M 122 (College Trigonometry) Spring 2013 Course Coordinator: Regina Souza

<table>
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<tr>
<th>Instructor</th>
<th>Section</th>
<th>MWF</th>
<th>Room</th>
<th>Office</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Souza</td>
<td>01</td>
<td>10 am</td>
<td>MA311</td>
<td>MA 104</td>
<td>243-2166</td>
<td><a href="mailto:Regina.Souza@umontana.edu">Regina.Souza@umontana.edu</a></td>
</tr>
<tr>
<td>Grener</td>
<td>02</td>
<td>11 am</td>
<td>MA 211</td>
<td>Corbin 355</td>
<td>243-4485</td>
<td><a href="mailto:Nicholas.Grener@umontana.edu">Nicholas.Grener@umontana.edu</a></td>
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Math Learning Center (MLC): Room Math 011 (basement); Mon–Thurs: 10–4pm; Fri: 10-noon Mansfield Library Main Floor; Mon–Thurs, 6:30–9pm More information at [http://www.umt.edu/math/MLC/](http://www.umt.edu/math/MLC/).

Office Hours (for all instructors): TBA (see [http://www.math.umt.edu/souza/oh.pdf](http://www.math.umt.edu/souza/oh.pdf))

Office Hours for Dr. Souza (Coordinator): Mo: 3:10-4pm, Tu: 10:10-11am, We: 2:10-3pm, Fri: 9:10-10pm, or by appointment.

Contact information for Dr. Souza: Room MA 104, 243-2166, Regina.Souza@umontana.edu

Text: College Algebra, Trigonometry and Precalculus, UM Custom 2nd ed., Connally, Hughes-Hallett, et al. (available at the bookstore). For Section 1, if you have not used the book last semester, you will need an access code (which will be bundled with your text book). It is the SAME textbook used in M 121 last semester. Please use your previous login information (and you won’t need to purchase a new book nor a new code). If you do have the book and do not care for a hardcopy, you may choose to purchase an electronic textbook with WileyPLUS when you register at [www.wileyplus.com](http://www.wileyplus.com).

Graphing Calculator: A graphing calculator is required. Class demos will be given with a TI-83 or TI-84.

Course Description: (adapted from [http://www.umt.edu/catalog/cat/cas/math.html](http://www.umt.edu/catalog/cat/cas/math.html))

M 122 (MATH 112) College Trigonometry 3 cr. Offered autumn and spring. Prereq., M 121 (MATH 111) or Aleks placement ≥ 4. Preparation for calculus based on college algebra. Review of functions and their inverses, exponential and logarithmic functions. Trigonometric functions and identities, polar coordinates and an optional topic such as conic sections or parametric functions. Credit not allowed for both M 122 (MATH 112, MAT 119) and M 151 (MATH 121, MAT 120).

Learning Goals:

1. Define trigonometric ratios using right triangles and coordinate systems: the unit circle and polar coordinates.
2. Graph trigonometric, exponential, and logarithmic functions of a real variable.
3. Investigate the algebra of trigonometric functions, including composition of functions, inverse functions, and transformations.
4. Solve trigonometric identities and equations.
5. Use trigonometric functions of a real variable to model real-world phenomena and solve applied problems.

Course Content:

1. Functions: Definitions, Transformations, Applications, Composition, Inverses
2. Triangle Trigonometry
3. Trigonometric Functions
4. Trigonometric Identities and Equations, Inverse Trigonometric Functions
5. Law of Sines and Law of Cosines
6. Polar Coordinates
7. Optional Topics: Complex Numbers, Parametric Equations or Conic Sections.
Grading and Policies

Grading: Your course grade will be based on 3 exams, a common final exam and other activities:

- Three midterm tests (100 points each; Feb 22, Mar 29 & May 3)  300 points (50%)
- Other activities (homework, quizzes, projects, etc…)  150 points (25%)
- Final Exam (all sections Tue, May 14, 6-8 pm)  150 points (25%)

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<td>≥ 87%</td>
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<td>&lt; 55%</td>
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M 122 must be completed with a C- or better to fulfill the math literacy requirement. Taking M 122 with the Credit/No Credit option will not fulfill the requirement.

Information you might find useful:

Prerequisite: M 121 with a grade of C- or better (taken less than a year ago) or Aleks placement level 4.

In-class activities: In my experience, regular attendance is essential to successfully complete this course.

“Doing math”: One of the best ways to learn mathematics is to do mathematics. Some instructors will provide opportunity in class for that. Your instructor will provide a selection of homework problems. Check with your instructor about his/her policies regarding that. Most students spend about 6 hours a week outside of class for study and homework. In my experience, it is best to do this in 1–2 hour sessions each day and not in a marathon all one day. Study groups or a study partner work well for many students.

Reading the text: Here are some strategies: reading the authors’ introductory remarks to get a feel for the material, redoing examples on your own and comparing your solution with the authors’ approach, reading the “Summary” or working out the “Check Your Understanding” problems at the end of each chapter, or creating your own summary and review. The access code will give you access to an electronic copy of the textbook, to a Student Study Guide (found under “Read, Study and Practice” on WileyPLUS), recorded Mini-Lectures, etc.

One-on-one interaction: Besides seeing your instructor, you may also interact with other instructors and classmates at the Math Learning Center (MLC) in the basement of the Math building (MATH 011). For some of us this is the most effective (and most fun) way to learn math.

Web Pages: [http://www.math.umt.edu/souza/M122](http://www.math.umt.edu/souza/M122) (a link can be found in the Math Dept’s web page).

Miscellaneous policies and information:

Disabilities: Students with disabilities are welcome to discuss accommodations with me. More information at the site of the Disabilities Services for Students (DSS): [http://life.umt.edu/dss/](http://life.umt.edu/dss/). Disability Services now requires one week's notice for scheduling exams.

Make-ups: Exam make-ups will be given under special circumstances (illness, UM-sponsored travel, family emergency, etc.) Please make arrangements as soon as you know you will miss an exam. Early finals (Monday, May 13 or earlier on Tuesday, May 14) will be given only under exceptional circumstances; and need the approval of the course coordinator.

Petitions: Between April 9 and May 10 you can petition to drop a course or to change the grading option (though not to Audit). Acceptable reasons are listed in the 2012/2013 student catalog.

Incompletes: Incompletes may be given only if a student has been in attendance and doing passing work up to 3 weeks before the end of the semester. See the 2011/2012 Catalog for the complete policy.

Misconduct: All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.

Student Conduct Code: All students need to be familiar with the Student Conduct Code. You can find it in the “S” section of the “A to Z Index” on the UM home page ([http://umt.edu](http://umt.edu)).