MATH 1010 - Honors ----- Fall 2010

MATHEMATICS FOR GENERAL STUDIES

Instructor Information

Instructor: Dr. Wandi Ding
Office: KOM 203G; Phone: 615.494.8936
Email: wding@mtsu.edu; Web site: www.mtsu.edu/~wding
Office Hours: MWF 9:00-10:00am, 2:00-3:00pm or by appointment

Course Information

Class Schedule: MWF 10:20-11:15am in BAS S213

Text: Mathematical Ideas, Miller, Heeren & Hornsby, 11th edition (May purchase hardcopy OR use e-book in MyMathLab in CourseCompass.)

Lab Resource: Math Help Lab KOM 204

Content: 3 Credit Hours. Course satisfies the General Education Mathematics requirement and is also part of the mathematics sequence for students preparing to become elementary school teachers. Topics include problem solving, set theory, logic, numeration systems, geometry, trigonometry, counting methods, probability, statistics, and financial management.

Prerequisites: Two years of high school algebra and a Math Enhanced ACT of at least 19, or COMPASS placement, or successful completion of DSPM 0850 or equivalent intermediate algebra course.

Course Objectives:
The purpose of this course is to introduce the student to a wide variety of mathematical perspectives and topics. The course is designed to expand the student’s appreciation of how mathematics applies to quantitative problems that originate in many fields, and the student will learn strategies for solving some of these problems. An introduction to logic will provide tools of deductive reasoning that are essential to not only mathematics, but also to other subjects and to daily life. The basic concepts of set theory will be introduced and used to analyze logical arguments. The student will encounter numeration systems, in particular the binary system and its relation to computing devices. Advanced topics in geometry will include such ideas as non-Euclidean geometry and right triangle trigonometry. Counting techniques, probability, and statistics will be introduced. The formulas of financial mathematics will be applied in problems related to the time value of money, installment and credit buying, and truth in lending.
Course Learning Outcomes:
Upon completion of this course, the student will have the abilities to:

- Use inductive reasoning to generate hypotheses from identifiable mathematical patterns, and use logical operators in applications of deductive reasoning.
- Apply processes of problem-solving in various mathematical connotations.
- Illustrate and prove set relationships using Venn diagrams and carry out combined set operations.
- Use concepts of logic and set theory to analyze logical arguments.
- Make conversions between the binary and decimal numeration systems, and show influences of earlier numeration systems.
- Distinguish between Euclidean and non-Euclidean geometries, and apply Euclidean postulates in solving geometrical problems.
- Use counting techniques and determine probability of given events.
- Generate descriptive statistics, including measures of central tendency, measures of dispersion and measures of position, for given data sets.
- Exercise financial management formulas in the consumer mathematics of installment loans and credit card usage.
- Use appropriate technology, such as a graphing calculator, in related mathematical applications.
- Conduct an individual project as assigned by the instructor, and prepare a report on assigned project.

Requirements: In general, you are expected to

1. attend class lectures;
2. come to class prepared (this includes completing homework in a timely manner and bringing your textbook); see detailed instructions below for online access of homework;
3. read the textbook and the lecture notes thoroughly and solve the assigned problems;
4. ask question in class when you are unsure of any concept or unclear on any assigned problem;
5. participate in class activities and do projects;
6. come to my office for additional assistance as necessary;
7. take all exams on the day they are scheduled.

Grading Policy:
Homework: 20%
Projects: 20%
Midterm: 30%
Final Exam: 30%

90-100 A, 80-89 B, 70-79 C, 60-69 D, Below 60 F.

**Final Exam:** Monday, December 13, 9:30 -11:30 a.m.

**Additional Information**

**Drop/Withdrawal Policy**

Please note the Drop Policy and Withdrawal Procedures as they are stated in the Fall 2010 Registration Guide. The last day to drop this course without a grade is September 10. The last day to drop this course with a "W" is October 15. A grade of “I” will be given only in accordance with University Policy.

No grade of “W” will be assigned after the official drop date except in situations involving extreme extenuating circumstances beyond the student’s control. In particular, a “W” will not be granted merely because the student is failing. Students should be aware that missing the official drop date and thereby receiving an “F” can have ramifications on financial aid.

**Lottery Scholarships**

To retain Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative TELS GPA of 2.75 after 24 and 48 attempted hours and a **cumulative** TELS GPA of 3.0 thereafter. You may qualify with a 2.75 **cumulative** GPA after 72 attempted hours (and subsequent semesters), if you are enrolled full-time and maintain a **semester** GPA of at least 3.0. A grade of C, D, F, or I in this class may negatively impact TELS eligibility. Dropping a class after 14 days may also impact eligibility; if you withdraw from this class and it results in an enrollment status of less than full time, you may lose eligibility for your lottery scholarship. Lottery recipients are eligible to receive the scholarship for a maximum of five years from the date of initial enrollment, or until a bachelor degree is earned. For additional Lottery rules, please refer to your Lottery Statement of Understanding form, review lottery requirements on the web at [http://scholarships.web.mtsu.edu/telsconteligibility.htm](http://scholarships.web.mtsu.edu/telsconteligibility.htm), or contact the Financial Aid Office at 898-2830.

**Disability Assistance**

If you have a disability that may require assistance or accommodation, or you have questions related to any accommodations for testing, note takers, readers, etc., speak with me as soon as possible. Students must also contact the Office of Disabled Students Services (898-2783) with questions about scheduling such services.
**Honors College:** To graduate from the Honors College, students must complete 20 hours of lower-division Honors coursework, and 11 hours of upper-division Honors coursework, including a research project. For information about the benefits of the Honors program, graduation requirements, or the thesis project, please contact the Honors College advisor, Ms. Laura Clippard (HONR 227; Lclippar@mtsu.edu; 898-5464.

**Course Access:**

The homework is housed in MyMathLab in CourseCompass, and is powered by BlackboardTM. It is accessed directly at www.coursecompass.com.

Course name: MATH1010

Course ID: ding02244

Access the course at www.coursecompass.com

The Student Access Kit (as shown below)

You can purchase a stand-alone access kit in the bookstore or online (includes e-book).

**To register:**

1. Go to www.coursecompass.com
2. Click the Register button below Students
3. Make sure you have everything you need to register:
   - A Student Access Code (Note: the access code is located in Student Access Kit, shown above).
   - A valid e-mail address
   - The Course ID: ding02244
   - Your school zip code: 37132
CourseCompass Technical Support:

For Customer Technical Support, call Toll Free 1-800-677-6337.

Monday through Friday 8 AM – 8 PM EST and on Sunday 5 PM – MIDNIGHT EST.