*MTH 023*

# *Beginning Algebra*

*Fall 2020*

**Class Time and Location:**

Beginning Algebra MTH023 WA205
MW 4:30 – 5:45

**Instructor Name/ Office Location/Office Hours/Office Phone:**

Shane Hale: shale@uarichmountain.edu
Office: (479) 394-7622 Ext: 1652
Office Hours: Mondays after 6PM by appointment only

Darla Williams: dwilliams@uarichmountain.edu
Office: (479) 637-7622 Ext: 4013
Office Hours: Monday, Tuesday, and Thursday 8:00am – 4:30am

**Instructors:** Shane J. Hale – B.S. Education: University of Arkansas – Fort Smith
Darla Williams – B.B.A.: Southern Arkansas University - Magnolia

**Prerequisite:** Grade "C" or better in MTH013 or a minimum score of 39 on the ASSET Numerical Skills Placement Exam, 42 on the Compass Pre-Algebra Placement Exam, 26 on the Compass Algebra Placement Exam, 17 on the ACT Exam, 41 on the Accuplacer Elementary Algebra or 470 on the SAT Exam.

**Supplies you need to get for this class:**
Pencils
Paper

**Course Description:** This course is designed primarily for those students who do not have a unit of high school algebra or whose proficiency in mathematics may have declined during the years absent from formal schooling. The content includes real numbers and their applications, variable expressions, solving general equations, solving equations involving practical applications, operations of polynomials, and special products and factoring of polynomials. (Offered spring and fall semester)

**Program Outcomes:** The purpose of the Associate of Arts Program is to provide students with the knowledge and critical thinking skills that will enable the student to analyze problems, arrive at intelligent conclusions, and make reasoned choices in his or her professional and personal life. Course syllabi specify how each class will help students achieve the outcomes and competencies of the general education curriculum.

- Students will demonstrate competency in mathematics, including analytical and occupational skills.

**Rationale:** An objective of post-secondary education is to provide a core of knowledge that is shared with most educated people. By studying and developing a deeper understanding of mathematical computations, students can better analyze, problem solve and prepare critical thinking strategies for real world scenarios.

**Course Objectives:**
Upon successful completion of Beginning Algebra, the student should be able to do the following:

- Apply the basic concepts of real numbers.
- Apply the basic concepts of variable expressions.
- Solve various types of linear equations (with and without application).
- Solve basic inequalities.
- Apply the basic operations to polynomials.
- Apply the various factoring techniques to polynomials.
- Graph ordered pairs of numbers and linear equations.
- Demonstrate proficiency in technological skills.

Student will be able to demonstrate the above objectives in the form of passed certifies, tests and hand-written explanations.

**Topical Outline:**

Unit 6: <u>Perimeter, Area and Introduction to Algebra</u>

A. Perimeter
B. Area
C. Order of Operations with Real Numbers
D. Simplifying and Evaluating Algebraic Expressions

Unit 7: <u>Solving Linear Equations and Inequalities</u>

A. Solving Linear Equations: $x + b = c$ and $ax = c$
B. Solving Linear Equations: $ax + b = c$
C. Solving Linear Equations: $ax + b = cx + d$
D. Working with Formulas
E. Linear Inequalities

Unit 8: <u>Linear Equations and Inequalities in Two Variables</u>

A. The Cartesian Coordinate System
B. Graphing Linear Equations in Two Variables: $ax + by = c$
C. The Slope-Intercept Form: $y = mx + b$
D. The Point-Slope Form
E. Introduction to Functions and Function Notation
F. Graphing Linear Inequalities in Two Variables

Unit 9: <u>Exponents and Polynomials</u>

A. Exponents
B. Exponents in Scientific Notation
C. Introduction to Polynomials
D. Addition and Subtraction with Polynomials
E. Multiplication with Polynomials
F. Special Products of Binomials

Unit 10: Factoring Polynomials

A. Greatest Common Factor and Factoring by Grouping
B. Factoring Trinomials: $x^2 + bx + c$
C. Factoring Trinomials: $ax^2 + bx + c$

## Course Schedule:

| Week # | Minimum Pace Required by Lesson # |
|---|---|
| 1 | Orientation/Pretest |
| 2 | Day 2 Orientation/ Homework Unit 6 |
| 3 | Placement Test 6/ Unit 6 Certifies |
| 4 | Unit 6 Certifies (continued)/ Unit 6 Test |
| 5 | Homework for Unit 7/ Placement Test 7 |
| 6 | Unit 7 Certifies/ Unit 7 Test |
| 7 | Homework for Unit 8/ Placement Test 8 |
| 8 | Unit 8 Certifies/ Unit 8 Test ***Midterm Grade*** |
| 9 | Homework for Unit 9 |
| 10 | Placement Test 9/ Unit 9 Certifies |
| 11 | Unit 9 Test/ Homework for Unit 10 |
| 12 | Placement Test 10/ Unit 10 Certifies |
| 13 | Unit 10 Test |
| 14 | Study Guide for Post-Test |
| 15 | Post-Test |

## ❖ Course Conduct:

**Hawkes Homework**

- Before students are allowed to take a unit placement test, they must present completed homework and software practice to their instructor.
- Assigned homework problems can be found on the course materials section in the Hawkes Learning System.

**HLS Lessons**

- Each student will be required to complete a minimum of 29 lesson objectives in the Hawkes Learning System.
- *Each lesson objective will have a placement test that is open book/notes (60-minute time limit), which may **not** be repeated. A score of 100% is required on the placement test in order to proceed to the next unit.*
- The placement test will place you on the lessons from which you have missed questions and give you 100% grades on the lessons from which you did not miss any questions. Each lesson is composed of Instruct, Practice, and Certify. *Certify is a quiz that is open book/notes which may be repeated.*
- A minimum score of 80% is required on the quiz in order to proceed to the next lesson objective.

**Tests**

- There will be 5 Unit Tests given throughout the semester on the Hawkes Learning System. Each test will be given after the student completes the appropriate unit objectives. If the student makes a 100% on the Placement Test for a unit they will automatically receive a 100% for their Unit Test grade as well.
- *Each test may be taken only **once**, and **may only be taken when an instructor is present.** The Unit Test is locked by a password. Only your instructor can release the test for use. If a student manages to override the password and test without instructor approval, they will receive a 0% for the test.*
- *The tests will be closed notebook/book exams.* ***Any student caught using their book or notebook during a test will be given a zero for that test – NO TOLERANCE!***

**UA Rich Mountain Credit Hour Calculator:** For every course credit hour, you should expect to spend at least three clock hours per week of concentrated attention on course-related work, including but not limited to time attending class, as well as out-of-class time spent reading, reviewing, organizing notes, preparing for upcoming quizzes/exams, problem solving, developing and completing homework, and other activities that enhance learning. For a three hour course, a typical student should expect to spend at least nine hours per week dedicated to the course. This includes the time spent in class. Please see the credit hour calculator attached at the end of the syllabus.

**Course Requirements/Evaluation:**

| | |
|---|---|
| HLS Lessons | 25% (Certifies) |
| TESTS | 60% (The highest of Placement/Unit will be taken) |
| Attendance | 5% (Attendance can be made up if excused) |
| Notebook | 10% (Grade taken for each unit) |
| Total | 100% |

Grades shall be assigned on the basis of a standard percentage scale:

**A: 89.5 – 100%**
**B: 79.5 – 89.4%**
**C: 69.5 – 79.4%**
D: 59.5 – 69.4%
F: 59.4% and below

**Class Procedures/Student Requirements:**

**Attendance/ Make-up Policy:**

If a student is absent from any class, it is the **student's responsibility** to contact the instructor ***before*** the next class meets to determine if the absence is excused. The student must make up the class time on their own accord during open lab. It is the student's responsibility to maintain a minimum pace as suggested on the back board in the classroom. Every three hours of recorded extra time will remove one EXCUSED absence when determining eligibility for incomplete status. Five or more absences could result in the removal of points from final grade. Attendance will make up 5% of the overall grade. Students with excessive unexcused absences (more than five) can be given an NF (non-attendance failure) grade. *STUDENTS THAT MISS TWO OR MORE DAYS DURING THE FIRST TWO WEEKS OF CLASSES WILL BE ADMINISTRATIVELY WITHDRAWN FROM THE ROSTER.*

**Success:**
Success in this class requires good attendance, good study habits and note-taking skills, and extra-time spent outside the class time. Students should try to log in extra-time as often as possible to remain on pace.

**Resources:**

Hawkes Math tutoring is available from Student Support Services (SSS) and www.tutor.com. Contact Marsha Jenkins at (479) 394- RMCC ext. 1623 for more information on SSS tutoring. Contact Brenda Miner at (479) 394- RMCC ext. 1370 for more information on www.tutor.com.

**Classroom Behavior:**

- ✓ **Food and drinks are NOT permitted near computers in this class.**
- ✓ Electronic devices, such as cell phones and pagers, are **NOT** permitted and **MUST** be turned off or turned onto vibrate during class. You may **NOT** answer your cell phone during a graded activity. Violation of these policies may result in disciplinary action.
- ✓ Students are **NOT** permitted to bring children, parents, siblings, spouses, or other significant others to class.

**Borrowed Materials:**
If you borrow materials from the lab, you must turn them in upon completion of finals week. Failure to do so could lead to a registrar's hold on your account or a charge to your account to cover the cost of the item.

**Pre-test and Post-test:**
You are required to take a pretest and post-test to evaluate your knowledge of Beginning Algebra.

**Academic Dishonesty**: Plagiarism, cheating, and other forms of academic dishonesty are prohibited. In addition to other possible disciplinary sanctions which may be imposed through the regular institutional procedures as a result of academic misconduct, your instructor will assign an "F" for the exercise or examination for the first offense and assign an "F" for the course for the second offense.

**Disability Policy:** It is the policy of UA Rich Mountain to accommodate students with disabilities, pursuant to state and federal law. Any student with a disability who needs accommodations should contact the Vice-Chancellor for Student Affairs Office, 394-7622 ext.1400.

**Arkansas Clean Air Act:** In compliance with the Arkansas Clean Air Act, UA Rich Mountain is a smoke and tobacco free facility. Students and guests are to refrain from the use of all tobacco products while on campus.

**Student Misconduct:** Students committing misconduct are subject to disciplinary sanction(s) and or restrictions. Misconduct or prohibited behavior includes, but is not limited to endangerment, harassment, disruption, sexual misconduct, dishonesty, illegal drugs and/or alcohol, fire or safety issues, gambling, property violations, computer violations or other violations as listed in detail in the UA Rich Mountain catalog.

**Face Mask Policy:** As per the Executive Order from the governor of Arkansas, all students are required to wear a proper face mask covering that completely covers the nose and mouth while on campus and in class. Masks with holes or masks that do not completely cover nose and mouth are not acceptable. Any student that does not have a proper mask will leave class and be referred to the Vice Chancellor of Student Affairs for possible disciplinary action.

**Food and Drink:** Food and drinks, including water are not allowed in the classroom at any time.

**Campus Security:** University of Arkansas at Rich Mountain strives to provide a safe learning environment; therefore, students who know of any security risk are asked to contact a college official. http://www.uarichmountain.edu/at-a-glance/disclosures

**UA Rich Mountain Mission:** *UA Rich Mountain provides transformative education to all learners.*

**Under review*

**Credit Hour Requirement Calculator**

**Course Information**

| | | |
|---|---|---|
| Department, Course Number | | Mathematics |
| Course Title | Beginning Algebra | MTH023 |
| Credit Hours | 3 | |
| Mode of Delivery | Hybrid | |
| Weeks in Part of Term | 15 | |
| Level of Reading Material | Advanced/Scientific/Technical (2) | 2 |
| Reading Level of Students | Remedial Student or Slow Reader (3) | 3 |
| Average Pages per Hour | 8 | |

*Enter either week or term, not both*

| **Contact Hours** | **Hours/Week** | **Hours/Term** | **Total Hours** |
|---|---|---|---|
| Lab Contact Hours | 3 | | 45 |

| | **Pages Asg'd** | **Hours/Week** | **Hours/Term** | |
|---|---|---|---|---|
| **Syllabus Items** | | | | |
| Assigned Homework | | 4 | | 60 |
| Tutor Assistance | | 1 | | 15 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |

| | |
|---|---|
| **Total Hours** | 120 |
| **Required Hours** | 112.5 |
| **Difference** | Ok + 7.5 |