

Math 182 – Calculus II Syllabus

Section 1004-25958

Spring 2024

Land Acknowledgment

This is an acknowledgement that the University of Nevada, Reno, in particular the professor's office and the room in which our class occurs, is situated on land traditionally occupied by the Numu (Northern Paiute), Wašiw (Washoe), Newe (Western Shoshone), and Nuwu (Southern Paiute) peoples. These lands continue to be a gathering place for Indigenous Peoples and we recognize their deep connections to these places. We extend our appreciation for the opportunity to live and learn on their territory.

Course Information

Instructor Information

Instructor: Dr. Jonathan Beardsley

Class Time: MW 1:00pm-2:15pm

Class Location: OB 102

Professor's Office: DMSC 327

Professor's Email: jbeardsley@unr.edu

Office Hours: Monday, 3:30pm-4:30pm and Tuesday, 3:30pm-4:30pm

Exam Dates (tentative):

Exam 1 – 2/14/24

Exam 2 – 3/18/24

Exam 3 – 4/17/24

Final Exam – 5/13/24 (12:45pm-2:45pm)

TAs: Nicholas Foster (nicholasfoster@unr.edu)

Office: LLC 147B-2

Office Hours: T/Th 11:30am-1pm

Christopher Solomon (cjsolomon@unr.edu)

Office: LLC 146E

Office Hours: T 1:00pm-2:30pm, Th 11:30-1:00pm

Course Topics

Methods of integration. Sequences and series, power series.

More specifically: Integration by substitution, computing the area between curves, computing volumes of closed surfaces in three dimensions, computing improper integrals, convergence of sequences and series, standard convergence tests, power series, Taylor and Maclaurin series, computing arc length of curves, solving differential equations, Euler's Method, integration by parts, trigonometric substitutions for computing integrals, integration of rational functions by partial fractions, approximate integration.

Course Pre/Co-requisites

MATH 181 with a "C" or better.

Required Texts/Course Materials

“Calculus: Early Transcendentals – 9th Edition” by James Stewart. You have two options for purchasing the textbook, which you must do to have access to the homework problems.

- You can purchase a print copy of the textbook at the UNR bookstore. This will come with an access code for the homework.
- You can purchase the book online which will also give you access to the homework.

In either case, you will need to register for WebAssign at www.webassign.net or www.getenrolled.com with the following information:

- Your official UNR email address.
- The course key: UNR94250612
- The access code you received when purchasing your textbook.

Class Procedures/Structures

Homework Format: Homework must be completed online via WebAssign. Due dates for homework are posted on WebAssign (typically they will be due on Wednesday at the start of class). It is your responsibility to stay current with homework and complete it on time. If you expect to succeed in this course, you will need to begin working on your homework well before the due date. You will also likely need to do extra exercises and work through the examples in the book on your own. It is necessary to do the assigned homework if you want to pass, but it is unlikely to be sufficient. You will have to make this determination for yourself.

Midterm Exams: There will be three midterm exams given during the semester. Exams will be given in-class at the usual class time. You are permitted a calculator so long as it is *not* a graphing calculator or a programmable calculator, for instance, a TI-30X II. You will need to bring a photo ID for the exams. You may replace your lowest midterm grade by the grade you get on the final exam.

Final Exam: A comprehensive final exam is scheduled for Monday, May 13th, 12:45pm-2:45pm, in OB 102. You will need to bring a photo ID. You are permitted a calculator so long as it is *not* a graphing calculator or a programmable calculator, for instance, a TI-30X II.

Quizzes: Once a week you will have a quiz during your Thursday recitation section. It will be given at the end of the section and will be 20 minutes long. You are permitted a calculator so long as it is *not* a graphing calculator or a programmable calculator, for instance, a TI-30X II. Your two lowest quiz grades will be dropped.

Student Learning Outcomes

Upon completion of this course students will be able to:

- Evaluate definite and indefinite integrals using techniques of integration like substitution, integration by parts and partial fraction decomposition.
- Use integration to compute arc lengths, areas and volumes of geometric objects.
- Determine convergence and divergence of infinite series.
- Approximate functions with power series.

Course Requirements and Grading Breakdown

No extra credit is available in this course. Your total grade will be determined by the following percentages:

15% Homework	45% Midterms
20% Quizzes	20% Final Exam

Grading Scale

Letter grades will be assigned according to the following table:

A: 93% - 100%	C: 70% - 76.9%
A-: 90% - 92.9%	D+: 67% - 69.9%
B+: 87% - 89.9%	D: 64% - 66.9%
B: 84% - 86.9%	D-: 60% - 63.9%
B-: 80% - 83.9%	F: <60%
C+: 77% - 79.9%	

Note that a grade of C- is not available for Math 182, per UNR policy.

Late Work or Make-up Exams Policies

Make-ups are not available for quizzes. If you have a compelling and sudden reason for missing an exam (e.g. serious illness or physical injury, death of a loved one) contact me or your TA by email *as soon as possible* so that we can find a solution.

Suggestions and Expectations

How to Succeed

Practice: In this course, we will be learning methods and techniques for solving mathematical puzzles. Doing this comes “naturally” to almost no one. This is like making 3-pointers in basketball, or winning at chess, or deadlifting 400 pounds, or writing a compelling narrative; it requires frequent practice and immersion in the craft. To be successful in this class, you will have to spend a lot of time doing things that feel repetitive. However, this will pay off in the long run when you find that you’ve developed an intuitive 6th sense for solving these sorts of problems. But getting to that point is going to require you to....

Fail a lot: Math is all about failure. You are probably going to make *a lot* of mistakes. The trick is to get those mistakes out of the way early. You will also need to get comfortable with making these mistakes, and not be too hard on yourself. When you make a mistake, or have a

misunderstanding, don't waste time beating yourself up over it. Learn from it, and start over. Sometimes, you won't be able to learn from your mistakes, or you won't even understand what your mistake was. When this happens, you need to....

Use every resource: There are many underutilized resources to help you do well in this course. Your TA has office hours, your professor has office hours, the Math Center is often open, you have a textbook, and of course there are countless online resources related to this material (e.g. Kahn Academy or Paul's Online Math Notes). *USE THESE THINGS.* Most Although folks cannot sit in a lecture, sit in a recitation, and then just go home and do the homework. You will be told something, you'll try it, you'll fail, and then you'll go get help to see why you failed. After repeating this a few times, you will finally *learn* the thing that you were told in the first place.

University Policies

Statement on Academic Dishonesty

The University Academic Standards Policy defines academic dishonesty, and mandates specific sanctions for violations. See the University Academic Standards policy: [UAM 6,502](#).

Statement of Disability Services

If you are a student who would normally seek accommodations in a traditional classroom, please contact me as soon as possible. You may also contact the Disability Resource Center for services for online courses by emailing drc@unr.edu or calling 775-784-6000. It is important that you contact them as soon as possible to discuss services. The University of Nevada, Reno supports equal access for students with disabilities. For more information, visit the [Disability Resource Center](#).

I may post PDFs of test solutions. If you have difficulty accessing these PDFs (e.g. you use a screen reader that has trouble with the math symbols or the formatting) please let me know as soon as possible and I can arrange alternative formatting.

Statement on Audio and Video Recording

Student-created Recordings

Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.

Statement on Maintaining a Safe Learning and Work Environment

The University of Nevada, Reno is committed to providing a safe learning and work environment for all. If you believe you have experienced discrimination, sexual harassment, sexual assault, domestic/dating violence, or stalking, whether on or off campus, or need information related to immigration concerns, please contact the University's Equal Opportunity & Title IX office at 775-784-1547. Resources and interim measures are available to assist you. For more information, please visit the [Equal Opportunity and Title IX](#) page.

TENTATIVE CLASS SCHEDULE

WEEK	DAY	DATE	TOPIC
1	MONDAY	JAN. 22	Syllabus Review, Calc I Review
	WEDNESDAY	JAN. 24	§5.5
2	MONDAY	JAN. 29	§6.1, §6.2
	WEDNESDAY	JAN. 31	§6.2, §6.3

3	MONDAY	FEB. 5	§6.3, §7.8
	WEDNESDAY	FEB. 7	§7.8, §11.1
4	MONDAY	FEB. 12	EXAM 1 REVIEW
	WEDNESDAY	FEB. 14	EXAM 1
5	MONDAY	FEB. 19	NO CLASS
	WEDNESDAY	FEB. 21	§11.2, §11.3
6	MONDAY	FEB. 26	§11.3, §11.4
	WEDNESDAY	FEB. 28	§11.5, §11.6
7	MONDAY	MAR. 4	§11.8, §11.9
	WEDNESDAY	MAR. 6	§11.9, §11.10
8	MONDAY	MAR. 11	§11.10
	WEDNESDAY	MAR. 13	EXAM 2 REVIEW
9	MONDAY	MAR. 18	EXAM 2
	WEDNESDAY	MAR. 20	§8.1
10	MONDAY	MAR. 25	NO CLASS
	WEDNESDAY	MAR. 27	NO CLASS
11	MONDAY	APR. 1	§8.1, §8.3
	WEDNESDAY	APR. 3	§9.1, §9.2
12	MONDAY	APR. 8	§9.3
	WEDNESDAY	APR. 10	§9.4, §7.1
13	MONDAY	APR. 15	EXAM 3 REVIEW
	WEDNESDAY	APR. 17	EXAM 3

14	MONDAY	APR. 22	§7.1, §7.2
	WEDNESDAY	APR. 24	§7.2, §7.3
15	MONDAY	APR. 29	§7.3, §7.4
	WEDNESDAY	MAY 1	§7.4, §7.7
16	MONDAY	MAY 6	FINAL EXAM REVIEW
	MONDAY	MAY 13	FINAL EXAM