

MTH 254—Multivariable Calculus—Winter 2019
WOH 120, CRN 34122

Instructor: Dr. Nicole Seaders

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Office Hours: T 1pm, W 10am, F 2pm

Required Materials: MyMathLab Access Code which includes the E-book for *Calculus, Early Transcendentals*, 2nd Edition by Briggs, Cochran and Gillett
Graphing Calculator

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. **Prerequisite:** MTH 252 or equivalent with a grade of C or better.

Outcomes: Upon successful completion of this course, students 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.

Course Grades: Your grade in this class is based on the following:

2 Exams (20% each)	40 %
Final Exam	25 %
Online Homework	15 %
Written Homework	10 %
In-Class Work	<u>10 %</u>
	100 %

Final Grade: 90%-100%=A, 80%-89%=B, 70%-79%=C, 60%-69%=D, <60%=F

Class Work: Mathematics is a combination of knowledge and skill, and like any skill (or sport) can only truly be learned by doing. We will frequently work in groups to solve calculus problems during class. These in-class problems will be worth 5 points each. If you are not in class to work on the problem, then you will not earn credit. There is no way to make up this in-class work but I will drop one of these in-class worksheets at the end of the term.

Homework: Online homework will be completed and submitted electronically using *MyMathLab* and will be due on Tuesdays and Fridays at 11:59 pm (*two each day, four per week*). You must register for this at www.pearsonmylabandmastering.com using the Course ID# seaders61736. Although you will enter your *MyMathLab* answers online, you should still work the problems by hand in a notebook you create for your 254 homework. This will give you practice for writing out solutions for the exam, give you a place to start when asking for help, and give you a clear record of work to use 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 of the problem.

Written Homework will be due weekly on Mondays at the beginning of class (Tues. for Mon. holidays). You should start these assignments *early* as the problems are often challenging.

Tests: There are two midterm exams that you will take in class and a Final that is comprehensive. The tentative dates for these exams are listed on the course calendar. The final exam is determined by LBCC and will be on Wednesday, March 20th from 3-4:50pm. *There are no exam retakes or make-ups.*

Missing Class and Late Homework: If you miss class, check online for the lecture notes and any changes to the schedule. Again, you cannot make up in-class activities. *If you miss a homework deadline, you can still complete every assignment and earn up to 75% credit before the next exam (or before Final's week for the last two weeks).* Homework will not be accepted after this deadline. The biggest reason why students fail to complete a math class is because of poor attendance. If you miss several classes you will find it very difficult to get caught up.

Class resources: This class has many resources to help you succeed.

- Whether you have questions about material, the course structure, or even other topics, I am available in my office hours (drop-in) or by appointment.
- Your classmates are a great resource and studies have correlated academic social groups with success in learning mathematics.
- The Learning Center offers the Math Help Desk and free one-on-one tutoring. (*Hours Mon-Thurs 7:30am-9pm, Fri 7:30am-5pm, Sat 11am-4pm.*)
- [Paul's Online Math Notes](#) for Calculus 3 has additional examples, practice problems and solutions that are a great resource.
- In addition to your textbook, *MyMathLab* has a **StudyPlan** that has additional homework problems with "Help Me Solve This" and "Show Me An Example" options.

Expectations: Expect to come prepared and ready to engage the class. This includes being present, asking questions and participating in activities. We will cultivate a culture of respect in the class, in word as well as behavior. Along these lines, please turn your cell phone ringer off and postpone cell conversations until after class. If you must leave your phone on due to some unusual emergency situation, please notify me before class, set the phone on vibrate and sit near the door so that you can leave class as soon as the phone rings and before you answer it.

Student Support: LBCC has many student support programs. These folks will help with issues that get in the way of your success. Someone can help you find child care, medical help or part-time employment. Check in the Career Center, the Multicultural Center, or Student Life for more information.

Special Circumstances: Students who may need accommodations due to documented disabilities, or who have medical information which the instructor should know, or who need special arrangements in an emergency, should speak with the instructor during the first week of class. If you think you may need accommodation services, please contact Center for Accessibility Resources, 917-4789.

Academic Honesty: I assume that you are ethical and honest. However, 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 be subject to disciplinary action which may include receiving an F for this class. Any incident of this nature will be reported to the administration where it will be noted in your file.

Statement of Nondiscrimination: LBCC maintains a policy of nondiscrimination and equal opportunity in employment and admissions, without regard to race, color, sex, marital and/or parental status, religion, national origin, age, mental or physical disability, Vietnam era, or veteran status. The LBCC community is enriched by diversity.