

UNIVERSITY OF NEVADA LAS VEGAS

Department of Mathematical Sciences

Math 181-1028

Fall 2021

Welcome!

Welcome to Calculus I! This is an exciting time in your life, and I am looking forward to working with you as you succeed in college and discover your path. You will also get the chance to apply and share the fundamentals of calculus, i.e. what you have learned in this class. This is an intense class, and the more you work on it, the better you will get. Be open to reviewing old areas and exploring new areas of math and science overall, and to learning something new about the applications of calculus in the world around you.

Item	Detail(s)
Faculty:	Monika Neda (pronouns: she/her/hers)
Email:	monika.neda@unlv.edu
Time(s):	N/A
Class Location	Web-based
Office Location:	SEB 2132
Office Hours:	I welcome you to my office hours MoWe 9:00am-11:00am or by appointment and the best way for this is to email me.
Phone:	702-895-5170
WebCampus:	https://webcampus.unlv.edu

How to Succeed

Everyone can succeed in this class if you do the following:

1. Recognize that this course will take a large amount of time. You will need to do readings, write assignments, and prepare properly for tests. It is expected that you will be spending 2-3 hours outside of class for every hour (or credit/unit) in class. This class is 4 credits, so you should expect to spend a minimum of 8 hours per week on class work.
2. If you miss a class or get sick, please talk to me as soon as possible so that we can make a plan to help you catch up. It is easy to fall behind, so get in the habit of reading and working on the assignments and test preparations uniformly throughout the semester. It is recommended that you complete your work at least 12 hours before it is due to give you time to think, process what you have read, and reflect on what you have learned. Late work will be accepted with no penalties and assignments can be resubmitted for full credit. Please read my comments and edits on your assignments so that you can accomplish this.
3. Pose a question if you do not understand something or if you need clarification in the “Course Question” discussion in Canvas where students will be encouraged to ask/answer questions. I will monitor this discussion and help with answers.

4. Check your RebelMail/WebCampus at least once per day.

Course Description

This is a course designed to introduce students to the application of functions and to the definition and techniques of differentiation and integration, and their application as well.

Course Prerequisite(s):

Grade of C or better in Precalculus (Math 127 or 128 at UNLV) or ACT score at least 28 or SAT score at least 630.

Course Textbook:

It is Essential Calculus, Early Transcendentals, by James Stewart. E-book from the webassign account is fine to use, no need to purchase hard-copy. Chapters 1, 2, 3, 4 and 5 will be covered.

Course Requirements

1. **Assignments based on Key points:** **Purpose:** You will learn the new concepts of this course and solve fundamental examples based on these concepts. This type of assignment is assigned once a week and they are based on the lectures covered in the modules. **Task:** Lecture notes in ppt and Camtasia recordings are uploaded in Canvas for each module lecture and you need to answer the listed key points in handwritten (preferred – since you will learn more by writing down math) or maybe typed format. Then, the files need to be uploaded in Canvas. **Criteria:** I will grade these assignments based on completion of all key points questions and correctness of your answers. I will be available daily to answer any questions that you might have.
2. **Video Assignments:** **Purpose:** It is to enhance the new concepts of this course and solve more examples based on these concepts. **Task:** You will be assigned to watch the webassign videos of the covered module lectures, and write a summary of these videos. These videos can be found under “Resources” (at the bottom of the webpage) in your Webassign account. You will need to submit your written summary (handwritten preferred or maybe typed) in Canvas. **Criteria:** I will grade these assignments and I will be available daily to answer any questions that you might have. The summary has to include the material that Prof. Mosely has on the green board for full credit. You are encouraged to add explanations (using sentences) that you hear during the videos. You need to do at least 1 video per lecture (and I would recommend to pick the ones based on the material that you maybe struggled to understand in ppt notes/Camtasia recordings). **Note:** *This assignment is optional, if you decide not to do it, please upload your key point assignment for it too, to be able to receive credit.*
3. **Discussions:** **Purpose:** It is to create a deep understanding of the material and connect it with applications and everyday life situations. **Task:** Give a full/elaborated answer to the posted question(s). List any references that you used. There will be 5 discussions in Canvas based on the up to date covered material. I will be available daily to answer any

- questions that you might have even before you post your answer (i.e. you are welcome to check your answer with me). **Criteria:** This will be graded and a grading rubric is posted.
4. **GeoGebra Activities – Extra Credit: Purpose:** These activities should help you practice some of the calculus concepts and get a better understanding of them through visualization. **Task:** These activities will be assigned for each module in Canvas. This is discussion with class member(s) about the concept/problem that is inside the activity. A post/comment/self-reflection has to be done for completion. **Criteria:** It is graded based on completion. I will be daily available to answer any questions that you might have and discuss the meaning of the activity if you struggle understanding it.
 5. **WebAssign Homework:** It will be assigned online through [WebAssign portal](https://www.webassign.net/) <https://www.webassign.net/>. To login into webassign, use the following **class key:** **unlv 6883 2225**. It is graded automatically by webassign. Please look at the gradebook settings to familiarize with them. Automatic extensions are set-up as well in case you need them. You need to show your work for every problem for the practice tests assignments. Additional note: You can upload all your work (i.e. the photos of all the written pages) in the first problem and then write in the response box of the rest of the problems that it is uploaded in the first problem. This way, you do not need to upload individual pictures of your work for every problem, but still you will get the points for all of them.
 6. **Tests:** There will be 5 tests and one final exam. All the tests/exams are closed textbook, and they will be done using Respondus Monitoring system in Canvas. Study guides will be provided in Canvas and practice tests will be created in webassign.
Note 1: You are allowed to use a scientific calculator that needs to be approved. You need to upload a picture of it in Canvas under the corresponding assignment. **The tests and final exam are cumulative and they will be used to overwrite the previous lower test(s) scores.**
Note 2: If you miss a test you must present me with some certification before the test; otherwise, your test grade will be zero.

Learning Outcomes/Course Objectives

1. Understand the definition of a function and how it relates to the vertical line test (Chapter 1.1)
2. Find limit of a function with various techniques (1.3 – 1.6)
3. Recite the limit definition of derivative, and use it to find the derivative of an elementary function (2.1)
4. Calculate the derivative for a function, implicitly and explicitly (2.3 – 2.6)
5. Find the slope of the line tangent to a curve through a point (Chapter 2)
6. Find the linear approximation of a given function (2.8)
7. Find the absolute maximum and minimum for a function using the derivative (4.5)
8. Describe the behavior of a function given the graph of the derivative (4.3)
9. For a given function (4.4):
 - a) Specify the domain
 - b) Find vertical and horizontal asymptotes (if they exist)
 - c) Find the first and second derivatives
 - d) Determine when the derivatives are zero or undefined
 - e) Make a sign diagram, indicating when the first and second derivatives are positive, negative, zero or undefined

- f) Classify critical points, and identify inflection points
- g) Make a rough sketch using the information gathered above
- 10. Use Newton's Method to approximate the root of a function given an initial guess and articulate mathematically how good that approximation is (4.6)
- 11. Use the Right Hand Reimann Integral Technique to evaluate a definite integral (5.1)
- 12. Use the definite integral to determine the area between a curve and the x axis (5.1 – 5.6)
- 13. Integrate definite and indefinite integrals (5.2, 5.3 and 5.5)

Evaluation Methods

- 20% Key Points Assignments
- 5% Video Assignments
- 5% Discussions
- 20% Webassign homework
- 20% Tests (with Practice Tests being 5% out of the 20%)
- 30% Final Exam (with Practice Final Exam being 5% out of the 30%)
- 4% Geogebra activities – Extra Credit

Grading Scale

A	95 – 100
A-	90 – 94
B+	87 – 89
B	84 – 86
B-	80 – 83
C+	77 – 79
C	70 – 76
D+	67 – 69
D	64 – 66
D-	60 – 63
F	00 - 59

Tests schedule

The test can be taken on the first day starting 4am and until midnight second day, on the specified dates from Table 1.

Week	Dates (First Day – Second Day)	Subject
2	Jan 28 – Jan 29	Test 1
5	Feb 18 - Feb 19	Test 2

7	Mar 4 - Mar 5	Test 3
12	Apr 8 - Apr 9	Test 4
15	Apr 29 – April 30	Test 5
16	May 12 – May 13	Final Exam

Table 1

Note:

The syllabus was created in January 2022, and it is subject to change during the semester.

The Undergraduate Math Tutor Clinic

It is located in CDC 701. Also, you can go to the website: www.unlv.edu/math/math_clinic.html for more information.

Diversity Statement

As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see [University Statements and Compliance](https://www.unlv.edu/about/statements-compliance), <https://www.unlv.edu/about/statements-compliance>.

A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another’s points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.

UNLV Land Acknowledgement

UNLV is situated on the traditional homelands of Indigenous groups, including the Nuwu or Nuwuvi, Southern Paiute People, descendants of the Tudinu, or Desert People. We honor and offer gratitude for those who have stewarded the land; for the land itself; and for the opportunity to cultivate a thriving, diverse, inclusive, and just scholarly community here today that works for a better tomorrow for all.

University Policies

Public Health Directives

Face coverings are currently mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found at [Health Requirements for Returning to Campus](https://www.unlv.edu/coronavirus/health-requirements), <https://www.unlv.edu/coronavirus/health-requirements>. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the [UNLV Student Conduct Code](https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf), https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf, including being administratively withdrawn from the course.

Academic Misconduct

Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another person, from the Internet or any other source without proper citation of the source(s). See the [Student Conduct Code](https://www.unlv.edu/studentconduct/student-conduct), <https://www.unlv.edu/studentconduct/student-conduct>.

Auditing a Course

Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of devices such as cellular phones and pagers, or other potentially disruptive activities are only permitted with the prior explicit consent of the instructor. Students are specifically prohibited to record classes without instructor authorization, including online/remote classes (either audio only, or video and audio). The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course.

Since the COVID-19 pandemic forced some instruction to be delivered remotely starting in Spring 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term.

Recorded lectures must be stored securely, and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning that the recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted.

Class recordings are protected from disclosure, as they are deemed part of an educational record under

the Family Educational Rights and Privacy Act (FERPA).

Copyright

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional [copyright policy information](https://www.unlv.edu/provost/copyright) is available at <https://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC)

The [UNLV Disability Resource Center](https://www.unlv.edu/drc) (Student Services Complex, SSC-A, Room 143, <https://www.unlv.edu/drc>, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to a permanent disability, temporary or permanent medical need, or academic support due to pregnancy are encouraged to contact the DRC as early as possible in the academic term. A Disabilities Specialist will discuss what options may be available to you. Students who are already registered with the DRC should request their accommodations online each semester, and make an appointment to discuss their accommodations with their instructors.

Final Examinations

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the [Final Exam Schedule](https://www.unlv.edu/registrar/calendars), <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the [Student Academic Misconduct Policy](https://www.unlv.edu/studentconduct/misconduct/policy), <https://www.unlv.edu/studentconduct/misconduct/policy>, which states that “acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment” is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the [Acceptable Use of Computing and Information Technology Resources Policy](https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy), <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades

The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

Library Resources

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the [Libraries’ Research Consultation](https://guides.library.unlv.edu/appointments/librarian) website, <https://guides.library.unlv.edu/appointments/librarian>. You can also [ask the library staff](https://ask.library.unlv.edu/) questions via chat and text message at <https://ask.library.unlv.edu/>.

Missed Classwork

Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Classwork policy, under Registration Policies, on the [Academic Policies](https://catalog.unlv.edu/content.php?catoid=32&navoid=8271&hl=) webpage, <https://catalog.unlv.edu/content.php?catoid=32&navoid=8271&hl=>.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student submits official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the

Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail

Rebelmail is UNLV's official email system for students and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Sending emails within WebCampus-Canvas is also acceptable.

Tutoring and Coaching

The Academic Success Center (ASC), at the Claude I. Howard Building, provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the [ASC website](https://www.unlv.edu/asc), <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the [Writing Center](https://writingcenter.unlv.edu/), <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3-301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Campus Resources

UNLV has a variety of resources and services intended to assist students and our local community with their academic, financial, and personal needs. [The Intersection](https://www.unlv.edu/intersection/campus-resources), <https://www.unlv.edu/intersection/campus-resources>, has many resources for First-Generation, minority, LGBTQ, DACA, Justice Impacted, Veteran, foster, and food and/or housing insecure students. [Campus Life](https://www.unlv.edu/campuslife/student-support), <https://www.unlv.edu/campuslife/student-support>, provides additional information about student support services including the UNLV Food Pantry hours, reduced-cost bus passes, childcare resources, technology loan programs, and counseling and psychological services.

Emergency Funding

The [S.O.S Emergency Relief Fund](https://www.unlv.edu/campuslife/sos-fund), <https://www.unlv.edu/campuslife/sos-fund>, may help provide financial assistance to students who experience unexpected emergency situations.