

# MATHEMATICS EDUCATION

## Graduate Certificate in Educational Studies

The Graduate Certificate in Educational Studies (GCES) is a four-course experience designed to meet the needs of educators.

Through the certificate program, you will learn to:

- *Deepen and extend knowledge in mathematics education, recognizing the role of curriculum, historical and contemporary perspectives on learning, opportunities for culturally responsive teaching, and contexts for playful interactions.*
- *Describe, reflect and comment on current scholarly/practice issues in mathematics education grounded in research-based and collective experiences.*
- *Apply mathematics education research to enhance teaching and learning in varied contexts, and attend to diverse conceptualizations of learning to be responsive to learners' needs and experiences.*

**Transform your mathematics teaching with purposeful practices.**

The Graduate Certificate in Educational Studies is for teaching professionals and other educational specialists seeking advanced professional education. The program consists of four-courses (12 credits) centred on mathematics education.

The courses in the certificate are delivered fully online, in synchronous sessions, recorded for asynchronous viewing if needed.

### THE PROGRAM

In this certificate, students will be challenged to examine their assumptions about mathematics learning alongside cultural, historical, and contemporary research and varied perspectives on learning. Mathematics pedagogy and learning will be explored through research and professional literature, experiential learning, and reflection. We will draw upon examples from Indigenous traditions and peoples, wisdom traditions, and mathematics education for social justice. This exploration will include the qualities of playful engagement, and the characteristics of tasks that encourage play in PreK-12 mathematics classrooms and beyond.

### COURSES

#### Summer

EDU 546 Numeracy Across the Curriculum

#### Fall

EDU 547 Perspectives on Mathematics Learners and Learning

#### Winter

EDU 548 Playful Places of Learning in Mathematics Education

#### Spring

EDU 545 Culturally Responsive/Regenerative Mathematics

*The Graduate Certificate may be laddered into some M.Ed. Programs (see reverse).*

### APPLICATIONS OPEN:

**November 1 - April 30**

(Start in summer term)

For more information:  
[uab.ca/gces](http://uab.ca/gces)  
[gcesinfo@ualberta.ca](mailto:gcesinfo@ualberta.ca)

### ADMISSION REQUIREMENTS

- Bachelor of Education (BEd) or a four-year baccalaureate degree (or equivalent) from a recognized academic institution with a minimum grade point average (GPA) of 3.0
- Two years of teaching experience
- English Language Proficiency  
(*more information on website*)



**UNIVERSITY  
OF ALBERTA**

# Laddering a Graduate Certificate into the Master of Education in Educational Studies (MES-STEM)



A [Graduate Certificate in Educational Studies \(GCES\)](#) in **Mathematics Education, Science Education, OR Technology in Education**, provides students with up to 12 credits in advanced standing in the MES-STEM program. Students who are admitted with one of these graduate certificates will complete the MES by taking six graduate-level courses (18 credits) - four core courses and two electives - following one of these timelines: (subject to change):

## Starting in Summer 2025



## Starting in Fall 2025



## Courses to Complete the M.Ed.

### EDU 510 Fundamentals of Educational Research

Students learn how to understand and apply educational research to educational problems. Specific focus on conceptualizing methods of educational research to specific and individual educational sites and issues.

### EDU 514 Planning for Educational Change

Students learn how educational research can enhance educational change toward school improvement and focus on the creation of a site-based research proposal, which utilizes appropriate research methods.

### EDU 515 Conducting Educational Research

Students complete a supervised research assignment specific to their educational context. They will develop and apply knowledge and skills related to data collection, data analysis techniques and research report presentation.

### EDU 900 Program Synthesis

A reflection and synthesis of learning from the Master of Education in Educational Studies in relation to the concepts of school/educational improvement that are the foundations of the program.

## Plus two graduate-level electives

*Note: Electives must be taken prior to taking EDU 900, unless permission has been received from the department for an altered course of study. Professional Learning offers a variety of electives; check the [website](#) for current offerings, or contact us to determine if the elective you want to take is approved for the program.*

### Other Laddering Options

The GCES can also ladder into the [M.Ed. Elementary Education - Curriculum and Pedagogy](#). Contact [essgrad3@ualberta.ca](mailto:essgrad3@ualberta.ca) for more information.

**Faculty of Education, Professional Learning**  
Website: [uab.ca/prolearn](http://uab.ca/prolearn) | Contact: [pluinfo@ualberta.ca](mailto:pluinfo@ualberta.ca)

*Note: Completion of the GCES does not guarantee acceptance into any Master's program. Course availability is dependent upon sufficient enrollment. Alternate schedules may be available for future years.*