

ACADEMIC SENATE PROPOSAL TRACKING SHEET
(Document To Be Originated By the Academic Senate Secretary On Canary Color Paper)

Proposal # 22-75

Title: EDU 397M/SCI; Methods-Math and Science

(Proposal explanation, submitter and college dean signatures on attached program/degree or course revision form.)

All proposals MUST have their originating college faculty body (Ex. Arts & Sciences, Education and Nursing; Technical Sciences) approval and must be signed by the submitter and the college dean before being submitted to the Academic Senate Secretary.

1. Submit all proposals (using the appropriate Academic Senate program/degree and/or course revision forms or General Education Inclusion form) to the Academic Senate Secretary. **NOTE: Level 1 or Level 2 forms must be submitted concurrent with this proposal where applicable. For Education proposals, PEU approval must be received prior to forwarding the proposal to the Senate.**
2. The Academic Senate Secretary logs and numbers items and forwards them to the appropriate Academic Senate subcommittee(s): General Education (if applicable), or Curriculum. A transmittal e-mail will be sent to the Recording Secretary of the receiving committee, cc Provost's Administrative Assistant, by the Academic Senate Secretary. A digital copy of the proposal will be linked on the Academic Senate Proposal page by the Academic Senate Secretary.
3. The Academic Senate subcommittee(s) consider(s) the proposal. If approved, the proposal is returned to the Academic Senate Secretary for forwarding to the next committee. If a committee disapproves the proposal, the originator may request that the item be forwarded to the next body for consideration. The committee will provide written rationale to the originator, via the Academic Senate, when a proposal is disapproved and the proposal is returned to the originator. Upon completion of committee action, the proposal will be returned to the Academic Senate Secretary, and a transmittal e-mail sent by the Committee Recorder to the Senate Secretary, cc Provost's Administrative Assistant.
4. The Academic Senate considers the proposal and recommends approval or disapproval. If approved, the proposal is forwarded to the Provost for consideration. If the Academic Senate disapproves the proposal, the originator may request that the item be forwarded to the Full Faculty for consideration, utilizing the procedures set forth in the Senate Bylaws. The Academic Senate will provide written rationale to the originator when proposals are disapproved and the proposal is returned to the originator.
5. Approved proposals will be forwarded to the Provost. The Provost approves or disapproves the proposal. If approved, the proposal is then forwarded to the Chancellor. From this point forward, the Provost's Administrative Assistant will update the Proposal page on the website by contacting the webmaster.
7. The Chancellor approves or disapproves the proposal.
8. The proposal will then either be implemented or referred to MSU for further action. The tracking page on the Provost site will be updated as required.

Subcommittee and Academic Senate college representatives will notify their respective colleges' of the progress of submitted proposals or the proposal may be tracked via the web page -- <http://www.msun.edu/admin/provost/senate/proposals.htm>

**Documentation and forms for the curriculum process is also available on the web page:
<http://www.msun.edu/admin/provost/forms.htm>**

******* (If a proposal is disapproved at any level, it is returned through the Academic Senate secretary and the Senate President, to the Dean of the submitting college who then notifies the originator.**

	Date	Action Taken	Signature	Date	Comments/Reason for Disapproval	Sent to	Date	Transmittal E-mail sent
*Abstract received by Senate Secretary		Copy to Senate President. Forward to Provost.						
*Provost		<input type="checkbox"/> Abstract Approved <input type="checkbox"/> Disapproved						
Received by Senate Secretary	04/04/2023	Tracking form initiated	D Bradley		Forward to Gen Ed	K Udayakumar		
General Education Committee (if applicable)	04/04/2023	<input type="checkbox"/> Approved <input type="checkbox"/> N/A	D Bradley		Forward to Curriculum Committee	C Donoven		DocuSign
Curriculum Committee (if applicable)	04/04/2023	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved	<small>DocuSigned by:</small> Casey Donoven		Forward to Academic Senate	Casey Donoven		DocuSign
Academic Senate	4/11/2023	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved	<small>DocuSigned by:</small> Valerie Guyant		forward	C. Reifschneider		DocuSign
Full Faculty (if necessary)		<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved						
Provost	5-26-23	<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved	Carol A. Reifschneider		Forward	Chancellor		
Chancellor		<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Disapproved	Gregory O. Kopf	6-8-2023				
MSU		<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved	N/A					
BOR		<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved	N/A					
NWCCU		<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved	N/A					
Provost		Advise originating college and Academic Senate of status. Update Web page.						
Registrar		Catalog/Policy Manual Update						

NOTE: The secretary of the Academic Senate will update the Academic Senate Proposal web page from initial receipt until the proposal reaches the Provost. The Provost's Administrative Assistant will ensure that the current status of each proposal is maintained on the Academic Senate Proposal web page from that point forward.

*Abstract and pre-approval required for new programs ONLY.

COURSE REVISION FORM

NEW _____ DROPPED _____ MAJOR REVISION X FOR INFORMATION ONLY _____

College CASE Program Area Education Date 3-7-2023

Submitter [Signature] 4/6/2023 Dean Beth Dunschke Date 5-1-23
Signature (indicates "college" level approval)

Please provide a brief explanation & rationale for the proposed revision(s):

1. To consolidate the coursework in the education program to bring our credit count in parity with other universities across the state.
2. To combine courses where appropriate to eliminate the 1-credit and 2-credit courses in order to make delivery and student course load more efficient
3. To align coursework (CCN) with the MUS Transfer Pathways

This new course merges EDU 397M and EDU 397SC (both two credit courses) into a single integrated 4 credit lab/lecture.

Please provide the following information:

College: CASE
Program Area: Education
Date: 3-7-2023
Course Prefix & No.: EDU 397 M/SCI

Course Title: Methods: Math and Science
Credits: 4
Required by: Elementary Education

Selective in: NA
Elective in: NA
General Education: NA

Lecture:
Lecture/Lab: 4
Gradable Lab:
Contact hours lecture: 60 hours
Contact hours lab:

Current Catalog Description (include all prerequisites):

EDU 397MA. Methods: K-8 Mathematics. 2-3 Credits.

This course is a "hands-on" course that includes the study of the nature of mathematics instruction and theory, its implications for teaching elementary mathematics, and information on resources/materials for the classroom. Teacher education candidates will prepare and present lesson plans that take into consideration the development of mathematical abilities and attitudes following NCTM standards. A variety of formal and informal assessment techniques appropriate in assessing mathematical attitudes/ability will be discussed. Prerequisites: Level I Admission to Teacher Education, MATH general education requirements, EDUC 380 and EDU 383. Graduate credit requirements are described in the course syllabus. If this class is taken at the 500 level, it is a graduate course and expectations for student performance are at an advanced level. Evaluation of course requirements is more rigorous than at the lower division section of this course.

BD
4-1-23

EDU 397SC. Methods: K-8 Science. 2-3 Credits.

This is a "hands-on" course that includes the study of how to teach the nature of science, instructional theory and its implications for teaching elementary science, and information on resources/materials for the classroom. Each student will prepare and present lesson plans according to three models for teaching elementary science; experimental, discovery and inquiry. A variety of formal and informal assessment techniques appropriate in science instruction will be discussed. Prerequisites: Level I Admission to Teacher Education, Science requirements for elementary education majors, EDU 380 and EDU 383. Graduate credit requirements are described in the course syllabus. If this class is taken at the 500 level, it is a graduate course and expectations for student performance are at an advanced level. Evaluation of course requirements is more rigorous than at the lower division section of this course.

Proposed or New Catalog Description (include all prerequisites):

Teacher candidates develop K-8 science and mathematics instruction and assessments that are aligned with state and national standards and the principles of universal design for learning. Candidates gain familiarity with instructional methods and materials appropriate for teaching content and problem-solving skills, primarily through inquiry and experiential learning. Candidates develop skills in integrated instruction, incorporating mathematics, physical science, earth and space science, and life science. Infused topics include technology, cooperative learning, assessment, environmental and conservation education, and Indian Education for All.

Prerequisites: Level I Admission to Teacher Education, Science requirements for elementary education majors, EDU 382. Graduate credit requirements are described in the course syllabus. If this class is taken at the 500 level, it is a graduate course and expectations for student performance are at an advanced level. Evaluation of course requirements is more rigorous than at the lower division section of this course.

Course Outcome Objectives:**EDU397M and EDU397SC**

Course objectives are aligned to the Montana Professional Education Preparation Program Standards (PEPPS) and the Interstate Teacher Assessment and Support Consortium (InTASC) standards.

MATH:

- Teacher candidates will explain, utilize, and practice addressing the 8 Mathematical Practices in their planning and instruction.
- Teacher candidates will identify and explain the Math Content Strands and the progression of learning through those strands including recognizing the role fluency plays in the mathematical progression and performance and explore strategies for increasing math fluency.
- Teacher candidates will be able to explain the three mathematical stages (Concrete - Representational - Abstract) as an effective approach to teaching math concepts.

SCIENCE:

- Teacher candidates will experience the nature of scientific inquiry, its central role in science, and how to use and assess the skills and processes of science inquiry.
- Teacher candidates will identify, describe, evaluate, and use the 3D model of NGSS standards for teaching science. (Cross Cutting Concepts, Disciplinary Core ideas and Science and Engineering Practices)
- Teacher candidates will identify and integrate the principles of conservation into science instruction.

INTEGRATION:

- Teacher candidates will utilize a variety of sources and materials, including NCTM and NGSS standards and state standards, to create mathematical and science lesson(s) designed to meet the needs of diverse learners.
- Teacher candidates will practice embedding IEFA into Mathematics and Science curriculum in a meaningful way to enhance instruction.
- Teacher candidates will explore differentiation techniques for meeting the needs of diverse learners when teaching mathematics and science.
- Teacher candidates will utilize reflective practice and collaborative skills to inform and assess their teaching practice.

Additional instructional resources needed (including library materials, special equipment, and facilities). Please note: approval does not indicate support for new faculty or additional resources.

Updated 09/29/05