

Math 180 Liberal Arts Business Calculus

Instructor: Dr. Jianmin Ma

Meeting: Seney 209 (10J, 11J)

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1. **Text:** Calculus for business, economics, and the social and life sciences, Hoffman/Bradley, 9th Edition, McGraw Hill
2. **Content:** This course is a survey of introductory calculus: Topics include limits, derivatives, and integrals including exponential and logarithmic functions with an emphasis on applications in economics and finance and the life and social sciences. Applications covered include present and future value of income streams, demand and supply curves, and elasticity of demand. The list of application is subject to change. We will cover most of topics from chapters 1-7 of our text.
3. **Prerequisites:** Math 110A/AX (with grade C and above) or Math placement.
4. **Learning outcomes:**
 - A clear understanding of functions (esp. polynomials, exponential and logarithmic), their definition, limits, continuity and differentiability. Reading and interpreting graphs of functions.
 - The ability to calculate the derivative of a function by definition and differentiation rules.
 - The ability to apply the derivatives to the approximation of functions, to derive behaviors of graphs (monotonicity, concavity and extreme values) and to solve certain applied problems.
 - A clear understanding of the definite integral – definition, calculation, antiderivative and the fundamental theorem of calculus.
5. **Grades:** The grade will be based on the total of four exams (400), quizzes and homework (100), final (200), and others (50). There are total of 750 points. The grade will be assigned as follows: A (91-100%), B (81-89%), C (71-79%), D(58-69%) and F (57% and lower).
6. **Important dates:**
 - Last day to drop with academic penalty: March 6
 - Final: May 6, 9:00-12:00 for 10J, 2:00-5:00 for 11J
 - Exam dates: Feb. 10, March 5, April 2 and 23.
7. **Quizzes and Tests:** Arrangement for making up tests is the responsibility of the student and should be made IN ADVANCE. Quizzes will be given in class with or with prior announcement. There is no makeup quizzes. Of course, emergency will be handled differently.
8. **Homework:** Homework will be assigned a regular basis, and some homework problems will be collected. I reserve the right not to announce which homework will be collect in advance. **So you are expected to attend every class and bring your recent homework to class.** From my experience, **I have observed that the amount of homework a student does will have a huge impact on how well he/she does in the course.** Try no t to fall behind – it is difficult to catch up in a math class.
9. **Blackboard:** The course is hosted on blackboard. You should check the course site at least once on every weekday for announcement and homework posting.

10. **Calculator:** This course does not require any calculator. If you do have one, you may use it for checking your work. However, no calculator is allowed on the tests.

11. **Course policies:**

- Attendance is important. Please be considerate and be on time for class.
- Students are encouraged to see help when need from the instructor. You do not need an appointment to see me during the office hours. Don't wait till the day before the final to get help!
- Honor code is in force all the time. If there is any doubt that what you want to do will be considered a violation of honor code, ask first!