

MATH K137 Immediate Algebra

Spring 2013

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COURSE DESCRIPTION: A graphing calculator is required. The instructor will use a Texas Instrument calculator (T183). This course continues the development of algebraic skills and concepts. The topics include: linear equations, functions and graphs, applications of systems of equations, inequalities, rational expressions and equations, operations of radicals and rational exponents, quadratic equations, exponential and logarithmic functions.

TEXTBOOK: Elementary & Intermediate Algebra: Graphs & Models 4th edition, Bittinger, Ellenbogen, Johnson

OFFICE HOURS: I will be available to meet with the students at the school in the evenings as needed.

ATTENDANCE: Your attendance record will be considered for borderline grades. I look forward to seeing you at each class. Absences will jeopardize success in this course.

HOMEWORK: An assignment will be given at the end of each class. You are expected to have completed the assignment for the next class session. Homework will be collected and reviewed to allow me an opportunity to measure the progress of the class. Questions on the homework will be discussed at the beginning of each class.

EXAMS: There will be two progress exams and a final exam in this course. You are required to take all exams. Any schedule conflicts should be resolved prior to exam day.

GRADES: Your grade will be determined as follows:
Three Exams - 30% each
Homework - 10%

COLLEGE WITHDRAWAL POLICY: As stated in college catalog

DISABILITIES AND LEARNING DIFFERENCE STATEMENT: As stated in college catalog (See me if you have any questions or concerns)

COURSE SCHEDULE

January 28	Class #1	Factoring	6.2 - 6.7
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6.2	Factoring $x^2 + bx + c$, Solve	HW: 9, 19, 23, 39, 61
6.3	Factoring $ax^2 + bx + c$, Solve	HW: 9, 21, 35, 47, 61, 63
6.4	Factoring Perfect-Square and Difference of Squares	HW: 9, 21, 29, 31, 47, 51, 59, 79
6.5	Factoring Sum or Difference of Cubes	HW: 11, 19, 31, 39, 47, 51
6.6	Factoring Strategy	HW: 5, 9, 21, 29, 41, 49, 61
6.7	Factoring Applications (Word Problems)	HW: 1, 11, 19, 27

February 4	Class #2	Trigonometry	Handout - 7.1
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	Homework review and questions	
	Trigonometry	HW: 1, 5, 9, 15, 17, 21, 22, 26, 31
7.1	Rational Expressions	HW: 19, 27, 35, 45, 55

February 11	Class #3	Rational Expressions and Equations	7.2 - 7.4
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	Homework review and questions	
7.2	Multiplying and Dividing Polynomials	HW: 7, 15, 23, 35, 49, 59, 63
7.3	Add and Subtract Polynomial	HW: 7, 19, 23, 29, 35, 37, 45, 51, 59
7.4	Add/Subtract with Unlike Denominators	HW: 9, 15, 25, 35, 45, 59

February 18	Class #4	Rational Expressions and Equations	7.5 - 7.8
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	Homework review and questions	
7.5	Complex Rational Expressions	HW: 11, 15, 17, 33, 41
7.6	Rational Equations	HW: 11, 19, 25, 31
7.7	Applications Using Rational Equations and Proportions	HW: 7, 21, 23, 33, 49, 59
7.8	Formulas, Applications, and Variations	HW: 15, 17, 25, 33, 41, 43, 51, 59

February 25	Class #5	Exam #1	(6.2 - 7.8, and Trigonometry)
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Exam #1: 6.2 - 7.8, and Trigonometry

March 4 Class #6 Systems of Equations in Three Variables 9.1, 9.2, 10.1, 10.2

Homework review and questions

- 9.1 Systems of Equations in Three Variables HW: 11, 17
- 9.2 Solving Applications (Word Problems) in Three Variables HW: 1, 5, 9
- 10.1 Radical Expressions HW: 9, 21, 25, 37, 39, 449, 55, 65, 73, 77, 83
- 10.2 Ration Numbers as Exponents HW: 9, 15, 19, 23, 39, 45, 49, 55, 77, 87, 93, 107

March 11 Class #7 Radical Expressions 10.3 - 10.7

Homework review and questions

- 10.3 Multiplying Radical Expressions HW: 7, 19, 23, 31, 39, 45, 47, 55, 61, 67
- 10.4 Dividing Radical Expressions HW: 9, 15, 25, 31, 35, 43, 55, 67
- 10.5 Several Radical Terms HW: 7, 13, 19, 23, 29, 41, 51, 65, 85, 91
- 10.7 Solving Radical Equations HW: 7, 15, 19, 21, 33, 35, 41

March 18 Spring Break No Class *

March 25 Class #8 Quadratic Equations 11.1 - 11.3

Homework review and questions

- 11.1 Quadratic Equations HW: 13, 17, 21, 25, 31, 45, 57, 77
- 11.2 Quadratic Formula HW: 7, 13, 25, 35
- 11.3 Solutions of Quadratic Equations HW: 7, 13, 21, 29, 35, 45

April 1 Class #9 Quadratic Equations 11.4 - 11.6

Homework review and questions

- 11.4 Applications Involving Quadratic Equations HW: 1, 11, 33, 35
- 11.5 Equations Reducible to Quadratic HW: 1, 5, 9, 13, 15, 35, 43
- 11.6 Quadratic Functions and Their Graphs HW: 1, 7, 15, 25, 41, 45, 59, 65

April 8 Class #10 Quadratic Equations 11.7, 11.8

- Homework review and questions
- 11.7 More Graphing Quadratic Functions HW: 1, 7, 9, 13, 19, 23, 29, 35, 51
Handout Quiz #4 (Take Home), sections 11.4 - 11.6
- 11.8 Problem Solving and Quadratic Functions HW: 7, 9, 17, 27, 37, 43

April 15 Class #11 Exam #2 (Section 9.1 - 11.8) *

Exam #2, Section 9.1 - 11.8

April 22 Class #12 Exponential and Logarithmic Functions 12.1 - 12.2

- Homework review and questions before class
- 12.1 Composite and Inverse Functions HW: 9, 17, 21, 27, 41, 43, 53, 75
- 12.2 Exponential Functions HW: 11, 21, 51, 57, 59

April 29 Class #13 Exponential and Logarithmic Functions 12.3 - 12.4

- Homework review and questions
- 12.3 Logarithmic Functions HW: 9, 21, 35, 49, 55, 65, 77, 83
- 12.4 Properties of Logarithmic Functions HW: 7, 13, 17, 23, 27, 39, 51, 65

May 6 Class #14 Exponential and Logarithmic Functions 12.5 - 12.6

- Homework review and questions
- 12.5 Natural Logarithms and Changing Bases HW: 11, 17, 29, 31, 41, 53, 55, 67
- 12.6 Solving Exponential and Logarithmic Equations HW: 9, 17, 21, 47, 49, 57
- Students work problems in class together
- Review for Final

May 13 Class #15 Exam #3, Section 12.1 - 12.6 and Review *

Final Exam

May 13 Last Week to Withdraw From Class

May 23 Final Grades Due