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**RIVIER COLLEGE**  
**MA100E: Mathematics 1**  
**Fall 2005**  
**Mondays 6:30-9:00 pm, classroom MEM101**

**Instructor:** Dr. Vladimir Riabov, Associate Professor, STH-312

**Contact information:** Tel: 603-897-8613, E-mail: [vriabov@rivier.edu](mailto:vriabov@rivier.edu)

**Office hours:** Please let me know whenever you need help. You are invited to stop by my office whenever I am there or make an appointment. My regular hours are M 4:25-6:25 pm, T 2:00-4:00 pm, 5:15-6:15 PM, and Th 2:00-4:00 pm. Office hours will take place in STH-312. I will also respond to questions via e-mail.

**Required textbook and supplement:** *Introductory Algebra: A Real World Approach*, 2<sup>nd</sup> edition, by Ignacio Bello, New York: McGraw-Hill, 2006, packaged with Math Zone access.

**Required materials:**

- Notebook paper for taking notes and completing assignments (graph paper is also acceptable and will be useful at times).
- Sharpened pencils
- Calculator with exponents ( $x^y$ ,  $y^x$ , or  $^x$ ) and square roots  $\sqrt{\quad}$  that displays large numbers in scientific notation. If you plan to take MA112, MA130, or MA165, a graphing calculator such as TI-83 will be required in those courses. MA110 requires a calculator with statistical capabilities.
- Access to a computer with web access (use the campus lab if you don't have your own!)
- **Math Zone account** (Use the login and password [that came with your text] the first time you access it). After the logging in, use the **Student Section Code: FA9-89-5D5**.
- Binder or notebook to keep your notes, handouts, quizzes, and tests organized.
- Ruler with inches and centimeters.
- Small stapler.

**Optional supplement:** Some texts are packaged with a bilingual DVD for a small extra fee.

**Course description:** This course is designed for students with little or no background in algebra, as well as students needing a review of basic algebra. The principal objective of the course is to develop and to strengthen the basic skills necessary for subsequent courses. The course does not fulfill the general education mathematics requirement. It is not available for credit to students who have successfully completed a course equivalent to MA 112 or higher.

**Course Objectives:** A student successfully completing this course should be able to

- perform multi-step calculations involving whole numbers, fractions, decimals, and signed numbers.
- convert between percentage, decimal, and fractional representation.
- identify when two fractions are equivalent.
- recall and apply basic geometric formulas for perimeter and area.
- translate a verbal problem into mathematical notation and solve the problem.
- use proportions, percents, and averaging to solve verbal problems mathematically.
- interpret and construct basic relational tables and graphs.
- use mathematical strategies to address loosely defined problems.
- use variables to represent unknown quantities.
- simplify expressions involving variables, radicals, and/or exponents.

- combine binomial expressions by addition, subtraction, and multiplication.
- solve linear and quadratic equations of one variable.
- work with functional notation.
- graph a linear function and identify its slope and intercepts.
- graph a quadratic function and identify its vertex and intercepts.
- apply his/her mathematical skills to real world problems.
- engage in mathematical thinking, logical reasoning, and mathematical discussions.

### Teaching Strategies:

- Review and presentation of arithmetic and algebraic techniques.
- Reinforcement and exploratory activities that engage students in developing and applying skills
- Web-generated assignments with immediate feedback
- In class interaction and assessment
- Tests and quizzes to measure students' understanding of material covered

### Course Requirements:

- Satisfactory completion of **MathZone homework assignments**.
- Active participation and engagement in full-class, small-group, and individual activities.
- Regular attendance at class meetings.
- Quizzes and tests.

**Tests: October 10, November 7, December 5, 2005**

**Final Exam: Comprehensive! FRIDAY, December 16, 2005, 6:30-8:30 pm.**

**Help with math:** All students are encouraged to seek help from peer tutoring or the instructor whenever they have questions on a section. The tutors and the instructor will not do your homework for you, but rather assist you in learning the material needed to complete the assignments. Come during the tutoring hours or office hours or talk to your instructor if you need a different time. Be sure to bring your text, pencil, paper, and calculator with you. Your classmates can also be a great resource. Perhaps you can help your friend with some sections and he/she can help you with others. You are also welcome to access the Net tutoring sessions that accompany the Math Zone site with the goal of learning the mathematics.

**Homework:** In order to get immediate feedback, you will do your homework at the Math Zone site <http://highered.mcgraw-hill.com/classware/infoCenter.do?isbn=0072831057>. (Use the **Student Section Code: FA9-89-5D5**).

You will be given a limited amount of time (no less than three days) to complete it at an acceptable level. Do not wait until the last minute as there could be network problems or you might not pass on your first attempt. Math Zone will record your passing attempt in my grade book. Assignments will be made both at the Math Zone site and in class. In addition, you may be asked to present problems at the board (this activity will contribute to your in-class activity grade).

### Assessment and computation of grades:

Homework, assignments	20%
Quizzes	10%
In class activities and discussions	5%
Tests	45% (15% each)
Final Exam	20%

**Classroom Policies:**

Workload: This course does require a significant amount of work outside of class; we cannot do it all in just 2.5 hours a week. There will be some days in which two sections will be covered in class. It is your responsibility to reinforce your understanding of the material in class by reading the chapters in the text. In addition, you will need to complete the web-based assignments for each chapter with a score of 75% or better (Try for better!). You may find it helpful to use some of the other study sources available in Math Zone.

Attendance and Punctuality: Active participation requires attendance and arrival to class in time to be prepared for work when the class period begins. You are expected to attend all classes. Much of the learning will take place in classroom activities that cannot be duplicated easily outside of class. If you miss class, you are responsible for doing all classroom activities you missed, getting the notes from a classmate, and turning in all work on the day it is due. If you miss more than two classes, your absences will be reported to the registrar and you must meet with the professor to discuss the advisability of your remaining in the course for the remainder of the semester. Students who miss three classes may be withdrawn from the course and receive disciplinary action from the college (see Rivier College attendance policy). If you anticipate that job-related duties or prior commitments will cause several absences, please discuss the matter with the instructor outside of class.

Making up tests: If unavoidable circumstances keep you from attending class on the day of the test, you must contact the instructor promptly to explain the absence and to schedule a make-up if one is approved. Documentation of the reason for absence is advised. Make-up quizzes, if approved by the instructor, must be completed prior to the class.

Cell phones: Cell phones should not be used during class. If you need to be available for emergency phone calls, talk to the instructor in advance and set the ringer to silent or vibrate. Leave the room to answer. Your calculator must be a separate device.

Asking questions: Questions are encouraged both in and out of class. All students have a right and responsibility to ask questions and give insight related to the understanding of course content. However, the instructor is also expected to cover a significant amount of material to prepare you for future coursework. For this reason, students having a large number of questions or significant difficulty with a topic are expected to seek help from the instructor outside of class. It is in your best interest to ask questions as soon as you have discovered and confirmed that you do not understand something.

Honesty policy: All work turned in on tests, quizzes, and the final must be entirely your own. Behavior contrary to this will result in a grade of F on the test. Serious infractions may result in an F for the course. Similarly, the paper you write for your project must not be plagiarized. See library discussion on plagiarism. Regarding homework, the instructor will not give you credit for any work that is copied from another source (from a classmate, instructor, a text, the answer key, web assistance, tutor, etc.). Take notes while getting help, but put aside the notes as you attempt to do the problems on your own.

Netiquette: You are encouraged to exercise good writing and social behavior when corresponding via e-mail or discussion boards. Too often I receive e-mails from students that are difficult to comprehend due to missing punctuation, sentence fragments, and abbreviations. Reread your message before hitting send to make sure that the message will not be misinterpreted. Use complete English (not IM) sentences. Avoid criticizing other individuals especially in a public forum or discussion.

**Americans with Disabilities Act (ADA):** Rivier College wants to provide reasonable accommodations to students with disabilities. To accomplish this goal effectively and to ensure the best use of our resources, timely notice of a disability must be provided to the Office of Special Services for verification

and for evaluation of available options. Any student whose disabilities fall within ADA should inform the instructor within the first two weeks of the term of any special needs or equipment necessary to accomplish the requirements for the course. To obtain current information on this procedure, contact the Office of Special Services at telephone extension 8497.

**Mathematics is not a spectator sport.** Just as one doesn't become a great athlete by watching games, one can't develop the skill of mathematics by watching the teacher. Give it a try! Take a break and come back to work at it some more. With practice will come understanding. You'll be amazed at what you can accomplish! Be sure to come see me whenever you need a little coaching or pep talk. I'm here for you!

### TOPIC OUTLINE:

<u>SESSION</u>	<u>TOPIC</u>	<u>READING</u>	<u>HOMEWORKS</u>
1 (09/12)	Pre-algebra Review: Fractions, Decimals, and Percents. Real Numbers and Their Properties	Ch. R Ch. 1	
2 (09/19)	Equations, Problem Solving, and Inequalities. Quiz 1.	Ch. 2	Homework #1 due
3 (09/26)	Graphs of Linear Equations. Quiz 2.	Ch. 3	Homework #2 due
4 (10/03)	Exponents and Polynomials. Quiz 3.	Ch. 4	Homework #3 due
5 (10/10)	Review of Chapters 1-4. <b>TEST #1</b>	Chs. 1-4	Homework #4 due
6 (10/17)	Factoring	Ch. 5	
7 (10/24)	Rational Expressions. Quiz 4.	Ch. 6	Homework #5 due
8 (10/31)	Graphs, Slopes, and Inequalities. Applications. Quiz 5.	Ch. 7	Homework #6 due
9 (11/07)	Review of Chapters 5-7. <b>TEST #2</b>	Chs. 5-7	Homework #7 due
10 (11/14)	Solving Systems of Linear Equations and Inequalities.	Ch. 8	
11 (11/21)	Roots and Radicals. Quiz 6. Quadratic Equations (start).	Ch. 9 Ch. 10	Homework #8 due
12 (11/28)	Quadratic Equations. Quiz 7.	Ch. 10	Homework #9 due
13 (12/05)	Review of Chapters 8-10. <b>TEST #3</b>	Chs. 8-10	Homework #10 due
14 (12/12)	Course Material Review <i>Final Exam Preparation</i>	Chs. 1-10	
15 (12/16)	<b>FINAL EXAM</b>	<b>FINAL EXAM</b>	Chs. 1-10