

Mathematical Reasoning
3.0 Semester Hours (3-0-3)
Department of Mathematics and Computer Science
College of Arts and Sciences
Valdosta State University
Fall 2013

PREREQUISITE: Grade C or higher in either Math 3162 or Math 3180 or permission of instructor.

Instructor : Dr. XYZ
Office : Nevins Hall 2XXX
Phone : 229-333-XXXX
Email : XYZ@valdosta.edu
Office Hours : 10:00 – 10:50 TR; others by appointment (example)
Other Options : Call, e-mail, stop by during office hours, or make an appointment.

REQUIRED MATERIALS:

Textbook: O'Daffer, P., Charles, R., Cooney, T., R., Dossey, J., & Schielack, J. (Fourth edition, 2008). *Mathematics for Elementary School Teachers*. Boston: Pearson –Addison Wesley.

Other: Three-ring notebook or folder, colored pencils or markers, graphing calculator, ruler (12 inches and 30 cm), scissors, compass, protractor, stapler – Please bring to class DAILY!

Software: Geometry Sketch Pad (around \$35) or Geogebra geometry software (free)
<http://www.geogebra.org/cms/>

COURSE DESCRIPTION

An in-depth study of concepts and processes underlying ~~the~~ ~~school~~ mathematics curriculum, with special emphasis on informal and formal mathematical reasoning. Problem solving and historical context serve as unifying strands. The analysis and remediation of student errors manifested in the application of conceptual and procedural mathematical knowledge will also be addressed.

GENERAL STUDENT LEARNING OUTCOMES

By the time you finish this course, you should know (understand) and be able to do the following:

- 1) understand, model, and appreciate the role of informal and formal mathematical reasoning skills and processes within the context of teaching and learning mathematics.
- 2) understand fundamental concepts of formal logic and the relationship to deductive reasoning.
- 3) a) solve a variety of routine and non-routine problems;
b) select and apply appropriate problem-solving strategies, and describe all aspects of the problem-solving process;
c) approach unfamiliar problems with confidence in your ability to find solutions.

additional readings), text exercises, assignments, in-class notes, and in-class activities.

The final exam is a **mandatory comprehensive final** and will make up **20% of your overall grade** for the course.

Daily In-Class Work, Homework Assignments, and Makeup Policy

The in-class experiences and out-of-class assignments are integral parts of the course. You can expect to:

- 1) ***In-class activities***. Complete in-class activities with a good work ethic and a positive attitude.
- 2) ***Text exercises or instructor made homework***. Text exercises or instructor made problems or exercises will generally be given for homework at each class meeting. Be certain to review **ALL** of the text exercises that are given (doing any exercise is up to you). Formative quizzes over some of the material will be provided.
- 3) ***Reading Assignments***. Reading assignments are given on the tentative class schedule. Instructor class notes can be printed by students prior to class for a given section if desired. In general, the instructor will not provide copies of notes for students. Reading assignments prior to each class meeting will enrich your classroom experience and help you to formulate questions for clarification more readily. Do NOT rely on the notes nor skip the reading!
- 4) ***Web Assignments***. Complete Web assignments following instructions located on either the course Web page or in WebCT as directed (**See Tentative Course Schedule for Due Dates**). Please note and adhere to the due dates for the Web assignments as **NO LATE WORK** will be accepted.
- 5) ***Make-Up Work***: Make up work or alternative assignments will be **determined by the professor and at the sole discretion of the professor. These assignments may or may not exactly duplicate the** original and will not entitle other students to the same alternatives since they may not have experienced the same situations.

Oct 2
Structure- Areas-
Volumes of solids

Oct 7
Cones from circles
And back.

Oct-9
Volume and areas
from the Net to the
solid

Oct 14

- Please remember that starting fall 2010 **undergraduate students are limited to 5 course withdrawals for the lifetime of their undergraduate record.**
- **DO NOT OVER-REGISTER!** Please make sure you are enrolled in courses you intend to complete.
- Please go to <http://www.valdosta.edu/academic/WithdrawalPolicy.shtml> and **read the entire policy and the FAQs.**

SOI Statement

At the end of the term, all students will be expected to complete an online Student

the Academic Integrity Policy as set forth in the Student Code of Conduct and the faculty members' syllabi. All students are expected to do their own work and to uphold a high standard of academic ethics." Full information on Academic Honesty at VSU is available at <http://www.valdosta.edu/academics/academic-affairs/vp-office/academic-honesty-at-vsuhp>

Turnitin

