

## MA101 INTERMEDIATE ALGEBRA FOR LIBERAL ARTS

CRN 22866 MWF 9<sup>00</sup>-9<sup>50</sup> SE 207CRN #22869 MWF 1000-1050 SE 207

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**PROFESSOR SHAW'S THOUGHTS ABOUT LEARNING**

You and I have the same goal – that you succeed in your Intermediate Algebra course.

Educational research shows that deepest learning occurs when students are actively involved and become participants in the process. I believe it is my role as an instructor to design ways and create a comfortable climate that facilitates your engagement in your learning. You will find that the classroom routines, activities and assignments are consistent with that premise. I have created opportunities for you to gain knowledge, practice new skills, reconfigure what you already know and to recognize what you have learned.

**INSTRUCTOR INFORMATION**

Office Location: Science East, 222F Telephone: 240-567-5225

Email: Nancy.Shaw@MontgomeryCollege.edu

- Please use your college address and write using grammatically correct sentences.
- During the work week and many weekends, I will reply to email within a day.

Math Department Office: 240-567-5194 Math Department Fax\*: 240-567-5182

*\*There is a significant time delay before a fax is printed, & finally delivered to my mailbox in SE215.*

Professor Shaw's Web Site: [www.montgomerycollege.edu/faculty/~nshaw/public\\_html](http://www.montgomerycollege.edu/faculty/~nshaw/public_html)

Official Office Hours: Mon 11<sup>00</sup> – 11<sup>30</sup>, Tue 9<sup>00</sup>-9<sup>45</sup>, Wed 2<sup>00</sup>-2<sup>45</sup>, Thursdays 12<sup>30</sup>-1<sup>30</sup>

When I am not in class, I am usually in my office, and often available to talk. There is a link to my weekly schedule on MyMC→My Courses tab→MA101, as well as my web site. If it is important that we meet at a specific time, let me know this so we can reserve one that is mutually convenient.

**STUDENT INFORMATION FORM**

I have tried to anticipate your learning needs as I was setting the agenda for this semester. In order to help me to deliver more effective instruction, please answer the questions on the Student Information Form at the end of this packet. It should be returned to me at the next class meeting. I will use this information to get to know you, to adapt the class to your needs and expectations, and to contact you by mail or phone, should the need arise. A secondary purpose for your completing this form is that it encourages you to assess your current readiness for taking the course.

**SEMESTER CALENDAR**

You will find a tentative semester calendar on page 5 of this course syllabus. It lists which days various topics (listed in green by chapter.section) are likely to be studied in class, expected test dates, and much more. To best appreciate the overall structure of the course, I suggest you consult it on a regular basis.

**GENERAL PURPOSE OF THIS COURSE**

The goals of this course are two-fold. One is that you learn how people communicate in math and that you, too, learn to reason and talk mathematically. A second goal is more practical - that you acquire math skills needed for certain future college courses (see next paragraph).

**COURSE CATALOG DESCRIPTION**

*Development of Algebraic and problem-solving skills and concepts intended to prepare students for a mathematics foundation course. Topics include linear, quadratic, and exponential equations, functions and their applications, modeling and data analysis. This course does not satisfy the prerequisite for MA 130, MA 160, or MA 180. Not intended for students who have a grade of C or better in MA 100, MA 100D, MA 103, or their equivalent.*

*PREREQUISITE: A grade of C or better in MA 091, MA 091A, or MA 091D; or appropriate score on the mathematics assessment test; or consent of department. Assessment level: RD 120. Three hours each week.*

## **REQUIRED MATERIALS**

### Textbook:

Textbook: *Intermediate Algebra, Functions and Authentic Applications, with MathXL, 3rd ed.*, by Lehmann; Pearson/Prentice Hall. If purchased from the bookstore, the textbook comes packaged with an access code for MathXL, the online homework system that we will be using in this course.

*Please be aware that you will need the MathXL access code as well as the textbook. If you purchase the book from an independent source, the list price is not likely to include a MathXL access code. Check first!*

### MathXL:

This is an online homework system which we will use for most homework. Some assignments for the first unit have already been posted online and more will be added even before classes begin. In fact, you can register now at [www.mathxl.com](http://www.mathxl.com) and enroll in the class. If your class meets at 9<sup>00</sup>, your course ID is [XL0D-N1NK-901Y-98Z2](#); if your class meets at 10<sup>00</sup>, your course ID is [XL0D-N1NR-001Y-68Z2](#). I encourage you to begin familiarizing yourself now with the system. With MathXL you can re-work most parts of each assignment, up until the posted due date. As you work the homework exercises, MathXL offers tutorial help and/or related textbook references. Print any questions that you wish to discuss and bring them to class or a study group. MathXL can be purchased as a stand-alone item at [www.mathxl.com](http://www.mathxl.com).

### Calculator:

Each MA 101 student is required to have a graphing calculator. Suggested models are TI-83 & TI-84. Neither the TI-89 nor the TI-92 may be used at this level.

You may not know how to use many features of your graphing calculator as you begin the course, but you will become proficient as the semester progresses. Advanced features will be introduced and discussed gradually as appropriate opportunities occur in the coverage of course material. Several graphing calculator workshops will be conducted in the Math/Science Center. Take advantage of this offering and plan to go when they are announced!

## **RESOURCES:**

There are many other resources available for you. It will be your responsibility to select and use which ones will be optimal for your personal situation. Below is a partial list:

Math/Science Center, located below the library, at Macklin Tower 02

The Center has tables for folks who wish to work in small groups, individual study carrels for those who want a quiet space to work alone, and computers for students to access MathXL on the Internet. The MSC retains textbooks and solution manuals for students to use while visiting, and free tutoring.

Contact: Telephone: 240-567-5200 Internet: [www.montgomerycollege.edu/Departments/mathscrv](http://www.montgomerycollege.edu/Departments/mathscrv)

Hours: Mon. – Thurs. 8am – 8pm, Fri. 8am – 4pm, Sat. 10am – 3pm.

### Tutoring:

You can receive free Tutoring on a drop-by basis, offered by math faculty and student tutors at the Math/Science Center during most hours they are open. Check their website for details.

### MyMC (online):

I will post course related materials, such as this syllabus, the semester calendar, some handouts, and printable graph paper. See MyMC → MyCourses → Ma101 → Files (or links) for these and other course-related materials as they are updated.

### Student Study Groups:

Student study groups can make a big difference! The relationships formed with study partners often continue well past one course. Find or form a study group with other students in the class; meet weekly to discuss the homework, ask questions and learn from your peers.



### Participating in Your Learning

Participation and discussion are an important part of learning. You will be working regularly with other members of the class and are expected to participate actively in all learning events. Effective participation includes staying “tuned in” and “turned on” during class, venturing forth with your own ideas and questions, contributing during group activities, listening attentively to others and assisting your classmates when possible.

### Attending and Being Prompt for Class

Each student is expected to come to every class, to arrive on time and to be prepared to be an active learner the moment class is scheduled to begin. If it is essential, however, that you miss a class, make sure you find out what transpired. It is not the professor’s responsibility to re-teach any lesson. You will be responsible for any assignments given, work covered and announcements made. Please be informed that if you miss more than a week’s worth of classes for any reason, you will likely be dropped from the course.

### Missing a Test/Quiz

If you know in advance that you have to miss a test or a quiz, you can make arrangements with me to take the test or quiz **before** it is given in class.

In addition, a TEST may be made up if and only if you

1. Contact me on or before the scheduled test date and time; and also,
2. Have submitted 85% of your MathXL and Written Homework when they were due.

Both conditions must be met in order to qualify to take an advance makeup test. If advance notification is not given, then your final exam grade can be substituted for the grade of the missed test only if you have submitted 85% of the collective homework. This special deal is offered for only one exam. If you are present for all four exams and have met the homework stipulation, then the offer applies to the test with the lowest score if that will help your overall average.

If you have not exceeded the limit for absences, then a missed QUIZ will be excused by your submitting satisfactory solutions to its questions.

### Inclement Weather

If inclement weather forces the College or any campus or College facility to suspend classes or close, public service announcements will be provided to local radio and television stations as early as possible. You may also call MC at 240-567-5000 or check the college website [www.montgomerycollege.edu](http://www.montgomerycollege.edu) to verify MC school closings. Any exams planned on days classes are suspended will be administered at the first class meeting once classes resume. Note that the Montgomery County Public Schools (MCPS) and Montgomery College are different; they do not follow the same school closing procedures.

### Cheating

Cheating will not be tolerated and would likely result in an "F" for the course.

### Disability Support:

To any student who may need an accommodation due to a disability, please make an appointment to see me during my office hours so we can discuss what is best for your situation. A letter from Disability Support Services authorizing your accommodations will be needed.

### Academic Regulations & Student Code of Conduct:

All MC students are expected to follow “Academic Regulations” & “Student Code of Conduct”, described in the MC Student Handbook. These regulations/guidelines can be found at:

[www.montgomerycollege.edu/departments/academicevp/Student\\_PandP.htm](http://www.montgomerycollege.edu/departments/academicevp/Student_PandP.htm)

### **GRADING**

To ensure consistency between the course goals and how you are evaluated, one component of your grade will be Written Homework, taken from selected exercises in the Intermediate Algebra textbook. This Written Homework will be done outside of class and evaluated on criteria more than simply stating a final answer. It will be based on how well you present your reasoning, how well you make use of graphs and/or

tables to communicate mathematical ideas, how coherent and structured is the work you show to establish final answers, how you state your final conclusions and relate them to the original situation presented.

You and I have the same goal – that you learn Intermediate Algebra and earn a grade that represents this. Because I believe that you will be more successful if you have a stake in your own assessment, I am asking you to take part in deciding how that grade should be determined. I ask you to select (by 9/11/09) how to weigh the averages in the categories listed below (within the stated ranges). You are the person who knows best your own strengths and weaknesses; consider them carefully before you submit your decision. It will be binding.

- Tests & Quizzes (3 unit tests + average of all quizzes = 4 Scores)....50-60 % (Default: 55%)
- Final Exam..... 20-30% (Default: 25%)
- Homework (MathXL online and Written).....10-20% (Default: 15%)
- Participation in Learning (Description TBA).....5% (Default: 5%)

Near the end of this packet is a contract for you to complete, telling me how you wish to apportion your grades. Attendance and participation will be used to help determine final grades for students with borderline averages. These closed intervals will be used for a grading:

A [90, 100]    B [80, 89]    C [70, 79]    D [60, 69]    F [0,59]

Montgomery College MA 101 Course Outcomes, <i>as approved Spring 2008</i>	
#	<i>Outcome: Upon completion of this course/program a student will be able to:</i>
1.	Given a table of values, a verbal, algebraic or graphical representation, identify whether a function is linear, quadratic, or exponential,
2.	Know specific symbolic and graphical characteristics of linear, quadratic, and exponential functions.
3.	Interpret, in context, the key features of linear, quadratic, and exponential functions.
4.	From real world data, develop the appropriate linear, quadratic, or exponential function model.
5.	Use linear, quadratic, and exponential models to evaluate and make predictions.
6.	Use numerical, verbal, algebraic or graphical strategies to do all of the above.
7.	Solve linear, quadratic, and exponential equations by applying algebraic, numerical, and/or graphing techniques.
8.	Understand, translate, and solve linear, quadratic, and exponential application problems.
9.	Campus-specific outcomes may be developed to assess individual optional topics.

**PARTING COMMENTS, from Professor Shaw:**

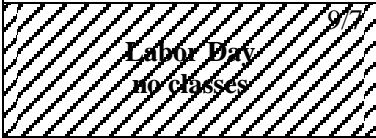
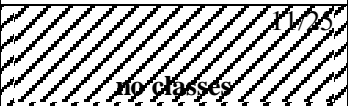
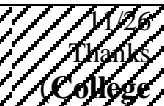

I have constructed this syllabus to include not only the content you'll need to support your learning, but also useful information to encourage active, purposeful and effective learning. If any changes need to be made to this syllabus, you will be notified promptly.

Last, but not least, think positively and believe that you can understand Intermediate Algebra and do well in the course. **YOU ARE THE OWNER OF YOUR EDUCATION.** Please don't fall into the trap of telling yourself that, "I'm just not a math person" or "I don't learn well doing homework on computers" or "I learn better by myself". As soon as you resign yourself to these thoughts, you have lost control of the situation and may be unable to do anything to change it. If you let yourself feel that you have no control over the situation, then not only are you unable to change what happens, but how well or how much you learn is no longer your responsibility - it's out of your control. On the other hand, if you tell yourself that you can learn Intermediate Algebra and that you are going to take responsibility for your own learning, then you have control over the situation and can take measures to do just that.

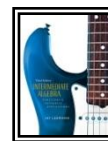
Ultimately, you will be the one to assume responsibility for actively shaping your learning in this course.

# Shaw's Suggested MA 101 Calendar

# Fall 2009 SE 207

Day # 1 <b>Course Intro</b> <b>1.1</b>	8/31	9/1	Day #2 <b>1.2</b>	9/2	9/3	Day #3 <b>1.3</b>	9/4
 Labor Day no classes	9/7	9/8 <b>Last Day to Drop with a Refund</b>	Day # 4 <b>1.4</b>	9/9	9/10	Day # 5 <b>1.5</b>	9/11
Day # 6 <b>1.6</b>	9/14	9/15	Day # 7 <b>2.1</b>	9/16	9/17	Day 8 <b>2.2</b>	9/18
Day # #9 <b>2.3</b>	9/21	<b>Last Day 9/22 to Drop without "W" or ↔Audit</b>	Day #10 <b>2.3</b>	9/23	9/24	Day # 11 <b>2.4</b>	9/25
Day # 12 <b>4.1, 4.2</b>	9/28	9/29	Day # 13 <b>4.2</b> <b>Summary</b>	9/30	10/1	Day # 14 <b>TEST #1</b> <b>9.1</b>	10/2
Day # #15 <b>9.1, 4.3</b>	10/5	10/6	Day # 16 <b>4.3, 4.4</b>	10/7	10/9	Day #17 <b>4.4, 4.5</b>	10/9
Day #18 <b>4.5, 5.1</b>	10/12	10/13	Day # 19 <b>5.1, 5.2</b>	10/14	10/15	Day # 20 <b>5.2, 5.3</b>	10/16
Day # 21 <b>5.3, 5.4</b>	10/19	10/20	Day # 22 <b>5.4</b>	10/21	10/22	Day #23 <b>5.6, 6.1, 6.2</b>	10/23
Day # 24 <b>6.2, 6.3</b>	10/26	10/27	Day # 25 <b>6.3, 6.4</b>	10/28	10/29	Day # 26 <b>6.4, 6.5</b>	10/30
Day # 27 <b>6.5, 6.6</b>	11/2	11/3	Day # 28 <b>6.6, Summary</b>	11/4	11/5	Day # 29 <b>TEST #2</b> <b>7.1 lab</b>	11/6
Day# 30 <b>7.1, 7.2</b>	11/9	11/10	Day# 31 <b>7.2, 7.3</b>	11/11	11/12	Day 32 <b>7.3</b>	11/13
Day # #33 <b>7.5</b>	11/16	11/17 <b>Last Day to Drop w/"W"</b>	Day # 34 <b>7.7</b>	11/18	11/19	Day # 35 <b>7.7, 7.8</b>	11/20
Day # 36 <b>7.8, 3.1</b>	11/23	11/24	 No classes	11/25	 Thanks giving (College Closed)	 11/25	11/25
Day #37 <b>TEST #3 + 3.1</b> or ... <b>3.2</b>	11/30	12/1	Day #38 <b>3.1 + 3.2</b> or ... <b>3.2, 3.3</b>	12/2	12/3	Day #39 <b>3.3 + 11.6</b> or ... <b>11.6</b>	12/4
Day #40 <b>11.6 + Summary</b> or ... <b>TEST #3 + Summary</b>	12/7	12/8	Day # 41 <b>Quiz + Course Smry</b> or <b>Course Summary</b>	12/9	12/10	Day # 42 <b>Course Summary</b>	12/11

**Final Exams 9:00 class: Wed, Dec 16, 8<sup>00</sup>-10<sup>00</sup> am. 10:00 class: Mon, Dec 14, 10<sup>15</sup> am-12<sup>15</sup> pm**



# MathXL Textbook Sources of Anticipated MathXL Homework

Section	Page	Exercises Covered in MathXL
<i>Note that MathXL re-numbers these sequentially as #1, #2...</i>		
1.1	5	1, 5, 7, 21, 29, 33, 37 seven
1.2	14	5, 25, 39, 41, 55, 59, 63, 69, 77, 79, 81, 83, 87, 98 fourteen
1.3	23	1, 15, 21, 27, 29, 31, 45, 59 eight
1.4	30	3, 9, 15, 19, 41, 43, 45, 51, 65, 71 ten
1.5	39	1, 9, 23, 33, 35, 37, 47, 51, 53, 69, 73 eleven
1.6	47	1, 11, 13, 17, 21, 29, 31, 39, 47, 53 ten
<b>1.7</b>	<b>52</b>	<b>**Assorted Exercises Ch 1: 1, 3, 4, 5, 7, 13, 15, 17, 19, 21, 26, 29, 32, 39, 42, 43**</b>
2.1	62	1, 3, 9 three
2.2	70	1, 7, 11, 18 four
2.3	83	1, 9, 23, 25, 29, 43, 45, 47, 53, 59, 61, 73, 81, 85, 93, 99 sixteen
2.4	95	5, 7, 11, 17, 19, 25, 27, 29 eight
<b>2.5</b>	<b>100</b>	<b>**Assorted Exercises Ch. 2: 1, 3, 5, 7, 9, 13, 15, 17, 19, 23, 27, 28, 29**</b>
4.1	173	2, 4, 5, 7, 21, 23, 25, 29, 37, 43, 49, 69, 71, 85, 90, 91, 99, 107 eighteen
4.2	181	1, 3, 13, 19, 23, 29, 35, 39, 45, 49, 55, 63, 65, 71 fourteen
9.1	509	1, 7, 9, 31, 39, 55, 73 seven
4.3	189	5, 11, 15, 19, 23, 31, 35, 37, 41, 59 ten
4.4	197	3, 11, 15, 29, 37, 39 six
4.5	207	5, 9, 11, 23*, 25* (* = great calculator problems) five
<b>4.6</b>	<b>216</b>	<b>**Assorted Exercises Ch 4: 3, 5, 17, 19, 21, 28, 31, 34, 37**</b>
5.1	226	3, 5, 7, 15, 25, 29, 31, 43, 45, 47, 49, 55, 61, 69 fourteen
5.2	234	1, 3, 7, 9, 13, 17, 19, 21, 35, 43, 63 twelve
5.3	242	1, 5, 9, 11, 17, 19, 25, 27, 35, 37, 41, 47, 51, 65 fourteen
5.4	248	5, 9, 13, 15, 17, *** (use calculator as needed) five
5.6	265	1, 5, 7, 11, 13, 17, 19, 21, 23 nine
<b>5.7</b>	<b>269</b>	<b>**Assorted Exercises Ch 5: 1, 3, 7, 8, 9, 10, 15, 27, 36, 49**</b>
6.1	282	3, 11, 21, 25, 31, 33, 41, 45, 53, 59 ten
6.2	293	3, 11, 21, 27, 39, 45, 53, 63, 75, 79, 95 eleven
6.3	303	1, 5, 9, 13, 19, 25, 27, 31, 37, 41, 51, 57, 67 thirteen
6.4	310	1, 5, 11, 13, 17, 23, 41, 45, 55, 67, 69, 73*, 77 thirteen
6.5	316	1, 7, 13, 17, 21, 33, 49, 53, 55, 87 ten
6.6	326	5, 19, 25, 29, 35, 45, 59, 63, 69, 75, 77, 81, 85, 89, 97 fifteen
<b>6.7</b>	<b>333</b>	<b>**Assorted Exercises Ch 6: 1, 3, 5, 9, 11, 13, 19, 21, 25, 27, 29, 33, 35, 37, 39, 41, 43, 46**</b>
7.1	343	None at this time. Ma101 is not using vertex form
7.2	355	1, 3, 11, 17, 19, 25, 33, 41, 47, 49, 55, 57 twelve
7.3	368	9, 15, 23, 27, 31, 37, 45, 49, 55, 59, 77 eleven
7.5	385	1, 19, 33, 39, 43, 59, 63, 67, 71, 79, 81, 85 eleven
7.7	400	MAY BE REVISED: 1, 1, 12 Supplement with book-three, plus more
7.8	409	MAY BE REVISED: 1, 9, 17 Supplement with book-three, plus more
<b>7.9</b>	<b>416</b>	<b>**Assorted Exercises Ch 7: 1, 7, 9, 11, 15, 17, 19, 21, 25, 29, 31, 43**</b>
3.1	109	1, 11, 13, 17, 27, 33, 39, 43, 47 nine
3.2	122	3, 21, 29, 41, 45, 55, 73, 75, 77, 83, 85, 89 twelve
3.3	128	1, 5, 15, 17 four
11.6	626	1, 3, 4, 11, 29, 35 six

\*\* These “Assorted Exercises” may be revised.

# Student Information Form

# - - Ma 101 Grade Contract - -



I understand that I may select how my grade will be determined, within these ranges:

- Tests & Quizzes (3 Unit Tests + Average of all Quizzes) 50-60% (Default: 55%)
- Final Exam 20-30 % (Default: 25%)
- Homework (MathXL online and Written Homework) 10-20% (Default: 15%)
- Participation 5 % (Default: 5%)

After careful consideration of my individual strengths, I have decided to contract for the following set of weighted scoring:

Tests/Quizzes \_\_\_\_\_% ; Final Exam \_\_\_\_\_ % ; Hwk (MathXL+Written): \_\_\_\_\_ % ; Participation 5 %  
(50 - 60) (20-30) (10-20)

The sum of the weights I have chosen = \_\_\_\_\_ (must be 100% )

*Signature:* \_\_\_\_\_ *Printed Name:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*due the 2<sup>nd</sup> Wk of Class*

*Professor Shaw will sign and return a copy to each student.*

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_