Summer 2021 Math 254

Multivariable Calculus

Instructor: Dionysus Birnbaum **Email:** birnbad@linnbenton.edu

Class Times: Online **Class Location:** Online

Office Hours: Virtual: MWF10-11; https://linnbenton.zoom.us/j/2125666553 or ID: 2125666553
You are also welcome to e-mail me to schedule an appointment!

Course Description

The fourth course in the calculus sequence for students majoring in mathematics, science and engineering. Topics include vectors in 2 and 3- space, graphs, contour maps and equations of multivariable functions and partial derivatives, directional derivatives, optimization of services, cylindrical and spherical coordinates, multiple integrals and their applications.

When you complete this class, you will be able to

- Demonstrate an understanding of vectors, vector operations, and apply vectors to solve application problems in 2D and 3D.
- Graph and write equations for functions in 3D.
- Apply limits and derivatives to multivariate functions.
- Apply integration techniques to multivariate functions.

What do you need for this class?

- Regular access to a computer and the internet.
- Calculus: Early Transcendentals by Briggs and Cochran, with Pearson MyMathLab access code (more information in Moodle)

How will your grade be calculated?

Your grade will be determined by completing the different types of assignments detailed on the following page.

Online Homework

Each chapter of the textbook has an associated assignment in MyMathLab, as an opportunity to practice the material. It is highly encouraged that you complete these assignments according to the recommended schedule in Moodle. That said, since this is an online course, I have allowed a fairly large degree of latitude on completing the online homework. You may work on the assignments as long as you want, up to their due date just before the exam testing that material.

Written Homework/Response

Each week, a written homework assignment is due Friday, submitted through Moodle. This is your opportunity to demonstrate directly to me your conceptual and process understanding of topics in the course. It is also an important pacing tool, given the flexibility in the due dates of the online

homework.

After the written homework closes, a key and Moodle forum will open up for you to check your answers and post an analysis of any mistakes you made/your solution process.

Tests

In this class, we will have three tests. If you must miss a test, you are required ***to contact your instructor in advance*** of the testing time. Alternate arrangements may be made in the case of extreme circumstances beyond the students control and will be at the discretion of the instructor. You may also be required to present written proof of your circumstances. If you miss an exam you will receive a zero for that exam, there are no retests or make-up exams.

The exam dates are: Wednesday July 21 (week 4), Wednesday August 4 (week 7), and Wednesday September 2 (week 10). These exams will be given through MyMathLab. You will have 2.5 hours available for each exam; the exams are not intended to require the full time, but this allows you to scan and upload any work you would like graded for partial credit.

Overall Grade

Your overall course grade will be calculated using a weighted average based on the following weights and will be rounded up to the nearest whole percent.

Category	**Percent**
Online Homework	20%
Written Homework/Responses	20%
Three Exams	60%

Letter grades will be assigned based on the scale:

A	90%-100%
B	80%-89%
C	70%-79%
D	60%-69%
F	59% or below

"Y" or "WP" grades will NOT be given.

What can you do to be successful in this class?

Complete your Homework on time: Homework is your opportunity to practice. Your homework for the section we talk about in class should be completed before the following class. Completing your homework on time will help prepare you for the next topic.

Get HELP! If you have questions, PLEASE come see me and ask! I have scheduled office hours but you're welcome to come in at other times too.

Form a study group: Your classmates are important resources for understanding and completing the homework. Often a fellow student can explain things in a different way than your instructor. You gain a deeper understanding of mathematical concepts when you express them in your own words and explain them to someone else. It is strongly recommended that you study together with other students in small groups.

Use the Learning Center: The Learning Center and Math Help, is on the second floor of

Willamette Hall above the library in WH226 on the Albany campus. This is an excellent place to study and to get help with your homework.

Check out what the Learning Center has to offer:

- There is free wireless available in the Learning Center
- The relaxed atmosphere and table arrangement in the Learning Center provides a great location for study groups to meet and work.
- Instructional assistants are available to answer your math and calculator questions.
- The Learning Center offers free individual and small group tutoring in addition to the help desk. You can get up to three one-on-one tutoring sessions per week. Sign up early because they fill up.

Class Policies

Special Circumstances or Accommodations

You should meet with your instructor during the first week of class if:

- You have a documented disability and need accommodations.
- Your instructor needs to know medical information about you.
- You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources (CFAR) Online Services webpage every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR Website for steps on how to apply for services or call (541) 917-4789.

Basic Needs

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support at 541-917- 4877, or schedule an appointment on the web at www.linnbenton.edu/rrc . Our office can help students get connected to resources to help. Furthermore, please notify the instructor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

LBCC Comprehensive Statement of Nondiscrimination

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

Statement of Inclusion

The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill. (related to Board Policy #1015)

Academic Honesty

I assume that you are ethical and honest. However, if there is an incident of academic dishonesty (cheating), you will receive a score of zero for that test/assignment and the incident will be reported to the college administration for possible further disciplinary action. If there is a second offense, you will receive a grade of F for the course and the incident will be reported to the college administration with a recommendation for disciplinary action.