

Differentiating Mathematics, K–5

3 Semester Hours
of Graduate Credit



Accessing the Course

To access your course, you will need an Internet-connected device such as a computer, tablet, or mobile phone. Courses run within the following web browsers:

- Chrome
- Firefox (Extended Releases are not supported)
- Internet Explorer 11 (Windows only)
- Edge (Windows only)
- Safari 10 and 11 (Macintosh only)

For the best experience, please ensure that your browser is up to date.

Login

1. Go to <https://corwin.instructure.com>
2. Login with the email address and password you used to purchase the course.
3. If you don't remember the password you created, simply click [Forgot Password?](#) to reset it.

Materials

All required readings and videos are included in the course as digital files, including content from:

Smith, N. N. (2017). *Every math learner: A doable approach to teaching with learning differences in mind, grades K–5*. Thousand Oaks, CA: Corwin.

Course Description

Motivate your students by addressing their learning differences and make learning elementary math fun. This course equips you with practical strategies that show how to integrate a daily differentiation process into your classroom. Explore videos, vignettes, lesson ideas, and weekly lesson sequences along with rich K–5 mathematics examples to build a manageable framework and make math accessible for all students.

Course Objectives

By the end of this course, you will be able to



- identify students in terms of readiness, interest, and learning profile;
- create doable differentiation;
- use the KUD to unpack standards to design learning; and
- develop strategies for year-long achievement.

Course Outline

This course is self-paced. However, if you are taking this course for graduate credit, please be aware of the due date of the final assignment, as this must be met in order to receive credit.

Key Dates

Many students find the courses most rewarding if they work through at a steady pace, setting aside dedicated time to take the course. Completing one module per week is a common goal.

<p>Module 1</p> 	<p>Knowing Students' Learning Differences</p> <p>After completing this module, you will be able to</p> <ul style="list-style-type: none"> • describe categories that make learners unique, and • discuss and apply the characteristics of the modes of differentiation to theoretical and real-world scenarios. 	<p>3.5 hrs Typical time to complete</p>
Focus	Three Characteristics of Differentiation	
Read	What Is Differentiation?	
Watch A	Getting Started With Differentiation	
Examine A	Professional Development and Teacher Efficacy	
Watch B	Ways to Differentiate	
Examine B	Modes of Differentiation	
Analyze and Evaluate	Applying Differentiation	
Discuss	Differentiation in Your Classroom	
Dialogue	Grouping Strategies	
Quiz	Knowing Students' Learning Differences	Graded
Reflect	Knowing Students' Learning Differences	
Update Your Portfolio	Knowing Students' Learning Differences	
<p>Module 2</p> 	<p>Differentiation at a Glance</p> <p>After completing this module, you will be able to</p> <ul style="list-style-type: none"> • describe the characteristics of a differentiated lesson, and • compare and contrast what a differentiated lesson is and is not. 	<p>3.5 hrs Typical time to complete</p>
Read	What Differentiation Is and Is Not	
Watch A	Balancing Differentiation During M.A.T.H. Centers	
Watch B	Reflecting on the M.A.T.H. Centers	
Check Your Knowledge	M.A.T.H. Implementation	
Create	M.A.T.H. Stations	
Discuss	What Does Math Time Look Like?	
Explore	How Do Others Differentiate?	
Quiz	Differentiation at a Glance	Graded
Reflect	Differentiation at a Glance	
Update Your Portfolio	Differentiation at a Glance	

Module 3



Strategies for Understanding Learners

After completing this module, you will be able to

- identify the characteristics of student readiness, interest, and learning profile; and
- discuss strategies for determining student readiness, interest, and learning profile.

3.5 hrs
Typical time to complete

Read A	Knowing Your Learners' Readiness	
Watch A	Knowing Your Learners' Readiness	
Read B	Knowing Your Learners' Interest	
Watch B	Knowing Your Learners' Interest	
Read C	Knowing Your Learners' Learning Profile	
Watch C	Knowing Your Learner's Learning Profile	
Check Your Knowledge	Identify the Strategy	
Analyze and Evaluate	Learning Profile	
Discuss	Areas to Address	
Dialogue	How Do You Determine Readiness and Interest?	
Quiz	Strategies for Understanding Learners	Graded
Project	Strategies for Understanding Learners	Submit for grading
Reflect	Strategies for Understanding Learners	
Update Your Portfolio	Strategies for Understanding Learners	

Module 4



Rigorous Math That Makes Sense

After completing this module, you will be able to

- apply the standards for mathematical practice, and
- unpack a mathematics standard into KUD.

3.5 hrs
Typical time to complete

Focus	Goal Setting	
Read A	Making Sense of Rigorous Mathematics	
Watch A	Rigorous Mathematical Content	
Read B	Teaching Up	
Watch B	The Heart of Differentiation	
Analyze and Create	Know, Understand, and Be Able to Do	
Discuss	Critique My Teaching	
Dialogue	School-Based Planning Strategies	
Quiz	Rigorous Math That Makes Sense	Graded
Reflect	Rigorous Math That Makes Sense	
Update Your Portfolio	Rigorous Math That Makes Sense	

Module 5



Differentiation by Readiness


After completing this module, you will be able to


- design tasks differentiated by readiness, and
- understand how to use a KUD to help plan and inform readiness differentiation.


3.5 hrs
Typical time to complete

Read	Readiness Differentiation	
Watch	Planning for Readiness Differentiation	
Observe or Create	Differentiated Tasks	


Discuss	Think Dots	
Dialogue	What Informs Readiness Differentiation	
Quiz	Differentiation by Readiness	Graded
Reflect	Differentiation by Readiness	
Update Your Portfolio	Differentiation by Readiness	

Module 6 	Differentiation by Interest After completing this module, you will be able to <ul style="list-style-type: none"> • design tasks differentiated by interest, and • understand strategies for implementing choice by interest that aligns with the learners' mathematical goals and are aligned to the unit's KUDs. 		3.5 hrs Typical time to complete
	Focus	Advantages of Learner Interest	
	Read	Interest Differentiation	
	Watch	Planning for Interest Differentiation	
	Create	Developing a KUD by Interest	
	Discuss	Offering Choice	
	Dialogue	Implementing Choice	
	Quiz	Differentiation by Interest	Graded
	Reflect	Differentiation by Interest	
	Update Your Portfolio	Differentiation by Interest	


Module 7 	Differentiation by Learning Profile After completing this module, you will be able to <ul style="list-style-type: none"> • define Sternberg's triarchic theory and Gardner's multiple intelligences, and • provide task examples aligned to one or more of the three areas described in Sternberg's triarchic theory and/or Gardner's multiple intelligences. 		3.5 hrs Typical time to complete
	Focus	Theories of Intelligence	
	Read	Learning Profile Differentiation	
	Watch A	Planning for Learning Profile Differentiation	
	Watch B	Differentiating for Learning Profile in a Fourth-Grade Classroom	
	Examine	Application of Gardner's Multiple Intelligences	
	Analyze and Reflect	Implementing Tasks by Intelligence Theory	
	Discuss	What Is Your Perspective?	
	Dialogue	Where Do I Fit In?	
	Quiz	Differentiation by Learning Profile	Graded
Project	Standards and Theories of Intelligences	Submit for grading	
Reflect	Differentiation by Learning Profile		
Update Your Portfolio	Differentiation by Learning Profile		

Module 8 	Creating a Healthy Learning Environment After completing this module, you will be able to <ul style="list-style-type: none"> • describe what a fair, respectful, and healthy math learning environment for everyone looks like; and • discuss the significant impact of teaching students about mindsets and how it impacts student academic performance. 		3.5 hrs Typical time to complete
	Read	Setting the Right Tone	
	Watch A	Establishing and Maintaining a Healthy Classroom	

Watch B	Encouraging a Growth Mindset in Primary Classrooms	
Watch C	Introducing a Growth Mindset in the Intermediate Classroom	
Check Your Knowledge	Types of Mindsets	
Create and Reflect	Working With Mindsets	
Discuss	Valuable Strategies	
Dialogue	Moving Toward a Growth Mindset	
Quiz	Creating a Healthy Learning Environment	Graded
Project	Creating a Healthy Learning Environment	Submit for grading
Reflect	Creating a Healthy Learning Environment	
Update Your Portfolio	Creating a Healthy Learning Environment	

 <p>Module 9</p>	<h3>Making Differentiation Natural</h3> <p>After completing this module, you will be able to</p> <ul style="list-style-type: none"> determine how to organize groups by task and how to make differentiation natural, and develop a system for monitoring time on task and building in time for flexibility. 	<p>3.5 hrs Typical time to complete</p>
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Focus	Setting Goals for a Safe Learning Environment	
Read	Mastering and Modeling Routines	
Watch	Using Anchor Activities for Classroom Management	
Create	Day-to-Day Routines	
Discuss	Creating Groups in Small Spaces	
Dialogue	Late Work: To Accept or Not Accept?	
Create and Reflect	Working With Mindsets	
Quiz	Making Differentiation Natural	Graded
Reflect	Making Differentiation Natural	
Update Your Portfolio	Making Differentiation Natural	

 <p>Module 10</p>	<h3>Designing Effective Assessments</h3> <p>After completing this module, you will be able to</p> <ul style="list-style-type: none"> describe the principles for developing effective assessments; and discuss the different purposes of differentiated assessments, including checks for understanding, preassessments, formative assessments, student self-assessments, and summative assessments. 	<p>3.5 hrs Typical time to complete</p>
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Read	Assessing and Evaluating	
Watch	Formative Assessment With Feedback	
Examine	A Different Perspective	
Analyze, Create, Reflect	Assessment Feedback	
Discuss	What Is an Effective Assessment?	
Dialogue	Data-Driven Instruction	
Quiz	Designing Effective Assessments	Graded
Reflect	Designing Effective Assessments	
Update Your Portfolio	Designing Effective Assessments	

Module 11



The Differentiated Mathematics Classroom

After completing this module, you will be able to

- examine what a typical week in your primary or intermediate mathematics classroom should look like, and
- identify differentiation strategies you can implement in your classroom.

3.5 hrs
Typical time
to complete

Focus	Setting Goals for Differentiation	
Read	A Week in the Differentiated Math Classroom	
Watch	Advice for Getting Started	
Analyze and Reflect	Daily Lesson Plans	
Discuss	Opportunities and Challenges	
Dialogue	Open Discussion	
Quiz	The Differentiated Mathematics Classroom	Graded
Reflect	The Differentiated Mathematics Classroom	
Update Your Portfolio	The Differentiated Mathematics Classroom	
Course Capstone		
Final Project	Differentiating Mathematics, K–5	Submit for grading
Final Exam	Differentiating Mathematics, K–5	Graded
Final Reflect	Differentiating Mathematics, K–5	
Update Your Portfolio	Differentiating Mathematics, K–5	

InTASC Standards Alignment

Our courses have been aligned to the InTASC Model Core Teaching Standards that outline what all teachers across all content and grade levels should know and be able to do to be effective in today's learning contexts. You can also view alignment to other popular frameworks [here](#).

Standard	Covered in Modules
Standard 1: Learner Development	1, 3, 6, 7, 8, 11
Standard 2: Learning Differences	1, 2, 3, 7, 8, 11
Standard 3: Learning Environments	2, 5, 6, 7, 8, 9, 10, 11
Standard 4: Content Knowledge	4, 5
Standard 5: Application of Content	4, 5, 6, 9
Standard 6: Assessment	10
Standard 7: Planning for Instruction	10, 11
Standard 8: Instructional Strategies	10, 11

Course Policies

Grading Policy and Rubric

Component(s)	Percentage of Final Grade
Final Project	40%
Final Exam	20%
Module Projects	30%
Module Quizzes	10%