

# MTH 251 Differential Calculus Fall 2020

# Instructor Information

Name: Claire Burke

Email: <u>burkec@linnbenton.edu</u>

Text Message: Sign up for Remind to text Claire (instructions are in Moodle)

Virtual Office: You can find the link to Claire's virtual office in Moodle

**Q&A Drop in Student Hours:** Tuesdays 10am-11am, Tuesdays 1pm-2pm, Thursdays

10am-11am, or email for an appointment.

When contacting your instructor you can expect a response within one business day.

# **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.

# When you complete this class, you will be able to

- 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.

# What do you need for this class?

- Daily access to a computer and the internet.
- A webcam and zoom account for class meetings/testing
- A calculator that does not have a symbolic manipulator to use for tests (I recommend the TI-36XPro)
- Free Textbook: Active Calculus by Matthew Boelkins, David Austin and Steven Schlicker
  - o HTML Version: <u>https://activecalculus.org/single/frontmatter.html</u>
  - PDF Version: https://scholarworks.gvsu.edu/books/18/

# How will your grade be calculated?

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

Category	Percent
Moodle Lessons	10%
Class Activity Reflections	10%
WebWorK Practice Problems (Online Homework) and Write-Ups (Written Homework)	25%
Projects	20%
Quizzes	15%
Final Exam	20%

Letter grades will be assigned based on:

А	90%-100%
В	80%-89%
С	70%-79%
D	60%-69%
F	59% or below

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

Overall grades will be rounded UP to the nearest whole percent. (ie 79.1% rounds to up to 80%)

# What exactly is in each category? How will the class work?

For this class, we will use <u>Moodle</u> together with <u>WebWorK</u> and meet virtually for 2 hours each week. Each week you will have several items in Moodle to complete in addition to some WebWorK practice problems. You will need to log into Moodle and WebWorK daily to participate in the course lessons and activities. You will complete items before (class prep), during (class activities), and after class (reflection and practice).

# Class Preparation/Moodle Lessons

Before each class you will have a lesson or two to complete in Moodle. Each lesson will contain a combination of videos and activities to help you explore and build the concepts. These lessons will help you prepare for the discussions and activities in class. Your grade for this category will be calculated by taking the average of the Moodle Lesson scores.

### **Class Activity Reflections**

During each class you will participate in discussion and activities to help deepen your understanding of the concepts and ideas you are learning and will often work in groups. After each class a reflection question will open in Moodle. To earn points for the Class Activity Reflection you will post a response to the reflection question.

## WebWorK Practice Problems (Online Homework)

There will practice problems assigned in WebWorK for each lesson in Moodle. Your grade for this category will be calculated by taking the average of the problem set scores.

### Write Ups (Written Homework)

Each week along with your WebWorK practice problems you may have one write-up homework problem to be completed and uploaded in Moodle.

# Projects

There will be three projects in this course. Specific guidelines for each project will be given and explained when the appropriate material has been covered in the course. Projects will be completed and uploaded in Moodle. You will also make a short video presentation for each project. Each project will include a peer review as part of the project.

# Quizzes and Final Exams (Tests)

There are three quizzes and one comprehensive final exam for this course. The tentative dates for the quizzes are in the course calendar. Quizzes and tests will be proctored using Respondus Monitor. It is your responsibility to test Respondus Monitor prior to the quiz/exam using the practice test available in Moodle. If you are having difficulty with the software contact your instructor in advance of the quiz/test. You can find the day/time of the final exam at <a href="https://www.linnbenton.edu/calendars/finals-schedule.php">https://www.linnbenton.edu/calendars/finals-schedule.php</a>

# **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 by text message through remind, 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 <a href="https://linnbenton.zoom.us/j/579890953">https://linnbenton.zoom.us/j/579890953</a>

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

# **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.

If you miss a WebWorK deadline, you can still complete every assignment and earn up to 75% credit until the end of the last week of classes (December 6th at 11:59pm). WebWorK will not be accepted after this deadline. Projects need to be timely so other students can benefit from your presentation.

Any other late work will be accepted at the discretion of the instructor.

#### 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, it also means that you participate in the class discussions and activities during the virtual classes. Your peers rely on your feedback and input.

If you do not login by Friday of the first week of classes to Moodle **and** WebWorK, as well as attend all classes, you will be dropped for nonattendance. If there is a week that you will be unable to log in and participate, please let your instructor know. Students are responsible for any material, updates, or other information available in Moodle.

#### 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 require 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 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 for 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) <u>Online Services webpage</u>

every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the <u>CFAR Website</u> 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 <a href="http://www.linnbenton.edu/rrc">www.linnbenton.edu/rrc</a>. 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: 2020 Fall Math 251 Tentative Calendar