

Salish Kootenai College
EDUC 371 TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL

Field Experience, Teaching in the Schools



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Course Description:

EDUC 371 - 1 cr (F) [SS/MS] To be taken concurrently with EDUC 372 Teaching Math in the Elementary Classroom Practicum provides candidates with supervised field experience that focuses on field implementation of methods and materials of mathematical instruction appropriate to the development of the K-8 educator.

Relation to Framework:

This course helps the student learn to develop experiential mathematics lesson through the use of manipulatives and real world problems. It introduces them to many mathematics manipulatives and other valuable lesson resources as well as a reflective lesson plan.

Portfolio Artifacts for Phase II:

See INTASC Principles Addressed in EDUC 370.

Course Requirements:

Students will present a mini-lesson and a hands-on lesson from the EDUC 372 course. Students will follow the below sequence:

Observation and Reflection

Students observe specific teaching practices and subject area instruction based on the NCTM Standards for Teaching Mathematics (Appendix B in the textbook). Students will take notes using the Practicum Packet distributed by the instructor and upon completion of their time in the classrooms, are required to write a reflection for each section of the Practicum Packet. Observations will include group observations as well as individual student classroom visits. Students must observe a minimum of 2 hours of instruction in the specific subject area corresponding to mathematics instruction before assisting.

Teacher Assisting

Students will work with the cooperating classroom teacher on a specific lesson that the teacher plans to implement as part of their regular instructional program. The cooperating teacher and the student select the lesson together, and though the teacher continues to act as the primary instructor, the student assists the teacher with implementation of the lesson. Both the teacher and the student follow up with a short evaluative meeting to discuss aspects of the lesson. Students are required to perform a total of 10 hours of observations (10 hours includes the above 2 hours of observation before assisting the supervising teacher).

Lesson Planning and Teaching

As one of the group practicum activities, students are be provided with the opportunity to work with a partner and teach up to three mini lessons out in the field. These lessons will be designed in the EDUC 372 course. When designing and implementing the lesson, students demonstrate connections to the content of Teaching Mathematics in the Elementary Classroom coursework based on the Montana Mathematics Common Core Standards.

Point Distribution:

A = 239-265 points B = 212-238 points C = 186-211
D = 159-185 F = 158 points and below

Course Assignments:

I. 4 Activity Sections in the Practicum Packet (80 points) see details below.

II. 10 hours of Mathematics Practicum Hours (50 points):

- a. Complete 10 hours of observations/above activities in K-4 classrooms. (Recommendation: observe at least 2 different classrooms to see different instruction and grade levels.) One observation should be with a kindergarten classroom during calendar time.

*5 hours will be done as a group out in the field and 5 hours will be reserved observing different master teachers out-in-the-field. Another hour will be used to interview students, parents, and professionals regarding mathematics.

III. Working with a partner, prepare and teach 3 lessons. In addition, observe and provide feedback to partner. (100 points total (25 points for lesson plans x 3 lesson plans = 75 points, 25 points):

- a. Prepare a lesson by meeting with supervising teacher, develop a lesson plan in the SKC format that includes a Math Talk. (Include a copy of a similar lesson from the elementary/junior high math textbook teacher's manual where you are going to teach the lesson). This lesson may be any of the following:
 - i. A lesson from the EDUC 370 unit plan – may be the lesson that you will "practice" teaching in the SKC face-to-face class (unless your supervising teacher prefers you teach a concept that is being covered the week of your lesson in the field).
 - ii. A lesson plan developed from the classroom textbook where you are teaching the lesson with the guidance of the classroom teacher.
- II. Teach the full lesson to the classroom in the field.
 - i. Keep all lesson plans and assessments and submit with the reflection - including student work.

One summary for each colored packet:

Activity Section #1: Physical Environment <i>Demonstrates knowledge of mathematical development through structure of the classroom environment, physical space, time, and materials.</i>	
Target 15	Describes the packet information by including: A. Completed Activity Section sheets and may include addendum notes. B. Connections made with at least 3 of the NCTM Professional Teaching Standards. C. Support for ideas with course reading assignments and MT Mathematics Common Core Practice Standards (MCCPS) and Content Standards.
Acceptable 10	Describes the packet information by including: A. Completed activity packet sheets – without addendums. B. Connections made with at least 2 of the NCTM Professional Teaching Standards noted in the Section description. C. Support for ideas with course reading assignments or MCCPS and/or MCCS.
Redo 8 or lower	Describes the packet information by including: A. Incomplete activity Section sheets. B. no connections made the NCTM Professional Teaching Standards noted in the Section description. C. No support for ideas from course reading assignments or MCCPS and MCCS.

Activity Section #2 Productive Classroom Culture <i>Identifies higher-level thinking, problem solving and multiple learning styles through mathematical goals and activities.</i>	
Target 15	Describes the packet information by including: A. Completed Activity Section sheets with addendum notes. B. Connections made with at least 3 of the NCTM Professional Teaching Standards. C. Support for ideas with course reading assignments and MT Common Core Practice Standards (MCCPS) or MT Common Core Content Standards.
Acceptable 10	Describes the packet information by including: A. Completed activity packet sheets – without addendums. B. Connections made with at least 2 of the NCTM Professional Teaching Standards. C. Support for ideas with course reading assignments or MCCPS or MCCS.
Redo 8 or lower	Describes the packet information by including: A. Incomplete activity Section sheets. B. No connections made with the NCTM Professional Teaching Standards. C. No support for ideas from course reading assignments or MCCPS and MCCS.

Activity Section 3: Student Interviews <i>Conveying positive attitude about the importance of mathematics.</i>	
Target 15	Describes the packet information by including: A. Completed Activity Section sheets with or without addendum notes. B. Connections made between the notes taken and at least 2 of the NCTM Professional Teaching Standards. C. Support for ideas with course reading assignments and MT Common Core Practice Standards (MCCPS) or MT Common Core Content Standards.
Acceptable 10	Describes the packet information by including: A. Completed activity packet sheets – without addendums. B. Connections to at least 1 of the NCTM Professional Teaching Standards. C. Support for ideas with course reading assignments or MCCPS or MCCS.

Redo 8 or lower	<p>Describes the packet information by including:</p> <ul style="list-style-type: none"> A. Incomplete activity Section sheets. B. no connections made the NCTM Professional Teaching Standards noted in the Section description. C. No support for ideas from course reading assignments or MCCPS and MCCS.
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<i>Activity Section #4 Teaching a Small Group</i> <i>Identifies higher-level thinking, problem solving and multiple learning styles through mathematical goals and activities planned and facilitated.</i>	
Target 15	<p>Describes the packet information by including:</p> <ul style="list-style-type: none"> A. Completed Activity Section sheets with or without addendum notes. B. Connections made between the notes taken and at least 3 of the NCTM Professional Teaching Standards. C. Support for ideas with course reading assignments and MT Common Core Practice Standards (MCCPS) or MT Common Core Content Standards.
Acceptable 10	<p>Describes the packet information by including:</p> <ul style="list-style-type: none"> A. Completed activity packet sheets – without addendums. B. Makes connections to at least 2 of the NCTM Professional Teaching Standards noted in the Section description. C. Support for ideas with course reading assignments or MCCPS or MCCS.
Redo 8 or lower	<p>Describes the packet information by including:</p> <ul style="list-style-type: none"> A. Incomplete activity Section sheets. B. No connections made the NCTM Professional Teaching Standards noted in the Section description. C. No support for ideas from course reading assignments or MCCPS and MCCS.

Each packet is also assessed on the following for a total of 20 points per "color":

****Complete packet including self-assessments submitted by the last Friday of the quarter – 10 pts.***

****clarity in expressing and organizing thoughts and ideas – 6 pts***

****spelling/grammar/sentence structure – 4 pts.***

Assessment of Clinical/Field Experience Assignments and Evaluation:
Prepare as a packet and submit by March 14th (last day of class).

Observation Packet: Each activity will be reflecting NCTM and CCSS Principles and Standards. These activities are designed to teach you to become a "kid-watcher" and practicing teacher. Students are required to complete notes in each Activity Section while doing observations. Upon completion, write a summary for each packet using the following criteria that includes using the notes you took and the Standards for Teaching Mathematics (Appendix B).

Green-colored Activity Section #1 (20 points): Physical Environment focuses on the community of the classroom and school. Are there mathematics-themed displays on the walls, mathematic centers, accessible manipulatives, etc. in the classroom and other areas throughout the school building? What mathematics do you hear talked about in regard to discourse between adults and teachers? What types of discourse indicate the safety of giving a wrong answer? What happens when students disagree or is the teacher's approval held as the deciding factor of the accuracy of the answers? Here again, most of the Standards apply – choose a minimum of 3 to address in the required summary.

“White”-colored Activity Section #2 (20 points): Productive Classroom Culture focuses on the NCTM Professional Standards for Teaching Mathematics (Appendix B). The focus of this activity is on the expectations for students observed as well as the roles of the teacher and student in a worthwhile task. All 7 of the standards apply to this Section. Choose **3 standards** of your choice to address in the required summary.

Gray-colored Activity Section #3 (20 points): Student Interviews focus on student attitudes and beliefs about mathematics. Interview five (5) K-8 students varied in age and gender about their attitudes about mathematics. There are two different interview guides to use as a tool - only one or the other is necessary to complete for each student (one form per student). Another guide that will assist in writing the summary for this section is **Standard 2: Knowledge of Student Mathematical Learning and Standard 6: Reflection on Student Learning**. This will help you get students to elaborate on their responses. Choose 2 standards of your choice to address in the required summary.

Blue-colored Activity 4 (20 points): Teaching a Small Group focuses on practicing a worthwhile task lessons with good questions prepared ahead of time that motivate student thinking. This will be a EDUC 371 group activity that will count toward practicum hours. All 7 of the standards apply to this Section. Choose **a minimum of 3 standards** of your choice to address in the required reflection/summary.

Lesson Plan	
<p>Grading Rubric for Lesson Plan: SKC Lesson Plan Format –</p> <ul style="list-style-type: none"> • All sections included and special attention given to (10 points): <ul style="list-style-type: none"> ○ Objectives aligned with assessment ○ Practice and Content Standards are clearly noted and aligned with objectives/assessment. ○ Don't forget to write a reflection!!! Very important section of a lesson plan. • Shows preparation and anticipatory thinking for age level (5 points) • A minimum of 3 NCTM sources utilized and cited. (5 points) • Completed Class period before teaching the lesson so that it can be reviewed by instructor and shared with the school teachers and principals (5 points) • 	Pts
<p>Use Lesson plan format from student handbook to complete the lesson with the following requirements: Prepare a hands-on minds-on lesson introducing a concept using manipulatives and/or technology that you will teach in your field experience. The DRAFT will be reviewed before you teach it. Use a Rubric handout, or design one of your own. ATTACH the RUBRIC. Teach the lesson in your field placement. Reflect as a team with your supervising teacher and/or SKC instructor using the Professional Standards for Teaching Mathematics (pg 7 and Appendix B pg. 493). Bring back samples of students' work with student's identification blacked-out.</p>	3 lessons x 25 =75
<p>Grading Rubric for Teaching and Observing Lessons: Uses 3-Part Problem Lesson Approach –</p> <ul style="list-style-type: none"> • Before • During • After • Shows preparation and anticipatory thinking for age level <p>Provides feedback to partner based on NCTM Teaching Standards</p>	Pts
3 lessons – Kindergarten, 2 nd Grade, and 4 th Grade	6 lessons x 10 = 60