

Syllabus (WC)

MATH 110 Fall 2023

COURSE DESCRIPTION

TECHNIQUES OF CALCULUS I (4) Functions, graphs, derivatives, integrals, techniques of differentiation and integration, exponentials, improper integrals, applications. Students may take only one course for credit from MATH 110, 140, 140A, and 140B. Prerequisite: MATH 022 or satisfactory performance on the mathematics proficiency examination.

COURSE COVERAGE

The goal for the course is to cover the chapters/sections detailed in the [Schedule of Topics](https://psu.instructure.com/courses/2270865/pages/schedule-of-topics) (<https://psu.instructure.com/courses/2270865/pages/schedule-of-topics>) page. The material in [Precalculus Review Course Packet](https://psu.instructure.com/courses/2270865/files/150887484?wrap=1) (<https://psu.instructure.com/courses/2270865/files/150887484?wrap=1>) is considered review material. Each student should confirm that they understand the material contained in the Precalculus Review during the first week of the course.

COURSE MATERIALS

1. REQUIRED - Abbreviated Lecture Notes & Course Packets

These resources are available as a FREE download from our Canvas course site and serve as our main textbook for the semester. The [Abbreviated Lecture Notes](https://psu.instructure.com/courses/2270865/pages/abbreviated-lecture-notes-and-video-lectures) (<https://psu.instructure.com/courses/2270865/pages/abbreviated-lecture-notes-and-video-lectures>) can be completed by watching the corresponding Video Lectures. The [Course Packets](https://psu.instructure.com/courses/2270865/pages/penn-state-learning-course-packets) (<https://psu.instructure.com/courses/2270865/pages/penn-state-learning-course-packets>) serve as a resource packed full of review material (definitions, formulas, etc.), completed examples, and additional exercises to work through by yourself, with a classmate, instructor, or tutor at Penn State Learning.

2. REQUIRED - WebAssign

Access to WebAssign is required to complete all graded components of the course, which includes weekly homework assignments and exams.

WebAssign includes a Free Trial period at the beginning of the semester, starting one week before the first day of classes and continuing until the end of the second week of classes. We recommend completing your purchase prior to the free trial ending. If you do not

purchase or register a WebAssign access code during the free trial period, you will be prompted to do so once the trial period ends. Access to WebAssign for the entire semester can be purchased directly from WebAssign/Cengage when you log into our WebAssign course.

See [WebAssign Information & Policies](#)

(<https://psu.instructure.com/courses/2270865/pages/webassign-information-and-policies>) for login information and [WebAssign Purchasing Options](#)

(<https://psu.instructure.com/courses/2270865/pages/webassign-purchasing-options>) for instructions on how to purchase access to WebAssign for the entire semester.

3. **RECOMMENDED - Webcam for use with Honorlock proctoring service**

All exams will be proctored using the Honorlock online proctoring service, which requires the Google Chrome web browser with Honorlock Chrome extension and a functioning webcam and microphone. For a list of minimum system requirements, see [Honorlock Student Support](#)

(<https://honorlock.com/students/>). For more information, see [Honorlock FAQ](#)

(<https://honorlock.com/faculty-student-faq/>). If you are unable to use Honorlock, you will need to make arrangements to have an in-person proctor for the exams. Many local libraries provide in-person proctoring services. Contact your instructor at least two weeks before the first exam if you need to make arrangements for an in-person proctor.

4. **OPTIONAL - Tan's Applied Calculus for the Managerial, Life, and Social Sciences, 9th Edition**

Course material will closely follow the contents of Tan's Applied Calculus for the Managerial, Life, and Social Sciences, 9th Edition. If you would like to use this additional resource, we recommend the eTextbook version of Tan's Applied Calculus. Cengage Unlimited includes access to this eTextbook at no additional charge. For students that do not purchase Cengage Unlimited, access to the eTextbook can be purchased directly from Cengage using the link below.

- [eTextbook: Tan - Applied Calculus for the Managerial, Life, and Social Sciences 9th Edition](#) (<https://www.cengage.com/c/applied-calculus-for-the-managerial-life-and-social-sciences-9e-tan/9781133607717PF/?searchISBN=9781285600437>) | ISBN 9781285600437 | List Price: \$42.99

WEBASSIGN HOMEWORK

Over the course of the semester, you will be asked to complete over 400 homework problems in WebAssign, each worth 1 point. In order to receive full credit for WebAssign, you must earn at least 380 points. Specifically, at the end of the semester, your WebAssign grade will be determined by computing the percentage of WebAssign points earned out of a maximum of 380 points. For

example, if you earn 342 points in WebAssign, then your WebAssign score would be 342/380, which equals 90%. Your WebAssign score for the semester cannot exceed 100%. If you earn 380 or more homework points in WebAssign by the end of the semester, then your WebAssign score will be 100%. There is no extra credit associated with earning more than 380 points.

EXAMS

Three examinations (midterms) and one final exam will be given. The dates of these exams will be as follows:

Exam Dates

| Exam | Dates |
|-------|--|
| 1 | Monday, September 18 to Sunday, September 24 |
| 2 | Monday, October 16 to Sunday, October 22 |
| 3 | Monday, November 13 to Sunday, November 19 |
| Final | Saturday, December 9 to Wednesday, December 13 |


Final Exam



The final examination in the course will be comprehensive. Travel plans do not constitute an official university excuse for missing an examination or for obtaining a conflict or makeup examination. Conflicts for the final exam are determined by scheduling - any student with a potential final exam conflict situation should apply online before the final exam conflict application period expires. The math department does not offer a makeup exam option for the final exam.


Makeup Exam




If you miss an exam without an official excuse (such as illness or official university business), then you may be allowed to take a makeup exam, but with an automatic 25% deduction from the grade. To avoid this deduction, you must notify your lecturer, with your official excuse, before the date and time of the exam.

HONORLOCK

This course may require you to take exams using certain proctoring software that uses your computer's webcam or other technology to monitor and/or record your activity during exams. The proctoring software may be listening to you, monitoring your computer screen, viewing you and your surroundings, recording and storing any and all activity (including visual and audio recordings) during the proctoring process. By enrolling in this course, you have consented to the use of the proctoring software selected by your instructor, including but not limited to any audio and/or visual monitoring which may be recorded. You will need to use one of the compatible operating systems which are listed in [Honorlock's Minimum Requirements table](https://honorlock.com/support/) .

Additionally, you will need to use Chrome and download the [Honorlock Chrome Extension](https://app.honorlock.com/install/extension/)  [\(https://app.honorlock.com/install/extension/\)](https://app.honorlock.com/install/extension/). You may also review [Penn State's statement on privacy in online proctoring](https://honorlock.psu.edu/privacy/)  [\(https://honorlock.psu.edu/privacy/\)](https://honorlock.psu.edu/privacy/). Please contact your instructor with any questions.

Honorlock support is available 24/7/365. If you encounter any technical issues, you may contact them through live chat on the [support page](https://honorlock.com/support/)  [\(https://honorlock.com/support/\)](https://honorlock.com/support/) or within the exam itself.

Some additional guides you should review are the [Student FAQ](https://honorlock.kb.help/honorlock-student-faq/)  [\(https://honorlock.kb.help/honorlock-student-faq/\)](https://honorlock.kb.help/honorlock-student-faq/), [Honorlock Knowledge Base](https://honorlock.kb.help/)  [\(https://honorlock.kb.help/\)](https://honorlock.kb.help/), and [How to Use Honorlock](https://honorlock.kb.help/how-to-use-honorlock-student/)  [\(https://honorlock.kb.help/how-to-use-honorlock-student/\)](https://honorlock.kb.help/how-to-use-honorlock-student/).

EXAM RESOURCE MATERIAL

Numerous resources will be available to help prepare for each exam. Primary resources should include your completed lecture notes, course packets, WebAssign homework, GSG session materials, Canvas Discussions, and the WebAssign Chapter Review Problems (see below). Secondary resources include the practice exams in WebAssign and Canvas (see below). Only completing the practice exams will not adequately prepare you for your exam.

WebAssign Chapter Review Problems

Each exam will come with a collection of chapter review problems in WebAssign. These problems will become available approximately two weeks before the exam. Each review problem will be a multiple-choice question, which matches the format of questions on the exams. Since most homework problems are fill-in-the-blank, we strongly encourage everyone to work through these multiple-choice problems to get used to simplifying your answers in preparation for the exam.

Furthermore, each exam is compiled of questions randomly selected from the Chapter Review Problems. While the Chapter Review Problems are not completed for credit, historical data confirms that students who successfully complete the chapter review problems perform

significantly better on each exam than students who do not.

Practice Exams in WebAssign for Extra Credit

Approximately one week before each exam, two practice exams will become available in WebAssign. After completing the Chapter Review Problems, we encourage everyone to take these practice exams. Each practice exam consists of 15 multiple-choice problems (20 multiple-choice problems for the final exam) taken from the Chapter Review Problems. You'll have 90 minutes (120 minutes for the final exam) to complete each exam and all answers should be submitted at once. Students who registered with SDR and coordinated with their instructor will have time adjustments made automatically to their testing environment. Do not click the "Submit Assignment" button in WebAssign until you're ready to submit the entire exam. It's your responsibility to make sure you've answered every question. After submitting the exam, you may not change any of your answers.

- Each practice exam in WebAssign can only be taken once. If you don't score at least 50% on the first practice exam, go back and try the Chapter Review Problems again before attempting the other practice exam.
- After completing each practice exam, make sure to save a PDF copy of the exam and solutions. Because the practice exams in WebAssign are timed, you will not be able to get back into the exam before the due date once the allotted amount of time has expired.
- If you score at least 50% on one or both practice exams, you'll receive 5 points of extra credit. If you score at least 50% on the first practice exam, you cannot earn additional extra credit by taking the second practice exam. However, each practice exam in WebAssign is randomized, so you will see a different set of problems on the second practice exam, which will better prepare you for taking the actual exam.

Practice Exam in Canvas and GSG Review Sessions

The [practice exams posted in Canvas](https://psu.instructure.com/courses/2270865/pages/practice-exams)

(<https://psu.instructure.com/courses/2270865/pages/practice-exams>) have the exact same look and feel as what you will experience when you take the actual exam, but the problems will not necessarily be the same. You'll have access to a built-in calculator and the questions will be presented one at a time. While the Canvas practice exam is not timed, we encourage everyone to take the exam under the same conditions as the actual exam. Find a quiet location and give yourself 90 minutes to complete the practice exam. Make sure to submit the practice exam only after answering every question. You cannot change your answers after submitting the practice exam, just like the actual exam.

The practice exams in Canvas are not for credit, but will be the basis of an exam review session held by our GSG leaders.

List of Common Mistakes

Your Math 110 instructors have created a [list of the most common errors \(https://psu.instructure.com/courses/2270865/pages/lists-of-common-mistakes\)](https://psu.instructure.com/courses/2270865/pages/lists-of-common-mistakes) on the material from each exam. As you work through the WebAssign Chapter Review Problems and the Practice Exams, keep this list handy to help avoid making these mistakes.

CANVAS DISCUSSIONS

Students are encouraged to post and respond to questions in the Canvas [Discussions \(https://psu.instructure.com/courses/2270865/discussion_topics/15441213\)](https://psu.instructure.com/courses/2270865/discussion_topics/15441213) threads about any Math 110 content, including WebAssign, lecture material, and course logistics. Students can also use the Discussions to request certain topics be discussed in more detail during the live Zoom sessions. You should make a habit of visiting the Discussions board frequently to monitor and participate in the conversations.

GRADING

Your course grade will be determined by your WebAssign and exam scores. The total possible points are as follows:

Grade Breakdown

| | |
|-------------------|------------|
| WebAssign | 100 |
| Exam 1 | 75 |
| Exam 2 | 75 |
| Exam 3 | 75 |
| Final Exam | 100 |
| Total | 425 |

The exact point requirements for each letter grade will be decided at the end of the course. General University guidelines follow:


Grade Cutoffs

| Grade | % Score |
|--------------|----------------|
|--------------|----------------|

| | |
|----|----------|
| A | 93 - 100 |
| A- | 90 - 92 |
| B+ | 87 - 89 |
| B | 83 - 86 |
| B- | 80 - 82 |
| C+ | 77 - 79 |
| C | 70 - 76 |
| D | 60 - 69 |
| F | 0 - 59 |

After the second exam and before the late-drop deadline, if required, the grade-line cutoffs for the major grades (A, B, C, D, F) will be updated to facilitate your planning for the remainder of the semester. The exact +/- grade-lines will be assigned after the final exam. Final course grades will be automatically rounded up to the nearest whole percentage, and the course grade will be assigned based on the above chart. The unavoidable consequence is that some students are just a point away from a higher grade. For reasons of fairness, the policy in this course is to NOT adjust individual grades in such circumstances.

Note: Your grade will be based exclusively on the WebAssign homework problems, midterm examinations, and final examination. Students are encouraged to discuss their performance with their lecturers regularly during the semester, and if appropriate, work out strategies to improve overall study, problem solving, and knowledge retention skills.

Deferred Grades: Students who are currently passing but unable to complete the course because of illness or emergency may be granted a deferred grade, which will allow the student to complete the course within 10 weeks after the final grade reporting date. Note that deferred grades are limited to those students who can verify and document a valid reason for not being able to take the final examination. Approval needs to be granted prior to the beginning of the final exam period of the semester in which the course is taken. For more information, see [Deferred Grades](https://www.registrar.psu.edu/grades/deferred-grades.cfm) 
(<https://www.registrar.psu.edu/grades/deferred-grades.cfm>)


CALCULATOR USAGE


Any basic calculator that can compute "x to the power y" is sufficient for this course, but not required. It may be used, as appropriate, in completing WebAssign homework exercises and self-assessment tests. A basic calculator built into Honorlock will be made available for use during exams.



ACADEMIC INTEGRITY

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, the University's Code of Conduct states that all students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts.


Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others.


According to Penn State policy [G-9: Academic Integrity](https://undergrad.psu.edu/aappm/G-9-academic-integrity.html) , an academic integrity violation is “an intentional, unintentional, or attempted violation of course or assessment policies to gain an academic advantage or to advantage or disadvantage another student academically.” Unless your instructor tells you otherwise, you must complete all course work entirely on your own, using only sources that have been permitted by your instructor, and you may not assist other students with papers, quizzes, exams, or other assessments. If your instructor allows you to use ideas, images, or word phrases created by another person (e.g., from Course Hero or Chegg) or by generative technology, such as ChatGPT, you must identify their source. You may not submit false or fabricated information, use the same academic work for credit in multiple courses, or share instructional content. Students with questions about academic integrity should ask their instructor **before submitting work**.



Students facing allegations of academic misconduct may not drop/withdraw from the affected course unless they are cleared of wrongdoing (see [G-9: Academic Integrity](https://undergrad.psu.edu/aappm/G-9-academic-integrity.html)  [\(https://undergrad.psu.edu/aappm/G-9-academic-integrity.html\)](https://undergrad.psu.edu/aappm/G-9-academic-integrity.html)). Attempted drops will be prevented or reversed, and students will be expected to complete course work and meet course deadlines. Students who are found responsible for academic integrity violations face academic outcomes, which can be severe, and put themselves at jeopardy for other outcomes which may include ineligibility for Dean’s List, pass/fail elections, and grade forgiveness. Students may also face consequences from their home/major program and/or The Schreyer Honors College.

Based on the [University's Faculty Senate Policy 49-20](https://senate.psu.edu/policies-and-rules-for-undergraduate-students/47-00-48-00-and-49-00-grades/#49-20) , a range of academic sanctions may be taken against a student who engages in academic dishonesty. Please see the [Eberly College of Science Academic Integrity](https://science.psu.edu/current-students/integrity)  [\(https://science.psu.edu/current-students/integrity\)](https://science.psu.edu/current-students/integrity) homepage for additional information and procedures.

DISABILITY SERVICES

Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an office for students with disabilities. The Student Disability Resources Web site provides [contact information for every Penn State campus](#) 

(<http://equity.psu.edu/sdr/campus-contacts>). For further information, please visit the [Student Disability Resources Web site](#)  (<http://equity.psu.edu/sdr>)

In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services office at the campus where you are officially enrolled, [participate in an intake interview, and provide documentation](#)  (<http://equity.psu.edu/sdr/applying-for-services>). If the documentation supports your request for reasonable accommodations, your [campus's disability services office](#)  (<http://equity.psu.edu/sdr/campus-contacts>) will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. You must follow this process for every semester that you request accommodations.

COUNSELING AND PSYCHOLOGICAL SERVICES

Many students at Penn State face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing.

The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

[Counseling and Psychological Services at University Park \(CAPS\)](#) 

(<http://studentaffairs.psu.edu/counseling/>): 814-863-0395


Counseling and Psychological Services at [Commonwealth Campuses](#) 

(<http://senate.psu.edu/faculty/counseling-services-at-commonwealth-campuses/>)

Penn State Crisis Line (24 hours/7 days/week): 877-229-6400

Crisis Text Line (24 hours/7 days/week): Text LIONS to 741741

EDUCATIONAL EQUITY/REPORT BIAS

Penn State takes great pride to foster a diverse and inclusive environment for students, faculty, and staff. Acts of intolerance, discrimination, or harassment due to age, ancestry, color, disability, gender, gender identity, national origin, race, religious belief, sexual orientation, or veteran status are not tolerated and can be reported through Educational Equity via the [Report Bias webpage](#) 

(<http://equity.psu.edu/reportbias/>).

OBTAINING ASSISTANCE

There are various avenues for obtaining assistance for this course:

- Your instructor via Zoom office hours.
- The Math Tutoring Center (part of Penn State Learning located on the 2nd floor Boucke building)
- Guided Study Group (part of Penn State Learning - Times TBA later)

COURSE COORDINATOR

If you have any questions or concerns about the course, please consult your instructor first. Include your name, student ID, and section number in any email correspondence. Should you need further guidance, you may be referred to the course coordinator, Dr. Smith (sss26@psu.edu)

HOPEFULLY HELPFUL HINTS

- *Learn for the long term.* Strive to retain the knowledge that you acquire. Do not simply try to learn material a couple of days before an exam with the goal of forgetting it right after finals. View the learning of the material as an active process, not a passive one. (You are here to learn, not to receive grades.) Learning is a process, not an event.
- *Strive to know the material,* to understand it at a very deep level, rather than a superficial one.
- *Do the homework* with as little help (solutions manuals, friends, etc.) as possible. Balance the use of group learning with individual study so you actually know the material.
- *Ask questions,* either at class or during office hours.
- *Read the textbook before the planned lecture.* The tentative schedule of classes gives you a guide as to what to read in advance.
- *Carefully study and rework the examples in the text.*
- *Re-read and rewrite your notes.*
- *Study for exams progressively,* over a long period of time. Begin the studying process at least one week prior to the date of the exam.
- *Manage your time wisely.* Plan to spend at least two hours outside of class for every hour in class, if not more!
- *Take responsibility for your education.* Work the self-assessment tests and learn from the objective feedback.

FINAL COMMENTS

It is our hope that your appreciation for mathematics will grow during this semester. Although the applications we cover are limited in scope, the application of mathematics extends to many areas in your chosen careers. The Calculus skills developed in this class provide a solid foundation for addressing many of the questions that surface during the introduction of standard business models in your future coursework.