CORWIN Advance

Course Syllabus and Requirements

Differentiating Mathematics, 6–12

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 6–12.* Thousand Oaks, CA: Corwin.

Course Description

Make mathematics learning a more engaging and meaningful experience for middle and high school students using an achievable, daily approach to differentiation to ensure you reach all your learners. Learn practical approaches to meeting students' needs and gain insight from classroom videos and vignettes, differentiated lesson ideas, weekly lesson sequences, and rich mathematics examples.

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 that you can use in your classroom;
- use the KUD (Know, Understand, Do) to unpack standards to design learning; and
- develop continuous 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.

Module 1 	**Knowing Students' Learning Differences** After completing this module, you will be able to • describe categories that make learners unique, and • discuss and apply the characteristics of the modes of differentiation to theoretical and real-world scenarios.	**3.5 hrs** Typical time to complete
Focus	Three Characteristics of Differentiation	
Read	What Is Differentiation?	
Watch	Getting Started With Differentiation	
Examine	What Is Differentiation?	
Check Your Knowledge	Increasing Intrinsic Motivation	
Analyze and Reflect	Categories of Learning Profile	
Discuss	Differentiation in Your Classroom	
Explore	Implementing Differentiation	
Quiz	Knowing Students' Learning Differences	Graded
Reflect	Knowing Students' Learning Differences	
Update Your Portfolio	Knowing Students' Learning Differences	

Module 2 	**Differentiation at a Glance** After completing this module, you will be able to • describe the characteristics of a differentiated lesson, and • compare and contrast what a differentiated lesson is and is not.	**3.5 hrs** Typical time to complete
Read	What Differentiation Is and Is Not	
Watch	Balanced Differentiation in the Classroom	
Analyze and Create	Assessing Student Interests	
Discuss	Student Engagement	
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	Who Our Learners Are	
Watch	Knowing Your Students as Learners	
Examine	But They Are All Different	
Check Your Knowledge	Determining Readiness	
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	Making Sense of Rigorous Mathematics	
Watch A	Planning a Unit Based on Rigorous Mathematics	
Watch B	The Heart of Differentiation	
Analyze and Create	Know, Understand, and Be Able to Do	
Discuss	Understanding Mathematics	
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	
Check Your Knowledge	KUD	
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
- 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	Decisions to Make	
Read	Interest Differentiation	
Watch	Planning for Interest Differentiation	
Examine	Learning Progressions	
Create	Developing KUDs and Designing by Interest	
Discuss	Interest Differentiation Strategies	
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
- 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	Planning for Learning Profile Differentiation	
Check Your Knowledge	Which to Select	
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
- 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 6–12 Classrooms	

Examine	Fostering a Growth Mindset	
Create and Reflect	Working With Mindsets	
Discuss	Valuable Strategies	
Dialogue	Moving Toward a Growth Mindset	
Quiz	Creating a Healthy Learning Environment	Graded
Reflect	Creating a Healthy Learning Environment	
Update Your Portfolio	Creating a Healthy Learning Environment	

Module 9

Making Differentiation Natural

After completing this module, you will be able to

- develop a system for monitoring time on task and building in time for flexibility, and
- understand group roles in the classroom and how to design and manage effective group work.

3.5 hrs
Typical time to complete

Focus	Goal Setting	
Read	Mastering and Modeling Routines	
Watch	Using Anchor Activities for Classroom Management	
Analyze or Create	Developing Protocols	
Discuss	Incorporating Groups	
Dialogue	Expectations	
Quiz	Making Differentiation Natural	Graded
Reflect	Making Differentiation Natural	
Update Your Portfolio	Making Differentiation Natural	

Module 10

Micro Modeling

After completing this module, you will be able to

- 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.

3.5 hrs
Typical time to complete

Read	Assessing and Evaluating	
Watch	Formative Assessment With Feedback	
Examine	Differentiation Is the Key to Assessment for Learning	
Check Your Knowledge	Formatting Your Preassessment	
Analyze, Create, Reflect	Preassessment Feedback	
Discuss	What Is an Effective Assessment?	
Dialogue	Data-Driven Instruction	
Quiz	Designing Effective Assessments	Graded
Project	Designing Effective Assessments	Submit for grading
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	Goal Setting	
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, 6–12	Submit for grading
Final Exam	Differentiating Mathematics, 6–12	Graded
Final Reflect	Differentiating Mathematics, 6–12	
Update Your Portfolio	Differentiating Mathematics, 6–12	

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%