

DEPARTMENT OF EDUCATION
COURSE OUTLINE – Winter 2026

ED2550: Introduction to Instructional Processes – 3 (3-0-0) 45 Hours for 15 Weeks
"The Art and Science of Teaching"

Northwestern Polytechnic acknowledges that our campuses are located on Treaty 8 territory, the ancestral and present-day home to many diverse First Nations, Metis, and Inuit people. We are grateful to work, live and learn on the traditional territory of Duncan's First Nation, Horse Lake First Nation and Sturgeon Lake Cree Nation, who are the original caretakers of this land.

We acknowledge the history of this land and we are thankful for the opportunity to walk together in friendship, where we will encourage and promote positive change for present and future generations.

INSTRUCTOR:	Dr. Matthew Kierstead	PHONE:	780-915-8741
OFFICE:	TBD	E-MAIL:	mkierstead@nwpolytech.ca
OFFICE HOURS:	TBD		

CALENDAR DESCRIPTION:

This course provides a comprehensive introduction to foundational instructional processes informed by cognitive science, blending theory and practice with collaborative reflection to prepare students for effective teaching. Through a cyclical process of theoretical coursework, micro-teaching, and reflection on practice, students deepen their understanding of essential teaching frameworks, lesson planning, instructional design, and assessment practices. Coursework emphasizes unpacking curriculum to design engaging, meaningful activities and lessons for diverse classroom settings. Students will develop skills in differentiating instruction through inclusive teaching strategies and classroom management, enabling them to support progress across multiple grade levels and meet the needs of all learners.

PREREQUISITE(S): ED2510

COREQUISITE(S):

REQUIRED MATERIALS:

[Alberta. Alberta Education. \(2010\). *Making a difference : meeting diverse learning needs with differentiated instruction*. Alberta Education.](#)

McTighe, Jay, and Judy Willis. *Upgrade Your Teaching: Understanding by Design Meets Neuroscience*. ASCD, 2019. *This will be used in multiple courses.

Sherrington, T. (2019). *Rosenshine's principles in action*. John Catt Educational Ltd. *This will be used in multiple courses.

Various readings such as book chapters and journal articles will be introduced in the beginning of the course.

The course schedule with reading list and reading links/files will be provided.

DELIVERY MODE(S): Synchronous online and in-person

LEARNING OUTCOMES:

Alberta Teaching Quality Standard (TQS)

The Bachelor of Education program prepares students for Interim Professional Certification with Alberta Education. Learning Outcomes support students to begin demonstrating competencies and indicators of the Alberta Teaching Quality Standard.

Through the completion of ED2550, students will:

1. Develop a foundational understanding of how students learn.
2. Understand and practice key instructional theories and frameworks.
3. Develop activities and instructional materials aligned with curriculum objectives that support diversity within the classroom.
4. Consider the ongoing use of assessment methods to monitor student progress.
5. Develop an understanding of effective classroom management strategies.
6. Reflect on Micro-teaching experiences and feedback to adapt and enhance their instructional repertoire.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check the transferability of this course at the Alberta Transfer Guide main page

<http://www.transferralberta.alberta.ca>.

** For courses with alpha (letter) grading, a grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. **Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability.**

EVALUATIONS:

Assessments	Weight	Related Course Learning Outcomes
Assignments	15 %	1, 2, 3, 4, 5
Reflective Journal	20 %	1, 2, 3, 4, 5, 6
Exit Slips	20 %	2, 3, 4
Learning Strategies Toolbox	15 %	2, 3, 4
Micro-Teaching Project	30 %	1, 2, 3, 4, 5, 6
TOTAL	100 %	

GRADING CRITERIA

Please note that most institutions will not accept your course for transfer credit **IF** your grade is **less than C-**.

Grading Chart for courses with Alpha Grading:

To progress in the Bachelor of Education program, students must achieve a minimum grade of C- in all Education (ED) courses. Any grade below C- does not meet the passing requirement and will require the student to repeat the course.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	67-69
A	4.0	85-94	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week/ Class	Topic	Readings	Assignments
Jan. 7 Class 1	Introduction to the course How we learn: Intro to Neuroscience How we learn: Indigenous Ways of Knowing	Chapter 1 UbD Chapter 1	• Reflective Journal • Reflective Journal • Venn Diagram
Jan. 14 Class 2	How we learn: The Instructional Hierarchy How we learn: The Instructional Hierarchy	Instructional Hierarchy table Instructional Hierarchy table	• DUE: Venn Diagram • Applying the Hierarchy • Reflective Journal • Applying the Hierarchy • Reflective Journal
Jan. 21 Class 3	How we plan: Understanding by Design How we plan: Teaching Quality Standard	Chapter 2 UbD TQS Chapter 2 UbD TQS	• DUE: Applying the Hierarchy • Rank & Justify • DUE: Rank & Justify • Hexagonal Thinking
Jan. 28 Class 4	How we plan: Unpacking the curriculum How we plan: Unpacking the curriculum	Alberta Curriculum Alberta Competencies Chapter 3 UbD Alberta Curriculum Alberta Competencies Chapter 3 UbD	• DUE: Hexagonal Thinking • Reflective Journal • DUE: Rank & Justify • MTP: LO Breakdown
Feb. 4 Class 5	How we plan: Assessment How we plan: Assessment	Chapter 4 UbD Chapter 4 UbD	• DUE: LO Breakdown (LO application only) • KWL Chart • Reflective Journal • DUE: KWL Chart • Socratic Seminar (prep) • Reflective Journal



Feb. 18 Class 6	How we plan: Assessment	Chapter 4 UbD Article	• DUE: MTP: LO Breakdown • Reflective Journal • MTP: Assessment • Reflective Journal
	How we plan: Assessment	Chapter 4 UbD	
Feb. 25 Class 7	How we plan: Relate AMT to the Instructional Hierarchy	Chapter 5 UbD	• DUE: MTP: Assessment • MTP: Fluency Activities • MTP: Fluency Activities • Reflective Journal
	How we plan: Brain-sensitive Teaching	Chapter 6 UbD	
Mar. 4 Class 8	How we plan: Brain-friendly Classroom	Chapter 7 UbD	• DUE: MTP: Fluency Activities • MTP: Acquisition Lesson • Reflective Journal • MTP: Acquisition Lesson • Reflective Journal
	How we plan: Differentiated Instruction	Chapter 7 UbD	
Mar. 11 Class 9	How we instruct: Rosenshines Principles of Instruction	Rosenshine's Principles in Action	• DUE: MTP: Acquisition Activities • MTP: Revision • Reflective Journal • MTP: Revision • Reflective Journal
	How we instruct: Rosenshines Principles of Instruction	Rosenshine's Principles in Action	
Mar. 18 Class 10	How we instruct: Behaviour Management	The Beginning Teacher's Behaviour Toolkit: A Summary	• MTP: Revision & Rehearsal • Reflective Journal • MTP: Revision & Rehearsal • Reflective Journal
	How we instruct: Behaviour Management		
Mar. 25 Class 11	How we instruct/grow/reflect: Micro-teaching		• Micro-teaching • Reflective Journal
Apr. 1 Class 12	How we instruct/grow/reflect: Micro-teaching		• Micro-teaching • Reflective Journal
Apr. 15 Class 13	How we instruct/grow/reflect: Micro-teaching		• Micro-teaching • Reflective Journal

Apr. 22 Class 14	How we instruct/grow/reflect: Micro-teaching		• Micro-teaching • Reflective Journal
Apr. 29 Class 15	How we instruct/grow/reflect: Micro-teaching		• Micro-teaching • Reflective Journal • DUE: Learning Strategies Toolbox • DUE: Reflective Journal

STUDENT RESPONSIBILITIES:

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

****Note:** all Academic and Administrative policies are available on the same page.

Additional Information: