University of North Texas at Dallas

Fall 2015

MATH 1353-001   Geometry and Measurement for Teachers   3 credit hours

Division: Liberal Arts and Life Sciences

Department: Mathematics and Information Sciences

Instructor: Dr. Gwendolyn Johnson

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Office hours: Mondays and Wednesdays 2:30-4:00
Tuesdays 11:30-1:00 and 2:30-5:30
Thursdays 11:30-1:00
Fridays and Saturdays by appointment
Because I often have meetings on campus, I might not be in my office during these hours. Please email me to make sure I will be available before you visit.

Class Location: Bldg 2 room 232

Class Times: Tuesdays and Thursdays 10:00-11:20

Course Catalog Description:

We will study basic geometry, the coordinate plane, the Pythagorean Theorem, polygons, circles, congruence and similarity, transformations, symmetry, perimeter, area, surface area and volume.

Learning Objectives:

1. Students will describe the <u>types of</u> and <u>properties of</u> two-dimensional shapes such as triangles, quadrilaterals, pentagons, and hexagons.
2. Students will answer questions and solve problems related to the measurement of two-dimensional shapes including perimeter, circumference, area of basic and composite (nonstandard) shapes, the Pythagorean Theorem and similar figures.
3. Students will answer questions and solve problems related to three-dimensional shapes, surface area, and volume.
4. Students will answer questions and solve problems related to coordinate geometry, transformations, and symmetry.
5. Students will solve problems related to the customary (traditional American) and metric systems of measurement.

INTASC and NCATE Standards:

InTASC Standard #4 Content Knowledge: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline meaningful for learners to ensure mastery of the content.

InTASC Standard #5 Application of Content The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

NCATE Standard 1: Candidate Knowledge, Skills, and Professional Dispositions

Learning Resources:

UNT Dallas Math Lab is located in Bldg 1 room 336.

UNT Dallas Writing Center can be found at www.unt.edu/wc

Academic Advising and Student Support is located in Bldg 1, third floor.   972-338-1645

Grading:

Tests   780 points

Homework   150 points

Participation   70 points

                   1,000 points total

Tentative Course Outline

Dates	Tuesday	Thursday
Aug 24-28	Measuring angles with a protractor, sums of angles in polygons	Basic geometry, acute, comp., supp., obtuse angles, angles created by parallel lines and transversals
Sept 1-4	Characteristics of quadrilaterals, conditional statements	Understanding circles (radius, diameter, circumfer.)
Sept 7-11	**Test: angles, polygons, circles (130 pts)**	Perimeter and area of squares, parallelograms, and triangles
Sept 14-18	Area of circles	Area of polygons and nonstandard shapes
Sept 21-25	Scale drawings and similar figures	Review **Homework on area & perimeter due (50 points)**
Sept 28-Oct 2	**Test: area, perimeter, scale drawings, and similar figures (130 pts)**	Plotting points on a coordinate grid – class online
October 5-9	Transformations	Transformations
Oct 12-16	Transformations	Review **Homework on transformations due (40 points)**
Oct 19-23	**Test: coordinate geometry and transformations (130 pts)**	Elapsed time – class online
Oct 26-30	Measurement	Measurement
Nov 2-6	Pythagorean Theorem	Review **Homework on measurement due (30 points)**
Nov 9-13	**Test: measurement and the Pythagorean Theorem (130 pts)**	Names of the three-D solids – class online
Nov 16-20	Faces, edges, vertices, and nets	Views of 3-D solids
Nov 23-27	Volume of prisms, cylinders, and cones	Review **Homework on 3-D figures due (30 points)**
Dec 1-4	**Test: 3-D figures and volume (130 pts)**	Review
Dec 8-11	**Comprehensive final exam (130 pts)**	

Course Policies and Procedures

Tests

Tests WILL cover material from class that is NOT covered in the textbook. Therefore, it is very important to attend class and download all of the supplemental materials (PowerPoints, Test Reviews, etc.) from Blackboard.

Test will contain short-answer questions that require students to show their work and explain their reasoning.

Homework

Homework will consist of two parts. A "suggested" assignment will give you an opportunity to practice the skills that we learn in class. Some of the test questions will come from the "suggested" assignments, so doing them is a good way to prepare for the tests.

The other part of the homework will be turned in for a grade. Homework that is turned in must be typed and submitted through Blackboard. Spelling, grammar, organization count toward the grade. Your thoughts and reasoning must be fully explained.

Homework will be accepted up to three weeks past the due date, but a late penalty will apply. The late penalty will be 10% for one day to one week late, 20% for eight days to two weeks late, and 30% for 15 days to three weeks late.

Attendance and Participation

Most of the mathematics content covered in the course is not in the textbook! Therefore, it is important to attend class. If you must miss class, it is your responsibility to learn the information by downloading the PowerPoint from Blackboard and scheduling an appointment with the instructor.

Participation includes attending class, paying attention to the instructor and other students, asking and answering questions, and volunteering to solve problems at the board. Students who miss class or who arrive late or leave early will lose participation points.

University Policies and Procedures

Students with Disabilities (ADA Compliance):

The University of North Texas Dallas is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. For more information, you may visit the Student Life Office, Suite 200, Building 2 or call 972-780-3632.

The Department of Teacher Education is committed to full academic access for all qualified students, including those with disabilities. In keeping with this commitment and in order to facilitate equality of educational access, faculty members in the department will make reasonable accommodations for qualified students with a disability, such as appropriate adjustments to the classroom environment and the teaching, testing, or learning methodologies when doing so does not fundamentally alter the course.

If you have a disability, it is your responsibility to obtain verifying information from the Office of Student Life and to inform me of your need for an accommodation. Grades assigned before an accommodation is provided will not be changed. Information about how to obtain academic accommodations can be found in UNTD Policy 7.004, Disability Accommodations for Students, and by visiting Student Life, building 2, Suite 200. 972-780-3632, studentlife@unt.edu.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching.

Academic Integrity:

Students are expected to abide by the University's code of conduct and Academic Dishonesty policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Conduct at http://www.unt.edu/csrr/student_conduct/index.html for complete provisions of this code.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses

main voicemail number (972) 780-3600 or search postings on the campus website
www.unt.edu/dallas.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.