MATH 1315-002

Algebra for Economics and Business Analysis

Spring 2014

Instructor: Yinlin Dong

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Office: PKH 410

Office hours: MW 11:00am - noon or by appointment

Meets: MW 5:30pm - 6:50pm in PKH 319 from Jan 13 to May 2

Prerequisite: MAT score of at least 11

Required Materials: Textbook: Tenth Edition of Mathematical Applications for the Management, Life, and Social Sciences by Ronald J. Harshbarger and James J. Reynolds

Accompanying webassign packet is mandatory, course code is: uta 7486 7638

Graphing calculator is strongly suggested.

Course Objectives: To learn to think critically, be part of a community of learners and appreciate the applications of business algebra.

Course Description: Topics include sets, exponents, factoring, algebraic fractions; linear equations/inequalities, linear functions, system of equations, quadratic functions, parabolas; matrices, matrix multiplication, linear programming; probability, conditional probability, Bayes formula, permutation/combination. The topics presented will be solved using algebraic, graphical and numerical approaches.

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

Grading Policy: Homework: not counted toward final grade but strongly suggested.

- 1. Use the assignment sheet to do problems from the textbook. Answers to odd questions are in the back of the book. OR
- 2. Do the online homework assignments. Online homework has unlimited attempts, provides instant feedback, guided solutions and tutorials.

Quizzes: 10%, 5 quizzes total (chapters 0, 1, 2, 3 and 7). All quizzes are online and become available one week before their corresponding exams and are due at the same time as the exams. Feel free to work them early. 8 attempts are permitted before the due dates and you are allowed to use the guided instruction. The lowest quiz grade will be dropped.

Exam 1: 15% chapter 0 opens Friday, 12 a.m. 1/31/14 closes 11:59 p.m.

Exam 2: 15% chapter 1 opens Friday, 12 a.m. 2/21/14 closes 11:59 p.m.

Exam 3: 15% chapter 2 opens Friday, 12 a.m. 3/7/14 closes 11:59 p.m.

Exam 4: 15% chapter 3(w/section 4.1 included) opens Friday, 12 a.m. 4/4/14 closes 11:59 p.m.

Exam 5: 15% chapter 7 opens Friday, 12 a.m. 4/25/14 closes 11:59 p.m.

The lowest exam (from 1-5) will be dropped.

Final Exam: 30% The final is departmental, Saturday, May 3, 3:30 p.m.-6 p.m. Location is TBA.

- **Makeup Policy:** There will be no make-up exams or make-up quizzes offered. With a university approved excuse for missing an exam, the missing exam grade will be replaced by the final exam grade.
- **Drop Policy:** The last day this semester to drop a course is 03/28/14. Any student who drops the course on or before will receive a W. Students must contact an advisor in their major in order to drop a course.
- **Attendance:** Students are expected to attend each lecture, arrive in class on time, and stay the entire class period. Mobile phones and other non-approved electronic devices must be turned off. If you must miss a class, it is your responsibility to find out all information from the class you missed, including material covered and any other announcements made.
- Electronic Communication: E-mail is a prime means for communication. Therefore, the University has the right to send communications to students via e-mail and the right to expect that those communications will be received and read in a timely fashion. The Office of Information Technology (OIT) will assign all students an official University e-mail address. It is to this official address that the University will send e-mail communications. Students are expected to check their official e-mail account on a frequent and consistent basis to stay current with University communications. The University recommends checking e-mail daily in recognition that certain communications may be time-critical.
- **Help in the Course:** The Math Clinic (PKH 325) is available to you seven days a week (Summer hours may be different) at no additional cost. The SOAR program (Hammond Hall 132) provides tutors on a cost-share basis. The Science Education and Career Center (Life Sciences 106) has tapes and other material pertinent to the course. The Math Department maintains a list of people, primarily graduate students, who are available for hire.
- Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.

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

I pledge, on my honor, to uphold UT Arlingtons 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 universitys 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 students suspension or expulsion from the University.

Student Disruption: The University reserves the right to impose disciplinary action for an infraction of University policies. For example, engagement in conduct, alone or with others, intended to obstruct, disrupt, or interfere with, or which in fact obstructs, disrupts, or interferes with, any function or activity sponsored, authorized by or participated in by the University.

Drop for Non-Payment of Tuition: If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursars office.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should move toward the nearest exits, which are located at the front of the room along the north and south walls. 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.

Important Dates: Spring 2014

Martin Luther King Jr. Day (Monday, Jan 20)

Census date (Jan 29)

Spring Break (Mar 10-14)

Last day to drop a class (Mar 28)

Last day of classes (Friday, May 2)

Disclaimer: Changes to this document or the tentative schedule may be made at the discretion of the instructor.

Tentative Schedule: Spring 2014

1/13	1/15	1/22	1/27	1/27	1/29	1/31	2/3
0.1	0.2,0.3	0.4	0.5	0.6	0.7	exam 1	1.1
2/5	2/10,2/12	2/17	2/19	2/21	2/24	2/26	3/3
1.2	1.3	1.5	1.6	exam 2	2.1	2.2	2.3
3/5	3/7	3/17	3/19	3/24	3/26	3/31	4/2
2.4	exam 3	3.1	3.2	3.3	3.4	4.1	4.2
4/4	4/7	4/9	4/14	4/16	4/21	4/23	4/25
exam 4	7.1	7.2	7.3	7.4	7.5	7.6	exam 5

Assignment Sheet: (use as an alternative to the online homework)

- 1. Sets(0.1) p8 1-49 odd, 51,53 ,55
- 2. Real numbers-exponents(0.2-0.3) p14 1-49 odd,51,53,55; p19 1-55 odd,63,65
- 3. Radicals-exponents (0.4) p27 1-65 odd,69,71,73
- 4. Algebraic expressions(0.5) p34 1-67 odd,69,71,73
- 5. Factoring (0.6) p39 1-57 odd
- 6. Algebraic fractions(0.7) p45 1-51 odd
- 7. Linear equations/Inequalities(1.1) p62 1-41 odd
- 8. Functions (1.2) p73 1-41 odd
- 9. Linear Functions(1.3) p85 1-45 odd,49
- 10. Systems of equations(1.5) p104 1-27 odd,41-47 odd
- 11. Applications(1.6) p112 1-37 odd
- 12. Quadratic equations(2.1) p134 1-43 odd
- 13. Parabola (2.2) p143 1-21 odd,31
- 14. Applications(2.3) p151 1-33 odd
- 15. Special functions(2.4) p162 1-11 odd, 25-33 odd
- 16. Matrices (3.1) p194 1-35 odd
- 17. Matrix Multiplication (3.2) p 206 1-35odd
- 18. Gauss Jordan (3.3) p219 1-29 odd,51,55
- 19. Matrix Inverse(3.4) p234 1-31 odd,39,41
- 20. Linear Ineq (4.1) p265 1-27 odd
- 21. Linear programming(4.2) p275 1- 19 odd,27, 29
- 22. Probability (7.1) p437 1-23 odd,41, 43, 55
- 23. Union/intersection(7.2) p446 1-21 odd
- 24. Conditional probability(7.3) p455 1-25 odd, 35, 37, 39
- 25. Bayes Formula(7.4) p464 1-25 odd
- 26. Permutations/Combinations(7.5) p470 1-39 odd
- 27. Perm/combinations & Probability(7.6) p474 1-19 odd, 27, 29, 31