

January 2010

MSU APPROVES NEW MIND/BRAIN CONCENTRATION

A new graduate-level option for those interested in mind/brain-based education was approved by MSU in Fall 2009. The Cognitive Science Concentration is designed to provide enhanced understanding of mind/brain function in applied educational settings.

The Cognitive Science Concentration is a new option within the existing Master of Education degree. The Master of Education degree includes 16 credits of advanced study in learning and teaching, along with a 14-credit (minimum) concentration. The addition of the Cognitive Science Concentration makes 14 different content options available to those wishing to take their teaching expertise to a new level.

Faculty seeking information on how new neuroscience findings may apply in higher education are also welcome in the anchor courses. Individuals from outside the education profession may be admitted as space permits, with the permission of the M.Ed. Program Director and Cognitive Science Concentration Coordinator.

M.Ed. Core courses are offered evenings and Saturdays over the North Dakota Interactive Video Network (IVN) and Concentration courses on campus in the summer. Some concentration courses are also broadcast over the IVN (check with respective departments for details/times).

Three courses anchor the applied mind/brain content, one in the M.Ed. Core (ED 535) and two in the Concentration (ED 550 and PSY 511). These courses provide a survey of pertinent information on biopsychology, sensation and perception, and cognitive science; alongside practical applications showing how mind/brain function intersects with teaching models that scaffold academic learning, and classroom dynamics that support positive, interactive learning environments and pro-social behaviors.

Additional courses in the concentration are selected from a list of foundations and applications appropriate to the participant's teaching goals. Descriptions of the new courses and structure of the degree follow, and links to descriptions of elective courses may be accessed through the Graduate School website or Master of Education home page:

<http://www.minotstateu.edu/graduate/>
<http://www.minotstateu.edu/tehp/grad.shtml>.

Individuals interested in the Cognitive Science Concentration may contact the CASCLS Director or the Graduate School.

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New Cognitive Science Anchor Courses

ED 535 Models of Teaching and Learning (3 SH). Study of student learning with emphasis on cognitive development processes. Emphasis will be placed on current mind/brain research and examining why particular teaching models may better facilitate particular learning goals.

ED 550 Dynamics of Managing Learning (2 SH). Organizational and mind/brain-based strategies for creating positive learning environments; understanding and managing disruptive and counterproductive behaviors, strategies for building interactive involvement among learning partners. The course draws upon multi-disciplinary research bases in cognitive sciences and group dynamics.

PSY 510 Cognitive Science (3SH). A survey of topics in biopsychology, sensation and perception, and cognitive science; designed to expand educators' understanding of mind/brain function and how learning occurs.

Cognitive Science Concentration (14-16 credits)

Since this multi-disciplinary concentration draws from many program areas, candidates are advised to frame their program of study as early as possible, as some courses may be offered on a three-year rotation rather than the typical M.Ed. rotation. Individuals who are interested in this concentration, but are not professional educators, may be admitted with the permission of the M.Ed. Program Director and Cognitive Science Concentration Coordinator.

Required mind/brain/education anchor courses:

Candidates for the Cognitive Science Concentration will take the section of ED 535 Models of Teaching and Learning in the M.Ed. Core which has been designated for mind/brain study, and the following Cognitive Science Concentration courses:

ED 550: Dynamics of Managing Learning..... 2

Required cognitive science survey course:

PSY 510: Cognitive Science 3

Choose at least one course from the following foundations list (3-6 credits):

PSY 511 Human Growth and Development 3

PSY 518 Psychopathology of Children 3

SPED 531 Theoretical Aspects of Exceptional Children 3

SPED 572 Methods of Teaching the Learning Disabled 3

SPED 509 Infant/Toddler Development 3

CD 544 Neurobiology of Communication 3

HPER 501 Exercise Science 3

Choose at least one course from the following applications list (2-6 credits):

ED 540 Reading: Advanced Diagnosis and Remediation 2

ED 555 Middle School Philosophy/Curriculum 3

ELED 524 Current Trends in Teaching Science 2

ELED 552 Theories of Early Childhood Curriculum 3

ELED 553 Symbolization: Reading and the Young Child 3

HPER 510 Issues and Trends in Physical Education, Exercise Science and Sport 3

HPER 540 Psychology of Physical Education, Exercise Science and Sport 2

MATH 536 Number/Operations in ELEM/MS Math 3

MATH 532 ELEM/MS Problem Solving/Algebraic Reasoning 3

MUS 520 Foundations and Psychology of Music Education 3

Capstone, choose either:

ED 598 Project and Report or ED 599 Thesis 2