

DEPARTMENT OF EDUCATION

COURSE OUTLINE – Fall 2025

CD2050 (A2): Math, Science, and Social Knowledge – 3 (5.6-0-0) 45 Hours for 8 Weeks

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: Kirsten Clark

PHONE: 780-539-2041

OFFICE: H212/off campus

E-MAIL: kielark@nwpolytech.ca

OFFICE HOURS: by appointment

CALENDAR DESCRIPTION: This course introduces students to science, mathematical and social knowledge. The course emphasis is on integrating social, physical and logical mathematical experiences in the preschool child's environment. Students learn to use developmentally appropriate curriculum to facilitate the young child's construction of knowledge in these areas.

LOCATION/TIME: In-person in Room A301: Tuesdays and Thursdays 11:30-12:50 and Fridays 1:00-3:20 from September 3-October 24, 2025

PREREQUISITE(S)/COREQUISITE: Successful completion of Year 1 or permission of the department.

REQUIRED TEXT/RESOURCE MATERIALS: Readings will be provided through MyClass.

DELIVERY MODE(S): Classroom instruction will include a combination of lectures, discussions, and small and large group work. Audio-visual materials and other resources will also be used.

LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

- Describe/identify young children's development of physical, social, and logical mathematical knowledge.

- Use a developmentally appropriate approach to plan and implement a variety of experiences that will facilitate the child's development of physical, social, and logical mathematical knowledge.

TRANSFERABILITY:

Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferalberta.ca>.

** 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: Your final grade for this course will be based on:

Math Assignment	25%
Science Assignment	25%
Social Assignment	20%
Quizzes	15% • Math, Science, and Social Quizzes: 3% each • Final Quiz: 6%
Attendance/Participation	15% *Attendance/Participation is assessed with the use of entrance and exit slips at the instructor's discretion

*Students must be present in-person to present each assignment. This is non-negotiable.

**Please note that all of the above must be completed without the use of Generative Artificial Intelligence tools.

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**. You must receive a final mark of a C- or above to pass this 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
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COURSE SCHEDULE/TENTATIVE TIMELINE:

Date	Topic	Assignments / Quizzes
Sept 4	Introduction and Welcome Course Outline	
Sept 5	Math, Physical & Social Knowledge Overview	
Sept 9	Social Constructive: Piaget & Vygotsky Math: Logical Knowledge	
Sept 11	Math: Sorting and Classifying	
Sept 12	Math: Comparing Seriating & One to One Correspondence	
Sept 16	Math: Counting, Parts, Wholes, Measurements, and Patterning. In Class – Work on Assignment	
Sept 18	Math: Adult's Role	
Sept 19	Math: Nature Walk	
Sept 23	Assignment 1: Math Presentations	Assignment #1 Due Sept 22 @ 11:59 pm: My Class Sept 23 @ 11:30 am: In Class
Sept 25	Science: Scientific Inquiry & Types of Science Quiz: Math	Quiz: Math
Sept 26	Science: Acting on Objects & Incorporating into curriculum - Water and Art Play.	
Sept 30	No NWP Classes - National Day for Truth and Reconciliation	

Oct 2	Science: Block and Dramatic Play	
Oct 3	Science: Outdoor Play	
Oct 7	Science: Adult Role In Class – Work on Assignment	
Oct 9	Science: Nature Walk Quiz: Science	Quiz: Science
Oct 10	Assignment 2: Science Presentations	Assignment #2 Due Oct 9 @ 11:59 pm: My Class Oct 10 @ 1:00 pm: In Class
Oct 14	Social: What is Social Knowledge	
Oct 16	Social: Why is Social Knowledge Important?	
Oct 17	Social: Anti Bias Approach / Diversity In Class – Work on Assignment	
Oct 21	Social: Adult Role Quiz: Social	Quiz: Social
Oct 23	Assignment 3: Social Presentations	Assignment #3 Due Oct 22 @ 11:59 pm: My Class Oct 23 @ 11:30 am: In Class
Oct 24	Final Quiz	Final Quiz

Assignment details and specific instructions will be discussed in class and provided on MyClass.

Assignments must be submitted in the dropbox on MyClass by the date and time indicated.

ALL assignments and tests **MUST** be completed and turned in to pass the course.

Unless arrangements have been made with the instructor prior to the due date, late assignments will be docked **5%** per day. If the assignment is not received within 7 days of the due date, a grade of 0 will be given.

STUDENT RESPONSIBILITIES:



Northwestern Polytechnic expects students' conduct to be in accordance with basic rights and responsibilities. Please refer to the NWP calendar regarding rights and 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:

It is the right of the student and of the instructor to a favorable learning/teaching environment. It is the responsibility of the student and the instructor to engage in appropriate adult behaviors that positively support learning. This includes treating others with dignity and respect and following the expectations outlined below.

Student Attendance and Participation

- ❖ You are expected to comment, respond to questions, interact with classmates, and otherwise contribute to the class dialogue. Questions are welcomed and encouraged. If you're wondering about something, most likely several classmates are as well, only they're afraid to speak up, so ask! To participate effectively, you should have the day's reading completed before class begins. This will allow you to comment, answer questions, and ask questions of your own. **Class begins promptly on time, and it is expected that students arrive on time for class and leave only when class is finished.**
- ❖ To receive full marks for participation and attendance students are expected to:
 - Be on time for class start and stay until the end.
 - Turn off/put away technology not being used for instruction, that could be a distraction (phones, other computers, tablets). Studies indicate that cell phones not only interfere with your learning, but also the students around you.
- ❖ Students should choose courses with class times that work with their employment and personal commitments, and arrange medical/dental appointments, job interviews, full or part-time employment, child care and any other personal commitments around their course schedule, as students will not generally be excused from class for such activities.
- ❖ If you are unable to make class, communication is key. If your absence is for a legitimate reason (illness, family crisis), please let me know as soon as possible via email. Please send a new e-mail for each class missed for a legitimate reason, or clearly state which days will be missed. E-mailed notices of absence do not automatically "roll over" for future missed dates.
- ❖ Students are responsible for all missed material, including material missed due to legitimate/excused absences. Slideshows are posted to MyClass, and further information can

be obtained from classmates. If, after you have reviewed the class materials, you have questions, please contact me and I'll be pleased to assist you.

Statement on the Use of AI in this Course

- ❖ Completing learning activities, assignments, and other course components is a critical part of learning and essential to the development of your practice as an educator. Therefore, in this course, all learners will pledge to use AI tools in ethical and appropriate ways.

For example, it *would not be* ethical or appropriate to use Generative Artificial Intelligence applications such as ChatGPT to write a draft of a learning activity or assignment and submit it as your own work. The use of Generative Artificial Applications such as ChatGPT without proper citation will be considered plagiarism and treated as such using Northwestern Polytechnic's Academic Misconduct Procedures.

In comparison, it *would be* ethical and appropriate for you to use AI tools such as Spell Check or Grammarly to identify spelling and grammar errors in your own work so you can correct them before submission.

If you require additional clarity on the use of AI in this course, please reach out to your instructor.

- ❖ Students may be required to submit their course work to Turnitin, a third-party service provider engaged by NWP.. Turnitin identifies plagiarism by checking databases of electronic books and articles, archived webpages, and previously submitted student papers. Students acknowledge that any course work or essays submitted to Turnitin will be included as source documents in the Turnitin.com reference database, where it will be used solely to detect plagiarism. The terms that apply to a student's use of Turnitin are described on Turnitin.com.

Names and Pronouns

- ❖ At the start of the course, my list of students' names is based on the register. If you would prefer to be called something else, please let me know, and I will adjust my list accordingly, and use your preferred name from that point on. You should feel free to use your preferred given name on all essays and submitted assignments. (If your preferred surname varies from the name under which you are registered, I may need occasional reminders.) If you want to tell me your pronouns, you should feel free to do so. I will respect your pronouns. All students are expected to respect their classmates' preferred names and pronouns.