**MTH223-01**
**Number Systems II**
**Spring 2021 Syllabus**

**Class Time and Location:** M W 4:30 - 5:45 pm S 245

**Instructor:** Shannon Lyle M.ED Harding University
M.ED Henderson State University
B.S. Arkansas Tech University

**Online Hours**: I do not have an office on campus. I will periodically check Moodle and my email for any questions you may have pertaining to this class and will answer your questions as soon as possible. I encourage you to contact me at any time with any questions or concerns you may have about this class. I am available by appointment for individual conferences.
**Email**: slyle@uarichmountain.edu
**Cell phone**: 479-216-3673

**Zoom Information:**
If a student or the instructor is under quarantine, the lecture will be recorded. PLEASE NOTE that I will be able to take attendance of LIVE participation from the roster that is created by Zoom.
**Shannon Lyle's Personal Meeting Room**
**Join Zoom Meeting**
**https://zoom.us/j/4013249631?pwd=UWpwcXRLeTIwdjU1elBBb2JYazB1UT09**
**Meeting ID: 401 324 9631**
**Passcode: AMa9M3**

**Co-requisite:** Minimum score of 19 on both the mathematics and English sections of the ACT or a grade of C or better in MTH033 (Intermediate Algebra) or a minimum score of 41 on the COMPASS Algebra Skills Placement Exam

**Resources:**
**Required Text:** Mathematics for Elementary Teachers – A Contemporary Approach, 8th Edition, Musser, Burger, and Peterson, Copyright 2008. ISBN # 13–978–0470–10583-2

**Required Materials:**
TI-83/84 Calculator supplied by UA Rich Mountain as needed, 3-ring notebook, college rule 3 hole paper, graph paper, cardboard folder, mechanical pencils with extra erasers, yellow highlighter, small pack colored pencils, small ruler or straight edge.

**Course Description:** This course includes development of concepts and operations of decimals and measurement, as well as exploration of graphs, data, statistics, probability, and geometry. Topic content levels appropriate for grades Pre-K through 8 are presented along with some methods and manipulatives to foster understanding of concepts. This course is designed to better prepare future elementary and middle school teachers. (ACTS MATH 1104)

**Program Outcomes:** The purpose of the Associate of Arts Program is to provide students with the knowledge and critical thinking skills that will enable students to analyze problems, arrive at intelligent conclusions, and make reasoned choices in their professional and personal lives.

- Students will demonstrate competency in mathematics, including analytical and occupational skills.
- Students will apply technological skills to process information.
- Students will be prepared to compete academically upon transfer to a four-year institution.

**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. Technological skills with the graphing calculator are necessary for future math courses.

**Course Objectives**: Upon successful completion of MTH 233 Number Systems II, the student should be able to:

1. Demonstrate concrete, pictorial, and abstract models for concepts and operations of decimals, ratio, proportion, percent, integers, rational, and real numbers.
2. Organize, interpret, and analyze statistics from many types of graphs.
3. Calculate and apply probability and counting techniques to real-world problems.
4. Recognize and analyze basic geometric shapes including polygons and various transformations.
5. Demonstrate understanding of measurement skills by calculating length, perimeter, area, surface area, and volume.

Students will demonstrate mastery of the above objectives by grades of C or above on journal entries, portfolio, tests, presentations, and final exam.

**Tentative Course Outline:** A topical outline and schedule for the course is posted in Moodle titled "Spring 2021 Tentative Schedule."

**Important Dates:**

| | |
|---|---|
| February 8 (M) | Four week grades due |
| February 18 (M) | Winter Break |
| March 1-5 (M-F) | Priority Registration for Summer and Fall |
| March 8 (M) | Eight Week (Mid-term) grades due |
| March 22-26 (M-F) | Spring Break |
| April 12 (M) | Twelve week grades due |
| April 28 (W) | Honors Evening |
| April 30 (F) | Last day of classes/ last day to drop the class with a W |
| May 3-6 (M - R) | Final Exams |
| May 6 (R) | Graduation; Grades due |

**Course Conduct:** The class will be taught using a combination of group interaction, question and answer approach, lecture, and independent study. New topics will be demonstrated using the board, document camera with smart board, and many manipulatives to support development of concepts in a concrete fashion. Students are strongly encouraged to discuss concepts and examples as opportunities are presented during instructor presentation. It is the student's responsibility to inform the instructor when a concept is confusing or otherwise unclear.

You are encouraged to solve problems forming a study group and actively taking part in discussion. You may seek assistance from Student Support Services (SSS) or Learning Enrichment Advising Center (LEAC) to check the concepts in homework assignments, quizzes, and exam reviews but it is not the responsibility of SSS or LEAC to teach the entire lesson to complete your homework, neither can you directly ask for the answer. In case of extreme difficulty, you must inform me no later than two weeks after the class starts.

**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 completing homework, seeking help from instructor or tutors, preparing for upcoming quizzes/tests/exam, reviewing material, problem solving, and organizing your notebook. For a three-hour course, a typical student should expect to spend at least nine hours per week dedicated to this course. This includes the time spent in class.

**Course Requirements / Evaluation (Grading):**

| Syllabus Items | # of Total Items | # of Points an Item | # of Total Points |
|---|---|---|---|
| *Attendance/Homework Checks | 30 | 5 | 150 |
| Portfolio | 6 | 50 | 300 |
| Tests | 6 | 50 | 300 |
| Presentations | 2 | 200 | 400 |
| Final Exam | 1 | 100 | 100 |
| | | | **Total = 1250** |

**Criteria for Credit:** Work must be neat and complete. Each problem assigned has three parts: 1) the original problem complete with figures drawn, 2) all steps or an explanation of how to arrive at the correct answer, and 3) the final answer. ***Answers alone are not acceptable***. Use pencils and straight edge paper; no ink or ruffles please. Write your name and the lesson topic and number at the top of the first page. Leave a blank line between problems. All graphs are to be accurately sketched on graph paper with all parts properly labeled and all work for the problem shown on the same page as the graph. For immediate feedback, you may check your answers for most assigned problems in the back of the book. Find and correct any mistakes. *You will not receive credit for any problems not meeting the criteria for credit described above.*

**90 – 100 = A** **80 – 89 = B** **70 – 79 = C** **60 – 69 = D** **0 – 59 = F**

**Class Procedures/Student Requirements:**
Students are expected to participate in class and contribute to their own learning. The student portal and Moodle will be available for accessing needed documents.

**Attendance / Make-up Policy**: It is the student's responsibility to immediately contact the instructor if they will not be present for class. No make-up exam will be given. Course portfolios are due just before taking the exam. Late portfolios will be penalized. The student is responsible for instruction missed during class by studying the material in the book, seeking help from the teacher and/or student support services, and by getting class notes from the teacher or another student.

**Cell Phones:** The use of cell phones in the classroom is prohibited. Turn cell phone off or set on vibrate and store it out of sight during class time. ***Cell phones will be taken up during exams.***

**Quarantined? Or, Not Quarantined?**
If you are experiencing COVID symptoms, you need to contact Chad Fielding. He has the authority to declare one to be allowed to attend face to face classes via Zoom. He will then oversee the notification of your instructors. So, always follow protocol in order to insure that the you are afforded this opportunity, if warranted.
When you or I are declared "under quarantine" by UARM, Zoom will be used to continue with the learning. You will be expected to log into Zoom and view the LIVE session during class time, unless you have communicated with the instructor of your inability due to the manifestation of symptoms. If you are unable to attend LIVE due to symptoms, the recorded version of the lesson will be made available to you upon request. It is imperative that you understand that this is YOUR RESPONSIBILITY to request the link to the recorded session.

**SSS**: SSS is located in the Johnson Learning Commons and offers free academic support in almost all subject areas. This program is an excellent source for supplemental instruction and tutoring. I strongly encourage you to make use of its services. If you are having extreme difficulties, please make an appointment with me to discuss your difficulties.

**Academic Dishonesty**: I encourage you to familiarize yourself with UA Rich Mountain policies regarding academic dishonesty. These policies are found in the UA Rich Mountain Catalog under Code of Student Conduct; Prohibited Conduct; Dishonesty.
You must do your own work. All projects, assignments, and exams must be completed by you without assistance beyond what is specifically authorized by me. I expect each student to do his/her own work on assignments and exams. Cheating on an assignment or test will result in a zero (0) for that work. Additionally, all instances of cheating/plagiarism will be reported to the Vice Chancellor for Student Affairs.

**Computer and On-Campus Resources:** Computer labs with printers are available in several places on campus including the Johnson Learning Commons. UA Rich Mountain offers students assistance with quality tutors available in the Student Support Services (SSS) and Learning Enrichment and Counseling Center (LEAC) in the Johnson Learning Commons. You may access www.tutor.com/uarichmountain nights and weekends when SSS is not available.

**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. 1460.

**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, including e-cigarettes, 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 violation, 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 covering that completely covers the nose and mouth while on campus and in class. Masks with holes or masks that do not completely cover the 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 for Student Affairs for possible disciplinary action.

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

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

Crime Statistics Link: UARM's crime statistics are available at
http://www.uarichmountain.edu/at-a-glance/disclosures

*See Something ... Hear Something ... Say Something*

Suspicious behavior should be reported to Deputy Sheriff Raul Toribio at (479)394-6811 OR through the anonymous email link found on the UA Rich Mountain webpage, bottom right hand corner. Deputy Toribio's office is located in the Spencer Building across from the Johnson Learning Commons.

| SPRING 2021 | NUMBER SYSTEMS II | S. LYLE |
|---|---|---|
| Date/Day | Topics/Activities by Book Chapter | Assignments & Due Dates |
| 1/11 M | Chapter 7: Decimals, Ratio, Proportion, and Percent<br>7.1 Decimals | |
| 1/13 W | 7.2 Operations with Decimals | |
| 1/18 M | 7.3 Ratios and Proportions | |
| 1/20 W | 7.4 Percent | |
| 1/25 M | EXAM Chapter 7 | |
| 1/27 W | Chapter 8: Integers<br>8.1 Addition and Subtraction | |
| 2/1 M | 8.2 Multiplication, Division, Order | |
| 2/3 W | Chapter 9: Rational Numbers, Real Numbers, and Algebra<br>9.1 Rational Numbers | |
| 2/8 M | 9.2 Real Numbers | |
| 2/10 W | 9.3 Functions and their Graphs | |
| 2/15 M | WINTER BREAK | |
| 2/17 W | EXAM Chapter 8 & 9 | |
| 2/22 M | Chapter 10: Statistics<br>10.1 Orgainzing and Picturing Information | |
| 2/24 W | 10.2 Misleading Graphs and Statistics | |
| 3/1 M | 10.3 Analyzing Data | |
| 3/3 W | EXAM Chapter 10 | |
| 3/8 M | Chapter 11: Probability<br>11.1 Probability and Simple Experiments | |
| 3/10 W | 11.2 Proabability and Complex Experiments | |
| 3/15 M | 11.3 Additional Counting Techniques | |
| 3/17 W | EXAM Chapter 11 | |
| 3/22 – 3/26 | SPRING BREAK | |
| 3/29 M | Chapter 12: Geometric Shapes<br>12.1 Recognizing Geometric Shapes | |
| 3/31 W | 12.2 Analyzing Shapes | |
| 4/5 M | 12.3 Properties of Geometric Shapes: Lines and Angles | |
| 4/7 W | 12.4 Regular Polygons | |
| 4/12 M | EXAM Chapter 12 | |
| 4/14 W | Chapter 13: Measurement<br>13.1 Measurement with Nonstandard and Standard Units | |
| 4/19 M | 13.2 Length and Area | |
| 4/21 W | 13.3 Surface Area | |
| 4/26 M | 13.4 Volume | |
| 4/28 W | EXAM Chapter 13 | |
| 5/3 – 5/6 | Finals week – Final Exam (Ch 1-6) | |