

**Differential Calculus**

**MTH 251 Spring 2020 CRNs : 40108, 41011, 42460**

Zoom Class Times: Mondays and Wednesdays Class Location: Moodle/Zoom

10:00 - 10:50 a.m. Office: WOH-101

Instructor: Sheri W. Rogers Phone: 541.917.4756

Zoom Office Hours: Tuesdays and Thursdays Email: [sheri.rogers@linnbenton.edu](mailto:sheri.rogers@linnbenton.edu)

10:00 - 11:00 a.m.; 3:00 - 4:00 p.m

or by appointment

**Course Materials:**

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| --- |
| * Regular access to a computer and the internet. * MyLab Math Access – [Class Code Information](https://drive.google.com/open?id=1LOLaa4VGx1eyR7F6xX05iEgQyLp18mwr) * *A scientific calculator or graphing calculator that does not have a symbolic manipulator. The TI-36X-Pro or TI-84 are recommended.* |

**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 with a grade of “C” or better.

**Student Learning Outcomes:** Upon completion of the course, the student will be able to:

1. Calculate, interpret and communicate the concepts of limits and derivatives.

2. Recognize when and how to apply calculus tools to solve problems in business, the sciences, and

engineering.

3. Connect the graphical behavior, numerical patterns and symbolic representation of functions and their

derivatives.

**Grading Policy:** Your grade in this class is weighted based on the following:

Online Homework 20%

Weekly Class Work 25%

Tests (3 @ 10% each) 30%

Projects 25%

Scale: 90%-100% A

80%- 89% B

70%- 79% C

60%- 69% D

0 – 59% F *All grades will be posted in the gradebook on the My Math Lab Website for*

*student viewing.*

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 passing the course prior to the “special circumstance.”

We will be using [**Moodle**](https://library.linnbenton.edu/student-help-desk) in conjunction with [**MyLab Math**](https://www.pearsonmylabandmastering.com/northamerica/mymathlab/) for this course. Each week you will have several items in Moodle to complete in addition to your MyLab Math homework. You will need to **log into Moodle several times each week** to participate in the course activities and download Class Work.

**Online Homework:** There are **homework** exercises assigned for each section we cover. This is your opportunity to practice and learn the material.  **MyLab Math** Homework should be completed by the due dates on the website. Assignments not opened prior to the relevant test will have a zero score. Problems in open assignments completed after the due date receive a 30% penalty.

**Projects and Write-Ups:**

* Selected problems from the textbook are assigned as a **Homework Write-Up**. You are expected to carefully write up the solution to each problem and turn it in on the assigned date. The write up will include: the problem statement, all steps--including the calculus and algebra necessary to solve it, appropriate explanation of the process and the answer clearly identified. It should be written so that anyone in a MTH 251 class would be able to easily follow and understand your solution. Homework Write-Ups will be graded on correctness, presentation, readability and the communication of your solution. Up to one half of the grade is based on the *communication and explanation of the solution.* In other words, an incorrect but well-explained solution can still earn up to half of the points. Similarly, a correct solution without explanation can lose up to half of the points.
* Projects will include applications of the material for the course. Specific guidelines for each project will be given and explained when the appropriate material has been covered in the course. Expect 3-4 projects this term.

**Weekly class work:** These are short assignments or activities, given and completed the same week the material is covered. Typically you will work in small groups, putting what you just learned into immediate practice. If you are unable to attend the Zoom Class Meetings, you will still be able to download and complete these on your own or with your own zoom group.

All written assignments that are completed outside of class are due at 11:59 p.m. on the due date. Late assignments will not be accepted after Sunday following the due date. **Late work will receive a 20 percentage point penalty.** It is important that you seek out help with assignments ***before*** the date they are due. I will drop the lowest score from the class work category at the end of the quarter.

***Please be prepared to upload your completed work as a pdf file. Please be sure items are numbered and pages are in order. One single combined document for each assignment is preferred.***

**Tests:**

* Written Tests (2) will have a 15-hour time limit and must be submitted on the scheduled day. No retakes for these tests.
* The MyLab Math Test (1) must be completed in one sitting. There will be a window of several days for you to log in and complete the test. Your supporting, written work for each problem will be submitted to me as a pdf as soon as you complete the test. Two retakes are allowed for this test.
* The *tentative* test dates are listed on the course calendar. If you have been missing class prior to a test, it is your responsibility to confirm the date of the test as it may change.

**Attendance:** I will monitor your participation and attendance through your Moodle log-in record, your timely completion of online homework and written assignments.  *Attendance, effort and attitude will be noted by the instructor and may be used to help determine “borderline” grades.*

**HELP!**  If you have questions, PLEASE ask!

* I have scheduled Zoom office hours when you can drop in:
  + Tuesday/Thursday 10:00 a.m. - 11:00 a.m. and 3:00-4:00 p.m. (zoom links on Moodle)
* Email me for a scheduled Zoom appointment [rogerss@linnbenton.edu](mailto:rogerss@linnbenton.edu)
* Use the “Email instructor” feature on My Math Lab
* Visit my [instructor website](http://cf.linnbenton.edu/mathsci/math/rogerss/web.cfm?pgID=5676) and [Moodle](https://library.linnbenton.edu/student-help-desk) for helpful links, [class notes](https://1drv.ms/u/s!AkWlk_uzPKHHnU0lr5HoEEIRePAz), videos, class work and announcements.
* The **Math Desk** WILL be operating Spring Term to support students working remotely via Zoom, with drop-in help available during our standard hours:
  + 8am - 9pm Mon - Thu; 8am - 5pm Fri; 11am - 4pm Sat
  + 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/hours-and-locations/index.php>. This will have all relevant Zoom meeting links, hours, and updated information.
* **Form a study group:** Your classmates are important resources for understanding and completing the homework. 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. The most successful calculus students form study groups early.

#### Expectations:

* I expect that my students will be involved in and working on this class several times a week. This includes asking questions and participating in group discussions, watching videos, etc.
* Spend **at least 10-15 hours per week working on this class.**
* You should log into Zoom meetings prepared (this means you should have your notebook, table/laptop, work, etc. ready).
* I expect you will be respectful of everyone in the class, in word as well as behavior. Discussion board posts should be respectful and supportive of the success of everyone in the class. We will all need extra patience and kindness this term.

**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.

**Special Circumstances:**  LBCC is committed to inclusiveness and equal access to higher education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would like to use your accommodations in the class, please talk to your instructor as soon as possible to discuss your needs.

If you believe you may need accommodations but are not yet registered with CFAR, please visit the [CFAR Website](http://www.linnbenton.edu/cfar) for steps on how to apply for services or call 541-917-4789.

**Nondiscrimination Statement:**

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy P1015 in our [Board Policies and Administrative Rules](http://linnbenton.edu/42145BA0-3DCC-11E3-AA36782BCB47BBE7). Title II, IX, & Section 504: Scott Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806. To report: [linnbenton-advocate.symplicity.com/public report](http://linnbenton-advocate.symplicity.com/public_report).

***The instructor reserves the right to make changes to the syllabus as necessary.***

***Sample Moodle Week 1 layout (I am still editing this!)***

**Lesson 1**

1. Download and read the course syllabus.
2. Complete the Syllabus Search Activity.
3. Use Free access code to log into MyLab Math and enter a valid email for yourself.
4. Attend or watch Zoom Class meeting 1 (25 min):
5. Complete the Class Work (Zoom groups optional; 25 min): Secant and Tangent Lines
6. Complete MyLab Math homework for Sections 2.1 and most of 2.2

**Lesson 2**

1. Download Class Work: Definition of Limits from Graphs
2. Download Reference Page: Limit Laws
3. Attend or watch Zoom Class meeting 2 (25 min):
4. Complete the Class Work (Zoom groups optional; 25 min): Limits Practice
5. Complete MyLab Math homework for Sections 2.2 and most of 2.3

**Syllabus Search Activity is due Wednesday, April 8th by 11:59 p.m.**

**Weekly Class Work is due Friday.** Please upload these as one continuous file here on Moodle.

Secant and Tangent Lines

Limits Practice