



COURSE OUTLINE

EMTH 310 **TEACHING MATHEMATICS IN ELEMENTARY SCHOOL**

3 CREDITS

PREPARED BY: Deb Edzerza and Danita Schmidt, Instructors

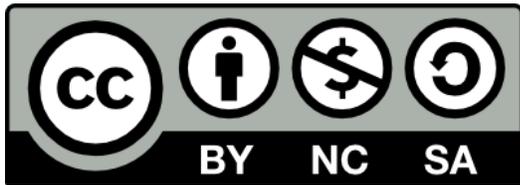
DATE: January 4, 2021

APPROVED BY: Name, Title

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TEACHING MATHEMATICS IN ELEMENTARY SCHOOL

INSTRUCTORS: Debra Edzerza Danita Schmidt	OFFICE HOURS: By appointment
OFFICE LOCATION: Online	CLASSROOM: Online via Zoom
E-MAIL: debra.edzerza@yukonu.ca danita.schmidt@yukonu.ca	TIME: 9:00 am-11:55 am
TELEPHONE: HEHS Office 867.668.8845	DATES: Fridays Jan.8 th -April 9 th , 2021 *Tuesday April 13 th , 2021

COURSE DESCRIPTION

This course is designed to address the philosophies, goals, curriculum documents, and methods of instruction and assessment of early elementary school (PreK-8) mathematics. A critical, resource-based approach to this course will provide opportunities for students to reflect on and construct understandings of key issues in mathematics education.

In alignment with the YNTEP progression framework as a year three course, there are three areas of pedagogical focus. They include: pedagogical competence, deconstructing curricula, and attention to BC Mathematics Curriculum and Yukon First Nation principles and practices.

As a course participant you will have the opportunity to further develop professional knowledge acquired and professional practice experiences provided, you will be able to approach the teaching of mathematics positively, and with an accurate and thorough understanding of what mathematics learning experiences involve for Yukon elementary students.

PREREQUISITES

RELATED COURSE REQUIREMENTS

It is highly recommended that all students have access to a computer or other device and Internet to do their studies. The minimum specifications for a student device are as follows:

Requirement	Windows-based PC	Apple Mac/macOS-based PC
Operating System	Windows 10	macOS X
Web Browser	Firefox, Edge or Google Chrome	Firefox, Edge or Google Chrome
RAM/Memory	4 GB	4 GB
Storage	5 GB of available space	5 GB of available space

EQUIVALENCY OR TRANSFERABILITY

EMTH310 is a University of Regina of course

LEARNING OUTCOMES

Upon successful completion of the course, students will be able to...

- Demonstrate a professional attitude towards working independently and collaboratively in the context of ongoing change in mathematics domain including specific knowledge of selected mathematics curriculum areas which include Number, Fluency, Patterns, and Attributes
- think critically about current research and how it can be applied in the classroom and demonstrate Yukon First Nations content in methods and problem-solving
- develop, implement, and evaluate lessons and lesson delivery that correlate with BC mathematics curriculum and that aspired experience of Yukon First Nation students
- demonstrate informed understanding of pedagogical practices and methods and apply these to mathematical teaching practices,
- use a variety of mathematics curriculum specific assessment practices to support students in their learning and evaluate the appropriateness of these experiences based upon YNTEPs mandate and the current BC curriculum
- contribute to the professional learning of colleagues through course engagement and the provision of professional learning opportunities
- challenge prevailing beliefs and attitudes towards mathematics as a subject, to ensure that students have positive math experiences and are prepared for secondary mathematics

COURSE FORMAT

This course will be a total of 39 online zoom contact hours, spread out over 13 sessions. Zoom sessions will run Fridays 9am – 11:55am. Due to the Yukon Heritage Day February 26th and Good Friday April 2, 2021 there will be a total of two make up sessions dates to be determined. Written reflection assignments will be due on Tuesdays during the course. Students will be required to have a Twitter account and use #EMTH310 when retweeting mathematical related ideas.

ASSESSMENTS:

Attendance & Participation

Assignments

Tests

Other

EVALUATION:

Assignments	
Attendance & Participation	10%
Literature Response	25%
Early Numeracy	25%
Unit Plan: Project Based Learning	40%
Total	100%

REQUIRED TEXTBOOKS AND MATERIAL

Van de Walle, J.A., Karp, K.S., Bay-Williams, J.M., (2019) *Elementary and Middle School Mathematics: Teaching Developmentally*. (10th Ed.). Pearson Canada Inc: Toronto, Ontario

Boaler, Jo. (2015) *Mathematical Mindsets: Unleashing Students' Potential Through Creative Math, Inspiring Messages and Innovative Teaching*. Mosey-Bass (A Wiley Brand)

Attendance and Participation 10%

Students are expected to attend regularly, complete all assignments, attend zoom sessions ready and prepared to learn, and participate actively in class activities.

Assignment 1: Literature Response – 25%

This assignment has two parts.

1) Reading Responses (15%)

During your scholarly readings, consider ideas that you knew previously as well as ones from the text that are new to you, and describe what questions have emerged for you. Responses should be 350 – 450 words in length and in Microsoft Word format. To ensure written assignments are reviewed and marked for Friday sessions, written responses are to be submitted electronically to the instructor via YukonU by 2pm every Tuesday. All reading responses must be completed to pass this assignment.

Assessment Criteria:

1. Demonstrated understanding of reading/activity being related/compared to personal reflections of /or beliefs about mathematical learning.
2. Evidence of personal reflections about the reading, connections with reading/discussions/activities and with other practical experiences, and consideration of your own future math teaching practices within Yukon Elementary Schools.
3. Demonstrated evidence of analysis and synthesis of content by making connections with other method course reading and class activities.

2) Group Discussion Leader (10%)

Literacy meet: You will be leading a small group discussion about your assigned book chapter. Your goal is to prompt and encourage all members of your group to engage in an active and thoughtful discussion about issues and ideas raised in the assigned reading.

You will be meeting via Zoom or other online media with your Literacy Leader Group to create a preparation outline:

1. What are important issues/ideas raised in this article/chapter?
2. What questions/prompts might you use to generate discussion?

One member of your group will e-mail this to me via YukonU at the end of class and as well as to the rest of the group members

Written Reflection: You will be submitting a written journal entry (350 - 400 words) reflecting on your topic, and ideas raised during the small group discussion and how your thinking about chapter content has evolved from your initial reading of the article/chapter. The deadline for electronically submitting this is 12pm the following Tuesday.

Assessment Criteria:

1. Discussion: generates group discussion using a variety of strategies and encourages participation from all members of the group.
2. Reflection: clearly written 350-450 words, submitted by 12pm the following Tuesday. Provide a list of questions, prompts, you used in leading your group discussion. Include your thoughts about literature content based on your group's discussion. How has your thinking about this topic/issue changed or been reinforced by the group discussion? What new ideas/issues/experiences can you connect to this topic?

Assignment 2: Early Numeracy 30%

This assignment will provide student teachers the opportunity to explore various ways to model number ideas for early numeracy numbers up to 100. These foundational ideas extend to larger numbers, operations, basic facts and computations. The Early Numeracy concepts are the foundation in which, higher number sense is built upon.

Early Numeracy Concepts

Student Teachers using a variety of academic sources, analyse early numeracy concepts, that are essential for the development child's numeracy foundation.

Assessment Criteria:

1. Identification of 2 Academic sources.
2. Early Numeracy concepts outlined and thoroughly explained
3. Importance and relevancy discussed

Teaching Methods Descriptions:

From class notes and a variety of academic sources, and early numeracy concepts, covered in class, and concepts taught by the instructor, Student teachers will have the opportunity to practice math

methods in small group settings. Student teachers will write the method, illustrate using visuals, include any hands-on materials required.

Assessment Criteria:

1. Written methods are succinct
2. Method includes visuals
3. Hands on material included
4. BC Curriculum Big Ideas, Curricular Competencies referenced,
5. Relevant to Yukon First Nation context.

Unit Plan Project Based Learning Grades 4-8

Student Teachers will develop a math unit proposal and consult with the instructor for final approval. Student Teachers will develop a math unit demonstrating their prior learning by a variety of resources, BC Curriculum, mathematical methods, visuals, textbook readings. Unit planning take place during three EMTH310 sessions thus allowing time for constructive working groups.

Each module will reflect prior learning using mathematical methods and research from the textbook “Elementary and Middle School Mathematics: Teaching Developmentally”

Assessment Criteria

1. Academic Sources
2. Concepts thoroughly explained and outlines, importance and relevancy discussed

Student Teachers will use the 7E model, YNTEP lesson plan, Backward Design templates, and project assessments to construct their Unit Plan. The plan will include producible created, and in class photographs of sharing them. Students will present their units to their cohort and instructor for feedback prior to submitting them.

Assessment Criteria

1. Written methods are succinct
2. Visual and hands on materials included
3. YNTEP lesson plan template
4. Backwards Unit Design Template
5. BC Curriculum “Big Ideas” Curricular Competencies references
6. Relevancy to Yukon First. Nation context

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the current Academic Regulations that are posted on the Student Services/ Admissions & Registration web page.

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when a student submits work for credit that includes the words, ideas, or data of others, without citing the source from which the material is taken. Plagiarism can be the deliberate use of a whole piece of work, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Students may use sources which are public domain or licensed under Creative Commons; however, academic documentation standards must still be followed. Except with explicit permission of the instructor, resubmitting work which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the University.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon University recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from ANY Yukon University program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukonu.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon University Academic Regulations (available on the Yukon University website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, they should contact the Learning Assistance Centre (LAC): lac@yukonu.ca.
