Instructors: Steve Phillips, Debbie Sloan
Office: GH 7, the “Math Shack,” The Missoula College East Campus
Instructor Email: steve.phillips@umontana.edu, debbie.sloan@umontana.edu
Text: Sullivan and Sullivan:
    Algebra and Trigonometry Enhanced with Graphing Utilities, 5/E
    Custom Edition for UM (retitled College Algebra & College Trigonometry)
    Available as an e-book through MyLabsPlus

Even if you are on the right track, you’ll get run over if you just sit there. ~~WILL ROGERS

Welcome to College Algebra! M121 is a one-semester three-credit course. This course is intended to
strengthen your algebra skills. Its main focus is the study of functions and their inverses: polynomial, rational,
exponential, and logarithmic. Placement in M121 is based on your individual mathematics assessment (ALEKS level 4, ACT, COMPASS, or SAT) or completion of M095 (Intermediate Algebra) with a grade of C- or better. College Algebra (M121) and College Trigonometry (M122) together satisfy the same degree requirements as Precalculus (M151). Credit is not allowed for both M121 and M151. Be certain that you are enrolled in the proper math class at the beginning of the semester. If you have any concerns about your placement contact me immediately.

This course has been designed for you. Really. Your willing participation is essential if you plan to succeed in this course. Education should not simply be about endurance, although perseverance is important; learning is the playground of the curious mind. No one can teach you/reach you if you are not engaged and ready to learn. You need to do your part by preparing on your own to the best of your ability. Don’t fall behind! If you keep up with the homework, you should find that the material makes sense and the challenges are manageable.

We cannot emphasize enough how important it is for you to be diligent in your study habits. You cannot learn math by wishful thinking alone; you need to put in the effort in order to be able to learn the material. Be proactive, not reactive. Different students have different learning styles, but we believe that every student can improve with effort. Find the technique that works best for you.

Why do we study algebra? Algebra comes from an Arabic word meaning ‘reunion of broken parts,’ and it is this puzzle-fitting, problem-solving, idea-seeking nature that makes algebra intriguing (dare we say, fun?). With algebra we can solve problems for unknown quantities, draw graphs of relationships between numbers, and make use of the inherent structure of our number system; but the larger and more important goal in this course is to learn abstract reasoning. This deeper thinking allows us to draw from our mental toolboxes to solve certain types of problems.

We believe that the keywords for education are respect and appreciation. As your instructors, we will respect your efforts and appreciate your contributions; you should do the same for me and for your classmates. This should not be a competition.

You must recognize that cannot learn math by absorption or wishful thinking; you simply have to put in the effort in order to be able to learn the material. It may sound trite, but there is no substitute for doing the work.
A NOTE ON ONLINE LEARNING: Online classes are different from face-to-face classes, as you will soon discover (unless you already have experience with the online format). You have to be self-motivated and responsible. We have broken the class down into weekly blocks; we strongly recommend that you watch or read the appropriate lessons and make every effort to keep up with the homework. This course could easily take 12 hours per week of your time (if not more), so be sure to budget it. Once you fall behind, it can be extremely difficult to catch up, although we do grant extensions on occasion.

We want to be crystal clear here: Online education, particularly in mathematics, is not for everybody. You have to be willing to struggle with the material and challenge yourself in order to progress. Of course we will respond to your questions and frame my answers as clearly as possible, but there is a frustration factor involved with that progress. Note also that because HW can be repeated until it is perfect, it boosts your grade. The online quizzes and tests, however, tend to be more representative of your level of understanding. Only you know how comfortable you are with the material. Please do not expect a miracle to pull you through the final exam — it shouldn’t be a surprise. We are supportive but we’re not naïve, and neither should you be.

LEARNING OUTCOMES: Upon successful completion of the course, students will be able to:

1. Manipulate polynomial, rational, radical, exponential, and logarithmic functions of a real variable.
2. Graph polynomial, rational, radical, exponential, and logarithmic functions of a real variable.
3. Find inverse functions for selected polynomial, rational, radical, exponential, and logarithmic functions of a real variable.
4. Manipulate real and complex numbers.
5. Use polynomial, rational, radical, exponential, and logarithmic functions of a real variable to model real-world phenomena and solve applied problems.

MYLABSPLUS (MLP): MyLabsPlus is an innovative way for you to do homework and take quizzes with immediate feedback; MyLabsPlus also keeps you on task and using your developing math skills. Every section of the M121 text covered in class has a corresponding assignment in MyLabsPlus; homework can be retaken as often as you wish until the unit closes. Review exercises at the end are optional but recommended.

There is a chapter quiz for each of the chapters covered in class as well; each quiz can be taken twice and the higher score is the recorded score. Note that these assignments and chapters are open for specific times and in a specific order. Check the MyLabsPlus calendar frequently to be sure you are keeping current with your assignments. You must keep up with the progression in order to succeed in this course. The direct link to MyLabsPlus is umt.edu/mylabsplus or access the site through OneStop: http://onestop.umt.edu/.

CALCULATOR: A graphing calculator is required for M121; the Department of Applied Arts and Sciences recommends and uses Texas Instruments models TI-83 or TI-84 (regular or plus editions). Calculators with symbolic manipulation capabilities (e.g. TI-89, TI-92) will not be allowed in testing situations.

TUTORING: Math tutoring is available for all UM students. Check for hours at the ASC on the Missoula College campus (AD06) and at math@Mansfield on the Mountain Campus: http://www.umt.edu/math/MLC/default.htm.

STUDENTS WITH DISABILITIES: The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in EL154 (mountain campus), telephone number 243-2243. Their website is http://life.umt.edu/dss/. We will work with you and DSS to provide an appropriate accommodation.

TESTS and QUIZZES: Each of the seven chapters we cover in this course has a quiz; you are permitted two attempts and the higher score is the one recorded in the Gradebook.

There are also five timed online tests, which are different from the quizzes in format. Tests are meant to give you an opportunity to demonstrate what you have learned, and are not intended to intimidate you. The online tests are similar to the tests we give in my face-to-face classes, but we allow extra time to allow for the inevitable computer issues that arise. We strongly suggest that you prepare for the online tests the same way you would for an in-class test: review your notes, write down any formulas you need or questions that often give you trouble for easy reference. Not only will this help you solidify your understanding for the test, but it will also help you prepare for the final, which is indeed face-to-face. The lowest test score will be dropped.
FINAL EXAM: The final exam for this class is comprehensive and is worth 150 points. The exam will be given in class. You may have a page (8½” x 11”) of notes (both sides) to assist you and, of course, your calculator (no TI-89 or -92). If you believe that you struggle with math anxiety, we suggest that you prepare carefully; there are also links addressing math anxiety that may help you on p.4. The University of Montana also offers workshops that you may choose to attend.

Because this is an online class, some students are not able to take the final exam in the scheduled time and place; those students need to arrange for a proctor to administer the exam. See p.4 for contact info.

DROPPING AND ADDING COURSES OR CHANGING SECTIONS, GRADING OR CREDIT STATUS:

Students are expected, when selecting and registering for their courses, to make informed choices and to regard those choices as semester long commitments and obligations.

Documented justification is required for dropping courses by petition. Some examples of documented circumstances that may merit approval are:

- Error in registration,
- Accident or illness,
- Family emergency, or
- Other circumstances beyond the student's control

Reasons that are not satisfactory include:

- Forgetting to turn in a drop slip
- Protecting a student’s grade point average

The opportunity to drop a course for the current term ends on the last day of instruction before scheduled final exams. Dropping a course taken in a previous term or altering grading option or audit status for such a course is not allowed. The only exceptions are for students who have received a grade of NF (never attended).

INCOMPLETES: A grade of incomplete will only be considered when all three of the following are true:

1. The student has been in regular attendance and passing up to three weeks before the end of the academic semester.
2. Factors beyond the student’s control make it impossible to complete the course on time.
3. The instructor and the student agree that there is a reasonable probability that the student will be able to make-up the work required to complete the course and specific arrangements are drawn up and signed by both.

A student who receives an incomplete has one calendar year to resolve the incomplete (I) before it automatically reverts to a failing grade (F).

GRADING POLICIES: M121 must be completed with a grade of C or better in order to contribute towards satisfying the UM Math Literacy requirement. Auditing M121 or taking it as a Credit/No Credit course will not fulfill the requirement.

The final grade will be computed as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>MyLabsPlus homework</td>
<td>200 (40 @ 5 points each)</td>
</tr>
<tr>
<td>MyLabsPlus quizzes</td>
<td>280 (7 @ 40 points each)</td>
</tr>
<tr>
<td>Tests</td>
<td>500 (5 @ 100 points each)</td>
</tr>
<tr>
<td>Final exam</td>
<td>150 points</td>
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<tr>
<td>TOTAL</td>
<td>1130 points</td>
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Letter grades correspond to numerical scores according to this plan:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
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<tr>
<td>B</td>
<td>80-89%</td>
</tr>
<tr>
<td>C</td>
<td>70-79%</td>
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<tr>
<td>D</td>
<td>60-69%</td>
</tr>
<tr>
<td>F</td>
<td>Below 60%</td>
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ACADEMIC CONDUCT: All students are expected to practice academic honesty as defined by the Student Conduct Code, available at [http://life.umt.edu/vpsa/documents/StudentConductCode1.pdf](http://life.umt.edu/vpsa/documents/StudentConductCode1.pdf). Academic misconduct is subject to an academic penalty by the instructor and a disciplinary sanction by the university.
<table>
<thead>
<tr>
<th>Week 1: Jan 28 – Feb 3</th>
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<tbody>
<tr>
<td>§R.1 - R.5 (bottoms up factoring), §R.7</td>
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<table>
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<tr>
<th>Week 2: Feb 4 – Feb 10</th>
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<tbody>
<tr>
<td>§R.8; §1.1 - 1.2</td>
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- Chapter R Quiz

*Note: All students should pass the MyLabsPlus Chapter R Quiz with a grade of 75% or better to remain in M121.*

*This is not a requirement, but it is a strong recommendation.*

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<thead>
<tr>
<th>Week 3: Feb 11 – Feb 19</th>
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<tbody>
<tr>
<td>§1.3 (set calculator to a + bi) - 1.5</td>
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</table>

- Online Test 1: Chapter R

<table>
<thead>
<tr>
<th>Week 4: Feb 20 – Feb 24</th>
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<tbody>
<tr>
<td>§1.6, 1.7 (linear only); §2.1</td>
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- Chapter 1 Quiz

<table>
<thead>
<tr>
<th>Week 5: Feb 25 – Mar 3</th>
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<tbody>
<tr>
<td>§2.2, 2.4</td>
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- Chapter 2 Quiz

<table>
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<tr>
<th>Week 6: Mar 4 – Mar 10</th>
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<tr>
<td>§3.1 – 3.3</td>
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- Online Test 2: Chapters 1 & 2

<table>
<thead>
<tr>
<th>Week 7: Mar 11 – Mar 17</th>
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<tbody>
<tr>
<td>§3.4 – 3.6</td>
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- Chapter 3 Quiz

<table>
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<tr>
<th>Week 8: Mar 18 – Mar 24</th>
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<tr>
<td>§4.1, 4.3 – 4.4</td>
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- Chapter 4 Quiz

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<th>Week 9: Mar 25 – Mar 31</th>
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<tr>
<td>§5.1 – 5.2</td>
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- Online Test 3: Chapters 3 & 4

<table>
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<tr>
<th>Week 10: Apr 1 – Apr 7</th>
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<tr>
<td>Spring Break!</td>
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<table>
<thead>
<tr>
<th>Week 11: Apr 8 – Apr 14</th>
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<tbody>
<tr>
<td>§5.3, 5.5 – 5.6</td>
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- Chapter 5 Quiz

<table>
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<tr>
<th>Week 12: Apr 15 – Apr 21</th>
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<tbody>
<tr>
<td>§6.1 – 6.3</td>
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- Online Test 4

<table>
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<tr>
<th>Week 13: Apr 22 – Apr 28</th>
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<tbody>
<tr>
<td>§6.4 – 6.6</td>
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<table>
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<tr>
<th>Week 14: Apr 29 – May 5</th>
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<tbody>
<tr>
<td>§6.7 - 6.8</td>
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- Chapter 6 Quiz

<table>
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<tr>
<th>Week 15: May 6 – May 10</th>
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<tbody>
<tr>
<td>§6.9 - 6.10</td>
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- Online Test 5

- Review

- Final Exam: Face-to-Face Tuesday, May 14, 6-8 PM, HB 11 (The Missoula College)

*See the MyLabsPlus calendar to find the opening and closing dates for MyLabsPlus tests and homework.*
Important Dates and Deadlines is found at [http://www.umt.edu/registrar/forms/pdf/ImportantDates201330nv2.pdf](http://www.umt.edu/registrar/forms/pdf/ImportantDates201330nv2.pdf)

Finals Week Schedule available at [http://umt.edu/registrar/students/finalsweek2/Spring.aspx](http://umt.edu/registrar/students/finalsweek2/Spring.aspx)

Academic Support Center (Missoula College): AD06, phone # 243-7826 (need 2 days’ notice for make-up tests)

Math Learning Center (Math Bldg, Main Campus): Basement — used for taking make-up tests

math@Mansfield: Mansfield Library — drop-in tutoring center [http://www.umt.edu/math/MLC/default.htm](http://www.umt.edu/math/MLC/default.htm)

Academic calendar available at [http://www.umt.edu/provost/academiccalendar.html](http://www.umt.edu/provost/academiccalendar.html)

OneStop (look for MyLabsPlus link): [http://onestop.umt.edu/](http://onestop.umt.edu/)

Some useful websites:

- [http://mtsu32.mtsu.edu:11064/anxiety.html](http://mtsu32.mtsu.edu:11064/anxiety.html) Help for Math Anxiety
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  *omit inequalities*
- 4.2 Building Linear Models from Data
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- 6.2 One-to-One Functions; Inverse Functions
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