MAT-032 Intermediate Algebra Course Syllabus
Chesapeake College Fall 2016

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Office Hours: by appointment
Office: Math Room T-130

What’s special about this course?
We listened carefully to feedback from previous students and revised MAT-032 significantly from earlier versions. Our most important goal is your success! We are confident that this course is set up in a way that will help you achieve that success. For those students that successfully completed MAT 031 in previously, you will find that that this course has many of the same policies and procedures. Of course, you have a big part to play in this. The energy, time, and faith that you invest in the course will directly affect your outcomes. If you complete the assignments and perform the tasks as requested by your instructor, we strongly believe that you will complete this course victoriously and in only one semester.

What will I learn?
In this course you will develop and strengthen the algebra skills needed to succeed in the credit math course, College Algebra. Just as important, you will sharpen math skills that come in handy in all sorts of situations at work and at home. Math is used extensively in everyday tasks as well as in many of your career choices. All occupations in life use math on a daily basis. Miscalculations in some instances could be disastrous; for example, a nurse who miscalculates the dosage of medication can truly harm a patient. In your everyday life you may encounter math by doing such tasks as balancing your checking account, determining miles-per-gallon for your car, check your change from a cash transaction, understanding the interest payments on your car or home loan, determining the batting average of a highly paid baseball player, or counting your calories.

Math helps you learn logical problem solving when you attack a problem through a sequence of steps in a particular order to get correct results. Math will help you maintain and develop the reasoning skills needed to solve more complex problems. Being grounded in mathematics opens the door to success in many other fields, which is why most colleges and universities require at least one credit-level mathematics course.

For those of you that took Algebra I in high school, the content of this course will look familiar. Many of you may find yourself reviewing some material you have already mastered. We will work as a team to help you recall the math you have learned in the past. You will earn credit for everything that we do, so please take all of your assignments seriously.
A detailed list of student learning outcomes and the official course description from the catalog are included on the last page of this syllabus.

**Required Course Materials:**

2. Notebook (exclusively used for math class) and a supply of pencils
3. Access to a computer with internet access, outside of class. If you do not have access to this at your home, you can use any of the public computers on campus or in any public library.

Our text is available in several forms:
1. You may purchase a printed version through the bookstore for approximately $20 – 25.
2. Also, there will be a lab manual that will you will either need to download yourself or purchase from the bookstore. Since the manual is over 100 pages you will probably find it less expensive to purchase it from the bookstore. It will need to be brought to class for each class period.
3. If you prefer, you can simply read the text online in our Canvas course, or go directly to the textbook website. [http://wallace.ccfaculty.org/book/book.html](http://wallace.ccfaculty.org/book/book.html)

**How much time should I spend on this course?**

This course meets in a classroom either once a week for 165 minutes, or twice a week for sessions of 75 minutes each. In addition to the class time, an average student should plan to spend at least 6 hours outside of class time. If your background in mathematics is below average, or if you just normally work at a slower pace, plan to schedule more time.

**How does this course work?**

This class has been set up like many traditional classes. You and your fellow learners will meet in a regular classroom for some teacher-led instruction. In the class, you may be called upon to answer questions and demonstrate how to solve problems. You may also work on problems in small groups. Homework problems will be accessible online, and you’ll use a textbook both in and out of class.

*Before class*, you’ll prepare by reading an assigned section of the textbook and completing a small number of questions that ask "Did you get it?" These questions will be your “admission ticket” to class. Suppose you read the material and simply don’t remember the answers. No worries – answer what you can. The “Did you get it?” questions are there to help you keep track of what you know and what you do not know – and to help me determine if the class will benefit from extra time or more explanation.

**Success Tip #1:** *Whatever you do, do not skip class!* Class is our workshop for conquering math problems! You have several other options for getting help:
• Visit me in my office for some guidance.
• Stop by the Academic Support Center (drop-In) for assistance from tutors.
• Talk to fellow students, in person or on Canvas.

**During class**, we will discuss several sections of the textbook each time we meet. We will work on problems taken from the exercises in the text, sometimes individually and sometimes in small groups. The textbook is inexpensive; if you get a printed version, I would encourage you to bring it to class. You will also want to take notes in your notebook.

Success Tip #2: *Math is not a spectator sport.* You must participate actively in each class in order to gain the full benefit from the discussion and problem sets of the day.

**Homework:** Of course, there will be some homework. Problems will be done online. You will see the assignments in Canvas, with due dates clearly indicated. The good news is that we have greatly limited the number of problems to be done for each section.

**Tests:** There are four tests planned for the semester. Most tests will cover a single chapter. Several of them may cover more material since the chapters are short. These will be given on predetermined dates using paper and pencil, in class. I generally do not allow make-up tests. Grades for missed tests will, of course be a zero. For those students that can produce a doctors’ note or other form of documentation I will create a make-up test. Of course, make-up exams are often a little tougher that the original exam. At the end of the course, we will have during final exam week the final exam using paper and pencil.

Success Tip #3: *Tap into your positive attitude and believe that you can succeed.* These are as important as your commitment to do the work in this class.

**How will I be graded?**
This course consists of all or parts of chapters 1 – 7 in the textbook. The numerical final course grade will be computed as indicated in the following distribution. Letter grades will be assigned as follows.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Did I get it?</td>
<td>14%</td>
</tr>
<tr>
<td>MyOpenMath Homework</td>
<td>14%</td>
</tr>
<tr>
<td>Quizzes (7)</td>
<td>21%</td>
</tr>
<tr>
<td>Factoring Review</td>
<td>2%</td>
</tr>
<tr>
<td>Tests</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>14%</td>
</tr>
<tr>
<td>Participation</td>
<td>1%</td>
</tr>
<tr>
<td>Review Tests</td>
<td>4%</td>
</tr>
</tbody>
</table>
Letter grades will be assigned as indicated in this *Grading Scale*:

- **A**: 90 – 100%
- **B**: 80 – 89.9%
- **C**: 70 – 79.9%
- **F**: Less than 70%

**Are there some course rules?**
You bet. Following these rules tends to help students succeed in the course.

**Participation**: Long experience shows that students whose attendance is spotty often do poorly in math class. Many students find the instructor’s mathematical explanations very useful in helping them understand the material. So, plan to be here! If you are unable to attend class, it is your responsibility to get the notes from another student and check the announcements in Canvas. Remember that participation counts 1% of the final grade, so it’s in your best interest to be present at every class session. If you find yourself unable to keep up with the class, please make an appointment to see me outside of class time – the sooner the better! *If you miss work due to an absence, it is your responsibility to make it up.*

**Testing**: Test dates for our four tests will be announced during class and posted in Canvas at least one week in advance. If you know ahead of time that you will be unable to be in class on a test day, you will need to contact your instructor at least 2 days in advance to set up a time to take the test.

**Computer access**: Homework problems are in Canvas, online, so you will need access to an internet-connected computer outside of class. Computer down time is not a valid reason for tardiness on assignments. We know that computers and computer programs do sometimes experience down time, but in this class computer down time is not a valid reason for tardiness on assignments. So, don’t wait till the last minute to get your homework done!

**Classroom Etiquette**: I expect that each of us in this class will show respect toward each other and behave with dignity. We will respect each other’s rights fully, so that our class is a place where we can focus on learning and being successful at it.

**What if I need help with this class?**
Besides meeting with your instructor, consider these great resources for help. **Academic Support Center**: Visit the ASC to get help with math from tutors who will work with you one-on-one or in small groups. *Remember, this time does not replace your class time.* In addition to your notes and work so far, bring your assignment to your session. The Academic Support Center is located in L-105 of the Learning Resource Center in Wye Mills and in the Multi-Service Center in Cambridge. To make an appointment, [call 410.827.5854](tel:410.827.5854), or drop in to see an available tutor on the spot. Check their website for current hours at [http://info.chesapeake.edu/lrc/tutoring](http://info.chesapeake.edu/lrc/tutoring).
**TRiO Student Support Services:** This program provides a whole menu of services, including tutoring, to students who are the first in their family to attend college, are eligible for a PELL grant, or who may have a disability. If you are interested in joining TRiO, contact the staff in room 105 of the Learning Resources Center.

**Chesapeake College Policies**

**Accommodating Disabilities:** Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact the instructor or Ms. Judy Gordon, Developmental Studies Case Manager/ADA Coordinator, as soon as possible, so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunity.

**Academic Instruction Emergency Management Plan:** In the event that Chesapeake College needs to close for an extended period of time due to a flu pandemic, severe weather event, or other emergency situation, consideration will be given to the timing and duration of the closure as follows:

1. Closure during the semester for up to one week – there will be an opportunity to make up work missed without significant alteration to the semester calendar.

2. Closure extending beyond one week (or in situations where classes are cancelled on the same days/evenings over multiple weeks) – the College may extend the length of the semester. Depending on the timing of the closure, scheduled breaks, end of semester dates, and/or the processing of final grades might be impacted.

Students can acquire information about closures on the College website or by calling 410-822-5400 or 410-228-4360. Chesapeake College courses held at off campus sites will follow the protocol of the host facility.

**Course Attempt limit Policy** – Effective Spring 2008, students may only attempt a course a maximum of three times. Both Audits (L) and Withdrawals (W) count as an attempt at a course. If you need additional attempts, please make an appointment to speak to Dr. Clayton Railey, V.P. of Academic Affairs.

**Academic Honesty Policy** – As described in the Student Code of Conduct, “If based on substantial evidence, a student is deemed guilty of academic dishonesty, the College may initiate disciplinary action as follows:

1. The student may be required to repeat the assignment or the examination.
2. The student may be given a failing grade for the assignment or the examination.
3. The student may be given a failing grade for the course.
4. The student may be suspended or dismissed from the college.
Official Course Description and Outcomes

Course Description from the catalog: A continuation of beginning algebra. Topics included are an introduction to functions, operations on rational and radical expressions, solving rational and radical equations, complex rational expressions, solving quadratic equations and inequalities, and graphing quadratic equations. [FALL/SPRING] Three hours per week.

Prerequisite(s): Complete MAT 031+ as a prerequisite, or appropriate placement score.

Statement of Course Goals:
The goal for the course is to provide students with the intermediate algebra skills necessary for success in College Algebra.

Core Content and mathematical skills:

- Perform basic arithmetic operations with integers and fractions
- Factor polynomials
- Solve quadratic equations
- Simplify rational and radical expressions
- Perform basic operations on rational and radical expressions
- Simplify radical expressions and expressions containing rational exponents
- Solve rational, radical, and quadratic equations
- Graph quadratic equations
- Solve compound inequalities
- Solve simple logarithmic and exponential equations
- Graph logarithmic and exponential equations

MAT 032 Intermediate Algebra Outcomes

Students will:

- Apply the mathematical skills required in performing operations and/or problem-solving related to intermediate algebra.
- Analyze mathematical models such as equations, formulas, graphs, tables, functions, shapes and/or figures and draw inferences from them related to intermediate algebra.
- Communicate mathematical information symbolically, visually, and/or numerically using appropriate terminology related to intermediate algebra.
- Evaluate and/or interpret mathematical information, relationships, and/or concepts related to intermediate algebra.
<table>
<thead>
<tr>
<th>Week #</th>
<th>Content</th>
<th>Textbook Sections</th>
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| 1     | A Review of Factoring Polynomials  
More Factoring & Quadratic Equation | Chapter 6 |
| 2     | Introduction to Rational Expressions  
Adding and Subtracting Rational Expressions | Chapter 7 Sec. 7.1 – 7.4 |
| 3     | Complex Rational Expressions & Rational Equations | Chapter 7 Sec. 7.5 – 7.7 |
| 4     | Roots & Radicals  
Chapter 8 | Test #1 Chapter 7 test (some review problems from Chapter 6)  
Chapter 8 Sec. 8.1 – 8.3 |
| 5     | Operations of Radical Expressions | Chapter 8 Sec. 8.4 – 8.6; 8.8 |
|       | **A Review of Graphing** | Test #2 Chapter 8 test |
| 6     | Quadratics Chapter 9  
Solving radicals, Completing the square | Chapter 9 Sec. 9.1 – 9.3 |
| 7     | Quadratic Formula | Chapter 9 Sec. 9.4 – 9.6 |
| 8     | Applications; rectangles-teamwork | Chapter 9 Sec. 9.7 – 9.8 |
| 9     | Applications/ Graphs | Chapter 9 Sec. 9.9 – 9.11 |
| 10    | Chapter 10  
Function Notation & Operations on Functions | Test #3 Chapter 9 test  
Chapter 10 Sec. 10.1 – 10.2 |
| 11    | Inverse and Exponential Functions | Chapter 10 Sec. 10.3 – 10.4 |
| 12    | Logarithmic Functions and Application: Compound Interest | Chapter 10 Sec. 10.5 – 10.6 |
| 13    | Chapter 10 Sec. 10.7-10-8 trig functions  
As time permits | Test #4 Chapter 10 |
| 14    | Final Exam |