Calculus I with Analytic Geometry

MATH 115–02

Fall 2022

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Office Hours: Monday, Wednesday, and Friday 10:00 AM– 11:00 AM, Tuesday and Thursday 9:30 AM– 11:00 AM, and by appointment.

Important Dates

First Homework due ..... 27 August
Exam 1 ..... 23 September
Exam 2 ..... 4 November
Exam 3 ..... 2 December
Final exam ..... 14 December 8:00 AM – 10:00 AM

Grading

Your course grade will be based on weekly inclass work, online homework, three midterm exams, and a comprehensive final exam; specifically:

In class work: *12 ten point assignments* ..... 120 (total)
Online homework *25 five point assignments* ..... 125 (total)
Mid-term exams 1,2, and 3: *100 points each* ..... 300 (total)
Comprehensive Final exam ..... 150 (total)

The following table shows the *minimum* number of points (out of 695) that are required for each of the twelve letter grades D- through A+. For example, a point total of 602 points will earn you a grade of B+, and a point total of 626 points will earn you a grade of A-. If you earn a point total of 416 or less, you a failing course grade.

D-	417	B-	556
D	440	B	579
D+	463	B+	602
C-	487	A-	626
C	509	A	648
C+	532	A+	671

Course Resources

1. Our textbook is *University Calculus: Early Transcendentals, Single Variable*, 4th Edition, by Joel R. Hass, Christopher E Heil, Przemyslaw Bogacki, Maurice D. Weir, and George B. Thomas, Jr.

2. We will be using the online homework system Pearson MyLab Math. Your online homework grade is a substantial part of your course grade. You *must* sign up for the homework system in the first week of the term. If you purchase a used book without an access code, you will may need to purchase access to the online homework system separately,

3. A computer or tablet (not a phone) with an Internet connection to use the online homework.
4. If we need to convert this class to remote learning, your computer will need to have a microphone and a camera.
5. To complete in class work while working remotely, you will need to print files.
6. For exams, you will need a scientific calculator (includes trigonometric, logarithmic, and exponential functions). You do not need anything more fancy than that. You *may* use a graphing calculator, but it will not be of any great advantage.
7. You will need a (functioning) camera on your phone or some other device for scanning a document and turning it electronically.
8. The UNK Learning Commons[1] provides peer tutoring for this class.
9. Pencils, erasers, notebook for note taking. Colored pens or pencils are nice for note taking.
10. Other resources include Desmos[2].

Course Calendar

Generally, we'll adhere to the scheduled exam dates even if we are ahead or behind with coursework. When we are ahead or behind, the topics on the exams will be appropriately adjusted.

Notices:

(a) *Exams will be given on **Friday** of the week they are assigned.*

(b) Homework (labelled **HW**) will be due one minute before midnight on Saturday of the week they are assigned.

(c) The final exam will be given on 14 December 8:00 AM – 10:00 AM.

Week	Week Starting	Section(s)	Topic(s)	Assessments
1	22 August		Logic, Proof methods, and Overleaf	**HW 1**
2	29 August	§1.1 – 1.3	Sets, Functions, Real numbers, Completeness	**HW 2**
3	5 September	§2.1 – §2.2	Sequences & Subsequences	**HW 3**
4	12 September	§2.1 – §2.2	Sequences & Subsequences	**HW 4**
5	19 September	§2.3	Bolzano-Weierstrass	**Exam 1**
6	26 September	§3.1	Topology	**HW 5**
7	3 October	§3.1	Topology	**HW 6**
8	10 October	§4.1	Limits and Continuity	**HW 7**
9	17 October	§4.1	Limits and Continuity	**HW 8**
10	24 October	§4.2	Monotone and Inverse Functions	**HW 9**
11	31 October	§5.1	Derivatives	**Exam 2**
12	7 November	§5.1	Derivatives	**HW 10**
13	14 November	§5.2	Some Mean Value Theorems	**HW 11**
14	21 November	§6.1	The Riemann Integral	**HW 12**
15	28 November	§6.2	The Riemann Integral	**Exam 3**
16	5 December		Catch up or Review	
17	12 December			**Final Exam**

[1] https://www.unk.edu/offices/learning_commons/
[2] https://www.desmos.com/

University Policies

Please see https://www.unk.edu/academic_affairs/asa_forms/course-policies-and-resources.php.

Policies

Unless an assessment is *explicitly* stated to be a group project, *all work you turn in for a grade must be your own.* If you need assistance in completing a homework assignment, you may ask me for help. Googling for answers, seeking help from the Learning Commons or other faculty members, or using solution keys from previous terms (either from UNK or other universities) is also prohibited. Violation of these rules will result in earning a grade of zero on the assessment. Each homework assignment you turn in for a grade must include the statement:

> I have neither given nor received unauthorized assistance on this assignment.

If two assignments are so similar that only collaboration could explain their similarities, both assignments will receive a grade of zero. Using unauthorized materials or communication devices (cell phone, for example) while taking a test will earn you a grade of zero on that assessment.

1. Regular in person class attendance is required. If you are ill or need to miss class due to athletics, please let me know ahead of time, and I will make an effort to put the class on Zoom.

2. For examinations and in class assignments, show your work. *No credit will be given for multi-step problems without the necessary work. Your solution must contain enough detail so that I am convinced that you could correctly work any similar problem.* Also erase or clearly mark any work you want me to ignore; otherwise, I'll grade it.

3. The work you turn in is expected to be *accurate, complete, concise, neat,* and *well-organized. You will not earn full credit on work that falls short of these expectations.*

4. Class cancellations due to weather or illness or other unplanned circumstances may require that we make adjustments to the course calendar, exam dates, and due dates or specifics for course assessments.

5. Extra credit is not allowed.

6. For examinations, you may use a teacher provided quick reference sheet, but no other reference materials. You may also use a pencil, eraser, and a scientific calculator. For examinations, your phone and all such devices must be turned off and *out of sight.*

7. Generally, if you are ill or absent for any reason (including athletics), you must turn in your in class work on time. Permission to turn in work late must be made in advance, otherwise late in class work will count zero points.

8. During class time, please refrain from using electronic devices. If your device usage distracts your classmates, I will ask you to put it away. If it's my impression that you are often not paying attention in class, I reserve the right to decline to help you during office hours.

9. The final examination will be *comprehensive* and it will be given during the time scheduled by the University. Except for *extraordinary circumstances* you must take the exam at this time.

10. If you have questions about how your work has been graded, make an appointment with me immediately.

11. Please regularly check Canvas to verify that your scores have been recorded correctly. If I made a mistake in recording one of your grades, I'll correct it provided you saved your paper.