

# MIND, BRAIN AND TEACHING (ONLINE), GRADUATE CERTIFICATE

*The School of Education is not accepting or admitting new students into the Graduate Certificate in Mind, Brain, and Teaching for the academic year 2025-2026.*

The 15-credit Graduate Certificate in Mind, Brain, and Teaching is designed for PK-20 teachers and instructors, administrators, and student support personnel, as well as organizational leaders, consultants, and policymakers, seeking to explore how research from the learning sciences has the potential to inform the field of education. Courses will promote the integration of diverse disciplines that investigate human learning and development that covers the lifespan.

The certificate builds upon basic and applied research from the fields of cognitive science, psychology and brain science, neurology, neuroscience, and education. It provides graduate students with knowledge of cognitive development and how emerging research in the learning sciences can inform educational practices and policies.

This program is offered in a fully online format. The timeframe for completion is five consecutive semesters spread over two academic years. Students also have the option of completing the program in three semesters, taking two courses in the fall semester, two in the spring, and the final course in the summer. The courses are offered in sequential order in a cohort structure. Enrolling in individual courses requires the permission of the faculty advisor.

## Program Requirements

| Code                 | Title                                      | Credits   |
|----------------------|--|-----------|
| ED.887.615           | Explorations in Mind, Brain, and Teaching  | 3         |
| ED.887.616           | Fundamentals of Cognitive Development      | 3         |
| ED.887.617           | Neurobiology of Learning Differences       | 3         |
| ED.887.618           | Cognitive Processes of Literacy & Numeracy | 3         |
| ED.887.619           | Special Topics in Brain Sciences           | 3         |
| <b>Total Credits</b> |  | <b>15</b> |

## Learning Outcomes

### Program Goals

This certificate aims to expand graduate students' knowledge and evaluation of theoretical and empirical work in the studies related to the learning sciences. Topics include brain structure and function, cognitive development, learning differences, research and practical application of topics such as emotions, attention, creativity, development of language, motivation, and intelligence, as well as the acquisition of skills and concepts related to arts-integrated pedagogy, mathematics, reading, writing, and problem-solving. Implications for education are considered.

During the program, students will:

- Identify areas in the learning sciences that have relevant application to teaching and learning in formal and informal learning settings. Examples include topics such as emotion and learning, memory, attention, cognitive development, learning differences, literacy, and numeracy.

- Identify basic brain structures and functions.
- Interpret findings from basic and applied research studies.
- Synthesize research findings and consider relevance to educational interventions.
- Apply content from courses to educational and professional practices and policies.