Spring 2016 MAT 105 ALEKS Syllabus
TTh 1:00 – 2:15 pm, C160

Instructor: Arman Banimahd

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Office Hours: Mondays – Friday at 12:00 – 12:50 pm, or by appointment

1. **Text/Materials Needed for Class:** Starting on the first day of class you must have…
   - ➢ A 2 ½ or bigger 3-ring binder with a minimum of 5 tabs labeled as "Handouts", "Workbook", "Lecture Notes", "ALEKS Notes", and "Class Work". All the handouts e-mailed to you must be included in their proper sections in this portfolio.
   - ➢ About 100 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. It is recommended to download the PDF file.
   - ➢ Purchase the worksheet from the bookstore. You must have the entire workbook in your binder starting first day of classes.
   - ➢ You must have your ALEKS account set by using the links provided in the homework sheet for the first day of classes. You will purchase an 18-week ALEKS license: Go to **www.aleks.com** and, when prompted, enter the following code: **WDWJG-93EPP**

   Note: Please *finish your initial assessment*; and all the assigned *homework* before you come to your first day of classes.

2. **Topics Covered:** See the "Calendar".

3. **Objectives:** This course is intended to prepare the students to succeed in the College Algebra course M110. Some of the objectives for this course are listed below
   - Apply the order of operations in arithmetic and algebraic expressions.
   - Extend the rules of integer exponents to rational exponents and apply these rules in simplifying algebraic expressions.
   - Formulate simple real world applications in one or more variables and solve them algebraically and/or graphically.
   - 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.
   - Use algebraic skills to solve real world applications problems.
   - 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 assessments. On ALEKS assessments, a calculator button will show up if one is needed. No cell phones or other electronic devices will be allowed to be used as a calculator. If a calculator is needed, only a scientific calculator is allowed.

6. **Important Dates** (dates for **Exams I-III** are based on the tentative schedule):

	Day, Date	Event
a.	Monday, January 25	First day of classes
b.	Friday, February 5	Last day to drop without a "W" grade
c.	Tuesday, February 23	Exam I
d.	Thursday, March 31	Exam II
e.	Friday, April 8th	Last day to drop
f.	Tuesday, April 26	Exam III
g.	March 21 – 25	Spring Break
h.	Thursday, May 12	Last day of Class
i.	Tuesday, May 17 10:30am-12:30pm	Paper/Pencil Final Exam

7. **Workload and Grading Policy**
➢ Workload estimation is based on the average student.

Item	Hours Spent
Class time (3 credits)	~3 hrs/wk (~44 hours)
Out-of-class time: 1. Watching videos/reading text 2. Taking notes/writing summaries on lectures/reading 3. Doing workbook exercises 4. Filling ALEKS Pie/meeting Intermediate Objectives	~6-9 hrs/wk (~116-130 hours)
Make-up exams (when needed to satisfy 100% mastery goal)	~6 hrs
Total for the Semester	**~166- 180 hrs**

➢ Your grade in Mat 105 will be determined by many factors: % on each of the 3 in-class exams (written/oral ALEKS and non-ALEKS exams), final exam, 5 quizzes, Workbook, % on the 9 ALEKS Objectives, and % on class participation, attendance quizzes, and portfolio.
➢ The total % breakdown for your grade is as follows:

Item	Weight
Quizzes (6 quizzes total, one dropped)	6
Exam 1 (Paper-pencil in-class exam)	9
Exam 2 (Paper-pencil in-class exam)	12
Exam 3 (Paper-pencil in-class exam)	15
Final Exam (Paper/Pencil)	25
Workbook Exercises	6
Class Participation/Attendance Quizzes/Portfolio	9
ALEKS Intermediate Objectives (IO)	18
Total	100

Grading Scale: Standard grading scale is used where scoring above 93% is an A, 90-92% is an A-, 87-89% is a B+, and so on. To compute your grade, the following formula will be used

- ➢ **Exams and Quizzes:** See course calendar on the last page for the tentative dates of exams and quizzes.
- ➢ Taking an exam is a privilege. Therefore, to earn exam eligibility,
  - ☐ You must have completed review exam/quiz assigned.
- ➢ In order to be eligible to take the quizzes, you must meet the following criteria.
  - ☐ You must have met the ALEKS pie target set for that quiz.
  - ☐ You must have ≥94% on your attendance quizzes
  - ☐ You must have ≥94% on your workbook
- ➢ Based on my experience, students who score ≥80% on all three exams, 8 quizzes, all objectives, all attendance quizzes, workbook exercises, and a C or higher on the final exam have a very good chance to earn a C or better grade in the course.
- ➢ See the makeup exam section (below) for retaking exams that are under 80%.
- ➢ **Make-up Exam Policy:** If you miss an exam due to extenuating circumstances, then a retake exam will be considered only if (or by instructor's consent). Before you will be allowed to take the make-up exam, you must have completed review exam assigned. To decide if you are ready for the make-up/retake exam, an oral exam may be administered by the instructor. Scheduling the exam may be restricted by the availability of the computer labs. Your instructor is going above and beyond to provide this extra opportunity; it is your responsibility to come to the agreed-upon make-up/retake exam on time.
- ➢ **There are no makeup quizzes:** Lowest quiz score will be dropped.
- ➢ **ALEKS Intermediate Objectives:** Your ALEKS pie is broken into 9 Intermediate Objectives. You must complete these objectives by the stated deadlines (listed in the pie itself and in the tentative schedule). The percentage of the objective mastered by the deadline will determine your grade on that Intermediate Objective. After each objective an automatic assessment is given to make sure you are retaining the material.
- ➢ **Class Participation/Attendance Quizzes/Portfolio/Workbook:** Points are reserved for in-class participation which involves group work and solving problems on the board. Portfolios refer to your 3-ring binders. Each class period, you are required to bring your portfolio that contains summaries and notes of lectures/readings, all the work from the workbook exercises, ALEKS work, and classwork (e.g., attendance quizzes). See below for information on attendance quizzes and workbook exercises.
- ➢ **Attendance:** You are expected to attend <u>all</u> class periods barring any unforeseen circumstances. If you are working at an accelerated pace, you must still attend all class periods until you have completed your ALEKS pie. If you have to miss a class, please inform your instructor as soon as possible to you can learn the missed materials. No penalty is applied to toward your grade for missing up to 3 class periods (1.5 weeks of class). If you miss more than 3 class periods, please check with your instructor for the penalty. Exceptions to this policy are at the instructor's discretion.
- ➢ **Quizzes:** Seven short quizzes some paper/pencil some in ALEKS will be given to you. See tentative schedule for the dates. One lowest score will be dropped. Each quiz is worth 1% of your grade.
- ➢ **Attendance Quizzes:** Questions for these quizzes are based on YouTube lectures/reading, workbook exercises, projects, material taught in the class, and ALEKS Intermediate Objectives. These quizzes may be oral and administered one-on-one or in a group. The student/group will use appropriate mathematical terminology to explain their work. No student is forced to demonstrate their mastery orally in front of the whole class.
- ➢ **Workbook Exercises:** Prior to each class period, you are required to **<u>watch</u>** the video lectures, or read appropriate text book pages. You must take notes from your lectures or readings, and **<u>write</u>** a summary. Please turn in the summary, notes, and cover sheet to your instructor in the first 5 minutes. At the end of the class you will also turn in the appropriate workbook pages with solutions discussed from class. If you turn in your work 5 minutes late, then it will be marked "not turned in."
- ➢ **Extra Credit %**: From time to time, your instructor may choose to give you opportunities to earn extra credit.
- ➢ In all work, especially for the attendance quiz problems and the workbook exercises, your handwriting should be legible, and the steps should be easy to follow. I recommend using a #2 pencil and an eraser. The general format should conform to the sample problems done in class, or as shown in the textbook or ALEKS. Following such guidelines will help your mathematical writing and thinking abilities.

8. **Special Needs**: If you are a student with a disability, please come and talk to me so we can accommodate them as well as possible.

9. **Classroom Etiquette or ground rules**

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 these guidelines:

➢ All cellular phones, beepers, and electronic devices that could disrupt class should be in sleep mode or off while class is in session. If one is accidentally turned on or must be kept on for emergencies, then please leave the classroom to respond or turn it off immediately. **No electronic device (like I-phones, cell phones, MP3-players,…) should be handled during class**. If you are caught using any of these devices during class (e.g., texting), you may lose access to the device until the end of the class.

➢ Do not talk to a classmate during class while I am trying to explain something to the class. 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 students' learning.

➢ If possible, please recycle all plastic bottles, aluminum cans, and paper. I respectfully ask that you do not throw these items in the classroom garbage.

Semester Calendar for Math 105 Course Fall 2015

The video/text assignments are to be viewed/read and attempt the workbook exercises before class. At the intermediate objective due dates, your percentage mastery will be recorded for your grade on that Intermediate Objective.

	Sunday	Mon.	Tuesday	Wed.	Thursday	Fri.	Sat.
January	24)	25)	26) **Module 0, Counting Project, 1.1 on decimal number system, Complete ALEKS Initial Assessment prior to first Day!!**	27)	28) 1.2, 1.4,1.5 Number sets, Fractions, irrationals, equiv. fractions, sci. not., number lines, rounding	29)	30)
	31) ALEKS Intermediate objective 1 due (IO # 1)	1)	2) 1.6-1.7, Natural, Integer and rational exponents and radicals, **Quiz 1, ALEKS Target 4%**	3)	4) 1.8, 1.9 Rational exponents and radicals	5)	6)
February	7) ALEKS IO # 2 due	8)	9) 1.10, 2.1 Polynomial and rational expressions, functions, **Quiz 2, ALEKS Target 13%**	10)	11) 2.2 Polynomial and rational expressions, functions, begin addition of "like" objects	12)	13)
	14) ALEKS IO # 3 due	15)	16) 2.3, Factoring numbers, greatest common factors and least common multiples. **ALEKS Target 20%**	17)	18) 2.3, 2.4, Factoring numbers and greatest common factor and least common multiples. Review for exam I, ALEKS practice exam is available.	19)	20)
	21) ALEKS IO # 4 due	22)	23) **Exam I, ALEKS target 30%**	24)	25) 2.5 Factoring Trinomials and binomials	26)	27)
	28)	29)	1) 2.6, Multiplication of rational and radical expressions, rationalize, **Quiz 3, ALEKS Target 37%**	2)	3) 2.6 Multiplication of rational and radical expressions, rationalize	4)	5)
March	6) ALEKS IO # 5 due	7)	8) 2.6, 2.7 Multiplication of rational and radical expressions, rationalize, Division of whole #'s, rational expr., polynomials, **Quiz 4, ALEKS target 41%**	9)	10) 2.7 Division of whole #'s, rational expr., polynomials	11)	12)
	13)	14)	15) 2.8 Division algorithm for decimals, polynomials, order of operations. **ALEKS target 50%**	16)	17) 3.1, 3.2, Interval and graphs of inequalities, additive and multiplicative prop of = Review for exam II, ALEKS practice exam is available.	18)	19)
	20) ALEKS IO # 6 due	21)	22) **ALEKS Target, 60%**	23)	24)	25)	26)
			Spring Break				
	27)	28)	29) 3.1, 3.2, Interval and graphs of inequalities, additive and multiplicative prop of = Review for exam II, ALEKS practice exam is available.	30)	31) **Exam II, ALEKS target 68%**	1)	2)
April	3) ALEKS IO # 7 due	4)	5) 3.3 Percentage, proportion and variation problems, Zero Product property and solving equations by factoring	6)	7) 3.4, Absolute value equations and inequalities, Power and radical equations, **Quiz 5, ALEKS target 75%**	8)	9)
	10)	11)	12) 3.5 Quadratic equations by completing the square and quadratic formula	13)	14) 4.1, 4.2 Rectangular Coordinate System, Midpoint and Distance between two points, and graphing solutions to equations **Quiz 6, ALEKS target 83%**	15)	16)
	17) ALEKS IO # 8 due	18)	19) 4.3 Lines and linear equations in two variables, slope-intercept and point-slope form for equations of lines. **ALEKS Target, 90%**	20)	21) 4.3. Solving 2 by 2 linear systems graphically, by substitutions and by elimination. Review for exam III, ALEKS practice exam is available.	22)	23)
	24)	25)	26) **Exam III Part A, ALEKS Target 95%**	27)	28) 4.4, 4.5 Interpreting graphs, Linear Models, Linear systems and Mixture Problems.	29)	30)
May	1) ALEKS IO # 9 due	2)	3) 4.6, 4.7 Rate Problems, Multistep Problems. **Quiz 7, ALEKS Target 100%**	4)	5) Review for Final Exam	6)	7)
	8)	9)	10) Review for Final Exam	11)	12) Review for Final Exam	13)	14)
	15)	16)	17) **Final Exam 10:30 am – 12:30 pm**	18)	19)	20)	21)