College Algebra

M 121 – 800 Fall 2019
CRN 61691
Online

Instructor	Dr. Mark Jacobson Office: LA-836 Office Hours: Monday and Tuesday: 10:00 a.m. – 12:00 p.m. (noon) or by appointment Phone: 406-657-2203 Email: mjacobson@msubillings.edu Webpage: www.msubillings.edu/mathfaculty/mjacobson/

Course Materials	[1] Access Code only, ISBN: 978-0-13-475884-8. Buy a printed textbook for about $50 by clicking on "Purchase Options" on the left-hand sidebar. [2] Algebra Package for MSUB 2nd Ed., ISBN: 9781323626788; includes MyMathLab access code. [3] Texbook: Algebra and Trigonometry by Robert Blitzer, 6th Ed., ISBN: 9780134463216; does NOT include MyMathLab access code. [4] Online Companion: MyMathLab (mymathlab.com). To sign up in MyMathLab, you will need an access code which comes bundled when you purchase a new textbook. If you already have a textbook and do not want to purchase a new one, then you can buy just the access code online. In fact, you will have access to an electronic version of the textbook after you buy the access code. When you sign up for the course in MyMathLab, make sure to use the correct course id given in the attached MyLab & Mastering Student Registration Instructions. [5] EText fast access in MyMathLab: Click on Chapter Contents on the left-hand sidebar, then go the desired Chapter and Section. [6] Graphing Calculator or App. Note: If you have MyMathLab technical problems go to the following website: https://support.pearson.com/getsupport/s/ .

Course Description	3 credits. Prerequisite: M 095 or appropriate placement score. A course that can meet the Mathematics requirement of General Education Courses, College Algebra introduces functions and associated equations. It covers the concepts of functions, linear and non-linear equations, complex numbers as solutions to quadratic equations, and systems of equations. Further, we investigate polynomial, rational, exponential and logarithmic functions and equations.

Learning Objectives	The main objective of college algebra is to enable students to read and evaluate real-world problems and quantitatively solve those problems using mathematical reasoning. Upon successful completion of the course, students should be able to [1] display a working understanding of the specific categories of functions and equations typical in a calculus series, such as polynomial, rational, logarithmic and exponential, and hence take higher level courses, such as finite math and calculus, [2] comprehend and apply the fundamental concepts and techniques of algebra in one variable to a variety of applications, [3] formulate, analyze and interpret quantitative arguments in a variety of settings, and

[4] read and understand mathematics, think critically, and express mathematical concepts precisely in writing.

Grading

Exam 1	12.5%	September 23 - 25
Exam 2	12.5%	October 15 - 17
Exam 3	12.5%	November 5 - 7
Exam 4	12.5%	November 25 - 27
Comprehensive Final Exam	25%	December 3 - 7
Online Homework	25%	

Scale:

Percentage	Grade	Points
100 – 93 %	A	4.0
92 – 90 %	A-	3.7
89 – 87 %	B+	3.3
86 – 83 %	B	3.0
82 – 80 %	B-	2.7
79 – 77 %	C+	2.3
76 – 73 %	C	2.0
72 – 70 %	C-	1.7
69 – 67 %	D+	1.3
66 – 63 %	D	1.0
62 – 60 %	D-	0.7
Below 60%	F	0.0

Exams

There are four chapter exams for 12.5% each and a comprehensive final exam for 25%; see the dates noted above. You will have 3 hours each for Exams 1 - 4; and 3.5 hours for the Final Exam. You may use a calculator, your book and notes during the exams.

If there is an extreme circumstance that prevents you from taking an exam during its designated time, then you will need to contact me as soon as possible. Depending on the nature of the situation, I may ask for a documentation from a proper authority, such as a note from a physician in the case of illness, or from the office of Vice Chancellor for Student Affairs in case of absence for special events. Please see *Montana State University Billings 2013-2015 General Bulletin* for more information. In all absences, the student is responsible for all requirements of the course.

Online Homework

The online MyMathLab homework is worth 25%. The homework problems focus on the understanding, interpretations and manipulations of the concepts discussed in class and the textbook. The problem sets closely correspond to the material covered in the class and will be assigned with deadlines throughout the semester. The website will provide you with immediate feedback when you submit your answers. You can attempt a problem any number of times. Some problems may take longer than others and hence I encourage you to start working on the problems well in advance of the due dates.

Incomplete Grade

An Incomplete (grade) is given only when students have been 'in attendance' for at least three-fourths of the semester but have been <u>prevented by circumstances beyond their control from completing all the requirements of the course</u>. The student must provide adequate evidence me as

the reason why the student was unable to complete the requirements of the course. An Incomplete must be made up within one calendar year or the grade will revert to an F.

| **Getting Help** | You are always welcome to stop by my office or email/call me at any time to see if I am available. You are also encouraged to work in groups as much as possible in understanding the concepts and homework problems. Often, having a second perspective helps in the understanding process. However, please do your homework on your own. |
| | The Academic Support Center, located in the Student Union, offers free tutoring in many areas of mathematics, statistics, languages, sciences and more. See http://www.msubillings.edu/asc/ for more information. |

| **Academic Integrity** | Montana State University Billings is built upon a strong foundation of integrity, respect and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated. As college students you should be very familiar with the requirements for academic integrity. Any student found to have engaged in academic dishonesty of any form will meet with disciplinary action, including, but not limited to, a failing grade in the course. For further information, consult the *MSUB Student Policies & Procedures Handbook* available online at the university home page. |

| **Disability Statement** | If you have a physical, learning, or psychological disability and require accommodations, please let me know as soon as possible. You have the responsibility to identify yourself, request appropriate accommodations and reasonable modifications. You are encouraged to contact Disability Support Services in College of Education Room 135, (406) 657-2283 (Phone), (406) 545-2518 (Video Phone). |

Tentative Schedule

Day	Chapter/Section	MathLab Due
Sept 4	Classes Begin	
	1.1 Graphs & Graphing Utilities	Sep 23
	1.2 Linear Equations & Rational Equations	Sep 23
	1.3 Models & Applications	Sep 23
	1.4 Complex Numbers	Sep 23
	1.5 Quadratic Equations	Sep 23
	1.6 Other Types of Equations	Sep 23
	1.7 Linear Inequalities & Absolute Value Inequalities	Sep 23
	EXAM 1, September 23 - 25	
Sep 25	2.1 Functions & Graphs	Oct 15
	2.2 More Functions & Graphs	Oct 15
	2.3 Linear Functions and Slope	Oct 15
	2.4 More on Slope	Oct 15
	2.5 Transformations of Functions	Oct 15
	2.6 Combinations of Functions; Composite Functions	Oct 15
	2.7 Inverse Functions	Oct 15
	2.8 Distance & Midpoint Formulas; Circles	Oct 15
	EXAM 2, October 15 - 17	
Oct 21	3.1 Quadratic Functions	Nov 5
	3.2 Polynomial Functions & their graphs	Nov 5
	3.3 Dividing Polynomials	Nov 5
	3.4 Zeros of Polynomial Functions	Nov 5
	3.5 Rational Functions & Their Graphs	Nov 5
	3.6 Polynomial & Rational Inequalities	Nov 5
	3.7 Modeling Using Variation	Nov 5
	EXAM 3, November 5 - 7	

Nov 12	4.1 Exponential Functions	Nov 25
	4.2 Logarithmic Functions	Nov 25
	4.3 Properties of Logarithms	Nov 25
	4.4 Exponential & Logarithmic Equations	Nov 25
	4.5 Exponential Growth & Decay; Modeling Data	Nov 25
	EXAM 4, November 25 - 27	

Final Exam, December 3 - 7

The policies in this syllabus are subject to change. Minor changes will be announced in class and substantive changes shall be communicated in writing.

See **MyLab & Mastering Student Registration Instructions** on the next page.

Student Registration Instructions Pearson

To register for M 121-800 Fall 2019 Instructor Jacobson:

1. Go to https://www.pearson.com/mylab.
2. Under Register, select **Student**.
3. Confirm you have the information needed, then select **OK! Register now**.
4. Enter your instructor's course ID: jacobson94268, and **Continue**.
5. Enter your existing Pearson account **username** and **password** to **Sign In**. You have an account if you have ever used a MyLab or Mastering product.
    » If you don't have an account, select **Create** and complete the required fields.
6. Select an access option.
    » Enter the access code that came with your textbook or that you purchased separately from the bookstore.
    » If available for your course,
        • Buy access using a credit card or PayPal.
        • Get temporary access.

   If you're taking another semester of a course, you skip this step.

7. From the You're Done! page, select **Go To My Courses**.
8. On the My Courses page, select the course name **M 121-800 Fall 2019 Instructor Jacobson** to start your work.

To sign in later:

1. Go to https://www.pearson.com/mylab.
2. Select **Sign In**.
3. Enter your Pearson account **username** and **password,** and **Sign In**.
4. Select the course name **M 121-800 Fall 2019 Instructor Jacobson** to start your work.

To upgrade temporary access to full access:

1. Go to https://www.pearson.com/mylab.
2. Select **Sign In**.
3. Enter your Pearson account **username** and **password,** and **Sign In**.
4. Select **Upgrade access** for **M 121-800 Fall 2019 Instructor Jacobson**.
5. Enter an access code or buy access with a credit card or PayPal.