MATH 103 Intermediate Algebra

Summer 2020

Instructor: Dr. Chris Edwards (edwards@uwosh.edu) **Phone:** (920)-948-3969

Course Description: Functions, tables and graphs, problem solving, inequalities in one variable, exponents and radicals, quadratic functions and exponential functions. This course does not count towards the 120 units credits (crs.) necessary for graduation. Prerequisites: Mathematics 101 with a C or better or placement. Not open to students who have completed Mathematics 104 or higher.

Classroom: Online

Textbook: *Beginning and Intermediate Algebra* 5th edition, by Miller, O'Neill, and Hyde. At the bookstore you will buy the ALEKS Access Card (720 Day ALEKS Access Card w/e-book). This will give you access to an e-book and will allow you to do your homework assignments online. There will also be options to buy a printed version of the textbook.

Calculator: A basic scientific calculator is required for this class, like the TI-30Xa.

ALEKS: (Assessment and Learning in Knowledge Spaces). ALEKS is an online learning system to do your homework, accessible via http://www.aleks.com. You will need the following class code to register for this course: **F4UVX-9KH9T**. For ALEKS customer support, call 1-800-258-2374 or go online through the website. ALEKS is an adaptive program, and is therefore able to tailor problems to suit your needs. As you master a concept, you will be given new problems from the next material. Periodically, ALEKS will assess your retention by giving you "Knowledge Checks". I have posted some additional information about ALEKS on the Canvas course page. In addition to viewing the online materials I prepared for the course, ALEKS gives you access to videos from the publisher, as well as the e-book itself.

Homework: Your homework will be completed on ALEKS via mastering Objectives (Topics). The homework problems are similar to problems from your textbook. Please pay attention to the due dates for the homework assignments. The due dates will all be in ALEKS, and are at the end of this syllabus. Homework assignments will due by 11:59 on the due date.

Help: You should get help as soon as you find yourself not understanding something. Please contact me via email to arrange a meeting on Canvas. In addition, a Swart 301 tutor has scheduled tutoring hours supporting MATH 103 during Summer 2020. I encourage you to participate in tutoring sessions when you are having troubles. You can access the tutor during the posted hours with this Collaborate Ultra Online Link:

https://us.bbcollab.com/guest/0ddfdd631f544ef49f116d2522c7432a

For Summer 2020, the Math 103 Tutor will be available from 7:45 to 8:45 a.m. and from 12:15 to 3:15 p.m. every Tuesday.

Learning Outcomes: Upon successful completion of the course, students are expected to have the ability to complete the following:

- Students will work with linear functions, quadratic functions and exponential functions in the forms of equations, tables and graphs proficiently.

- Students will solve quadratic equations utilizing both completing the square and the quadratic formula.

- Students will determine and interpret the meaning of the x-intercepts and y- intercepts for various functions.

- Students will calculate a discriminant and will identify how features of a calculated discriminant value relate to the features of the equation and graph of a quadratic function.

- Students will factor expressions and solve equations that are quadratic in form.

- Students will determine the solution of 2x2 systems of linear equations utilizing processes by graphing, the substitution method and the addition or elimination method.

- Students will utilize the properties of inequalities to determine the solution of compound inequalities and write the solutions in different representations including the real number line, interval notation and set builder notation.

- Students will graph exponential growth and decay functions.

- Students will utilize the properties of exponents to simplify radical expressions, to solve radical equations and to solve exponential equations that do not require the use of logarithms where a common integer base is determined.

- Students will solve application exercises through a logical and sequential process that emphasizes preparing a plan of action, creating an equation, solving the equation, answering the original question including the correct units, checking that the answer is a plausible real number solution and rejecting non-plausible real number solutions such as negative distances, negative radicands in even index roots and/or extraneous solutions.

Grading: Final grades are based on Exams and Homework:

Component	Topics	Weight	Date
Exam 1	Chapter 7: Rational Equations and Expressions Chapter 8: Relations and Functions	30%	July 9th and 10th
Exam 2	Chapter 10: Radicals and Complex Numbers Chapter 11: Quadratic Equations and Functions	30%	July 30th and 31st
Final Exam	50% Previous Material 50% Chapter 12: Exponential and Logarithmic Functions	30%	August 5th and 6th
ALEKS	Homework using ALEKS	10%	Weekly

Grading Scale:

A	92 to 100%
A-	90 to 91%
B+	88 to 89%
B	84 to 87%
B-	82 to 83%
C+	80 to 81%
C	75 to 59%
D	50 to 74%
F	Below 50%

Academic Honesty Policy: Cheating on an exam, plagiarizing, or any other form of academic dishonesty will be dealt with in accordance with the current UWO Student Discipline Code. The instructor reserves the right to assign a grade of "F" for the course should circumstances warrant.

Math 103 Schedule for Summer 2020

Week	Topics	Due Dates
June 15 to June 18	Sections 7.1, 7.2, and 7.3	ALEKS due June 18
June 22 to June 25	Sections 7.4, 7.5, and 7.6	ALEKS due June 25
June 29 to July 2	Sections 7.7, 8.1, and 8.2	ALEKS due July 2
July 6 to July 9	Sections 8.3, 10.1, and 10.2	ALEKS due July 9 Exam 1 due July 10
July 13 to July 16	Sections 10.3 and 10.4	ALEKS due July 16
July 20 to July 23	Sections 10.5, 10.7, and 11.5	ALEKS due July 23
July 27 to July 30	Sections 11.2, 11.4, 11.5, 8.4, and 12.1	ALEKS due July 30 Exam 2 due July 31
August 3 to August 6	Sections 12.3, 12.4, 12.5, and 12.6	ALEKS due August 6 Final Exam due August 6