Math 103 – Algebra Methods and Introduction to Functions – Fall 2018

(3 credits – Prerequisite Math 100 or 40% on WSU MPA)

(INFORMATION GIVEN BELOW IS SUBJECT TO CHANGE)

THIS SYLLABUS IS FOR ALL SECTIONS OF MATH 103

Course Web Site: learn.wsu.edu (click on WSU Authentication)
Announcements and assignments will be posted to the course website. Please check it frequently.

Required Materials: ALEKS Student Access Code
(Can be purchased through the Bookie or online at ALEKS.com)

- Provides on-line help in the form of written explanations and video instruction clips
- Offers 24 Hour Unlimited Online Access
- http://www.aleks.com This website is the primary learning tool you will use to facilitate your practice with the fundamental concepts you are learning.
- **YOUR ALEKS COURSE CODE(S):**

COURSE DESCRIPTION: We will be working primarily on simplifying and factoring expressions, solving equations containing fractions, rational expressions, exponential expressions, radical expressions, and graphing lines. By the end of the course you are expected to be able to manipulate algebraic expressions using properties of real numbers; solve application problems by constructing algebraic equations derived from the data; and solve equations. These skills will be needed in later classes such as pre-calculus, calculus, economics, chemistry, physics, biology, and engineering.

LEARNING OUTCOMES: You will develop learning skills that are important for your success in this course, other courses you will be taking during your undergraduate studies, and lifelong learning. In particular, at the end of this course you will be able to:

- Use properties of real numbers and properties of exponents to add, subtract, multiply, divide, and simplify expressions.
- Recognize the difference between an algebraic expression and an algebraic equation.
- Analyze a real-life situation and convert it into an appropriate mathematical expression or equation.
- Solve linear inequalities and linear, quadratic, rational, and radical equations.
- Use properties of real numbers and properties of exponents to manipulate and simplify rational expressions and solve simple rational equations.
- Determine slopes of lines, and equations of parallel and perpendicular lines through given points.
- Use properties of real numbers and properties of exponents to manipulate and simplify exponential expressions.
- Use properties of real numbers, properties of radicals, and properties of exponents to simplify radical expressions and solve simple radical equations.
- Add, subtract, and multiply polynomial expressions.
- Use properties of real numbers and properties of exponents to factor polynomial expressions.
- Solve simple polynomial equations and simple absolute value equations and inequalities.
- Set up equations to represent data given an application problem and use it to solve for a specific outcome.
- Use the methods of substitution and elimination to solve systems of linear equations.

Each of the above learning outcomes will be evaluated by homework assignments, in-class assessments, ALEKS progress, and exam questions.

Grading: Your overall grade in this course is based upon the following point system.

ASSIGNMENT	POINTS	~%
Math Learning Center (MLC) (2 points each week)	30	(4%)
ALEKS Modules: 22 @ 5 points each (drop lowest 2)	100	(12%)
Written Homework: 13 @ 5 points each	65	(8%)
In-class Activities	50	(6%)
Three mid-term **Exams**	375	(46%)
Comprehensive **Final Exam**	200	(24%)
TOTALS	***820***	***~100%***

****You must have a score of 73% or better on at least 2 exams or the highest grade achievable will be a C-.**

Grading Scale

Passing Grades:		Grades Requiring a Course Repeat	
93% – 100%	A	70% – 72.99%	C-
90% – 92.99%	A-	67% – 69.99%	D+
87% – 89.99%	B+	60% – 66.99%	D
83% – 86.99%	B	0% – 59.99%	F
80% – 82.99%	B-		
77% – 79.99%	C+		
**73% – 76.99%	C		

IMPORTANT-What to expect from the class and how to approach it: This class is challenging and will take a commitment on your part to work diligently. As your instructor, I will also work very hard to make the best use of class time, to support you in office hours, and to provide a structure for the class that supports your learning. However, in the end, whether or not you succeed depends on the attitude you bring to class and the effort you put forth.

The only way to learn and retain mathematics (you ***will*** be using this material in later courses) is through lots of practice working with the concepts and reflecting on the processes used and underlying structure. Before each class you are expected to review assigned reading and homework sets. Class time will be spent highlighting key topics, making connections between prior knowledge and new concepts, and working through examples that illustrate important ideas and give you experience working with the ideas before you work independently outside of class.

ACADEMIC INTEGRITY: Academic integrity is the cornerstone of higher education. As such, all members of the university community share responsibility for maintaining and promoting the principles of integrity in all activities, including academic integrity and honest scholarship. Academic integrity will be strongly enforced in this course. Students who violate WSU's Academic Integrity Policy (identified in Washington Administrative Code (WAC) 504-26-010(3) and -404) will receive a zero on the assignment (we reserve the right to give a grade of F for the course as well), will not have the option to withdraw from the course pending an appeal, and will be reported to the Office of Student Conduct.
Cheating includes, but is not limited to, plagiarism and unauthorized collaboration as defined in the Standards of Conduct for Students, WAC 504-26-010(3). You need to read and understand all of the definitions of cheating: http://app.leg.wa.gov/WAC/default.aspx?cite=504-26-010. If you have any questions about what is and is not allowed in this course, you should ask course instructors before proceeding.

If you wish to appeal a faculty member's decision relating to academic integrity, please use the form available at conduct.wsu.edu.http://conduct.wsu.edu/academic-integrity-policies-and-resources.

CLASS PARTICIPATION/ATTENDANCE: You are expected to attend and actively participate in each and every scheduled class period. Reading assigned materials prior to each class, taking good notes during class and

reviewing them before the next class, asking relevant questions, and working through activities both independently and in consultation with your classmates are just a few ways you can actively participate in class.

ALEKS INITIAL ASSESSMENT: After you have signed into ALEKS and completed a tutorial, you will automatically be given an initial knowledge check to determine an appropriate program level. It is important that you take the knowledge check seriously. Do your best to answer all questions without assistance and without using additional resources. ALEKS will use the results of your knowledge check to set individual practice based on what you can and cannot do. Be sure to read the *ALEKS Information* sheet for complete log on instructions and tips for using ALEKS successfully. Log on instructions and tips for success are also posted on the class website.

ALEKS MODULES: You are expected to master the topics in the 22 ALEKS modules. Progress in ALEKS is critical to your learning and success. Prior students recognized that they got a much greater benefit from working on their ALEKS in shorter, more frequent sessions and recommended that rather than having one module due a week, it would be helpful to have modules due more often. In response to their feedback, we restructured the course so that modules are due on Monday and Thursday most weeks. Points will be awarded based on following table:

Percent Complete	Points Awarded	Percent Complete	Points Awarded	
100%	5	80%	4	See the *ALEKS Module Weekly Calendar* in this syllabus for specific due dates.
95%	4.75	75%	3.75	
90%	4.5	70%	3.5	
85%	4.25	Less than 70%	0	

While ALEKS is an on-line learning environment, you should work the problems using pencil and paper. Maintain a dedicated notebook in the spirit of a lab notebook. Your notebook serves as an organizational tool and memory aid and should be used specifically to record your ALEKS work. Each day when you work on ALEKS, *date your work, record the topic you are working on, solve the exercise in the notebook, and record any important information you need to recall or might want to reference later*. This notebook is also a good place to record questions about topics for which you may need to seek additional help to understand. The neater and more organized your work is, the better a resource it will be when you prepare for the exams or need to communicate with tutors.

EXAMS: There will be three written mid-term exams. Each midterm is worth 125 points. The comprehensive final exam is 200 points. Make-up exams are given only in extremely rare cases. If you have to miss an exam for any reason, you must notify me as soon as **possible prior to exam** so I can determine if a make-up exam is applicable. Please note that make-up exams are typically more difficult than the original exam. Calculators are **not allowed** on exams. Because of this, it would be in your best interest to get accustomed to doing in-class work and homework without a calculator. **Do not** be dependent on your calculator. Make sure to bring your student ID, pencils and an eraser to each exam. Please note the dates for the course exams:

Mid Term I: Wednesday, September 12 – 6 to 7 pm
Mid Term II: Wednesday, October 10 – 6 to 7 pm
Mid Term III: Wednesday, November 14 – 6 to 7 pm
Final Exam: Monday, December 10 – 7 to 9 pm **(NO EARLY EXAMS)**

IN CLASS ACTIVITIES: Most of your class time will be spent working with your classmates on in-class activities. There will be about two per week except for exam weeks. These activities are designed for you to get some experience with weekly course content before you go home and try it on your own. Working with your classmates helps you understand different ways to approach the problems as well as get some feedback on your own work. These activities must be done during regular class time and may not be made up. If you miss a class you miss an activity.

WRITTEN HOMEWORK: Thirteen homework sets will be assigned. Each homework set is worth 5 points. Completing homework on time is critical to your success in this class. While you are expected to complete these assignments individually, working together in study groups is recommended. The Math Learning Center (MLC) is

set up to assist you with your homework assignments. However, the tutors will not do the work for you. You should attempt to do your homework before you ask for help. When you visit the MLC, sit with other students in Math 103, if the tutors are busy your table mates may be able to shed new light on your problem. Assignments must be turned in at the beginning of class on the date they are due. Late homework will not be accepted without prior permission. **Read the homework policy information sheet below for complete requirements on how to submit homework.**

MATH LEARNING CENTER: Beginning the first week of the semester you are required to attend the Math Learning Center (MLC) a minimum of one hour per week **(15 weeks – 30 pts. total)**. After you have taken the first exam, your score will determine how many hours a week you will be required to go to the MLC.

- Score 90% or higher 0 hours
- Score 80% to 89% 1 hour
- Score less than 80% 2 hours

The hours required will be adjusted after each midterm exam based on your score on the last exam and the above criterion. See the **STUDY ASSISTANCE** section of this syllabus (below) for MLC hours and locations. MLC time is recorded from Monday through Sunday each week.

COLLABORATIVE LEARNING and IN-CLASS ACTIVITIES: Current research indicates that collaborative learning increases understanding of course content for all active participants. You will work on in-class assignments in groups of 2-3 students every week during this course (with the possible exception of exam weeks). You are allowed to bring and use the appropriate technology to class on these days to be used exclusively for the purpose of completing the in-class activity. It would not be wise to miss class on these days as the opportunity to ask questions and hear strategies posed by others will increase your chances for success in this course. Additionally, most of the materials will be turned in and graded. Activities may not be made up if you miss class except in rare situations approved in advance such as a university condoned activity.

STUDY ASSISTANCE: There are many opportunities on campus to get help including the following two:

1. FREE tutoring is available in the Math Learning Center (MLC in Cleveland 130) and the computing lab in Thompson Hall (Room 1). Successful students make use of available resources! This is a great resource, so build it into your weekly schedule. http://www.math.wsu.edu/studyhalls/welcome.php

2. You are welcome to come see me during office hour. I am here to help you and it is my goal to see you succeed in this class. One-on-one help in office hours is perfect for helping you work through any difficult topics you run into in the course.

Make use of these options – we want you to be successful. Another good strategy for is to form study groups and meeting to review assignments. Look also for more information on peer mentors.

CORRESPONDENCE: When communicating with your instructor (for this or any class) keep in mind that this is a professional relationship. Please use complete sentences, proper capitalization, and proper punctuation. Please use the email address given at beginning of this document. Always put **Math 103** and your section number in the subject line of your email. This will help me respond to your concerns more efficiently.

ELECTRONIC DEVICES: Computers, tablets, cell phones (this means no texting during class), pagers, blackberries, iPods, mp3 players, CD players, and similar devices may not be used during class without instructor permission. Recording of this class is not allowed in any form without direct permission from the instructor. **Anyone caught ignoring this policy may be asked to give up their phone and collect it at the end of class or leave the classroom at the discretion of the instructor.**

WSU CLASSROOM SAFETY: "Classroom and campus safety are of paramount importance at Washington State University, and are the shared responsibility of the entire campus population. WSU urges students to follow the "Alert, Assess, Act," protocol for all types of emergencies and the "Run, Hide, Fight" (https://oem.wsu.edu/emergency-procedures/active-shooter/) response for an active shooter incident. Remain ALERT (through direct observation or

emergency notification), ASSESS your specific situation, and ACT in the most appropriate way to assure your own safety (and the safety of others if you are able).

Please sign up for emergency alerts on your account at MyWSU. For more information on this subject, campus safety, and related topics, please view the FBI's Run, Hide, Fight video (https://oem.wsu.edu/emergency-procedures/active-shooter/) and visit the WSU safety portal (https://oem.wsu.edu/about-us/.

STUDENTS WITH DISABILITIES: Reasonable accommodations are available for students with a documented disability. If you have a disability and may need accommodations to fully participate in this class, please visit the Access Center. All accommodations MUST be approved through the Access Center (Washington Building, Room 217). Please stop by or call 509-335-3417 to make an appointment with a Access Advisor. For more information contact a Disability Specialist at http://accesscenter.wsu.edu or Access.Center@wsu.edu .

Levels of Mathematical Understanding

The following table clarifies the different levels of mathematical understanding that lead to success in mathematics. Your goal in Math 103 is to reach Level 4.

Level 1	Watch someone else work through a problem and follow along.	Ready to learn
Level 2	Solve a problem similar to a solution shown worked out in the book or class notes.	Beginning to understand
Level 3	Look at a problem and recognize the methods which could be useful. Solve the problem without reference to notes or book.	Minimal understanding
Level 4	Solve a problem (Level 3) and clearly explain the solution to a friend.	Understands mathematics at an acceptable level

ALEKS Module Weekly Due Dates

There are generally two modules due per week. Please pay close attention to the begin date and the end date of each module. All modules begin at 12:01 am and end at 11:59 pm of the given dates.

Module Number	Number of Topics	Beginning Date	End Date (due date)
Module 1	15	8/20/218	8/23/2018
Module 2	15	8/24/2018	8/27/2018
Module 3	18	8/28/2018	8/30/2018
Module 4	15	8/31/2018	9/3/2018
Module 5	16	9/4/2018	9/6/2018
Module 6	13	9/7/2018	9/10/2018
Module 7	12	9/11/2018	9/17/2018
Module 8	10	9/18/2018	9/20/2018
Module 9	16	9/21/2018	9/24/2018
Module 10	13	9/25/2018	9/27/2018
Module 11	17	9/28/2018	10/01/2018
Module 12	16	10/02/2018	10/04/2018
Module 13	15	10/05/2018	10/08/2018
Module 14	18	10/09/2018	10/18/2018
Module 15	16	10/19/2018	10/22/2018
Module 16	6	10/23/2018	10/25/2018
Module 17	14	10/26/2018	10/29/2018
Module 18	15	10/30/2018	11/01/2018
Module 19	8	11/02/2018	11/05/2018
Module 20	12	11/06/2018	11/12/2018
Module 21	14	11/13/2018	11/29/2018
Module 22	8	11/30/2018	12/06/2018