

**MAT 105 Syllabus Fall 2016**  
**MW 1:00 – 1:50 PM, in Room N027**

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**Office Hours:** Mon/Wed 11:00-11:50 AM, Tue/Thur 1:00-1:50 PM, and by appointment

1. **Text/Materials Needed for Class:** Starting on the first day of class you must have...
  - A 2 or 3 inch binder with a minimum of 3 tabs labeled as “Workbook”, “Lecture Notes”, and “Class Work”. All the handouts e-mailed to you must be included in their proper sections in this binder.
  - About 200 sheets of paper in the last tab.
  - Writing utensils, colored pens/pencils, and a 12-inch ruler.
  - A scientific calculator. Cell phones or other electronic devices will NOT be allowed to be used as calculators.
  - Download the free e-text from <http://banimahd.weebly.com/resources.html>.
  - Either download and print the entire workbook or purchase it in the bookstore. You must have the entire workbook in your binder starting second day of classes.
2. **Topics Covered:** See attached sheets.
3. **Objectives:** This course is intended to prepare the students to succeed in the College Algebra course MAT110. Some of the objectives for this course are listed below
  - Apply the order of operations in arithmetic and algebraic expressions.
  - Extend the properties of integer exponents to rational exponents and apply these properties in simplifying algebraic expressions.
  - Explore various linear equations, their graphs, and the interpretation of their parameters.
  - Become familiar with a variety of factorization techniques and their use in solving equations involving polynomials, rational expressions, and radicals.
  - Work in the rectangular/Cartesian coordinate system with linear and other equations.
  - Formulate simple real world applications in one or more variables and solve them algebraically and/or graphically.
  - Where appropriate, use a scientific/non-graphing calculator to explore and answer various algebraic questions.
4. **Course information:** Introduction to College Algebra (MAT105) is a three degree credit course approved throughout the University Wisconsin System. This course counts as an elective credit. Introduction to College Algebra is an accelerated math course that covers basic algebra and will be far more sophisticated than a high school algebra course. Expect to have the material covered two to three times the pace of high school. Upon successful completion of this course (C or better), students should be able to complete the subsequent course MAT110.
5. **Calculator Policy:** A calculator will be needed on some in-class written exams and quizzes, but no calculators are allowed on ALEKS assignments. On ALEKS assignments, a calculator button will show up if one is needed. No cell phone or other electronic device will be allowed to be used as a calculator. If a calculator is needed, only a scientific calculator is allowed.
6. **Important Dates:**

	Day, Date	Event
a.	Wednesday, September 7	First day of classes
b.	Monday, September 15	Last day to drop without a “W” grade
c.	Wednesday, October	Exam I
d.	Wednesday, November 2	Exam II
e.	Monday, November 14	Last day to drop
f.	Wednesday, November 30	Exam III
g.	Thursday-Friday, November 24-25	Thanksgiving Break
h.	Wednesday, December 14	Last day of Class
i.	Friday, December 16	Paper/Pencil Final Exam 8:00-10:00am

7. **Workload:** Workload estimation is based on the average student.

Item	Hours Spent
Class time (3 credits)	~3 hrs/wk (~45 hours)
Out-of-class time: 1. Watching videos/reading text 2. Taking notes/writing summaries on lectures/reading 3. Doing problems from Video Logs	~5-9 hrs/wk (~75-135 hours)
Make-up exams (when needed to satisfy 100% mastery goal)	~8 hrs
<b>Total for the Semester</b>	<b>~128 – 188 hrs</b>

**Grading Policy:** The total % break down for your grade is as follows:

ITEM	%	Variable
Exam 1	10	A
Exam 2	15	B
Exam 3	20	C
Quizzes (7 total quizzes, one dropped)	12	D
Final Exam	30	E
Attendance quizzes + review sheets + Workbook + class participations	13	F
Total	100	

Grading Scale: Standard grading scale is used where scoring above 93% is an A, 90-92% is an A- and so on. To compute your grade, the following formula will be used

$$\text{Total \%} = 0.1(\text{A}) + 0.15(\text{B}) + 0.2(\text{C}) + 0.12(\text{D}) + 0.3(\text{E}) + 0.13(\text{F})$$

**Exams:** All exams are spaced about 2-4 weeks apart and submission of completed review sheet the day of Exam is mandatory.

- All exams including the final exams are cumulative.
- You must score 85% or higher on all Exams in order to qualify to take the final exam.
- If you have to retake an exam after the first attempt, you need to be prepared for part of the exam to be an oral exam and you must demonstrate mastery of the material before even attempting the second try.
- This means that you may have to retake an exam multiple times.

To make sure you are able to complete MAT 105 and to increase your success rate in MAT 110 we have divided the course into 4 modules. Mastery of each module will give you confidence and success in the next module. After all 4 modules are completed you will be ready for MAT 110.

- **Quizzes:** Seven short quizzes some paper/pencil will be given to you. See tentative schedule for the dates. One lowest score will be dropped. Each quiz is worth 2% of your grade.
- **Class participation/Attendance Quizzes:** Points are reserved for in-class participation which requires solving problems on the board during class, paper/pencil and oral quizzes given to determine the mastery of material for a total of 9%. Questions for these quizzes are based on homework assignments/video logs, or projects, material taught in the class, and Out of class Exam practice sheets. The oral exams/quizzes are done on a one-on-one or group mode. The student/group will talk to the instructor using mathematical terminology to explain their work. No student is forced to demonstrate their mastery orally in front of the whole class.
- **Workbook:** Prior to each class period, you are required to watch the video lectures, write a summary for each lecture, and answer video log questions for each lecture. You are required to bring your binder with all your work from your answers to video log questions, summaries to lectures, and any accompanying work to each class period. You need to hand cover summary sheets in person in the first 5 minutes of class. These submissions will amount to 4% of your grade. Late work will get prorated scores.

- **Extra Credit %:** From time to time your instructor may choose to give you additional opportunities to earn extra credit points at his discretion.
  - **Grades and Review Sheets:** In order to get a passing grade for the Mat 105, you must have 85% mastery of Module 1 and Module 2 exams, 85% mastery of Module 3 exam, and 85% or higher on video logs and review sheets turned in on time prior to each Exam. You will not be allowed to take any exam unless you submit completed review sheet on the day of Exam.
  - **Makeup Exam/Second Try Policy:** If you score under 85% on an exam, or under extenuating circumstances you need a makeup exam, one will be considered only if:
    - You have turned in 90% of the video logs on time
    - You have received 90% on your attendance quizzes at the time of the request
    - You have contacted the instructor prior to, the day of, or the day after the exam.
  - In all work, especially for the attendance quiz problems, and the video logs, the handwriting should be legible to me, and the steps should be easy to follow. I also recommend using a HB/#2 pencil and an eraser. The general format should conform to the sample problems done in class, or shown in the textbook. Following such guidelines will help your math writing and thinking abilities.
8. **Colleges Assessment:** A UW Colleges-wide assessment program has been put into place to enhance the quality and effectiveness of the curriculum, programs, and services of the institution. The following areas of proficiency will be assessed because they are of primary importance in the education of our students: Analytical Skills, Quantitative Skills, Communication Skills, and the Aesthetic Engagement. The Mathematics Department has also determined a number of core proficiencies for students enrolled in mathematics classes. The skill areas of (1) solving equations, (2) setting up and solving applied problems, (3) simplifying and evaluating expressions, and (4) graphing related problems will be incorporated into the department assessment exercises this year. Results from problems in these areas will collectively be used to assess the colleges-wide proficiency “Quantitative Skills; Solve Quantitative and Mathematical Problems”. For more information, please visit the website:  
<http://www.uwc.edu/academics/assessment/>
9. **COMMITMENT TO INCLUSIVE EXCELLENCE:**  
 As per UWS 17 of the University of Wisconsin Colleges Student Rights & Regulations (<http://www.uwc.edu/students/uwc-student-rights-regulations-booklet.pdf>), no form of harassment or discrimination is allowed in this class on the basis of identity, including but not limited to race, gender, class, age, disability, religion, sexual orientation, immigration status, veteran status, gender identity, nationality, and/or ethnicity. While this class seeks to foster an environment in which ideas and beliefs can be challenged in the spirit of academic inquiry, such challenges must be respectful and civil so that all class members are welcome and empowered to participate in this learning process.
10. **Classroom Etiquette**  
 Most students do not need this section. However, there have been some exceptions over the years that have disrupted class and students' understanding of the material. So please follow the following guidelines:
- All cellular phones, beepers, and electronic devices that could disrupt class should be in silent or off while class is in session. If one is accidentally turned on or must be kept on for emergencies, please leave the classroom to respond or turn it off immediately. **No electronic devices (like iPads, cell phones, MP3-players, ...) should be handled during class.** If you are caught using any of these devices during class (for e.g., texting, ...), you will lose your device until the end of the semester.
  - Do not talk to a classmate during class while I am trying to explain something. This is mainly for non-math talk, but even math talk should not occur while I am talking. Other students who have paid to learn in the course may be distracted by your conversation, and at times I also can become distracted. I am also concerned that you yourself might be missing some important information at the board. At any point if you do not understand the material or have questions, don't hesitate to ask questions. Raise your hand and I can address your question.
  - I know the material is sometimes difficult and some students have trouble following what I'm doing at the board at times. Please let me know when this occurs so that I can address it. Please do not get vocally upset about it during class time. Pouting or venting is usually a healthy reaction to stress, but it is not appropriate in class and can be disruptive to other student's learning.

## Semester Calendar for Math 105 Course Fall 2016

The video/text assignments are to be viewed/read and Video Log Questions Attempted before class. Video links are embedded in the appropriate section of the e-text and the workbook.

	Sun.	Monday	Tue.	Wednesday	Thur.	Fri.	Sat.
September	4	5	6	7. <b>Module 0, Counting Project, 1.1 on decimal number system</b>	8	9	10
	11	12. 1.2, 1.4,1.5 Number sets, Fractions, irrationals, equiv. fractions, sci. not., number lines, rounding	13	14. 1.6-1.7, Natural, Integer and rational exponents and radicals, <b>Quiz 1</b>	15	16	17
	18	19. 1.8, 1.9 Rational exponents and radicals	20	21. 1.10, 2.1 Polynomial and rational expressions, functions, <b>Quiz 2</b>	22	23	24
	25	26. 2.2 Polynomial and rational expressions, functions, begin addition of "like" objects	27	28. 2.3, Factoring numbers, greatest common factors and least common multiples.	29	30	1
October	2	3. 2.3, 2.4, Factoring numbers and greatest common factor and least common multiples.	4	5. <b>Exam I</b>	6	7	8
	9	10. Factoring Trinomials and binomials	11	12. 2.6, Multiplication of rational and radical expressions, rationalize, <b>Quiz 3</b>	13	14	15
	16	17. 2.6 Multiplication of rational and radical expressions, rationalize	18	19. 2.6, 2.7 Multiplication of rational and radical expressions, rationalize, Division of whole #'s, rational expr., polynomials, <b>Quiz 4</b>	20	21	22
	23	24. 2.7 Division of whole #'s, rational expr., polynomials	25	26. 2.8 Division algorithm for decimals, polynomials, order of operations.	27	28	29
	30	31. 3.1, 3.2, Interval and graphs of inequalities, additive and multiplicative prop of = Review for exam II, ALEKS practice exam is available.	1	2. <b>Exam II</b>	3	4	5
November	6	7. 3.3 Percentage, proportion and variation problems, Zero Product property and solving equations by factoring	8	9. 3.4, Absolute value equations and inequalities, Power and radical equations, <b>Quiz 5</b>	10	11	12
	13	14. 3.5 Quadratic equations by completing the square and quadratic formula	15	16. 4.1, 4.2 Rectangular Coordinate System, Midpoint and Distance between two points, and graphing solutions to equations <b>Quiz 6</b>	17	18	19
	20	21. 4.3 Lines and linear equations in two variables, slope-intercept and point-slope form for equations of lines.	22	23. 4.3. Solving 2 by 2 linear systems graphically, by substitutions and by elimination. Review for exam III, ALEKS practice exam is available.	24	25	26
	27	28. Review for Exam III	29	30. <b>Exam III</b>	1	2	3
December	4	5. 4.4, 4.5, Interpreting graphs, Linear Models, Linear systems and Mixture Problems.	6	7. 4.6, 4.7 Rate Problems, Multistep Problems, <b>Quiz 7</b>	8	9	10
	11	12. Review for Final Exam	13	14. Review for Final Exam	15	16. Final Exam	17