Spring 2022 MTH 251
Differential Calculus

CRN 41011

Instructor Name: *Shannon Harbert*

Email: harbers@linnbenton.edu

Virtual Office: Zoom Link in Moodle

Class Times: M,T,W,R,F from 12-12:50

Class Location: WOH 126

Q&A Drop in Hours: Monday 2-3 Tuesdays/Thursdays from 11-12 or email for an appointment.

Our Class Discord   Shannon's "Virtual" Office

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.
- Optional: Webcam for collaborating and office hours

Course Description

The first course in the calculus sequence for students majoring in mathematics, science and engineering. Limits and derivatives are approached using graphical, numeric, and symbolic methods. Linear approximations, related rates, curve sketching and optimization are among the applications of differentiation covered in this course. PREREQUISITE: MTH 112 Trigonometry or equivalent.

What will you learn in this course?

- Calculate, interpret and communicate the concepts of limits and derivatives.
- Recognize when and how to apply calculus tools to solve problems in business, the sciences, and engineering.
- Connect the graphical behavior, numerical patterns and symbolic representation of functions and their derivatives.

How will your grade be calculated?

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

      30%...Online Homework
      15%...Write-ups
      10%...Derivative Proficiency Exam
      20%...Midterm
      25%...Final Exam

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%

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/Achieve several times each week to view lessons, complete lesson activities, online homework and write-ups.

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

Lessons and Lesson Prep

Preview Assignments (Lesson Preparation)

Each topic we learn about will have a preview assignment to complete in Moodle prior to the lesson covering that topic. These preview assignments will help you prepare for the discussions and activities that happen during the lesson. Taking time to complete a 10 minute preview activity will make your learning more efficient and save you time. Some preview assignments will be graded solely on participation.

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 to be found on our course calendar, or in Achieve. There will be soft deadlines

(where you can earn 100% of the homework points) and hard deadlines (where you can earn 75% on those problems not already completed). The hard deadlines will be one week after the soft deadline.

Write Ups   (Written Homework)
Write-ups will help you solve more complex problems and practice communicating your solutions. Weekly write-ups will be uploaded as a pdf in Moodle. Start these assignments early as the problems are often challenging.

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 one midterm, a derivative proficiency test, and a comprehensive final exam for this course. All exams must be proctored and will be taken in class.

Class Resources

This class has resources to support your success!

Student Drop In Office Hours
If you have questions, please ask me! I have scheduled office hours but you're welcome to drop in at other times too. You can also reach me through Discord or by email.

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". Otherwise, if you miss an online preview or online homework assignment deadline, you can still earn up to 75% credit for up to one week or until the exam covering that material, whichever is sooner. Write-ups need to be turned in by the deadline so we can discuss them in class.

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. If you miss any classes the first week of school, you will be dropped for nonattendance. Also, If you do not login by Friday of the first week of classes to Moodle and Achieve, as well as complete the assignments due before Friday, you will be dropped for nonattendance. If there is a class that you will be unable to participate in, please let your instructor know. Students are responsible for any material, updates, or other information in Moodle or sent by email to their student email account.

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. 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)

Course Calendar

You can find the tentative course calendar at this link: [Tentative Class Calendar](#)