

## University Mission Statement

Lubbock Christian University is a Christ-centered, academic community of learners, transforming the hearts, minds, and hands of students for lives of purpose and service.

# Course Syllabus

**MAT1316.02 Business Calculus**

**SPRING 2018**

**M/W 11:40-12:55, NSRC 117**

### Instructor Information

Contact Information: David Joyner. Office Phone: 720-7382; email: david.joyner@LCU.edu

Office Hours: *Mon:* 10:40-11:55, 1:15-2:30; *Tues:* 7:00-8:25, 11:40-2:30; *Wed:* 10:40-11:55, 1:15-2:30; *Thur:* 7:00-8:25. (office hours are also on the class website)

Office Location: Natural Sciences Building, office A.

### Course Description and Prerequisites:

Description: Introduction to basic differential and integral calculus with business applications.

Prerequisites: Mat 1315 (Business Math I) or Mat 1311 (College Algebra) or Mat 1313 (Pre-Calculus). I would recommend that you have made at least a B in one of these courses as the algebra is intense in Business Calculus.

### Learning Outcomes

The student will understand the concepts of limits, continuity, and differentiation by definition and by formulas. Business concepts for the student to know include differentiation, marginal analysis, minimum and maximum profit. The student will do integrals by anti-derivatives and the fundamental theorem of calculus. Areas between curves will be determined and used in business applications involving marginal analysis and continuous income streams.

### Teaching Methodology

The objectives of the course will be met primarily through lectures demonstrating the topics covered in the text. Homework will be assigned as each section of the text is covered. Many opportunities for questions and interaction with the instructor and other students will be provided. A class website with assignments and due dates, as well as other helpful material will be kept at [www.rejoicealways.net](http://www.rejoicealways.net)

### Required Text and/or Materials

Text: Mathematical Applications for the Management, Life, and Social Sciences by Harshbarger, Ronald J.; Reynolds, James J, Edition: 11th; ISBN-13: 978-1305108042

Scientific Calculator: TI 82/83/84; HP G8X92AA LA Prime v2, Casio FX9860, FX115 or something similar. I recommend the TI or HP calculator.

Internet Access: Internet Access to the Internet is required for access to homework assignments and extra study materials.

Class website: <http://www.rejoicealways.net/>

### Other Resources and/or Suggested Readings

Other resources will be made available, when appropriate, on the class website.

## Course Policies

1. Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Also, please contact the Disabilities Coordinator in the Office for Disability Services at 806.720.7156 in room 117 CAA to coordinate reasonable accommodations. Be advised accommodations will not be made prior to documentation with the Office of Disability Services.

2. Few students in a Business Calculus course can do well without everyday attendance. Examples and answers to questions are provided in abundance during each class meeting. If you miss a lecture, please find another student who was there and who will provide you with a copy of the examples worked on during that lecture. I will always try to post a student's copy of the notes for each class meeting on the class website.

3. When you miss a class, whether due to illness or school activities, you are still responsible for mastering the material soon enough to be able to take the quiz given before that quiz is graded and given back to the class. If you miss a scheduled quiz, you MUST contact me via email and make arrangements to make it up before the next class meeting after the quiz was given. If your absence was unexcused, I will deduct 15 points from your grade. If you fail to make these arrangements before you come back to the next class meeting, you will receive a zero for the quiz.

4. Honesty and integrity are vitally important! Every student is expected to maintain the highest standards in these areas. It is always acceptable to help another student learn how to do a task with advice and demonstrations. It is never acceptable to do work for another student, who will turn it in and receive credit for it! It is always cheating to turn in work that another student created. If anyone is caught cheating on a quiz or test, a grade of 0 will be entered for that quiz or test. The incident will be reported as outlined in the current Student Handbook.

5. Assignments and tests must be legible. If illegible work is turned in, it will be counted incorrect.

6. Students are responsible for tracking their academic progress in this class throughout the semester. Therefore, students with questions about grades are encouraged to contact the instructor. Final grades will be posted on LCU SelfServe at the conclusion of the semester.

7. Students should refer to the Student Handbook for information regarding the academic integrity policy.

8. Students may be dropped from classes, at the discretion of the professor, due to excessive absences (i.e., three, six, or nine absences in courses meeting once, twice, or three times per week, respectively, and absences for athletic or school-related participation exceeding 25% of the class meetings and/or laboratory sessions). All absences are included. For elaboration of the absence policy, see the current catalog.

9. All materials provided in class or recordings of lectures are copyright protected by Lubbock Christian University and the professor. Your use of these materials beyond preparation for this course (i.e. publishing to a website, distribution to others, etc.) may constitute copyright infringement.

## Assignments and Grading

1. Six to eight quizzes will be given throughout the semester over the homework problems assigned and lecture examples. The average of these quizzes will count as a major exam, along with the final exam. I will double the highest of these and average those three grades. So if your quiz grades are 70, 80, 100, 77, 72 and 70 the average of these grades would be a 78. If you make an 80 on the final exam, I would calculate your grade as follows:  $(78 + 80 + 80) / 3 = 80$  (rounded). This will count as 90% of your course grade. While bonus points will be made available, no grade above a 100 will be recorded.

2. Homework will be randomly collected and graded (from 3 to 8 times through the semester). The average of these grades will count as one quiz.

3. Class participation, attendance and tardiness will count as 10% of your course grade. This gives me an opportunity to reward things like perfect attendance, hard work, class participation, dedication and a great attitude during the class.

4. The grading scale is: A = 90 - 100, B = 80-89, C = 70-79, D = 60-69, F = below 60. A decimal average will be rounded to the next higher integer (a 79.50 would be an 80 for a B, a 79.49 would be a 79 for a C). I know this doesn't seem always quite fair, but this comes from our traditional way of recording letter grades. There has to be a dividing point. I will under no circumstances ever "budge" a numeric grade up at one of these dividing points. Whatever you make is exactly what you will get. With this in mind, you need to make sure your attendance and daily work is good enough to carry you over if your quiz average by itself is going to be close to that dividing point!

Example: Quiz Average = 78, Final exam = 80. Attendance/Participation = 90.  
Course grade =  $0.9 * (78 + 80 + 80) / 3 + 0.1 * 90 = 80.4$  gives a "B" for the course.

## Instructional and Outside Word Estimate

Face to face time (3 hrs/wk x 15 wks) = 45 hrs

Chapter Readings (280 pages) = 14 hrs

Quiz Preparation (approximately 6 quizzes at 4 hrs/quiz) = 24 hrs

Exam Preparation (1 final exam, 8 hrs study time) = 8 hrs

Assignments (approximately 25 assignments x 2.25 hours per assignment) = 56.25 hrs

Miscellaneous Assignments (extra practice problems, tutor meetings, etc. average of 2 hours each for 5 occurrences) = 10 hours

Total Time = 157.25 hrs

## Tentative Schedule and/or Due Dates

A tentative schedule of material will be given the second class meeting. This is subject to change. official schedule of material covered and assignments given will always be available on the class website - ([www.rejoicealways.net](http://www.rejoicealways.net)). Notice that this is NOT a MOODLE site. I do NOT use MOODLE. In our textbook we will cover material from chapters 9-14. I sometimes include additional resources for the material covered on a given day.. If you miss a class, always consult the class website to make sure you are caught up on assignments and to know what to study for on an exam or quiz. Always check the class website for the official, up to date schedule of assignments!