

MATH 1316 Mathematics for Economics and Business Analysis

Summer 2015

Section 001: PKH 110, 6:00PM - 7:50PM, TuTh

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Office Hours: 5:00 - 6:00 PM, TuTh; or by appointment.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a Mav-Mail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Textbook: *Mathematical Applications for the Management, Life and Social Sciences, 10th Custom UTA Edition*, by Harshbarger and Reynolds.

Course Prerequisites: Math 1315 or equivalent.

Description of Course Content: The topics covered in this class include logarithms and exponential functions, math of finance, and differential and integral calculus. Chapters 9, 10, 11, 12, 13 in the textbook will be covered.

Learning Outcomes: Upon completion of Math 1316, the students should have an understanding of interest, annuities, differential and integral calculus, and be able to apply these mathematical tools to analyze business and economics problems.

Grading Scale: A: 90-100 B: 80-89 C: 70-79 D: 60-69 F: 0-59

Grade components:

1. Midterm 1 — 20%, Tuesday, June 30, 2015; 6:00-7:50 pm (in class)
2. Midterm 2 — 20%, Tuesday, July 21, 2015; 6:00-7:50 pm (in class)
3. Final examination — 30%, TBD; 6:00-8:30 pm (in class)
4. Homework and quizzes — 30%. There are five quiz in total. Each quiz(**50 mins in class**) is 6 points and total is 30 points. Homework assignments will **NOT** be collected, thus NOT be graded. However, you are strongly encouraged to work on these problems, since similar ones may appear on your quizzes and exams. Calculators TI-30XA or TI-30XIIS can be used in quizzes and exams. Students need prepare Scantron (Form 882-E) for quizzes and exams.

Attendance Policy: To succeed in this class it is strongly recommended that you attend every class. A missed quiz or exam cannot be made up.

Student Support Services Available: The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counselling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817-272-6107 or visit www.uta.edu/resources for more information.

The math clinic on 3rd floor PKH offers free one-on-one help, and cost share tutoring is available by calling 817-272-2617.

START STRONG Freshman Tutoring Program: All first time freshmen can receive six FREE hours of tutoring for this course and other selected subjects for this semester. To sign up, visit UTSI in 205 Ransom Hall/University College. Upon completion of your first tutoring appointment, you will receive five hours of additional free tutoring. Flexible tutoring hours are available from 7:00am - 9:00pm, seven days a week in the Central Library. All tutors receive extensive training. Find out more at www.uta.edu/Startstrong.

SUPPLEMENTAL INSTRUCTION: Supplemental Instruction (SI) is a FREE voluntary academic development program that increases student performance and retention. The program is offered to all students in this class, as well as for other historically difficult subjects on campus. SI provides regularly scheduled out-of-class peer facilitated sessions. Senior students (SI Leaders), who have successfully taken the course before, facilitate structured group study sessions to support students to master course content and learn effective study skills. On average, students who attend SI on a regular basis, obtain a half letter to a full letter grade higher when compared to those students who do not attend. It is also a great way to get to know students in your class. All SI Leaders receive extensive training. Session times will be presented by your SI Leader during the first week of class; alternatively you can visit our website at www.uta.edu/utsi.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. **Students must consult with their major advisor to drop a course.** Drops can continue through a point two-thirds of the way through the term or session. Any student who drops the course on or before Friday, April 3 at 4:00 PM will receive a W. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/aao/fao/>).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 - The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation

entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. As a faculty member, I am required by law to **provide “reasonable accommodation”** to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests **with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.**

If you require an accommodation based on disability, I would like to meet with you in the privacy of my office, during the first week of the semester, to make sure you are appropriately accommodated.

Title IX: The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity: Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents’ Rule 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as “lecture”, “seminar”, or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or

following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911. For non-emergencies, contact the UTA PD at 817-272-3381.

Important Dates:

Jun 08	First Day of Class
June 25	Census Date
Tuesday, June 30	Midterm 1, 6:00-7:50 pm
Tuesday, July 21	Midterm 2, 6:00-7:50 pm
Thursday, July 23	Last day to drop a class
(Submit request to advisor prior to 4 pm)	
August 13	Last Day of Class
August 17	Final Exam, 6:00-8:30 pm
FINAL TIME might change due to the class progress	

Course Schedule:

1. 06/09/2015, Section 9.1, Limits. Section 9.2, Continuous Functions.
2. 06/11/2015, Section 9.3, Definition of Derivative. Section 9.4, Derivative Formulas.
3. 06/16/2015, Section 9.5, Product and Quotient Rules **Quiz 1: 9.1-9.4.**
4. 06/18/2015, Section 9.6, Chain Rule. Section 9.7, Using Derivative Formulas
5. 06/23/2015, Section 9.8, Higher Order Derivatives. Section 9.9, Applications.
6. 06/25/2015, Section 10.1, Relative Max/Min. **Quiz 2: 9.5-9.9.**
7. 06/30/2015, **Midterm 1: 9.1-9.9**
8. 07/02/2015, Section 10.2, Concavity and Inflection. Section 10.3, Optimization in Business.
9. 07/07/2015, Section 10.4, Applications. **Quiz 3: 10.1-10.3.**
10. 07/09/2015, Section 11.1, Derivative of Log Functions. Section 11.2, Derivative of Exponentials.

11. 07/14/2015, Section 11.5, Applications. Section 12.1, Indefinite Integrals.
12. 07/16/2015, Section 12.2, Power Rule. **Quiz 4: 10.4-11.5**
13. 07/21/2015, **Midterm 2: 10.1-12.2**
14. 07/23/2015, Section 12.3, Log-Exp Integrals. Section 12.4, Applications.
15. 07/28/2015, Section 13.1, Summation Problems. Section 13.2, Definite Integrals.
16. 07/30/2015, Section 13.4, Consumer and Producer Surplus. **Quiz 5: 12.1-13.1**
17. 08/04/2015, Section 13.6, Integration by parts.
18. 08/06/2015, Pending (Lecture or Review)
19. 08/11/2015, Pending (Review or Final)
20. 08/13/2015, Pending (Review or Final)

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. — PENGCHENG XIAO