

EDCI 634-7901 (Online)
**Improvement of Instruction in Mathematics in
Elementary/Middle Schools**

Spring 2021
Chadron State College

Part 1: Course Information

Instructor Information

Instructor: Dr. Jung Colen

Office: Burkhiser 216

Office Phone: 308-432-6406

E-mail: Use [CSC Online](#) course site to email via **Messages**

Emergency email: jcolen@csc.edu

Make sure to indicate the class name and number along with the topic you want to discuss (e.g., EDCI 634-7901 HW Question) on the subject line.

Office Hours: MW 12 pm – 2 pm, F 12 pm – 1 pm

Virtual Office Hours: MW 12 pm – 2 pm, F 12 pm – 1 pm

CSC Online Address: (<https://online.csc.edu/>)

Credit hours

3 hours

Course Description

Study methods and the value of teaching mathematics in the elementary school curriculum. Improved instructional materials are considered. Special consideration is given to exceptional children. Trends as noted in the professional literature are reviewed. Prerequisites: Student-teaching or other teaching experience.

Prerequisites: Graduate status

Textbook & Course Materials

- No textbook is required to purchase for this course.
- "5 Practices" reserved at the library.
- Articles from the journal "Mathematics Teacher: Learning and Teaching PK-12 (MTLT)"

[Recent articles are available at the library:](#)

<http://web.a.ebscohost.com.ezproxy.chadronstatelibrary.com/pfi/detail/detail?vid=2&sid=1489dc28-75e0-4bc8-abc8-b380f0023314%40sessionmgr4007&bdata=JnNpdGU9cGZpLWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#AN=edp23816046&db=edspub>

- All other readings will be available on CSC Online Resources by the instructor.
- (Optional) NCTM Membership: You will be asked to read several articles from *Mathematics Teacher: Learning and Teaching PK-12 (MTLT)* and *Teaching Children Mathematics (TCM)* magazine from NCTM.
 - Go to <https://www.nctm.org/Membership/Join-Options/>

- Student Membership (Click the join button in the Premium Membership column. Then make sure to check "I am a Student" in the page that follows.)
- Subscribe *Mathematics Teacher: Learning and Teaching PK-12*

Part 2: Student Learning Outcomes

About the Course

Goal or Purpose: The student will develop an understanding of effective instructional methodology in elementary/middle school mathematics and the current research concerning the teaching of mathematics.

Student Learning Outcomes: The specific learning outcomes for the student are: Upon completion of this course, you will be able to:

1. Promote activities that elicit critical thought, beyond recall and comprehension. (Thinking Skills)
2. Develop and maintain a physically inclusive and emotional safe classroom environment conducive to effective learning that encourages student concerns, embraces elements of diversity, and exhibits an understanding of child growth and development. (Human Relations/Diversity)
3. Design and assess learning activities (with sequential goals and outcomes), utilizing assessment measures to make instructional and/or curricular decisions. (Assessment)
4. Utilize the knowledge, skills, and disposition developed through assessment, communication, human relations/diversity, methodology/technology, professionalism, and thinking skills to provide to a school system the leadership necessary to utilize assessment to improve learning, develop new and better methods and technologies to enhance learning, display human behaviors supportive of all learners, communicate effectively with stakeholders, demonstrate an ability to think methodically at a higher order thinking level, and model professional behaviors appropriate for leaders within a school system. (Leadership)
5. Demonstrate and promote effective communications skills (with students and adults), while respecting diversity and engaging students in the learning enterprise through motivation and constructive learning applications. (Communications)
6. Plan and deliver teaching-learning activities that are consistent with identified learning outcomes and ability level of students while using a variety of instructional methodologies/strategies to prescribe for individual differences. (Methodology-Technology)
7. Demonstrate conduct befitting a professional educator to include the following dispositions: regular self-reflection, positive ethical behavior, respectful and attentive attitude, effective classroom management skills, appropriate knowledge of subject matter, and professional leadership. (*Professionalism*)

Method(s) of Instruction

In CSC Online, you will find the reading materials, class notes, and assignments for each topic. The online course requires excellent communication between you and other students as well as you and the instructor. Make sure to check your emails/messages frequently (at least once a day)

Nebraska State College Board Policy 4141

For a 1-credit hour course, [Nebraska State College Board Policy 4141](http://www.nscs.edu/Policy%20Manual/Policy%20Manual%20Master/Policy%204141.1.pdf) (<http://www.nscs.edu/Policy%20Manual/Policy%20Manual%20Master/Policy%204141.1.pdf>) suggests that you spend at least 45 hours per credit hour in learning activities. Since EDCI 634 is a 3-credit hour course, you should plan to spend a **minimum** of 135 hours in learning activities. Be prepared to devote the Hours per Week associated with each of the course activities or components listed below.

Learning Activity	Hours Per Week	Total for Course
Direct Instruction	1.5	22
Reading & Interactive Multimedia	3	45
Homework Assignments	2	30
Research-Based Learning	1	15
Group Work	1	15
Assessments	1	15
Total		142

The actual hours spent on individual learning activities will vary from student to student depending on prior knowledge; however, 142 hours represents the minimum expectation for any student.

****Disclaimer:** The completion of the minimum time commitment does not ensure a passing grade. Achievement of the course competencies must be demonstrated.

Part 3: Course Topic Schedule/Outline

Course Schedule/Outline

Topics

1. Unit 1: Teaching and Learning About Early Number Concepts
2. Unit 2: Conceptual and Procedural Understanding Through Mathematical Tasks: Addition and Subtraction
3. Unit 3: Teaching and Learning with Math Talk: Multiplication and Division
4. Unit 4: Teaching Practices: Fraction and other

Major Course Assignments And Components

This semester you will complete the following required assignments. Assignments are due on the dates listed (11:59 pm). Details of these assignments will be provided as the semester progresses, but here is some information that may be helpful as you plan:

Assignments	Due Date	What You Need to Know Now
1. Mathematics Autobiography	January 25	<ul style="list-style-type: none">• Write a 2-3 page personal essay.• Read and respond to a MTLT article in relation to your experiences.
2. Article Discussion/ Peer Teaching	February 8	<ul style="list-style-type: none">• Assigned to a small group and a <i>TCM</i> article (a group will be assigned by an instructor.)• Meet with your group online to plan.• Your group will create a 15-20 minutes presentation to share your article with the class.• Follow-up assignment: Watch other groups' presentations and summarize it in a one-page report.
3. Number Talk Discussion	March 8	<ul style="list-style-type: none">• Watch and summarize three different grades' number talk videos (https://www.insidemathematics.org/classroom-videos/number-talks).• Report 3-page (1 page per grade) summary and reflection.
4. Principles to Actions Project	April 5	<ul style="list-style-type: none">• Read Principles to Actions (pp.7-57).• Create a lesson plan that reflects 8 "Effective Teaching and Learning" from Principles to Actions.• Implement and record the lesson in your classroom or online.
5. Innovative Virtual Lesson Plan Project	May 3	<ul style="list-style-type: none">• Assigned to a small group, grade level, and a math topic• Research innovative lessons for virtual learning• Design and record a 15-20 minute long innovative lesson for virtual learning.• Provide feedback to other groups' lessons.

Course Requirements

Classroom Environment:

- You need internet access. High speed internet access is required.

- Class participation is required. You will need to read the assigned articles and discuss with others.
- *Civility and Netiquette*: Civil behavior enhances the learning environment and is expected at all times. The academic environment welcomes a difference of opinion, discourse, and debate within a civil environment. All members of the class are expected to follow rules of common courtesy in all communications (including email messages, discussion, and chats). You may find these guidelines helpful:
 1. Clearly label posts and emails with a relevant subject heading.
 2. Use capital letters sparingly. THEY LOOK LIKE SHOUTING.
 3. Forward emails only with a writer's permission.
 4. Be considerate of others' feelings and use language carefully.
 5. Cite all quotations, references, and sources.
 6. Use humor carefully. It is hard to "read" tone; sometimes humor can be misread as criticism or personal attack. Feel free to use emoticons to let others know you are being humorous.

Homework: Homework will be assigned randomly.

- When homework is assigned, you will receive a message from the instructor (Check your email/message frequently).
- No late submission is allowed for any circumstances.

Notebook Check: Occasionally, the instructor will ask you to scan and submit your notebook.

- Watch and keep the notes of all lesson videos.
- When submitting the scanned file of your notes, make sure to save it as a pdf file.

Quizzes: There will be 3-4 quizzes this semester.

- At the end of each unit, you will take a quiz.
- You are allowed to work with a partner. If you choose to work with a partner, let me know at least 2 days before the due date of each quiz and submit only ONE file with both you and your partner's names.
- You will need to print out the quiz, work on it neatly, save it as a pdf file, then submit it before the due dates.

Projects: There are 5 major projects (See **Major Course Assignments And Components** above). If you have to work with a partner or a group, the instructor will assign the group randomly. No late submission is allowed.

Part 4: Grading Policy

Graded Course Activities and Letter Grade Assignment

Assignments	Percentage Breakdown
Homework + Notebook	10%
Participation	10%
Quizzes	30%
Projects 1. Mathematics Autobiography (10%) 2. Article Discussion/ Peer Teaching (10%) 3. Number Talk Discussion (10%) 4. Principles to Actions Project (10%) 5. Innovative Virtual Lesson Plan (10%)	50%
Total	100%

Letter Grade	Percentage
A	90% - 100%
B	80% - 89%
C	70% - 79%
D	60% - 69%
F	Less than 60%

Viewing Grades in CSC Online

Grades will be posted in CSC Online. Check your grades frequently and let me know if you see anything inaccurate.

Please note Turnitin will be used for all assignments so please be aware of plagiarism and rules that govern such behavior.

Part 5: Course & Institution Policies

Academic policies, including the selected policies detailed in this syllabus section, can be found on [Chadron State College's Policy Website](http://www.csc.edu/policy/category/index.csc).

(<http://www.csc.edu/policy/category/index.csc>)

Student Behavior

Academic Honesty

Students are encouraged and expected, with the assistance of the faculty, to conduct themselves in conformity with the highest standards with regard to academic honesty. Violation of college, state, or federal standards with regard to plagiarism, cheating, or falsification of official records will not be tolerated. Students violating such standards will be advised and disciplined. Violations of these standards may result in course failure, suspension, or dismissal from the college. Students are encouraged to seek the advice of instructors as to the proper procedures to avoid such violations.

The following acts are examples of academic dishonesty:

1. Cheating – intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.
2. Fabrication – intentional and unauthorized falsification or invention of any information or citation in an academic exercise.
3. Facilitating Academic Dishonesty – intentionally or knowingly helping or attempting to help another in an act of academic dishonesty.
4. Plagiarism – appropriating or imitating language, ideas, and thoughts of another author, representing them as one's own original work. The following acts are examples of plagiarism:
 1. Submitting an assignment that someone else has written and claiming the work as one's own.
 2. Submitting an assignment that contains sections, paragraphs, sentences or key phrases that someone else has written without appropriately documenting the source(s) for each portion of the assignment not written by the student submitting the assignment.
 3. Submitting an assignment that contains paraphrased ideas from another source, published or unpublished, without appropriately documenting the source for each paraphrase. (Changing around a few words in a sentence from the source is not sufficient to avoid plagiarism.)

Note: "Someone else" in the three statements above may refer to a published author, another student, an internet source, or any person other than the student claiming credit for the assignment. If an individual is unsure in how to document sources used within an assignment, they are encouraged to ask their professor or the reference librarian for assistance.

View the [Academic Honesty Policy](https://app.policyiq.com/ChadronStateCollege/Content/View/3419?Key=c320bad9-cae1-4820-bac1-ec7a3b6d69ba) on CSC's Policy Website.

(<https://app.policyiq.com/ChadronStateCollege/Content/View/3419?Key=c320bad9-cae1-4820-bac1-ec7a3b6d69ba>)

Equal Education Opportunity Policy/Nondiscrimination Policy

CSC is committed to an equal opportunity program to encourage admission and employment, and to provide procedures which will assure equal treatment of all students and employees. The College administers its academic and employment programs and related supporting services in a manner which does not discriminate on the basis of gender, race, color, national origin, age, religion, disability, sexual

orientation, gender identity, or marital status. Its policies are consistent with nondiscriminatory policy, including Title VII of the Civil Rights Act of 1964, as amended; Title IX of the Educational Amendments of 1972, as amended; and Sections 503 and 504 of the Rehabilitation Act of 1973. The College's written policy regarding the Americans with Disabilities Act (ADA) may be reviewed in the office of the Director of Human Resources or in the Library Learning Commons, along with the provisions of the Americans with Disabilities Act, and the rights provided. View the [Equal Employment and Education Opportunity Policy](#) on CSC's Policy Website.

(<https://app.policyiq.com/ChadronStateCollege/Content/View/3443?Key=c320bad9-cae1-4820-bac1-ec7a3b6d69ba>)

Equal Access

Chadron State College works to ensure that all programs, activities, and services, including electronic and remote services, are accessible to people with disabilities. Upon request, CSC will provide reasonable accommodations to ensure students have equal access to programs, activities, and services. For assistance, contact the Equal Access Coordinator, Deena Kennell, at 308.432.6467 or by email at dkennell@csc.edu.

Disclaimer

This syllabus and schedule is articulated as an expectation of class topics, learning activities, and expected student learning. However, the instructor reserves the right to make changes in this schedule that, within my professional judgment, would result in enhanced or more effective learning on the part of the students. These modifications will not substantially change the intent or outcomes of this course and will be done within the policies and procedures of Chadron State College.

CSC Mission

Mission Statement

Chadron State College delivers experiences that foster knowledgeable and engaged leaders and citizens to enrich the High Plains region and beyond.

MAP Priorities, 2019-2023

CSC is committed to the achievement of tasks/projects that align with the following Priorities:

People

Recruitment | Retention | Engagement | Completion Awareness | Commitment
| Leadership

Purpose

Student Learning and Growth Pedagogy | Support Services | Wellness

Place

Community Engagement Social Infrastructure & Third Places | Generational
Transitions | Building Bridges