

Syllabus, Math 114.06, CRN 31490, Winter 2015

Instructor: Ms. Rani Fischer, fischerrani@fhda.edu

Office Hours: after class on MWF

Classroom: MLC260

Textbook: Clark & Anfinson, *Intermediate Algebra: Connecting Concepts Through Applications*, 2012

What to bring every day: textbook, notebook, loose-leaf paper, pencils, two colored pens, graph paper. Also, a scientific calculator is required. A graphing calculator is recommended. The TI-83 or TI-84 is preferred, and the TI-89 is not allowed.

Class Rules: Be considerate and respectful. No cell phones.

Objectives:

- a. Develop systematic problem solving methods.
- b. Investigate the characteristics of rational relationships.
- c. Develop rational function models to solve problems.
- d. Explore the concepts of inverse relations and functions.
- e. Investigate exponential relationships.
- f. Explore logarithmic functions.
- g. Develop exponential and logarithmic models to solve problems.
- h. Investigate distance and develop the equation of a circle.
- i. Explore sequences and series.
- j. Investigate how mathematics has developed as a human activity around the world.

STUDENT LEARNING OUTCOMES:

Evaluate real-world situations and distinguish between and apply linear and quadratic function models appropriately.

Analyze, interpret, and communicate results of linear and quadratic models in a logical manner from four points of view - visual, formula, numerical, and written.

Demonstrate an appreciation and awareness of applications in their daily lives.

Homework: All HW will be collected. **On the schedule below do multiples of 3 for each section. NO LATE HW ACCEPTED. I will give you four free HW's in case you are sick or too tired to do HW. If you do more than 20 HW's, you will get extra credit.** To receive full points for HW, you must have completed HW on the day it is due and show all the steps. If you give answers without any explanation, you will not receive full credit. Write me notes to ask me questions in the HW so that I can know where you are stuck. HW is graded 1-5 where 5 is a perfect score. I am grading HW on effort and thinking, not for correct answers. You check the answers in the back of the book and ask questions on paper or in class.

Quizzes: You will have a quiz every week based on HW problems. No make-ups allowed.

Tests: There will be several tests and a Final Exam. Each test, in addition to covering the current material, will contain several problems from previous chapters to help you retain cumulative information. The tests will be closed books and closed notes.

Final Exam: A comprehensive cumulative final exam will be given at the end of the quarter (see schedule). **Students must score a 60 or above on the final exam to pass.**

Grading:

Homework-20%
Quizzes-20%
Tests-30%
Final Exam-30%

Course Grade:

90-100% =A
80-89% = B
69-79% = C
60-69% = D
below 60% =F

Advice: This is a very intense and fast-paced course, and **you must have time to do the HW.** Start the HW as soon as you can. There is so much, that you cannot do it all at once. Start early and take breaks.

<u>M</u>	<u>T</u>	<u>W</u>	<u>Th</u>	<u>F</u>
1/5/2015 Sec 5.1 intro to exponential functions	1/6/2015 Sec 5.1 patterns of growth and decay	1/7/2015 Sec. 5.2 solving with exponential rules, HW #1 due	1/8/2015 Sec. 5.2	1/9/2015 Sec. 5.3 graphing exp functions, HW #2 due
1/12/2015 Sec. 5.3	1/13/2015 Sec. 5.4 finding exp models, HW #3 due	1/14/2015 Sec. 5.4	1/15/2015 Sec 5.5 growth and decay rates, HW #4 due	1/16/2015 Sec 5.5 compound interest
1/19/2015 MLK, Jr's birthday-NO CLASS	1/20/2015 Review Ch 5, HW #5 due	1/21/2015 Test on Ch 5	1/22/2015 Sec 6.1 inverses	1/23/2015 Sec 6.2 log functions, HW #6 due
1/26/2015 Sec 6.2 solving log eq	1/27/2015 Sec 6.3 graphing log functions, HW #7 due	1/28/2015 Sec 6.3	1/29/2015 Sec 6.4 properties of , HW #8 due	1/30/2015 Sec 6.4
2/2/2015 Sec 6.5 Solving exp eq, HW #9 due	2/3/2015 Sec 6.5	2/4/2015 Sec 6.6 Solving log eq, HW #10 due	2/5/2015 Sec. 6.6	2/6/2015 Review Ch 6, HW #11 due
2/9/2015 Test on Ch 6	2/10/2015 Sec 7.1 Rational functions	2/11/2015 Sec 7.1 Variation	2/12/2015 Sec 7.2 simplifying rational exp, HW #12 due	2/13/2015 Lincoln's birthday- NO CLASS
2/16/2015 GW's birthday - NO CLASS	2/17/2015 Sec 7.2	2/18/2015 Sec 7.3 multiplying rat exp, HW #13 due	2/19/2015 Sec. 7.3 dividing rat exp	2/20/2015 Sec. 7.4 adding rat exp, HW #14 due
2/23/2015 Sec 7.4 subtracting rat exp	2/24/2015 Sec. 7.5 solving rat eq, HW #15 due	2/25/2015 Sec 7.5	2/26/2015 Rev Ch 7, HW #16 due	2/27/2015 Test on Ch 7
3/2/2015 Sec 8.1 radical functions	3/3/2015 Sec. 8.2 adding & subtr radicals, HW #17 due	3/4/2015 Sec. 8.3 multiplying & dividing radicals	3/5/2015 Sec. 8.4 solving radical eq, HW #18 due	3/6/2015 Sec 8.4
3/9/2015 Sec 8.5 operations, HW #19 due	3/10/2015 Sec 8.5 solving complex eq	3/11/2015 Review Ch 8, HW #20 due	3/12/2015 Test on Ch 8	3/13/2015 Sec 9.1 conic sections
3/16/2015 Sec 9.1 circles	3/17/2015 Sec 9.3 arithmetic seq, HW #21	3/18/2015 Sec 9.4 geometric seq	3/19/2015 Sec 9.5 series, HW #22 due	3/20/2015 Review Ch 9
3/23/2015 Review for Final, HW #23 due	3/24/2015 NO CLASS	3/25/2015 NO CLASS	3/26/2015 FINAL EXAM 9:15-11:15 am, HW #24 due	3/27/2015 NO CLASS

Do multiples of 3 unless stated otherwise.

HW #1 p.425-429

HW #2 p.437, 438

HW #3 p.448, 449

HW #4 p.457-459

HW #5 p.469-471

HW #6 p.492-495, do multiples of 5

HW #7 p.504-505, do multiples of 5

HW #8 p.510-512

HW #9 p.516-517

HW #10 p.526-527

HW #11 p.534, 535

HW #12 p.563-566

HW #13 p. 575-576, do multiples of 5

HW #14 p.580-581

HW #15 588-591, do multiples of 5

HW #16 p.598-600, stop at #63

HW #17 p.624-629, do multiples of 5

HW #18 p.633, 634, 642, 643 do multiples of 5 on all pages

HW #19 p.652, 653

HW #20 p.663

HW #21 p.700-702

HW #22 p.727, 736, 737

HW #23 p.746, 747

HW #24 p. 758 do all except #3, 5, and 8

<u>M</u>	<u>T</u>	<u>W</u>	<u>Th</u>	<u>F</u>
1/5/2015 Sec 5.1 intro to exponential functions	1/6/2015 Sec 5.1 patterns of growth and decay	1/7/2015 Sec. 5.2 solving with exponential rules, HW #1 due	1/8/2015 Sec. 5.2	1/9/2015 Sec. 5.3 graphing exp functions, HW #2 due
1/12/2015 Sec. 5.3	1/13/2015 Sec. 5.4 finding exp models, HW #3 due	1/14/2015 Sec. 5.4	1/15/2015 Sec 5.5 growth and decay rates, HW #4 due	1/16/2015 Sec 5.5 compound interest
1/19/2015 MLK, Jr's birthday-NO CLASS	1/20/2015 Review Ch 5, HW #5 due	1/21/2015 Test on Ch 5	1/22/2015 Sec 6.1 inverses	1/23/2015 Sec 6.2 log functions, HW #6 due
1/26/2015 Sec 6.2 solving log eq	1/27/2015 Sec 6.3 graphing log functions, HW #7 due	1/28/2015 Sec 6.3	1/29/2015 Sec 6.4 properties of logs, HW #8 due	1/30/2015 Sec 6.4
2/2/2015 Sec 6.5 Solving exp eq, HW #9 due	2/3/2015 Sec 6.5	2/4/2015 Sec 6.6 Solving log eq, HW #10 due	2/5/2015 Sec. 6.6	2/6/2015 Review Ch 6, HW #11 due
2/9/2015 Test on Ch 6	2/10/2015 Sec 7.1 Rational functions	2/11/2015 Sec 7.1 Variation	2/12/2015 Sec 7.2 simplifying rational exp, HW #12 due	2/13/2015 Lincoln's birthday- NO CLASS
2/16/2015 GW's birthday - NO CLASS	2/17/2015 Sec 7.2	2/18/2015 Sec 7.3 multiplying rat exp, HW #13 due	2/19/2015 Sec.7.3 dividing rat exp	2/20/2015 Sec. 7.4 adding rat exp, HW #14 due
2/23/2015 Sec 7.4 subtracting rat exp	2/24/2015 Sec. 7.5 solving rat eq, HW #15 due	2/25/2015 Sec 7.5	2/26/2015 Rev Ch 7, HW #16 due	2/27/2015 Test on Ch 7
3/2/2015 Sec 8.1 radical functions	3/3/2015 Sec. 8.2 adding & subtr radicals, HW #17 due	3/4/2015 Sec. 8.3 multiplying & dividing radicals	3/5/2015 Sec. 8.4 solving radical eq, HW #18 due	3/6/2015 Sec 8.4
3/9/2015 Sec 8.5 operations, HW #19 due	3/10/2015 Sec 8.5 solving complex eq	3/11/2015 Review Ch 8, HW #20 due	3/12/2015 Test on Ch 8	3/13/2015 Sec 9.1 conic sections

3/16/2015 Sec 9.1 circles	3/17/2015 Sec 9.3 arithmetic seq, HW #21	3/18/2015 Sec 9.4 geometric seq	3/19/2015 Sec 9.5 series, HW #22 due	3/20/2015 Review Ch 9
3/23/2015 Review for Final, HW #23 due	3/24/2015 NO CLASS	3/25/2015 NO CLASS	3/26/2015 FINAL EXAM 9:15-11:15 am, HW # 24 due	3/27/2015 NO CLASS