MATH 211 – Fundamentals of Geometry and Measurement - FALL 2017

Instructor: Mr. Michael (Mike) Skowronski  Email: skowrons@uwosh.edu

Office: 233 Swart Hall  
Phone: 424 – 7347; Cell: (715) 584 – 3931 (I do accept text messages.)

Section 001: TuTh, 9:40 – 11:10, Swart 101  
Section 002: TuTh, 11:30 – 1:00, Swart 101  
Section 003: MWF, 12:40 – 1:40, Swart 13

Office Hours:  
Mon, Wed, Fri: 10:00 – 11:30  
Tue, Thu: 3:00 – 4:00

NOTE: Please schedule an appointment if these hours are not convenient for you.

Course Description:

This course is designed to give you experience in how to think mathematically. To this end, you will solve problems, make conjectures, justify those conjectures, and communicate your results, orally and in writing. The specific content of the course is guided by the mathematics of the elementary school curriculum, as described by the Common Core State Standards for Mathematics.

Text:


Required Materials: In addition to your textbook, you will need the following: protractor, ruler (straightedge), and scissors. We will use tracing paper a few times during the semester. May I suggest you share the cost with others. I will let you know when to bring these materials. Please bring your textbook to class every day.

Assessment:

10% - CLASS PARTICIPATION  
20% - EXAM 1 – WEDNESDAY, 10/11 & THURSDAY, 10/12  
20% - EXAM 2 – THURSDAY, 11/16 & FRIDAY, 11/17  
20% - EXAM 3 – TUESDAY, 12/12 & WEDNESDAY, 12/13  
30% - MISC. – (Write-ups, collected homework, quizzes, group activities)
Math 211: Geometry and Measurement

Learning Objectives: The content of the course is focused on important mathematics in the elementary school curriculum as described by the Common Core State Standards (2010) and National Council of Teachers of Mathematics (NCTM Principles and Standards, 2000). This includes ideas about fundamental concepts, objects, and properties of Euclidean geometry; angles; polygons; transformations; symmetry; and the measurement of angle, length, area, and volume.

Upon successful completion of the course, students are expected to have the ability to:

- Create and use a variety of problem solving strategies including reasoning from diagrams, and using geometric models to find generalities and constraints.
- Understand fundamentals of logical reasoning and distinguish between and use, both inductive and deductive reasoning.
- Understand the limitation of geometric representations and the distinction between these representations and the ideal objects they represent.
- Communicate the problem solving process and mathematics both orally and in writing using precise mathematical language, definitions, and representations.
- Listen, evaluate and respond effectively to the mathematical ideas of peers.
- Make mathematical arguments and justify solutions, and come to understand, through logic and structure - as opposed to another authority - when a solution is correct and complete.
- Understand axioms and key theorems from Euclidean geometry (including parallel line theorems, triangle congruence theorems, and the Pythagorean Theorem).
- Recognize and justify properties of, and relationships among, triangles, quadrilaterals, and other polygons.
- Understand, model, and contrast definitions and properties of rigid motions (including translations, reflections, and rotations) and their relationship with symmetry.
- Explain the idea, processes, and limitations associated with the measurement of angle, length, area, and volume. Understand why units matter and explain why our standard formulas for perimeters, areas, and volumes make sense.
- Recognize, model, and reason about dilations. Explain their relationship to similarity and scaling of one-, two-, and three-dimensional measures.
- Understand children’s models and the mathematical work of teaching.
- Gain an appreciation for the beauty and importance of geometry.
Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93 – 100</td>
</tr>
<tr>
<td>A-</td>
<td>90 – 92</td>
</tr>
<tr>
<td>B+</td>
<td>87 – 89</td>
</tr>
<tr>
<td>B</td>
<td>83 – 86</td>
</tr>
<tr>
<td>B-</td>
<td>80 – 82</td>
</tr>
<tr>
<td>C+</td>
<td>76 – 79</td>
</tr>
<tr>
<td>C</td>
<td>70 – 75</td>
</tr>
<tr>
<td>D</td>
<td>60 – 69</td>
</tr>
<tr>
<td>F</td>
<td>&lt; 60</td>
</tr>
</tbody>
</table>

Attendance and Participation:

This course is more than learning mathematics; it is about doing mathematics. It is also about explaining your ideas and interpreting and responding to the ideas of others. Therefore attendance and active participation are vital. This active participation DOES NOT include talking while others are talking or use of cell phones during class. This behavior is disruptive, rude, and disrespectful.

Homework:

Students are expected to complete homework assignments whether they are collected or not. **Late homework will be accepted only in the most extenuating of circumstances.** If you know that you will be absent on a day when homework is due, all attempts must be made to turn in homework BEFORE you leave. The same holds for any scheduled exams and quizzes.

Tutors:

There is a Mathematics Tutor Lab located in Swart 113. They will employ a tutor specifically for MATH 211. The hours will be posted outside of the tutor lab.

The Center for Academic Resources (CAR) provides free, confidential tutoring for students in most classes on campus. CAR is located in the Student Success Center, Suite 102. Check the Content Tutoring page on CAR’s website ([www.uwosh.edu/car](http://www.uwosh.edu/car)) for a list of tutors. If your course is not listed, click on a link to request one, stop by SSC 102 or call 424-2290. To schedule a tutoring session, simply email the tutor, let him/her know what class you are seeking assistance in, and schedule a time to meet. Tutoring takes place in SSC 102. The Center for Academic Resources also provides support to students through Supplemental Instruction (SI) and the Peer Educator program. Visit the website for more information.

Final Remarks:

I look forward to meeting and working with all of you. I encourage you to work with one another and to utilize all the **FREE** resources available to you (CAR, Swart Tutor Lab, my office hours). I also suggest that you check your email and D2L periodically as I use these resources to post announcements.
and grades.

I intend to treat all of you fairly and with respect. You need to do the same. All smart phones should be in silent mode or off while class is in session. If your phone needs to be kept on for an emergency, then please leave the room to respond.

**DO NOT** hesitate to schedule an appointment if my office hours conflict with your availability. I live very close to the University and am usually in by 8 AM on. Feel free to stop by, text me, or email if you have any concerns. I have met students in the evening and on weekends in my office or Reeve Union if they had to miss class for a family emergency or illness. If you are reluctant to ask questions in class you can send an email or text message asking me to solve specific problem. **Your success is my top priority!**

Welcome to Math 211!