Spring 2022 MTH 252
Integral Calculus - Virtual

CRN 40936

Instructor Name: Marlon Flores

Email: floresm@linnbenton.edu

Virtual Office: Office hour by appointment.

Class Times: Tuesdays and Thursdays 6:30 PM – 8:50 PM

Class Location: Zoom/Moodle (https://linnbenton.zoom.us/j/92952540697)

What do you need for this class?

- Regular and reliable access to the internet (LBCC Library Technology Resources can help).
- Ability to scan documents and create pdfs (free apps like CamScanner work fine).
- At least 15 hours a week to practice and learn the material.
- Achieve access code for the online homework and eBook access.
- Webcam (mandatory) for virtual class attendance.

Course Description

The second course in the calculus sequence for students majoring in mathematics, science and engineering. Topics include techniques of integration, numerical integration, improper integrals, applications of integration, and an introduction to differential equations.

Course Objectives

Course Objectives: Upon completion of the course, the student will be able to
1. Calculate, interpret and communicate the concept of the integral.
2. Integrate a variety of functions using multiple techniques.
3. Recognize when and how to apply calculus tools to solve problems in business, the sciences and engineering.

How will your grade be calculated?

Your grade will be calculated using a weighted average based on the following percentages:

20%...Online Homework.
10%...Class Activities / Weekly quizzes.
10%...Attendance.
20%...Test 1
20%...Test 2
20%...Final Test

Your letter grade will be assigned based on the grading scale:

A: 90-100%
B: 80-89%
C: 70-79%
D: 60-69%
F: 0-59%

Grades will be rounded UP to the nearest whole percentage. (example: 89.01% would be rounded to 90%) Students can view their grades in Moodle.

A grade of Incomplete may be assigned at the discretion of the instructor under special circumstances. The student must have completed the majority of the course, been in regular attendance and have a passing grade in the course prior to the special circumstances.

How will the class work?

Mathematics is a combination of knowledge and skill, and like any skill (or sport) can only truly be learned by *doing*. This course will have several types of activities for you to do each week that are designed to help you meet the learning goals of the class. You will need to log into Moodle several times each week to view lessons, complete lesson activities, online homework.

You can expect to spend *at least* 15 hours per week on this 5 credit course.

Lessons, Class activities/ Weekly quizzes and attendance

Lessons are mandatory, observe that there is a 10% of your grade associated with the attendance to the virtual lessons to have the full 10% you must be present and participate in at least 90% of the classes and class time. Your grade will be 5% if your attendance is anywhere between 80% - 89% and 0% if your attendance to class and participation is less than 80% of the classes and class time.

There will be in class activities individual or as a group plus weekly quizzes that represent also 10% of your grade, you must be present in class to access these points.

Lessons

Lessons will be virtual Tuesdays – Thursdays 6:30pm – 8:50pm

Zoom link: https://linnbenton.zoom.us/j/92952540697

Homework

Achieve Practice Problems (Online Homework)
Online homework is your opportunity to practice and quiz yourself on the material with immediate feedback and multiple chances. Online homework will be completed and submitted electronically (link in Moodle). Deadlines are Tuesdays before class.

IMPORTANT: enroll on ACHIEVE "ASAP" our course enrollment key is: **6yu7f5**

Important: For your homework, work the problems by hand in a notebook you create for your 251 homework. This will give you practice writing out solutions, a place to start when asking for help, and give you a clear record of work to study for exams. When you come to office hours or other tutors for help, you should bring a copy of the problem and your notes for your attempt at the problem.

Assessments
There is a test 1, a test 2, and a comprehensive final exam for this course. All exams will be virtually proctored you will have video on while solving your test.

Class Resources

This class has resources to support your success!

Office Hours
If you have questions, please ask me! Make an appointment with me via Email, we will find the time that work for your schedule and mine.

Study Group
Your classmates are an important resource for understanding and completing the work for the course. Often a fellow student can explain things in a different way than your instructor. Studies have shown there is a correlation between success in learning math and students who engage in study groups. It is strongly recommended that you study together with other students in small groups.

Learning Center
The Math Desk will be operating this term to support students working remotely via Zoom, with drop-in help available during their standard hours:

The link to connect to the remote Math Desk is https://linnbenton.zoom.us/j/579890953

The URL for the Learning Center Remote Resources site is: https://www.linnbenton.edu/current-students/study/learning-center/.

Class Policies and Expectations

Late Work
The work in this course has been planned to help you learn. When work is completed late or last minute you miss out on fully engaging in the learning opportunity. Completing the work on time also helps prepare you for the next topic.

Completing your work on time makes your learning more efficient and will mean that you spend less time overall learning the same material.

In general, you will be better off if your work is completed by the deadline. But life happens. You have two, no questions asked, 48-hour extensions if you email your instructor with the subject line “late pass”.

Other late assignments may be accepted at the discretion of the instructor. Communicate with your instructor if there are obstacles preventing you from completing the course assignments on time.

Attendance

There is a strong link between good attendance and success in math courses. Attending an online class means logging in and making some progress on the course most days.
Attendance also means that you participate in class and class activities frequently. Your peers rely on your feedback and input.

Attendance is mandatory and totally expected in this virtual class.

Academic Honesty

I assume that you are ethical and honest. Using sites like chegg.com (or similar) for solutions to your work is cheating, even on assignments where collaboration and getting help is encouraged.

The goal of assigned work is for you to personally build a neural network of understanding, which copying and “seeing” the answer will not provide, since building neural networks requires thinking hard and making mistakes.

If there is an incident of academic dishonesty (including but not limited to cheating, plagiarism, forgery, or aiding or abetting cheating or plagiarism) you will receive a grade of F in the course and/or on the assignment. The incident will also be reported to the college administration with a recommendation for further disciplinary action.

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. It might be helpful to 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. Everyone 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)

Course tentative schedule

The instructor reserves the right to adjust the schedule as needed.

Week	Topics/Sections
1	5.1 Approximating Areas Under Curves
2	5.2 Definite Integrals 5.3 The Indefinite Integral, 5.4The Fundamental Theorem of calculus Part I 5.5 The Fundamental Theorem of Calculus Part II
3	5.6 Net Change, 5.7 The substitution Method, 5.8 Further Integral Formulas
4	6.1 Area Between Curves, 6.2 Setting up Integrals: Volume, Density, **Test 1**
5	6.3 Volume of Revolution, 6.4 Volume by Shells
6	6.5 Work and Energy, 7.1 Integration by parts
7	7.2 Trigonometric Integrals, 7.3 Trigonometric Substitution
8	7.5 Partial Fractions, **Test 2**
9	7.6 Strategies for Integration, 7.7 Improper Integrals 7.8 Numerical Integration 8.1 Probability and Integration
10	8.2 Arc Length and surface area, 8.3 Fluid Pressure and Force, 8.4 Center of Mass
11	**Final Exam**, Monday proctored online at Class time.

IMPORTANT: Last day to withdraw May 15.
May 30 College closed for Memorial Day, Won't Affect our class.