

## Syllabus

Math 210-05, CRN 01598, Fall 2015

**Instructor:** Ms. Rani Fischer, [fischerrani@fhda.edu](mailto:fischerrani@fhda.edu)

**Office Hours:** after class MWF

**Classroom:** S15, 9:30-10:30 AM

**Textbook:** *Prealgebra Textbook*, 2nd ed., by College of the Redwoods, available free online at <http://mathrev.redwoods.edu/PreAlgText/>, but better to buy the hardcopy in the bookstore

**What to bring every day:** textbook, Math 210 notebook, loose-leaf paper, pencils, two colored pens

**Class Rules:** Be considerate and respectful. No calculators or cell phones.

### Student Learning Outcome Statements (SLO)

- **Student Learning Outcome:** Demonstrate and apply a systematic and logical approach to solving arithmetic and geometric problems.
- **Student Learning Outcome:** Demonstrate and apply the knowledge and skills required to select the correct introductory formulas, procedures, and concepts from algebra and geometry and use them to solve problems.

### II. Course Objectives

- Develop, throughout the course as applicable, systematic problem solving methods
- Solve problems involving arithmetic operations, including fractions, percents and decimals
- Apply the order of operations to evaluate numerical expressions
- Solve problems involving operations with signed numbers
- Explore the characteristics and properties of real numbers
- Use estimation to determine approximate solutions and to check the reasonableness of answers
- Explore rates and ratios and use proportions to solve problems
- Explore, as applicable throughout the course, the geometry of mathematical measurements and solve problems involving geometric figures and formulas
- Explore the use of variables in expressions and evaluate algebraic expressions
- Solve linear equations in one variable numerically and algebraically
- Interpret linear relationships in two variables numerically, graphically using the Cartesian coordinate system, verbally and algebraically
- Explore the concept of function
- Investigate, throughout the course as applicable, how mathematics has developed as a human activity around the world

### GRADING:

**Homework:** HW will be collected. **LOOK AT THE SCHEDULE BELOW TO SEE WHETHER YOU HAVE HW DUE OR NOT. NO LATE HW ACCEPTED. You will get 3 free HW's since sometimes you might be sick or too tired to do HW.** 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 as to how you got them, 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, not for correct answers. You check the odd answers in the back of the book and ask questions on paper or in class.

**Quizzes:** You will have a short quiz at the beginning of class every day 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. In exceptional circumstances, you may be allowed to take a test early. Any such arrangement must be made in advance, and you must have a serious reason for doing so.

**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.

| <b>Grading:</b> | <b>Course Grade:</b> |
|-----------------|----------------------|
| Homework-20%    | 90-100% =A           |
| Quizzes-20%     | 80-89% = B           |
| Tests-30%       | 69-79% = C           |
| Final Exam-30%  | 60-69% = D           |
|                 | below 60% =F         |

**Advice:** This is a very intense course, and you must have time to do the HW. There is so much HW. If you do not do the HW, you will sink. Please try to get a good night's rest and eat breakfast, not just drink caffeine. That will help A LOT!

SCHEDULE Math 811, Fall 2015, Fischer

| M   | T   | W   | Th                                   | F  |
|---|---|---|--------------------------------------|--|
| 9/21/2015                                   | 9/22/2015                                       | 9/23/2015   | 9/24/2015                            | 9/25/2015  |
| Sec. 1.1 Whole Numbers, W                   | Sec 1.2 Add/Sub in W; Sec.1.3 Mult/Div in W     | Sec. 1.4 Prime Factors; Sec. 1.5 Order of Op, HW #1 due | Sec. 1.6 & 1.7 Solving equations     | Sec. 2.1 Intro to Integers (Z), HW #2 due                                    |
| 9/28  | 9/29  | 9/30  | 10/1                                 | 10/2   |
| Sec. 2.2, 2.3 Add/Sub of Z, HW #3 due       | Sec. 2.4 Mult/Div in Z                          | Sec. 2.5 Order of Op. in Z, HW #4 due                   | Sec. 2.6 Solving equations in Z      | Review for Test Ch.1 & 2, HW #5 due (Sunday is last day to                   |
| 10/5  | 10/6  | 10/7  | 10/8                                 | 10/9   |
| Test on Ch. 1 & 2                           | Sec. 3.1, 3.2 Algebraic exs and evaluating them | Sec. 3.3,3.4 Simplifying exs, HW #6 due                 | Sec. 3.5 Solving Eq in Z             | Sec. 3.6 Applic. Solving Eq., HW #7 due                                      |
| 10/12                                       | 10/13   | 10/14   | 10/15                                | 10/16  |
| Review Ch 3                                 | Sec. 4.1 Equivalent fractions, HW #8 due        | Sec. 4.2 Multiplication of fractions                    | Sec 4.2 Area of triangles            | Sec. 4.3 Division of fractions, HW #9 due (last day to request pass/no pass) |
| 10/19                                       | 10/20   | 10/21   | 10/22                                | 10/23  |
| Sec. 4.4 Adding/Subtr fractions, HW #10 due | Sec. 4.4 review                                 | Sec. 4.5 Mult/Div. mixed fractions, HW #11 due          | Sec 4.6 Adding/Subtr mixed fractions | Sec 4.7 Order of operations, HW #12 due                                      |
| 10/26                                       | 10/27   | 10/28   | 10/29                                | 10/30  |
| Sec 4.8 Solving eq with fractions           | Review Ch 3 & 4, HW #13 due                     | Test on Ch 3&4  | Sec. 5.1 Intro to decimals           | Sec. 5.2 Add/Subtr. Decimals, HW #14   |
| 11/2  | 11/3  | 11/4  | 11/5                                 | 11/6   |
| Sec. 5.3 Multiplying decimals               | Sec 5.4 Dividing decimals                       | Sec 5.5 Fractions & decimals, HW #15 due                | Sec 5.6 Eq with decimals, HW #16 due | Sec 5.7 Square roots   |
| 11/9  | 11/10   | 11/11   | 11/12                                | 11/13  |
| Veterans' Day HOLIDAY                       | Sec. 5.8 Pythag Theorem, HW #17 due             | Sec 6.1 Ratios & rates                                  | Sec 6.2 Proportions                  | (Last day to drop with a "W") HW #18 due                                     |
| 11/16                                       | 11/17   | 11/18   | 11/19                                | 11/20  |
| Sec 6.3 Unit conversion                     | Review Ch 5,6, HW #19 due                       | Test Ch 5,6   | Sec 7.1 Percent, fraction, &         | Sec 7.2 Solving % problems   |
| 11/23                                       | 11/24   | 11/25   | 11/26                                | 11/27  |
| Sec. 7.3 App of %, HW #20 due               | Sec. 7.4 % increase/decrease                    | Sec 7.4   | Thanksgiving HOLIDAY                 | Thanksgiving HOLIDAY   |
| 11/30                                       | 12/1  | 12/2  | 12/3                                 | 12/4   |
| Sec. 8.1 Cartesian plane, HW #21 due        | Sec 8.2 Graphing linear equations               | Functions, HW #22 due                                   | Rev Ch 8 and functions               | Review for final, HW #23 due   |
| 12/7  | 12/8  | 12/9  | 12/10                                | 12/11  |
|   |   | FINAL EXAM: 9:15 a.m.                                   |                                      |  |

Do multiples of 3 (# 3,6,9, 12, . . .) unless otherwise stated:

HW #1: p.9-10, 26-28 (starting with #39), p.44-47 (starting with #18)

HW #2: p. 49, 58, 60, 61, 71-73

HW #3: p. 85, 86, 94, 95

HW #4: p.106-108, 124-126 (skip #37-63), 133-135

HW #5: p. 145-147 (start with #18), 152-154, 167, 168

HW #6: p.177 (#1-20 all), p.183-185

HW #7: p.195 (all), 205, 213

HW #8: p.214, 224, 225

HW #9: p.226, 227, 243, 244

HW #10: p.260-262, 271

HW #11: p. 285-288 (skip #105-120)

HW #12: p.297, 299, 308, 309

HW #13: p.321, 322, 336-339 (skip #51-72)

HW #14: p.353-356 (including #94 and #95)

HW #15: p.366, 367, 382, 383, 395, 397 (#67-76 all; stop at #76)

HW #16: p.398-399, 408-409

HW #17: p.421, 423, (don't do p.422), 433 (do all on this page)

HW #18: p. 443, 444 (all on this page), 454

HW #19: p.463-465, 475, 477 (#101-103 all, only)

HW #20: p.508-510, 518, 519

HW #21: p. 525, 526, 538-540

HW #22: p. 576- 579, 589-591, print p.4,5 only of function packet

HW #23: p.4,5 of function packet