Stewart with WebAssign Access Code.
2. **Option 2** (Choose if you will also take 2110). *Calculus: Early Transcendentals* (this includes Multivariable Calculus), 8th Edition, by James Stewart with WebAssign Access Code
3. **Option 3** (Choose if you will also take 2110 and 2410) *Calculus: Early Transcendentals+ Diff Eq*, 8th Edition, by James Stewart with WebAssign Access Code
4. **Option 4:** You can also opt for a *Cengage Unlimited* subscription, which provides access to the eBook and WebAssign HW. (Choose if you don't mind ebooks and/or if you have other courses requiring Cengage material)

**Calculators & Resources:** No calculators, websites, books/notes are allowed on course exams. Use of prohibited materials will result in a zero on the assessment.

**IMPORTANT!**
If you already purchased a textbook and HW access for MATH 1131Q at UConn you do not need to repurchase anything for MATH 1132Q and your HW access will still be valid.

## Grading:

| Assignment Type | Due Date | Percentage |
|---|---|---|
| **Discussion Activities** | Monday (in discussion) | 10% |
| **Quizzes** | Wednesday (in discussion) | 15% |
| **WebAssign HW** | Due Tuesday at 11:59PM (online) | 10% |

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| **Exam 1:** | Wednesday 2/9 (in discussion) | 15% |
| **Exam 2:** | Wednesday 3/9 (in discussion) | 15% |
| **Exam 3:** | Wednesday 4/13 (in discussion) | 15% |
| **Final Exam:** | Date/ Time TBA | 20% |

**Exam Replacement Policy:** Your score on the final exam will replace your lowest exam score if you score higher on the final exam. Note that your final exam grade is always counted when computing your course grade and cannot be replaced.

**Participation:** You are required to be an active participant in the course *every week.* In particular, you must be present and active in your discussion section on Monday for your discussion activity and on Wednesday for quizzes.

**NOTE:** The honors section (038D) will have slightly different grading schemes which are detailed in the respective syllabus.

# WebAssign HW:

**Description:** There will be online homework assignments for each section of the text. *You will get five attempts for each question that is not multiple choice and fewer than five attempts for each multiple choice question; the exact number of attempts will depend on the number of choices.* After each attempt, you will be told whether your answer is correct or not. If you are not able to get the correct answer after your initial attempts, we recommend that you seek help from your instructor, the Q-Center, a tutor, or another student.

**Homework Access:** To access the homework you will have to go through Husky CT. On your course HuskyCT page you will find a link to access WebAssign. There is no class key for us: that is for accessing WebAssign through the company website, which we don't do.

**Due Dates/ Extensions:** Homework is due on Tuesday evening at 11:59PM for all sections covered the previous week during lecture. If you miss the due date on WebAssign homework then you are allowed to request a 48-hour extension **within the first 48 hours after the due date** (automatically applied on WebAssign) for 50% credit.

**Technology Warning**: When accessing your online homework, *use Firefox or Chrome as your browser*; there are problems that can occur if you use Internet Explorer or Safari. Here.pdf is a document with tips on using WebAssign.

# Exams

**Exam Description:** There will be three unit exams and a Final Exam in this course. The Final Exam for the course will be cumulative. The dates and times for all exams are shown below.

- **Exam 1:** Week 4 (Wednesday 2/9)
- **Exam 2:** Week 8 (Wednesday 3/9)
- **Exam 3:** Week 12 (Wednesday 4/13)
- **Final Exam:** TBA

**Exam Format:** Unit exams are administered in-person during your discussion section. Exams are mixed format with multiple choice, true/false, and short-answer questions. Partial credit is awarded on short-answer style questions.

**Note:** No external resources are permitted during exams. A formula sheet will be provided with select formulas. You are prohibited from using additional resources such as a calculator, notes, textbook, etc.

# Quizzes:

On Wednesday during your in-person discussion, there will be a quiz focusing on the material covered the previous week in lecture. Quizzes are mixed format with multiple choice, true/false, and short-answer questions. Partial credit is awarded on short-answer style questions.

# Discussion Activities:

Every Monday during your set discussion time, you will complete a discussion activity with your classmates. The activities will be facilitated by your TA and you will have an opportunity to engage with your classmates to complete the assignment. The assignment is conducted in-person during discussion and must be submitted at the conclusion of discussion. Assignments are graded on a combination of completeness and correctness.

# Content Delivery & Resources:

**Lecture:** Lectures for MATH 1132Q are held on Tuesdays and Thursdays at the set time that appears on your schedule. Section 010 and 030 are DL format and section 050 is in-person. Refer to your lecture HuskyCT for more information on lectures.

**Discussion Sections:** As part of MATH 1132Q, you have been placed in a discussion section with an experienced graduate TA. Discussion sections will meet twice per week on Mondays and Wednesdays in-person at a set time that will appear on your schedule. While attending class in person, please make sure the mask you wear covers your nose, mouth, and chin. Below are details about what to expect on Monday and Wednesday

- **Monday Discussion:** On Monday, your TA will hold an in-person session and you will work on an activity focused on the material learned in lecture the previous week (if example, in week 1 Ch 7.1 and 7.2 are covered in lecture so the activity on Monday in

week 2 will focus on those two sections). These activities will be collected at the end of the session and graded. Your attendance is *expected*.
- **Wednesday Discussion:** On Wednesday, your TA will begin discussion with a Q&A session and then will administer your weekly quiz. The quiz will focus on the material learned in lecture the previous week.

**Additional Resources:** There are many resources available throughout this course to help you understand the calculus concepts.

- Instructor and TA Office Hours: Your instructor and TA will offer weekly office hours.
- Q-Center Tutoring: There are many skilled tutors ready and willing to help you at UConn's Q-center (provided virtually and in-person). Follow this link for more information: https://qcenter.uconn.edu/

# Additional Information:

**Make-up Policy:** If you have to miss a graded assignment (exam, activity, or quiz) at its designated time, you must notify the TA (and the lecturer in the case of exams) *in advance*. Arrangements for a make-up will be considered on a case by case basis and will be administered for approved reasons only at the discretion of the instructor. All make-ups must be taken within that week.

**Academic Integrity:** It is in your best interest to maintain your academic integrity. Any form of academic dishonesty undermines the goals of our course and devalues the learning process. Academic dishonesty is a serious offense at UConn and can result in a zero grade on an assessment and/or failure in the course.

**Accommodations for Students with Disabilities:** The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

**Change to Syllabus:** The information contained in the course syllabus, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.

**Online Learning:** UConn has several resources available to help you navigate online learning. You can check out the following links: https://achieve.uconn.edu/online-course/ https://onlinestudent.uconn.edu/keeplearning/

| Week | Date | Section | Topic |
|---|---|---|---|
| 1 | 1/17 | 7.1 | Integration by Parts |
| | | 7.2 | Trig Integrals |

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| 2 | 1/24 | 7.3 | Trigonometric Substitution |
| | | 7.4 | Integration by Partial Fractions |
| 3 | 1/31 | 7.7 | Numerical Integration |
| | | 7.8 | Improper Integrals |
| 4 | 2/7 | **EXAM 1** | *In discussion Wednesday 2/9 |
| | | 6.4 | Work |
| 5 | 2/14 | 11.1 | Sequences |
| | | 11.2 | Series |
| 6 | 2/21 | 11.3 | The Integral Test and Estimates of Sums |
| | | 11.4 | The Comparison Tests |
| 7 | 2/28 | 11.5 | Alternating Series |
| | | 11.6 | Absolute Convergence and Ratio Test |
| 8 | 3/7 | **EXAM 2** | *In discussion Wednesday 3/9 |
| | | Fourier Series | |
| — | 3/14 | OFF | Spring Break |
| | | OFF | Spring Break |
| 9 | 3/21 | 11.8 | Power Series |
| | | 11.9 | Representations of Functions as Power Series |
| 10 | 3/28 | 11.10 | Taylor and Maclaurin Series |
| | | 11.11 | Applications of Taylor Polynomials |
| 11 | 4/4 | 9.1 | Modeling with Differential Equations |
| | | 9.3 | Separable Equations |
| 12 | 4/11 | **EXAM 3** | *In discussion Wednesday 4/13 |
| | | 8.1 | Arc Length |
| 13 | 4/18 | 10.1 | Curves Defined by Parametric Equations |
| | | 10.2 | Calculus with Parametric Curves |
| 14 | 4/25 | 10.3 | Polar Coordinates |
| | | 10.4 | Calculus with Polar Coordinates |
| 15 | | | |

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| | | | Final Exam (TBA) |