MATH 1420: Mathematics For Elementary Education II

Instructor:
Office Phone:
Office Location:
Office Hours:
Email Address:

Course Description
This course is a continuation of MATH 1410 and the second course in math for elementary education which is restricted to students majoring in Elementary or Early Childhood Education. Topics include introductory elements of probability and statistics and the basic concepts of Euclidean geometry and coordinate geometry including congruence, similarity, measurements, areas, and volumes.

Credit Hours: 3 credits; 3 class hours

Prerequisite: MATH 1410

Course Outcomes and Topics
- Apply the basic concepts of probability and statistics.
- Organize and compare data by constructing tables and graphs.
- Calculate the measures of central tendency (mean, median, mode) and measures of dispersion for analyzing and comparing data.
- Construct graphs using the rectangular coordinate system and the calculator.
- Compare and apply the concepts of angles, similarity, congruence, symmetry, ratio, and proportion.
- Calculate perimeter, area, surface area, and volume. These computations include the understanding of simple polygons and composite figures and of measuring distance using both metric and standard measurement and conversion between units of measure.

Topics
- Equations in a Cartesian Coordinate System
- How probabilities are determined
- Multi-stage experiments with tree diagrams and geometric probabilities
- Using simulations in probability
- Statistical graphs
- Measures of central tendency and variation
- Abuses of statistics
- Basic notions of geometry
- Linear measure
- Curves, polygons, and symmetry
- Congruence and properties of congruence
- Similar triangles and other similar figures
- Perimeter/circumference of polygons and circles
- Areas of polygons and circles
- The Pythagorean Theorem and Distance formula
- Geometry in three dimensions
• Surface area
• Volume, mass, and temperature
• Translations and rotations (optional)
• Reflections and glide reflections (optional)
• Dilations (optional)
• Tessellations of the plane (optional)

Required Materials
• MyMathLab access code
• Calculator (A graphing calculator is recommended)

Optional Materials

Course Policies

Attendance
Students are expected to attend each class meeting. Attendance will be taken at each class meeting (and reported to the Financial Aid Office when required). If a student misses two consecutive weeks of class, then the student will receive a grade of FA. Since our class meets two days per week, missing four consecutive classes will result in a grade of FA. Please note that an FA grade is equivalent to an F for GPA purposes. If a student receives an FA, he/she can petition for an exemption. If you would like to petition for an exemption for missing two weeks, you may contact Dr. Mary Womack (Interim Dean of Math and Natural Sciences). Successful petitions will require documentation demonstrating an acceptable reason for having missed two consecutive weeks of class. (Dean Womack: mary.womack@nscc.edu, 615-353-3117, K-240 on the Main Campus).

Homework
Homework assignments will be completed using MyMathLab. You are required to purchase an access code for MyMathLab. Purchasing the access code gives you free access to the online textbook (this is the reason you are not required to purchase a physical copy of the textbook). The due dates for the homework assignments will correspond to the test dates. For example, all of the homework assignments that cover the Test 1 content will be due on the day we take Test 1. There will be NO make-ups or extensions for the homework assignments. It is absolutely imperative that you complete all of the homework assignments – they will give you practice over the content and they will prepare you for the tests. It is also very important to stay current with all homework assignments.

Student Communication Channels
It is the student’s responsibility to check D2L and MyNSCC e-mail on a regular basis. These are the official communication channels between the college and the students. Important information regarding our class will be posted on D2L and may also be communicated through e-mail.

ADA Statement
Please contact the Access Services Coordinators at 615-353-3721 or 615-353-3741 if you would like to arrange ADA accommodations.
Classroom Behavior

Students whose behavior disrupts the classroom will be removed from the classroom and will be subject to disciplinary sanctions. The instructor has primary responsibility for control over classroom behavior and maintenance of academic integrity. He/she can order temporary removal or exclusion from the classroom of any student engaged in disruptive conduct or in conduct that violates the general rules and regulations of the college.

Disruptive behavior in the classroom may be defined as, but not limited to, behavior that obstructs or disrupts the learning environment (ex: offensive language, harassment of students and instructors, outbursts that disrupt the flow of instruction or prevent concentration, failure to cooperate in maintaining classroom decorum, etc.). The continued use of electronic devices or other noise or light emitting devices that disturb other students or the instructor is prohibited. If a student disrupts the classroom, they may be removed by security. The student will not be allowed to return to class until the issue has been resolved with the Dean of Students. Please be aware that children are not allowed in class and cannot be left unattended on campus.

Academic Dishonesty

Any form of academic dishonesty, cheating, plagiarizing, or other academic misconduct is prohibited. “Plagiarism may result from: (1) failing to cite quotations and borrowed ideas, (2) failing to enclose borrowed language in quotation marks, and (3) failing to put summaries and paraphrases in your own words” (A Writer’s Reference 331). Academic dishonesty may be defined as, but is not limited to, intentionally trying to deceive by claiming credit for the work of another person, using information from a web page or source without citing the reference, fraudulently using someone else’s work on an exam, paper, or assignment, recycling your own work from another course, purchasing papers or materials from another source and presenting them as your own, attempting to obtain exams/materials/assignments in advance of the date of administration by the instructor, impersonating someone else in a testing situation, providing confidential test information to someone else, submitting the same assignment in two different classes without requesting both instructor’s permission, allowing someone else to copy or use your work, using someone else’s work to complete your own, altering documents, transcripts or grades, and forging a faculty/staff member’s signature. In addition to other possible disciplinary sanctions that may be imposed through regular college procedures as a result of academic dishonesty the instructor has the authority to assign an “F” or a “Zero” for the exercise, paper, or examination or to assign an “F” for the course.