

# Methods of Teaching Geometry

## EDEL-3318

Spring 2025 Section 42703 3 Credits 01/21/2025 to 05/15/2025 Modified 06/07/2025

### Course Information

#### Class Meetings:

Bldg	Room	Type	Days	Start Time	End Time
CET	INET	INET	W	05:30PM	07:20PM
CET	INET	INTLB	MTWRFSSU		

Withdraw Date:04/17/25

Certification Date:02/03/25

### Course Description

Congruence and measures of plane and solid figures, similarity, areas, volumes, and a brief introduction to concepts in probability and statistics.

#### Requisites

Required: "C" or better in MATH 1350 and MATH 1351.

### State-Defined Learning Outcomes

The successful student will fulfill the following learning objectives: develop, justify and perform geometric constructions using compass, straightedge and reflection devices and other appropriate technology; investigate and prove geometric relationships within the axiomatic structure of Euclidean geometry; analyze and solve problems involving one, two and three dimensional objects such as lines, angles, circles, triangles, polygons, cylinders, prisms, and spheres; analyze the relationship among three dimensional figures and related two dimensional representations and use these representations to solve problems; apply measurement concepts and dimensional analysis to derive units and formulas for a variety of situations including rates of change of one variable with respect to another; use symmetry to describe tessellations and show how they can be used to illustrate concepts, properties and relationships; relate

geometry to algebra and trigonometry by using the Cartesian coordinate system and use this relationship to solve problems; and use calculus concepts to answer questions about rates of change, areas, volumes and properties of functions and their graphs.

## Required Course Materials

[Course Materials Link \(https://www.bkstr.com/webApp/discoverView?bookstore\\_id-1=608&term\\_id-1=3&dept-1=EDEL&course-1=3318&section-1=42703\)](https://www.bkstr.com/webApp/discoverView?bookstore_id-1=608&term_id-1=3&dept-1=EDEL&course-1=3318&section-1=42703)

## Graded Work

The "Criteria" table below is a summary of all the graded work in this course.

The "Breakdown" table explains the final letter grade.

### Criteria

Type	Weight	Topic	Notes
Attendance & Participation	15% (150 points)	15 weeks @ 10 points each	Each week requires students to attend ( <b>with cameras on for virtual classes</b> ) and actively participate in class by engaging in class discussion and collaborative group/whole class activities for full credit. To authentically engage in rigorous learning, students must complete assigned readings and related tasks prior to class.
Exit Tickets	7.5% (75 points)	15 weeks @ 5 points each	Students will reflect on learned content, pedagogical skills, and/or rehearsals through a written assignment located on Brightspace. Each Exit Ticket will require 5-8 sentences alongside citations (when appropriate).
Concept Development Videos	37.5% (375 points)	3 videos @ 125 points each	In these signature performance tasks students are taught to facilitate strong mathematical instruction using concrete and pictorial representations while emphasizing key elements and using language and representations carefully. Students will create a video of themselves, as modeled in class, demonstrating the concept development component of an assigned Eureka lesson in an authentic classroom environment. They will analyze their facilitation as well as that of their group members and complete a related written reflection in the form of an essay.
High Quality Instructional Materials (HQIM) Modules	18% (180 points)	9 modules @ 20 points each	For this assignment, students will complete each of six modules on high-quality instructional materials. These modules will expand on the introduction to HQIM and the internalization process from class. Students will also learn how to make instructional decisions with a focus on providing grade-level instruction. These modules are in Nearpod and ideally, each will be completed in one sitting. Students should allow a minimum of 1-1/2 to 2 hours to complete each module.

Type	Weight	Topic	Notes
Lesson Internalizations	22% (220 points)	5 lessons: 4 @ 32 points and 1 @ 92 points	For this assignment, students will practice the lesson internalization process learned through the HQIM modules. In so doing, they will strengthen their mathematical content knowledge for teaching whole number place-value concepts, addition and subtraction concepts, and multiplication and division concepts. Lessons used for the addition and subtraction and multiplication and division concepts will include connections to decimals, fractions, geometry, and measurement, where appropriate.

## Breakdown

Grade	Range	Notes
A	900-1000 points	90-100%
B	800-899 points	80-89%
C	700-799 points	70-79%
D	600-699 points	60-69%
F	0-599 points	0-59%

## Course Schedule

This schedule is a “working draft” and will be monitored/adjusted as necessary through the semester. These updates will occur at the start of the class with as little as a week’s advance notice. As is expected in the professional world, it is your responsibility to communicate with another class member about any changes if you are late or absent.

**Important Note:** The School of Education is committed to the health and wellbeing of our faculty, our students and our community partners. External observation requirements for this course are subject to change at any time during the semester based on the recommendation(s) and guidance provided by the School of Education leadership.

All assignments and readings are due by the start of class the following week except for Week 1. *Example: Chapter 7 of Van De Walle will need to be completed by 5:30pm on February 12th as will Exit Ticket Week 3, HQIM Module 1 Part 3, and Lesson Internalization #1 (all submitted via Brightspace).*

When	Topic	Notes
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When	Topic	Notes
1/22-1/28	Welcome and Course Overview	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• VanDeWalle, Chapters 1 and 2</li> <li>• <a href="#">Procedural Fluency</a></li> <li>• <a href="#">What is Conceptual Understanding?</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 1</li> <li>• HQIM: Module 1, Part 1 (Submit acknowledgement when completed.)</li> </ul>
1/29-2/04	Exploring What It Means to Know and Do Mathematics	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Problem Types</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 2</li> <li>• HQIM: Module 1, Part 2 (Submit acknowledgement when completed.)</li> </ul>
2/05-2/11	Intro to Eureka Math and the Internalization Process	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• VanDeWalle, Chapter 7</li> <li>• Pages 48-53 of the <a href="#">Texas PreK Guidelines</a> (Stop at C. Geometry and Spatial Sense.)</li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 3</li> <li>• HQIM: Module 1, Part 3 (Submit acknowledgement when completed.)</li> <li>• Lesson Internalization #1</li> </ul>
2/12-2/18	Developing Early Number Concepts	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• VanDeWalle Chapter 9, Sections 9.1 and 9.2</li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 4</li> <li>• HQIM: Module 2, Part 1 (Submit acknowledgement when completed.)</li> </ul>

When	Topic	Notes
2/19-2/25	Fluency Activities	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• VanDeWalle Chapters 10 (all) and Chapter 11 (only sections 11.1 and 11.3)</li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 5</li> <li>• HQIM: Module 2, Part 2 (Submit acknowledgement when completed.)</li> <li>• Lesson Internalization #2</li> </ul>
2/26-3/04	Place Value & Problem Solving with Addition & Subtraction	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• VanDeWalle Chapter 12 (only sections 12.1 and 12.2)</li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 6</li> <li>• HQIM: Module 2, Part 3 (Submit acknowledgement when completed.)</li> </ul>
3/05-3/18	Arrays, Number Bonds, & the Distributive Property	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Multi-Digit Multiplication and Division (Grade 4, Module 3 Overview)</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 7</li> <li>• HQIM: Module 3, Part 1 (Submit acknowledgement when completed.)</li> </ul>
3/19-3/25	Using Place Value Disks & Partial Products for Multiplication	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• VanDeWalle Chapter 19 (only section 19.2)</li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 8</li> <li>• HQIM: Module 3, Part 2</li> <li>• Lesson Internalization #3</li> </ul>
3/26-4/01	Spatial Reasoning & Attributes of 2D Shapes	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>• VanDeWalle Chapter 18 (only section 18.8)</li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>• Exit Ticket, Week 9</li> <li>• HQIM: Module 3, Part 3</li> <li>• Lesson Internalization #4</li> <li>• Concept Development Video #1 &amp; Analysis/Reflection</li> </ul>

When	Topic	Notes
4/02-4/08	Time & Relating Telling Time to a Number Line	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>Eureka Grade 3, Module 4, Topic A: <a href="#">Concepts of Area Measurement</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>Exit Ticket, Week 10</li> </ul>
4/09-4/15	Concepts of Area Measurement	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>VanDeWalle Chapter 14 (only section 14.1)</li> <li>Eureka Grade 4, Module 5, Topic C: <a href="#">Fraction Comparison</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>Exit Ticket, Week 11</li> <li>Lesson Internalization #5</li> </ul>
4/16-4/22	Defining Fractions & Developing Units	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>VanDeWalle Chapter 14 (only sections 14.2 and 14.3)</li> <li>Eureka Grade 4, Module 5, Topic A: <a href="#">Decomposition and Fraction Equivalence</a> and Topic B: <a href="#">Fraction Equivalence with Multiplication and Division</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>Exit Ticket, Week 12</li> <li>Concept Development Video #2 &amp; Analysis/Reflection</li> </ul>
4/23-4/29	Comparing Fractions and Equivalent Fractions	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>VanDeWalle Chapter 15 (only sections 15.1 and 15.2)</li> <li>Eureka Grade 4, Module 5, Topic D: <a href="#">Fraction Addition and Subtraction</a>, Topic F: <a href="#">Addition and Subtraction by Decomposition</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>Exit Ticket, Week 13</li> </ul>
4/30-5/06	Addition and Subtraction of Fractions	<p><b>Read:</b></p> <ul style="list-style-type: none"> <li>Eureka Grade 5, Module 3, <a href="#">Overview</a></li> </ul> <p><b>Complete &amp; Submit:</b></p> <ul style="list-style-type: none"> <li>Exit Ticket, Week 14</li> </ul>

When	Topic	Notes
5/07-5/13	Composing and Decomposing Fractions Greater than 1	<b>Complete &amp; Submit:</b> <ul style="list-style-type: none"> <li>Exit Ticket, Week 15</li> <li>Concept Development Video #3 &amp; Analysis/Reflection</li> </ul>
5/07-5/14	End of Course Logistics	<b>Wrap Up</b>

## \* Course Policies

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### Unexpected Class Changes

In the event that class is cancelled or asynchronous, communication will be sent directly via email and/or announcements. Therefore, it is imperative (alongside other class communication notes) that you are frequenting your email every couple of days and before class.

### Late Work

Students are expected to submit classroom assignments by the due date and complete the course according to the published class schedule.

Late policy:

- work submitted within 1 week of the original deadline will be 15% off.
- work submitted within 2 weeks will be 30% off.
- work will not be accepted beyond two weeks late.

Note: If there are extenuating circumstances that should be considered, please contact your professor as soon as possible (written documentation may be required). Ongoing internet and computer problems are not acceptable excuses since this is an online course.

## Support Contacts

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[Contact Your Success Coach \(https://www.dallascollege.edu/successcoach\)](https://www.dallascollege.edu/successcoach)

Every Dallas College student has a personalized Success Coach who supports them from day one to graduation. Contact your coach for help navigating college and reaching milestones leading to graduation and a career.

[Get Free Tutoring \(https://www.dallascollege.edu/tutoring\)](https://www.dallascollege.edu/tutoring)

Tutoring is free to all current Dallas College students. You can walk in or schedule an appointment at all [Learning Commons \(https://www.dallascollege.edu/learningcommons\)](https://www.dallascollege.edu/learningcommons) campus locations. Live, online tutoring is also available via eCampus.

[Explore More Free Student Resources \(https://www.dallascollege.edu/help\)](https://www.dallascollege.edu/help)

You have access to many free resources as a Dallas College student, including [Counseling and Psychological Services \(https://www.dallascollege.edu/counseling\)](https://www.dallascollege.edu/counseling), [Child Care Resources \(https://www.dallascollege.edu/childcare\)](https://www.dallascollege.edu/childcare), [Housing Resources \(https://www.dallascollege.edu/housing\)](https://www.dallascollege.edu/housing), [Emergency Aid Funds \(https://www.dallascollege.edu/emergencyaid\)](https://www.dallascollege.edu/emergencyaid), [Food Pantries \(https://www.dallascollege.edu/foodpantry\)](https://www.dallascollege.edu/foodpantry), and more!

[Submit the Student Care Form \(https://www.dallascollege.edu/careform\)](https://www.dallascollege.edu/careform)

Not sure which free college resources can help? Submit the Student Care Form! Our [Student Care Network \(https://www.dallascollege.edu/studentcare\)](https://www.dallascollege.edu/studentcare) will connect you to support for physical and mental health, financial concerns, food, clothing, and more.

[Contact Technical Support \(https://www.dallascollege.edu/techsupport\)](https://www.dallascollege.edu/techsupport)

Need help with eCampus or another college technology? Our technical support staff can assist you.

## Institutional Policies

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### Dallas College Policies

Please review the [Institutional Policies \(https://www.dallascollege.edu/syllabipolicies\)](https://www.dallascollege.edu/syllabipolicies) page to learn about accommodations for students with disabilities, class drop and repeat options, Title IX (harassment, discrimination, and sexual misconduct), and more.