

# Math 1430, Section 03: Calculus II

## Fall 2019 Syllabus

### 1 Course Information

- Location and Time: MWF 2:00–3:15pm, 402 Lee Drain Building
- Professor: Dr. Martin Malandro
- Department: Mathematics and Statistics
- Office: 433 Lee Drain Building
- E-mail (preferred method of contact): malandro@shsu.edu
- Phone number: (936) 294-1580
- Office Hours: Mon and Wed noon–1 pm, Friday 1–2 pm (note the difference!), and by appointment.
- Required Materials:
  - Textbook (FREE): Openstax Calculus, Volume 2. Available at <https://openstax.org/details/books/calculus-volume-2>
  - Another great free resource we will use is Paul's Online Notes for:
    - \* Calculus 1: <http://tutorial.math.lamar.edu/Classes/CalcI/CalcI.aspx>
    - \* Calculus 2: <http://tutorial.math.lamar.edu/Classes/CalcII/CalcII.aspx>
  - Calculator: TI-83 or better recommended. Calculators with computer algebra systems (such as the TI-89) will NOT be allowed on exams. If you have questions about the legality of your calculator, please see me.

**Catalog Course Description:** Topics include the definite integral and its applications, techniques of integration, improper integrals, Taylor's formula and infinite series. Prerequisite: C or better in Calculus I (MATH 1420). Credit 4.

**Course Objectives/Learning Outcomes:** A successful student will attain mastery of the following topics. Other topics will also be covered.

- Applications of integration, including areas between curves, volumes of revolution, surface areas of revolution, and arc length.
- Improper integrals: Identification and evaluation
- Techniques of integration, including  $u$ -substitution, integration by parts, partial fractions, and trigonometric substitution
- Infinite sequences and series, definitions and basic properties
- Geometric series: Theory and applications
- Convergence tests for infinite series, including the integral test, ratio test, and root test
- Taylor series: Theory and applications

## 2 Grading Policy

Your grade in the course will be calculated using the following weights:

Attendance and participation	10%
Homework	10%
Reading quizzes	10%
Exams 1, 2, 3	Worst one: 10%, other two: 20% each
Final Exam (cumulative)	20%

Grading Scale:

A	90% or better final average
B	80–89% final average
C	70–79% final average
D	60–69% final average
F	59% or lower final average

**Missed homework policy:** No make-ups for missed homework or reading quizzes will be available. If you are sick and unable to attend on a day homework is due you may email me a copy of your homework for grading by the beginning of class time. EMAIL ONLY. Do not abuse this policy.

At the end of the semester I will drop your lowest week's worth of homework grades and reading quizzes. This is mainly to help with sickness/car troubles/parking/etc., so please do not expect me to drop more than this if you do run into these issues.

For your attendance/participation score, you may miss up to three class periods before being penalized.

**Exams:** Many exam problems will be similar to homework problems or examples worked in class. The final exam will be cumulative.

If you arrive late to an exam, you may still take the exam in the remaining time as long as nobody has finished the exam yet.

No exam grades will be dropped, and there will be no do-overs. However, note that your worst exam score (of exams 1, 2, and 3) is weighted at only 10% for your final average, while your other exam scores are weighted at 20% each.

**Exam make-up policy:** If you miss an exam, you will be expected to show appropriate cause in writing. If you must miss an exam, I expect you to contact me beforehand. If that is impossible, then you must contact me no later than 24 hours after the exam. If you miss an exam and have not contacted me by this time, you forfeit your right to a make-up.

**Academic Honesty Policy:** You may work together on homework assignments and you may consult whatever sources you deem necessary while doing so. The purpose of the homework is to LEARN—specifically, to better your understanding of the underlying concepts and to gain proficiency in using them to solve problems. Please make sure you work on the homework in the best way for you to learn. I recommend you don't seek out help until you've worked on things for a while and are truly stuck.

Exams, on the other hand, exist for you to DEMONSTRATE what you have learned. They are individual endeavors, where no help is to be given or received. Cheating on an exam includes, but is not limited to, sharing answers or using any form of cheat sheet (note: notes programmed into a calculator count as a cheat sheet). If I catch you cheating on an exam, I will forbid you from attending any further class meetings and assign you a grade of F in the course. You may also be referred to the dean on academic dishonesty charges.

**Extra Credit Policy:** Extra credit will be available in the form of one bonus question per exam. No other extra credit will be available.

**Grade Dispute Policy:** All grade issues need to be brought to my attention within one week of having your grade returned/posted.

**Final Exam Schedule:** Mon Dec 9, 3:30–5:30pm

### 3 Classroom Policies

**Attendance Policy:** I expect you to attend every class. If you miss a class, then I expect you to get notes from a classmate. I expect you to arrive to class on time.

**Classroom Rules of Conduct:** Students must refrain from behavior in class that disrupts the learning process. Students are prohibited from using tobacco products in class, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times or about inappropriate things, wearing inappropriate clothing, using cellphones, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

Math-related questions in the classroom are encouraged. However, chatter is disruptive to the learning process and will not be tolerated under any circumstances.

**Disabilities policy:** Any student with a disability that affects his/her academic performance should contact the Office of Services for Students with Disabilities in the SHSU Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786) to request accommodations.

**Use of Telephones and Text Messengers in Class:** Be respectful of those around you and don't use these for non-math related things during class, except in the case of emergency. All messengers must be put away for exams.

### 4 Tentative Schedule

WEEK 0: Calculus 1 review	Aug 21–23
WEEK 1: u-sub, area between curves	Aug 26–Aug 31
Labor Day Holiday	Sep 2
WEEK 2: Volumes by slicing, disks	Sep 3–Sept 7
WEEK 3: Volumes by shells, arc length, surface area	Sep 9–Sep 14
WEEK 4: Hydrostatic force, centers of mass	Sep 16–Sep 20
EXAM 1	Friday, Sep 20
WEEK 5: Integration by parts, trig integrals	Sep 23–Sep 28
WEEK 6: Trig subs, partial fractions, numerical integration	Sep 30–Oct 5
WEEK 7: Improper integrals, function growth rates	Oct 7–Oct 12
WEEK 8: $p$ -integrals, comparison tests for improper integrals	Oct 14–Oct 18
EXAM 2	Friday, Oct 18
WEEK 9: Power series, sequences, geometric series	Oct 21–Oct 26
WEEK 10: The $n$ th term test for divergence, integral test, comparison tests	Oct 28–Nov 2
WEEK 11: alternating series, ratio and root tests	Nov 4–Nov 9
WEEK 12: Taylor series	Nov 11–Nov 16
EXAM 3	Friday Nov 15
WEEK 13: More Taylor series, polar coordinates	Nov 18–Nov 23
WEEK 14: Catch up and Thanksgiving Break	Nov 25–Nov 30
WEEK 15: Complex numbers, parametric equations	Dec 2–Dec 7
Final Exam	Mon Dec 9, 3:30–5:30pm

The date/time of the final exam is set by official SHSU policy. All other dates in this list are tentative and subject to change.

### 5 Additional Information

All information on this syllabus is subject to change. All changes will be announced in class. Further university policies regarding academic dishonesty, student absences on religious holy days, disabilities, and visitors in the classroom which apply to this course may be found at <http://www.shsu.edu/syllabus/>. If

there is a conflict between information on this syllabus and official university policy, university policy takes precedence.