

Instructor	Section	MTWF	Room	Office	Phone	Email
Lane	2 & 3	10 & 11 am	MA 305	Math 005	243-5207	Dick.Lane@umontana.edu
Souza	5	1 pm	MA 311	Math 104	243-2166	Regina.Souza@umontana.edu

Math Learning Center (MLC): Room Math 011 (basement); Mon–Thurs: 10–4pm, Friday: 10-12pm
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 (Coordinator): Mo: 3-3:30pm, Tu: 10:10-10:40am, We: 2:10-3pm and
Fri: 11:10-12pm, or by appointment.
(See contact information for Dr. Souza in table above.)

Text: *College Algebra, Trigonometry and Precalculus*, UM Custom (2nd ed.), Connally, Hughes-Hallett, et al. (available at the bookstore). **Online text (plus online homework, student study guide, student solutions manual, graphing calculator manual)** at WileyPLUS URL: www.wileyplus.com. You will need an access code (which will be bundled with your text book). If you had a Wiley account for the previous edition last semester, please use your previous login information (and you won't need to purchase a new book nor a new code).

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 151 Precalculus 4 cr. Offered autumn and spring. Prerequisites: appropriate placement score. A one semester preparation for calculus as an alternative to M 121-122 (MATH 111–112). Functions of one real variable are introduced in general and then applied to the usual elementary functions, namely polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, and miscellaneous others. Inverse functions, polar coordinates and trigonometric identities are included. Credit not allowed for both M 151 (MATH 121, MAT 120) and M 121 or 122 (MATH 111 or 112, MAT 118 or 119).

Learning Goals:

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

Course Content:

1. Graphs, Functions, Applications (Function Notation, Linear Functions, Equations of Lines, Applications, Solving Linear Inequalities, Increasing, Decreasing, and Piecewise Functions, Algebra of Functions, Composition of Functions, Symmetry and Transformations; Family of Quadratic Functions)
2. Exponential and Logarithmic Functions (Inverse Functions, Exponential and Logarithmic Functions and their Graphs, Exponential and Logarithmic Equations, Applications)
3. Trigonometric Functions (Trigonometric Functions and their inverses, Applications, Arc Length, Graphs, Identities (Sum, Co-function, Double-Angle), Trigonometric Equations, Polar Coordinates)
4. Polynomial and Rational Functions (Short-run Behavior, Graphs, Comparing Power, Exponential and Logarithmic Functions, Fitting Exponentials and Polynomials to Data, Applications.)

Grading and Policies

Grading: Your course grade will be based on 4 exams, a final exam and other activities:

Four midterm tests (100 points each)	400 points
Other activities (homework, quizzes, projects, etc...)	200 points
Final Exam (all sections, Tue, May 8, 6-8pm)	200 points

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

M151 must be completed **with a C- or better** to fulfill the math literacy requirement. Taking M151 with the Credit/NoCredit option will not fulfill the requirement.

Information you might find useful:

Prerequisites: Aleks placement level 4 or consent of instructor.

In-class activities: In my experience, regular attendance and engaged participation 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. There is also a selection of homework problems available at the course webpage. Check with your instructor about his/her policies regarding that. Most students spend about 8 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, redo examples on your own and comparing your solution with the authors’ approach, using the *Student Study Guide* (found under “Read, Study and Practice” on WileyPLUS), reading the “Summary” or the “Check Your Understanding” problems at the end of each chapter, or creating your own summary and review.

One-on-one interaction: Besides seeing your instructor (during office hours or at an arranged time), 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/M151> (a link can be found in the Math Department’s webpage).

Miscellaneous policies and information:

Disabilities: Students with disabilities are welcome to discuss accommodations with me. More information can be found at the website 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 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 7 or earlier on Tuesday, May 8) will be given only under exceptional circumstances; and need the approval of the course coordinator.

Petitions: Between March 27 and May 4 you can petition to drop a course or to change the grading option (though not to Audit). Signatures from Advisor, Instructor, and Dean of major are required, the transcript will record WF or WP. Acceptable reasons for late drops are listed in the 2011/2012 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>).