1-2014

M 122.00: College Trigonometry

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M 122 (College Trigonometry) **Spring 2014** **Instructor**: Regina Souza

Instructor	Section	MWF	Room	Office	Phone	Email
Souza	01 02	10 am 11 am	MA311 MA211	MA 104	243-2166	Regina.Souza@umontana.edu

Math Learning Center (MLC): Room Math 011 (basement); Mon–Thurs: 10–3pm, Fr: 10am-noon
Starting Feb. 3rd, also at the Mansfield Library Main Floor; Mon–Thurs, 6:30–9pm
More information at http://www.umt.edu/math/MLC/ .
Office Hours (for all instructors): TBA (see http://www.math.umt.edu/souza/oh.pdf)
Office Hours for Dr. Souza: Mo: 3:10-4pm, Tu: 11:10-12pm, We: 1:10-2pm,
Fri: 9:10-10pm, or by appointment.

Text: College Algebra, Trigonometry and Precalculus, UM Custom (2nd ed.), Connally, Hughes-Hallett, et al. (available at the bookstore), or the 4th edition of Functions Modeling Change, Connally, Hughes-Hallet, et al. This is the same text book we used last semester for College Algebra. If you purchased the access code last semester, you can login at www.wileyplus.com to register for " Spr14-M 122/M 151-Electronic Textbook Access". You do not need the access code for WileyPLUS; you can buy a used book. You may also choose to purchase an e-book: www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP001848.html

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)

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 21, Mar 28 & May 2nd)	300 points (50%)
Other activities (homework, quizzes, projects, etc…)	150 points (25%)
Cumulative Final Exam (all sections Tue, May 13, 6-8 pm)	150 points (25%)

≥ 93%	≥ 90%	≥ 87%	≥ 83%	≥ 80%	≥ 75%	≥ 70%	≥ 65%	≥ 62%	≥ 58%	≥ 55%	< 55%
A	A–	B+	B	B–	C+	C	C–	D+	D	D–	F

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. There will be opportunity in class and outside of class for that. There will be a selection of homework problems due weekly, and ``daily'' WeBWorK (http://lennes.math.umt.edu/webwork2/) online problems. 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. Additionally, if you have a WileyPLUS account from last semester, this will give you access to an electronic copy of the textbook, solutions manual, graphing calculator manual, a *Student Study Guide,* recorded Mini-Lectures, etc. (Those are found under "Read, Study and Practice" on WileyPLUS).

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 (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/. Disability Services now requires one week's notice for scheduling exams.

Make-ups: Exam make-ups or early finals (Monday, May 12 or earlier on Tuesday, May 13) will be given only under special circumstances (illness, UM-sponsored travel, family emergency, etc.) Please make arrangements as soon as you know you will miss an exam.

Academic Policies: Petitions to drop between April 8 and May 9 must be approved by the Dean of the student's major. 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. Acceptable reasons for late drops and incompletes are listed in the 2013/2014 student catalog: http://www.umt.edu/catalog/acad/acadpolicy

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).