# INTERMEDIATE ALGEBRA (Spring 2020)

**Math 103 – 021C 5:00 – 6:30pm MWF Room 2824**

**Instructor:** Lirong Ding **Office:** 2833 **Phone:** 920-931-3409 **e-mail:** dingl@uwosh.edu

**Office hours:** 11:30 -12:30am M; 6:30 -7:30pm T; 12:40 –1:40pm W; Or by an appointment

**Text and Materials:**
Aleks "Beginning & Intermediate Algebra" 5th Edition, by Miller, O'Neill, and Hyde is required (Textbook is optional). TI-84+, or TI-83+graphing calculator, Texas Instrument, any other graphing calculator you should learn by yourself.

**Description:** Rational expressions and equations; Relations and Functions; Compound inequalities, absolute value equation and absolute value inequalities; Radical and complex numbers; Quadratic equations and functions; Exponential functions and applications. Prerequisite: Math 101 grade of C or better or placed by placement test.

**Course Coverage:** Chapter 7 Rational Expressions and Equations
Chapter 8 Relations and Functions (8.1, 8.2, & 8.3)
Chapter 9 More Equations and Inequalities (Add 2.8, 9.1, 9.3, &9.4)
Chapter 10 Radicals and Complex Numbers
Chapter 11 Quadratic Equations and Functions (11.1, 11.2, 11.4, &11.5)
Chapter 12 Exponential Functions and Applications (12.2, 12.6)

**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 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.

**Coursework:** These are the types of course activities planned for the semester

**Homework:** Homework will be assigned and graded via ALEXS. You need a pen or pencil to do it on paper and enter your answer in ALEKS. You should follow the due date and time (11:59pm) to avoid credits loss.

**How to register for ALEKS**:

- Go to www.aleks.com
- Click on Register and follow the on-screen instructions. You will need a student access code (you can buy online or from the bookstore) and the Course ID. After registering, log in to ALEKS with your username and password. To enroll in this course, enter the following Class Code

**Class Code**: **HDHVP-NHMHQ**

**Worksheets:** There will be 6 worksheets. You need to understand each step and a problem to prepare for your exams. **No credits for any late worksheets.**

**Exams:** There are two exams and one final exam. **You need to finish an exam in the given time unless you have a Accommodation Plan proving that you can have extra time for exams. If you have the Plan please contact me as soon as you can.**

| Exam | Date | Time | Room |
|---|---|---|---|
| Exam I | T. Mar.10 | 5:30 – 6:30pm (A short review before exam) | 2848 |
| Exam II | T. Apr. 21 | 5:30 – 6:30pm (A short review before exam) | 2848 |
| **Final Exam** | R. May.14 | 5:30 – 6:30pm (A short review before exam) | 2848 |

**Make-up Exams:** You attend classes regularly and make-up exams will **NOT** be given unless you have **a valid reason** for the absence**.** If you have the reason you want to take make-up exam. You need to contact me **before** the exam. **Failure to contact me in advance you will get zero on the exam** (The best way to contact me is by e-mail at dingl@uwosh.edu). When you e-mail me please tell me your class and class time.

**Grade Weight and Scale:**

| | | | | |
|---|---|---|---|---|
| ALEKS | 10% | : | 93-100 A; | 90-92 A-; |
| WS and Others | 10% | : 87-89 B+; | 83-86 B; | 80-82 B-; |
| Exam 1&2 | 50% | : 77-79 C+; | 73-76 C; | 70-72 C-; |
| Final Exam | 30% | : 67-69 D+; | 63-66 D; | 60-62 D-; |
| | | : 60 below F. | | |

**Attendance:** You are required to attend class regularly. If you miss it you are responsible for what you miss in the class.

**Class Notes:** You are recommended to take class notes. It will help you to do homework and review for exams.

**Electronic Devices: Laptop, cell phone, and other electronics are *not* allowed to be used in classes.**

**Tutoring Resources:** Free tutoring service is in room 1819, Developmental Math Lab, during daytime of weekday.

**ALEKS Customer Support:** You can go to www.aleks.com online service or you can call at 714-619-7090.

**Early Alert program:** There is an early alert program which informs students of their academic performance in classes early. You may receive an early alert email around 4th week or/and 8th week. If you receive it, please read it carefully. And make an appointment with me or your counselor to get a plan for you to improve your performance for the course.

**Academic Misconduct**: "All suspected incidents of academic misconduct shall be handled using the UW System rules (from UWS 14.01)' The definition of 'academic misconduct' can be found at https://www.uwosh.edu/deanofstudents/universitypolicies-procedures/academic-misconduct