



Course Format	In-Person, CEB 254 MoWeFr 11:00am–12:20pm
	Mondays and Wednesdays are discussion days. Fridays are reserved for quizzes and "hands-on" activities.
Instructor	Sungju Moon, PhD
INFORMATION	Primary Contact: Use the Inbox tool within Canvas Email: sungju.moon@nevadastate.edu Office Phone: (702) 992-2725 Office Location: Dawson 223
	Please note that all official University communication is conducted using Nevada State University-issued email addresses (e.g., @students.nevadastate.edu) in order to comply with the Family Educational Rights and Privacy Act (FERPA). If you need assistance finding or accessing your NSU email account, please see the Policies & Student Responsibilities page.
Office Hours	MoWe 1:00–2:00pm 3:45–5:00pm (as of March 1) or whenever my office door is open Online meetings by appointment
E-mail & Classroom Response Time	You can generally expect a response to e-mails within 24–48 hours (or slightly longer over weekends or holidays). Feedback for completed discussions, quizzes, and assignments depends on the length and complexity of the activity and could take up to 10 days. For questions on the status of a completed assignment, discussion, or test please contact me.
Course Description	Fundamental concepts of analytic geometry and calculus; functions, graphs, limits, derivatives and integrals.
$\begin{array}{l} \text{Required} \\ \text{Text}(s) \end{array}$	Boelkins, M., Austin, D., Schlicker, S., <i>Active Calculus</i> , 2018 Updated Ed. (or later) This is a free online textbook available at URL: https://activecalculus.org/
Supplemental Materials	<i>Calculator</i> —A scientific calculator or access to equivalent web-based platforms such as Desmos or Octave Online is recommended for some of the homework problems.
Learning Outcomes	 After finishing this course, you will be able to: Evaluate limits using graphical, numeric, and algebraic methods, Compute derivatives using graphical, numeric, and algebraic methods, Solve optimization problems using calculus-based ideas and techniques, Use the Fundamental Theorem of Calculus to evaluate definite integrals, and Correctly express mathematical ideas in a sentence using accurate notation and well-defined symbols
Class Schedule	See Page 7 of the course syllabus for the tentative course calendar. All dates are subject to change.

ASSIGNMENT Homework Assignments (25%): Homework assignments will be assigned on a DESCRIPTION weekly basis. & DUE DATES For each assignment, you are asked to fill out the Solution Form. These forms are

For each assignment, you are asked to fill out the *Solution Form*. These forms are designed to guide you in writing complete and well-organized math solutions. The structural guides for writing your solutions will be gradually phased out over the course of the semester. Alternatively, you have the option to bypass the form and submit your solutions in free-form. Free-form submissions are subject to the same grading criteria, and any missing components will result in grade deductions. If you choose to submit free-form solutions, you are fully responsible for ensuring they meet all expectations outlined in the Solution Form.

Complete solutions to the homework problems will be provided after individual grades are posted. We will tackle a subset of these problems together in groups during Friday activity sessions. See Page 6 for more information about Friday activity sessions.

Working together on homework problems is strongly encouraged with the following restrictions: (1) each student must submit their own Solution Form and disclose the people who you worked with on a problem-by-problem basis. (2) Students are not allowed to divide up the work and pool together the solutions (the "divide and conquer" approach). (3) Students cannot work with people who are not currently taking this course including tutors, family members, artificial intelligence, or strangers online; however, getting help on problems that are similar to homework problems is allowed.

Mini-Projects (2 projects, 10% each): Mini-project assignments consist of a mix of individual- and group-activities. Details will be announced in class.

Participation (20%): Throughout the semester, you will be asked to self-evaluate your overall participation levels on a regular basis.

Out-of-Class Activities (10%): At the beginning of the semester, you will be asked to come up with specific plans (including time and place) for agenda items such as:

- reviewing the material; reading ahead
- thinking about the "questions for next time" before class
- working on homework problems
- finalizing homework assignments by completing Solution Forms
- revisiting old assignments for resubmission
- time set aside for catching up and studying for exams

You will be periodically asked to complete the self-assessment form to reflect on your success in following through your plans and make necessary changes.

In-Class Activities (10%): You must submit a good-faith effort to complete the inclass activities including discussion and problem solving (worksheets), Exit Tickets and group activities during Friday activity sessions. The self-assessment form will ask you to rate yourself on your in-class participation levels and provide supporting evidence/narrative for any apparent anomalies.

	Quizzes (5%): There will be weekly quizzes held at the beginning of class on Fridays. Typically, there will be two parts to a quiz. The first part will ask you to state a definition or theorem and the second part will ask about an example involving the definition or the theorem. The quiz problems will be discussed in groups immediately following each quiz as part of the Friday activities.		
Exam Description	Exams (30%): There will be three midterm exams. See the course calendar for the tentative exam dates. While not required, you may use a scientific calculator.		
Exam Debrief	Schedule an individual meeting with the instructor to pick up your graded exam and discuss how the class is going. There may be opportunities for exam corrections.		
Late Work Policy	When students miss work for medical and/or personal reasons, they should access the Student Absence Notification System.		
	Late homework assignments will be accepted until the next assignment due date and will cost you a \bigstar ; however, homework assignments that are submitted after the solutions are posted will receive at most 50% of the total points available.		
	To make-up for any missed Friday sessions, you must meet with your group outside of class (online or in-person) and submit a summary report of the meeting. The summary report must include the names of at least two participating members, who will each earn an additional \bigstar (except for the initially missing member).		
	The following assignments may not be turned in late for credit without explicit permission from the instructor:		
	 Self-Assessment Forms Quizzes Mini-Projects Exams 		
	You cannot receive a passing grade for the course without completing all major assessments.		
Attendance Expectations	There may be days you do not to attend classes or leave early due to past or ongoing crises or distressing circumstances. Disclosure of specific reasons or details is not expected, but it will be helpful if you could communicate with me about instances of missed sessions or work; this is because (1) frequent or prolonged inactivity with regard to course contents will negatively impact your learning, and (2) open communication will help us reformulate missed assignments to suit your situation. Missing five consecutive class sessions or assignments without prior or follow-up notice will prompt me to check in with you for a 'pulse check'. Please know that I am available to provide resources and connect you to support services.		
Homework Resubs	 Homework assignments can be resubmitted for up to full credit provided the following conditions are met: 1. The assignment was submitted on time. 2. The initial grade on the assignment was 50% or higher. 3. The problem was attempted to a reasonable extent upon initial submission. 		

To initiate a resubmission of a homework problem (the *resubs*), you may schedule a meeting with me to go over the problems (live-regrade) or record a video of yourself going over the problem for feedback. Initiating the resub process will cost 1 personal \bigstar per problem; however, once initiated, additional resubs on that particular problem can be attempted as many times as needed until the next exam date. Students may initiate a resubmission process for an assignment no sooner than one week after the graded assignment has been returned. Failure to pick up or review your graded assignment due to unexcused absences will not extend this one-week resubmission window.

Grading Criteria

Your grade will be determined by the following rubric: (Course Point Totals)—100%

- Homework Assignments (25%)
- Mini-Projects (20%; 10% each) Quizzes (5%)
- Participation (20%) Exams (30%)

Grading Scale (Letter Grade and Point Range):

Α	93% or higher	\mathbf{C}	73% - 76.99%
A-	90% – 92.99%	C-	70%-72.99%
B+	87% - 89.99%	D+	67% – 69.99%
В	83% - 86.99%	D	63% – 66.99%
В-	80% - 82.99%	D-	60% – 62.99%
C+	77% - 79.99%	F	less than 60%

Accessing Grades and Instructor Feedback

To access your grades and find all of the instructor's feedback, click on Grades in the course navigation menu. Scroll through the list until you find the new graded assignment (indicated by the blue dot to the left of the assignment name). Then click on the assignment name. You will see your grade. Below it you can click on Show Rubric to see the marked up rubric. Click on the paper title if you want to download the original document. (The instructor's marks or comments will not appear on the downloaded document.) Click on the box to the right of the paper title to see the Turnitin report. Click on View Feedback to see the paper marked up with the instructor's comments/corrections in DocViewer. The instructor's feedback is on the right. Accessing Grades will take you step-by-step through how to find all instructor feedback and see the marked-up paper and rubric.

POLICIES &Students are responsible for reading, understanding, and abiding by theSTUDENTpolicies listed on the Student Responsibilities page. This page containsRESPONSI-information about conduct, plagiarism, cheating, and Turnitin, among other importantBILITIESpolicies related to this course, LASB, and NSU.

Artificial	Use Only With Permission. Students are allowed to use advanced automated	
INTELLIGENCE	tools (artificial intelligence or machine learning tools such as ChatGPT or Bard) on	
(AI) Policy	assignments in this course if instructor permission is obtained in advance. Unless given permission to use those tools, each student is expected to complete each assignment without substantive assistance from others, including automated tools. Students are responsible for ensuring the accuracy of any information provided by an AI tool.	
	Source: Adapted from the University of Delaware: https://ctal.udel.edu/advanced-automated-tools/	
Student Success Resources	At some point this semester, you may require help or support from various services on campus to help you be successful in your classes. On the Student Support & Resources page, you will find information about services like tutoring, library resources, advising, and help with writing assignments.	

Guide to the Friday Activity Sessions and the \bigstar System

Stage 1: Take the weekly quiz & debrief with your group

On most Fridays, there will be a short quiz at the beginning of class (5–7 minutes). Immediately following the quiz, you will gather in groups and discuss the quiz problems with your fellow group members (5–10 minutes). Once everyone is in agreement about the quiz solution, you can notify the instructor. Upon confirmation, your group will receive a \bigstar and move on to the next stage.

Stage 2: Your group works on the activity problems (one at a time)

Claim a whiteboard for your group. You are now tasked with a set of problems. Work on one problem at a time. Once your group has reached a consensus on a working solution to a problem, designate one person from your group as the "presenter", who will present your group's solution to the whole class. Your group will earn a \bigstar regardless of whether the presented solution is correct. If the solution is correct, your group will earn an additional \bigstar . If the presented solution is not correct, another group will get a chance to present their solution or point out a fix. We will continue until we run out of problems or class period.

There will be times when you get stuck on a problem. Feel free to ask for hints and/or clarifications from the instructor (or send out a spy; see "Other Roles" below).

Ground Rules

- 1. The same individual cannot represent the group as "presenter" twice in a row.
- 2. When a group is presenting their solution, everyone must stop working on the problem and pay attention to the presentation. Participants are encouraged ask for clarifications or bring up a related question during presentations as long as the discussion remains respectful.
- 3. Do not "divide and conquer"; particularly, for problems with multiple parts, do not distribute different parts among your group members. Everyone must be on the same page.
- 4. Sending out a spy to get ideas from other group's progress is allowed.

Over the course of the semester, we may add or amend these rules.

Other Roles

Members should organically assume different roles. Besides "presenter", here are examples of other roles:

- The **compiler**'s job is to finalize the group's solution so that members can reach a consensus. It is recommended that the compiler is a different person from the presenter for the problem.
- A **spy** would sneak up on other group's discussions and get hints when their own group is stuck on a problem.
- The **secretary** will keep track of the number of ★s earned by your group and ensure that no one person is dominating a particular role (especially watch out for "presenter hogging")

Stage 3: Write up your own solutions (refer to Solution Forms)

Friday activity problems are part of your homework assignment for the week, which will be submitted using Solution Forms. It is highly recommended that you work out a solution on a separate piece of paper and then, only after you have a reasonable grasp of the problem, fill out the Solution Form. Feel free to continue communicating with your peers as you work on your Solution Form; that said, the written work that you turn in must be your own.

Date	Agenda	Assignment	Due
Wed, Jan 22 Fri, Jan 24	Discussion: key idea of calculus, rate of change (1.1) Quiz 0, Activity 1: functions and notation	HW1	
Mon, Jan 27 Wed, Jan 29	Discussion: limits and infinity (1.2) Discussion: continuity (1.7)		Study Plan
Fri, Jan 31	Quiz 1, Activity 2: limits and continuity	HW2	HW1
Mon, Feb 3 Wed, Feb 5	Discussion: derivatives I (1.3, 1.4) Discussion: derivatives II (1.3, 1.4, 1.6)		
Fri, Feb 7	Quiz 2, Activity 3: interpreting derivatives	HW3	HW2
Mon, Feb 10	(no class)		
Wed, Feb 12 Fri, Feb 14	Discussion: basic derivative rules (2.1) ; introduction to e Quiz 3, Activity 4: visualizing derivative rules I	HW4	HW3
Mon, Feb 17	Presidents Day Holiday		
Wed, Feb 19 Fri, Feb 21	Discussion: special functions (2.2), product rule (2.3) Quiz 4, Activity 5: visualizing derivative rules II	HW5	HW 4
Mon, Feb 24 Wed, Feb 26 Fri, Feb 28	Discussion: quotient rule, trig functions (2.4) Discussion: estimating derivatives (1.5) Quiz 5, Activity 6: quotient rule practice, estimation	HW6	HW5
Mon, Mar 3 Wed, Mar 5 Fri, Mar 7	Exam 1 Review Exam 1 Activity 7: reflection, work on Mini 1	Self-Eval 1 HW7	HW6
Mon, Mar 10 Wed, Mar 12 Fri, Mar 14	Discussion: chain rule (2.5) Discussion: inverse functions (2.6) Quiz 6, Activity 8: chain rule and inverse functions	HW8	HW7
Mar 17–21	Spring Break		
Mon, Mar 24 Wed, Mar 26	Discussion: implicit differentiation (2.7) Discussion: l'Hôpital's rule (2.8) Quiz 7. Activity 9: implicit differentiation	HW0	HWS
Mon, Mar 31 Wed, Apr 2 Fri, Apr 4	Discussion: related rates (3.5) Discussion: extreme values I (3.1, 3.2) Quiz 8, Activity 10: related rates problems	HW 10	HW9
Mon, Apr 7 Wed, Apr 9 Fri, Apr 11	Discussion: extreme values II Discussion: global optimization (3.3) Quiz 9, Activity 11: optimization problems	HW 11	HW 10

$\begin{array}{c} {\bf Course \ Schedule^{\dagger}}\\ {\rm All \ Dates \ are \ Subject \ to \ Change} \end{array}$

Date	Agenda	Assignment	Due
Mon, Apr 14	Exam 2 Review	Self-Eval 2	
Wed, Apr 16	Exam 2		
Fri, Apr 18	Activity 12: reflection, work on Mini 2	$\mathrm{HW}12$	HW 11
Mon, Apr 21	Discussion: Ideas behind integration (4.1)		
Wed, Apr 23	Discussion: antiderivatives and Riemann sum (4.2)		
Fri, Apr 25	Quiz 10, Activity 13: antiderivatives, Riemann sum	$\mathrm{HW}13$	HW 12
Mon, Apr 28	Discussion: definite integrals (4.3)		
Wed, Apr 30	Discussion: FTC I (4.4)		
Fri, May 2	Quiz 11, Activity 14: visualizing FTC		$\mathrm{HW}13$
Mon, May 5	Discussion: integration by substitution		
Wed, May 7	Exam 3 Review	Self-Eval 3	
Fri, May 9	Exam 3		

 $^\dagger \rm Not$ including mini-project & self-assessment due dates.