COURSE FORMAT	In-Person, CEB 254 MoWeFr 11:00am–12:20pm *Mondays and Wednesdays are discussion days.* *Fridays are reserved for quizzes and problem-solving sessions.*
INSTRUCTOR'S INFORMATION	Sungju Moon, PhD **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 NS-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 relevant section on the LASB Course Policies and Guidelines page.
OFFICE HOURS	TuWe 12:30–1:30pm and 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.
REQUIRED TEXT(S)	Boelkins, M., Austin, D., Schlicker, S., *Active Calculus*, 2018 Updated Ed. (or later) This is a free online textbook available at URL: https://activecalculus.org/
SUPPLEMENTAL MATERIALS	*Calculator*—A scientific calculator or access to equivalent web-based platforms such as Desmos or Octave Online is recommended for some of the homework problems.
COURSE 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 • Accurately communicate mathematical ideas in complete sentences, using correct mathematical notation and clearly defined symbols

Program Learning Outcomes

This course aligns with the following mathematics program learning outcomes.

Program Learning Outcomes (PLO)	Course Assignment or Activity	Level of Attainment
PLO 7 (Personal Development: Collaboration) Work in groups to move collaboratively towards a shared goal.	Mini-Project 1 (See also, the "Collaboration" document distributed via LMS)	1. The student indicates negative outcomes within the group context. 2. The student indicates neutral outcomes within the group context. 3. The student indicates the ability to identify positive collaborative outcomes within the group context. 4. The student indicates significant levels of positive collaboration outcomes in the group context.

Class Schedule

See Page 11 of the course syllabus for the tentative course calendar.
All dates are subject to change.

Embedded Peer Leader (EPL)

Dominick Bellini

Study Sessions: WeFr, 9:30–11:00am (Location TBA)

EPL Office Hours: Mo 10–11am, Thu 2–3pm (ASC Fishbowl, RSC 256)
This schedule may be rearranged depending on student schedule compatibility.

Primary Contact: Canvas Inbox or NSU email: dbellini@nevadastate.edu

This course utilizes an Embedded Peer Leader (EPL). Embedded Course Support follows the Supplemental Instruction (SI) model with the intention of targeting historically difficult courses, offering weekly structured Study Sessions before or after class to review the most difficult material from the lecture. Embedded Support sessions are led by embedded peer leaders who have successfully completed the course previously and continue to sit in lectures throughout the semester. While experienced in the content, the leader is not a content expert and will not re-lecture the material. Instead, the leader will facilitate students to collaborate in small groups using active learning strategies in order to review the content. Sessions will also integrate the review of the content along with the appropriate use of learning/study strategies for the course.

During study sessions, students can expect:

- To use their lecture notes and books throughout the SI session
- A different way of seeing and applying the content from the lecture
- To work with classmates during sessions and engage in a "students helping students" model
- To make mistakes, because SI is a great place to do so, instead of on a quiz or exam
- Practice the most difficult content from the lecture
- Gain insight on what to learn and how to learn it using effective study strategies

Assignment Description & Due Dates

Homework Assignments (30%): Homework will be assigned weekly and will be due the following Wednesday in class. We will work on most homework problems in groups during Friday activity sessions. See Page 10 for more information about Friday activity sessions.

For each homework assignment, solutions must be submitted by using the *Solution Form*, which consists of structured prompts with blank spaces to help you write complete and well-organized solutions. This initially somewhat rigid structure will be gradually phased out over the course of the semester. You may opt to bypass the Solution Form and submit free-form solutions instead, but these must meet the same standards as Solution Form submissions. Free-form submissions are subject to the same grading criteria as the Solution Form. *You* are responsible for ensuring all required components are included; missing components will result in point deductions as they would on the Solution Form.

Two randomly selected problems per assignment will be graded with feedback. Since mathematical writing is a core learning goal, you will be assessed on both correctness *and* exposition. We will adopt the following mastery-based grading system: each blank space can earn up to **3 points** for complete, correct, and well-explained work, **2 points** for minor errors or correct work with incomplete/unclear explanation, **1 point** for genuine attempts showing meaningful progress, and **0 points** for blank, irrelevant, or dishonest submissions.

You may revise any graded homework problem in exchange for a ★ by either (1) presenting your reworked solution directly to Dr. Moon's during office hours, or (2) work with the EPL during Study Sessions and submitting written work to Dr. Moon. Written revisions must include the complete problem statement and follow the Solution Form structure on blank paper. You may also earn an additional ★ by discussing any ungraded problem (1 per problem set) you are uncertain about during Study Sessions led by the EPL, in which case you must provide the specific aspect that confuses you (i.e., you cannot just pick a problem you already know how to do fully well and present it to earn a ★).

Working together on homework problems is strongly encouraged with the following limitations: (1) Each student must submit their own solutions and disclose the collaborators. (2) You may not split the work ("divide and conquer"). (3) Prior to initial submission of your assignment, collaboration is limited to only with students enrolled in this class. Outside help (tutors including the EPL, family, AI tools, online forums) is not permitted on assigned problems, though you may seek help with problems *similar* to the assigned ones.

Participation (15%): You must submit a good-faith effort to complete the in-class activities including discussion and problem solving (worksheets), Exit Tickets and group activities during Friday activity sessions. Three graded components contribute to your participation grade: (1) self-assessment, (2) categorized summary notes, and (3) tiered ★ conversion, mainly earned through Friday activities.

1. **Self-Assessment.** At the start of the semester, you will set specific plans (including time and place) for agenda items such as reviewing material, working on homework problems, and reviewing homework feedback. Three times during the semester (immediately after each exam), you will complete a self-assessment form to reflect on how well you followed your plan, evaluate your in-class participation, and adjust your study plan as needed.
2. **Categorized Summary Notes (CSN).** Separate from your regular class notes, you will maintain an organized, itemized list of *theorems*, *definitions*, and *examples*. Note that "examples" here mean a small demonstrative example of a concept, not a fully worked-out solution to an example problem. One week before each exam, you will be asked to upload a "snapshot" of your notes for approval. The CSN notes must be prepared during your review time, not during class, and may not simply consist of photographs of your class notes.
3. **Tiered ★ and Friday Activities.** Fridays are reserved for problem solving activities (see Page 10 for more information). Your Friday activity group will earn ★s through active participation in these sessions. Each week, the group's stars will be distributed to individual "star wallets" based on individual participation levels. At the end of the semester, your stars will be converted into participation points according to a tiered scale (e.g., 5/5 points for more than 30 ★s). Count your ★s to stay on course!

Additional notes on in-class participation. While not explicitly graded, the following items will be referenced in your self-assessment form:

1. **Companion Handouts.** For the in-class discussion sessions (Mondays and Wednesdays), you will be provided with companion handouts. These are designed to help you actively work on the material during our discussion. Do not be afraid of 'messing' up the handouts as these are not for submission. In fact, you are encouraged to scribble down as much as possible!
2. **Exit Tickets.** At the end of Monday and Wednesday sessions, you will complete a brief "Exit Ticket" on a small notecard provided. Usually, you will put a short summary of one thing you learned that day. On a rare occasion, you may be asked to respond to a specific question. Feel free to also use this space to ask questions or give feedback. Important questions from Exit Tickets will be answered in the relevant Canvas module as a posted comment. Exit Tickets are anonymous by default, but you may include your name if you would like a personalized response.

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

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. After the first two exams/self-assessment, you may schedule an individual meeting with the instructor to discuss how the class is going based on your self-assessment. There may also be opportunities for exam corrections in exchange for personal ★s.

Late Work Policy

If you experience a serious or ongoing medical or extenuating circumstance (e.g., a major medical event, hospitalization, family emergency, or any situation that significantly impacts your ability to attend class for an extended period), please report it through the Student Absence Notification System (SANS).

SANS is not intended for one-time absences, brief illnesses, or situations where you can communicate directly with your instructor. Once a SANS report is submitted, it will be reviewed, and both you and your instructor will be notified. Your instructor will then determine if and how missed or late work can be addressed.

Late homework assignments will be accepted until the next assignment due date but will cost you a ★; afterwards, late submissions will not be accepted.

To make-up for any missed Friday sessions, you can 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 individual ★ (except for the initially missing member). Alternatively, you can seek help from either the instructor or the EPL during Study Sessions.

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, which include exams and mini-projects.

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.

Grading Criteria

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

- Homework Assignments (30%)
- Mini-Projects (20%; 10% each)
- Participation (15%)
- Quizzes (5%)
- Exams (30%)

Grading Scale (Letter Grade and Point Range):

A	93% or higher	C	73%–76.99%
A-	90%–92.99%	C-	70%–72.99%
B+	87%–89.99%	D+	67%–69.99%
B	83%–86.99%	D	63%–66.99%
B-	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 the instructor's feedback, click on Grades in the left 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.

Artificial Intelligence (AI) Policy

What Is AI? AI tools are applications and other generative technologies capable of producing content (e.g., generating, summarizing), offering feedback (e.g., revising, translating), researching, assisting with coding, or other tasks typically done by humans. Examples include, but are not limited to, ChatGPT, Grammarly, Bing Copilot, Google Gemini, Grok, Answers.AI, Quillbot, Claude AI, DeepL, DeepAI, DALL-E, etc.

AI Tools Banned on State-Owned Devices. The State of Nevada has banned (link) some AI tools (and other technology) due to security or intellectual property concerns. You cannot use these tools on University-owned computers or other devices:

- Grammarly (public version)
- DeepSeek AI

The State updates the banned technology list occasionally, so other tools may be added. You are responsible for checking the most updated list to ensure you are not using any banned tools on state-owned devices.

AI Use Policy for This Course.

- *Prohibited Uses.* As a student in this course, you are not allowed to use AI assignments in the following ways:
  - Generating full essays, reflections, or academic papers
  - Generating answers for homework assignments
  - Generating Categorized Summary Notes based on your course notes
  - Generating plots and graphs for assignments and mini-projects
- *Permitted Uses.* You are allowed to use AI in the following ways:
  - Checking grammar and spelling
  - Tutoring or study help (e.g., generating sample questions)
  - Generating artificial data to be used in mini-projects (with AI attribution)
  - Research assistance or finding sources
  - Brainstorming or outlining ideas for papers or projects (with AI attribution)

If you are unsure how AI can be used for a specific assignment, talk to the instructor before you get started.

AI Citation. This class does not require a specific citation style. The example below, in AMS style, may be used for AI attribution:

> [1] OpenAI ChatGPT-version chat response to prompt "Your prompt goes here," 2025.
>
> In text citation example: "...according to ChatGPT [1]..."

Consequences for Misuse. Misuse of AI may result in plagiarism or academic misconduct penalties outlined in the NS Student Code of Conduct and/or the LASB Academic Conduct Policy (found under Resources & Policies). Continued misuse of AI in coursework or across courses will result in escalating consequences based on the severity and frequency of the violation, which could include receiving an F in this course, academic probation, suspension, or expulsion.

LASB Course Policies & Guidelines

All courses in the School of Liberal Arts, Sciences, and Business (LASB) are subject to LASB course policies and guidelines. You are responsible for reading, understanding, and abiding by these policies and guidelines.

Student Support & Resources

Academic Success Center (Tutoring). The Academic Success Center (ASC) offers a range of services including free one-on-one and group tutoring sessions where students can review and practice course concepts and relevant study/test taking strategies with trained peer tutors.

NetTutor Online Tutoring—Did you know you can receive a free on-demand academic support at your convenience when the ASC is closed? You can submit a question or request a drop-in session for a specific subject with an e-instructor. The majority of NetTutor e-instructors have a Master's or Ph.D. in the field. You can access NetTutor through Canvas by selecting the "NetTutor Online Tutoring" on the left-side navigation bar in each of your courses.

Writing Center. Supporting every NS student's ability to improve their process and product, the Writing Center provides trained readers for all writers, all projects, in all disciplines, and during all stages.

Academic Advising Center. The Academic Advising Center is a dedicated team of Advisors committed to your academic success at NS. By providing the right advice and guidance, we helpe students meet their educational and personal objectives. Please visit Academic Advising Center.

Scorpion Success Network. If the instructor determines your performance in this class is placing you at academic risk, you may be referred to a member of the Academic Advising Center. An Academic Advisor will work with you to address issues and develop a student success strategy. Regardless of whether a referral has or has not been made, you are ultimately responsible for tracking your own progress in this course. If you would like to meet with an Advisor regarding any academic struggles you are experiencing, please contact Academic Advising at 702-992-2160 or at `studentsuccess@nevadastate.edu`.

Student Wellness Services. If you are struggling with hunger, unstable housing, safety, mental health worries, or ANY other concerns, contact Student Wellness. Email: `studentwellness@nevadastate.edu` | Call (702) 992-2514.

STAR (Student Transition and Retention). STAR (Student Transition and Retention) is the cornerstone of the student experience at Nevada State University. Our mission is to provide every Nevada State student with continuous support throughout their academic journey. Meet with our team to navigate campus resources, find a student community, develop time management skills and set and achieve personal and academic goals. Click on Student Transition and Retention.

Disability Resources. At Nevada State University, we recognize our responsibility and embrace the opportunity to meet the unique educational needs of students with documented disabilities. The staff of the Disability Resource Center (DRC) is dedicated to providing a coordinated program of support services for students qualifying with disabilities under the Americans with Disabilities Act (ADA) and Section 504 Guidelines. Our mission is to ensure that all students qualifying with disabilities have equal access to participate in, contribute to, and benefit from all university programs, classes and activities.

Confidential, sensitive, and individualized services are provided free of charge, on a case-by-case basis.

Any student who believes s/he may need accommodations, based on the impact of a documented disability, should contact the DRC Office to speak privately with the Director of the DRC about specific needs. To make an appointment, please contact the DRC office at (702) 992-2180 or by email at drc@nevadastate.edu.

Veteran Concerns. If you are a veteran who is struggling academically or have concerns please contact the DRC office at (702) 992-2180 or by email at drc@nevadastate.edu.

Guide to the Friday Activity Sessions and the ★ 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 ★ 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 ★ regardless of whether the presented solution is correct. If the solution is correct, your group will earn an additional ★. 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 " Member Roles" below).

Member Roles. Members should organicallyy rotate through different roles for each problem:

- The **presenter** will present the problem prepared by the compiler to the whole class using the designated whiteboard.
- The **compiler**'s job is to finalize the group's solution so that members can reach a consensus. Ideally, the compiler should be a different person from the presenter for that problem.
- The **spy** listens in on other groups' discussions to bring back hints when their own group is stuck.
- The **scribe** keeps the Friday Activity Checklist up to date and helps ensure that no one person dominates a role (especially avoiding "presenter hogging"). The last scribe of the day must turn in the Checklist before leaving class.

Ground Rules. Over the course of the semester, we may add or amend these 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 and encouraged.

Stage 3: Write up your own solutions (use *Solution Forms*)

Friday activity problems are part of your homework assignment for the week, which will be submitted using Solution Forms. It is 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, start filling 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.

Course Schedule

All Dates are Subject to Change

Date	Agenda	Assignment	Due[†]
Wed, Jan 21	Discuss: key idea of calculus, rate of change (1.1)	Study Plan	
Fri, Jan 23	Quiz 0 (uncounted), Activity: functions and notation	HW 1	
Mon, Jan 26	Discuss: limits and infinity (1.2)		
Wed, Jan 27	Discuss: continuity (1.7)		HW 1
Fri, Jan 30	Quiz 1, Activity: limits and continuity	HW 2	
Mon, Feb 2	Discuss: derivatives I (1.3, 1.4)		
Wed, Feb 4	Discuss: derivatives II (1.3, 1.4, 1.6)		HW 2
Fri, Feb 6	Quiz 2, Activity: evaluationg/interpreting derivatives	HW 3	
Mon, Feb 9	Discuss: basic derivative rules (2.1)		
Wed, Feb 11	Discuss: special functions (2.2),		HW 3
Fri, Feb 13	Quiz 3, Activity: basic derivative rules	HW 4	
Mon, Feb 16	President's Day		
Wed, Feb 18	Discuss: product/quotient rules (2.3), more trig. (2.4)	Mini 1	HW 4
Fri, Feb 20	Quiz 4, Activity: visualizing derivative rules	HW 5	
Mon, Feb 23	Exam 1 review		
Wed, Feb 25	Exam 1	Self-Asses. 1	HW 5
Fri, Feb 27	Activity: reading reflection	HW 6	Mini 1 Indiv.
Mon, Mar 2	Discuss: estimating derivatives (1.5)		
Wed, Mar 4	Discuss: chain rule (2.5)		HW 6
Fri, Mar 6	Quiz 5, Activity: estimation problems	HW 7	
Mon, Mar 9	Discuss: inverse functions (2.6)		
Wed, Mar 11	implicit differentiation (2.7), l'Hôpital's rule (2.8)		HW 7
Fri, Mar 13	Quiz 6, Activity: chain rule and inverse functions	HW 8	Mini 1 Group
Mar 16–20	Spring Break		
Mon, Mar 23	Discuss: related rates (3.5)		
Wed, Mar 25	Discuss: extreme values I (3.1, 3.2)		HW 8
Fri, Mar 27	Quiz 7, Activity: implicit diff. & l'Hôpital's rule	HW 9	Mini 1 Final
Mon, Mar 30	Exam 2 Review		
Wed, Apr 1	Exam 2	Self-Asses. 2	HW 9
Fri, Apr 3	Activity: reading reflection	HW 10	
Mon, Apr 6	Discuss: extreme values II		
Wed, Apr 8	Discuss: global optimization & application problems (3.3)		HW 10
Fri, Apr 10	Quiz 8, Activity: extreme values, optimization	HW 11	

Date	Agenda	Assignment	Due
Mon, Apr 13	Discuss: ideas behind integration (4.1)	Mini 2	
Wed, Apr 15	Discuss: antiderivatives and Riemann sum (4.2)		HW 11
Fri, Apr 17	Quiz 9, Activity: Riemann sum, antiderivatives	HW 12	Mini 2 Indiv.
Mon, Apr 20	Discuss: definite integrals and average values (4.3)		
Wed, Apr 22	Discuss: FTC I		HW 12
Fri, Apr 24	Quiz 10, Activity: definite integrals	HW 13	Mini 2 Group
Mon, Apr 27	Discuss: FTC II		
Wed, Apr 29	Discuss: additional integration techniques		HW 13
Fri, May 1	Quiz 11, Activity: illustrating FTC	HW 14	
Mon, May 4	Exam 3 Review		
Wed, May 6	Exam 3	Self-Asses. 3	HW 14
Fri, May 8	No Class		Mini 2 Final