



Midwestern State University
Gordon T. & Ellen West College of Education

Welcome to
Teaching Math in Elementary Schools
EDUC 4043
Fall 2019, Scotland Park Elementary Campus

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Office hours: Tuesday 2:15-3:15pm, Thursday 11-12pm and 2:15-4:15pm, and Friday 11:30-12:30pm. However, I am more than happy to schedule virtual meetings, answer phone calls, or meet outside of the office hours. Don't hesitate to contact me.

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Course Description

These field-based courses focus on elementary and middle school mathematics, science, and mathematics pedagogy with emphasis on instructional strategies and models, the use of technology in the learning/teaching process, effective practices, professionalism, curriculum, and lesson design. Different teaching strategies include: appropriate use of creative approaches to the learning/teaching process, cooperative learning, direct instruction, inquiry, concept attainment, etc. An important component of this field-based block of classes is the course time spent in active participation in field (classroom) experiences.

Required Text

Van de Walle, J. A., Karp, K. S., & Bay-Williams, J. M. (2010). *Elementary and middle school mathematics: Teaching developmentally*. Boston: Allyn & Bacon

Supplemental Reading

NCTM (2000) *Principles and Standards for School Mathematics*. NCTM: Reston, VA

Additional readings may be assigned as necessary, but will be provided by the instructor.

Conceptual Framework Overview

The outcomes for graduates of professional programs are based upon knowledge, skills, and dispositions in the following elements:

- **Learner Development** - understand how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional,

and physical areas, and design and implements developmentally appropriate and challenging learning experiences.

- **Learning Differences** - understand individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.
- **Learning Environment** - work with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.
- **Content Knowledge** - understand the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.
- **Application of Content** - understand how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.
- **Assessment** - understand and use multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.
- **Planning for Instruction** - plan instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.
- **Instructional Strategies** - understand and use a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.
- **Professional Learning and Ethical Practice** - engage in ongoing professional learning and use evidence to continually evaluate his or her practice, particularly the effects of his or her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.
- **Leadership and Collaboration** - seek appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

Course Objectives

- Learners are able to describe learning and thinking in elementary and middle mathematics.
- Learners will be able to develop curriculum and use effective instructional planning skills.
- Learners will be able to develop appropriate assessment tools to assess students learning.
- Learners will be able to use assessment data to design appropriate learning activities.
- Learners will be able to develop lesson plans that involve students in an active learning environment.
- Learners will be able to develop and implement effective teaching strategies.
- Learners will be able to develop lesson plans/units that incorporate national standards in mathematics and technology applications.
- Learners will be able to develop lesson plans/units that incorporate state standards in mathematics and technology applications.
- Learners will be able to develop and implement learning environments that utilize various teaching/learning strategies.
- Learners will be able to develop learning activities that involve the infusion of technology.

Classroom Policies

Students are expected to assist in maintaining a classroom environment which is conducive to learning. In order to assure that all students have the opportunity to gain from time spent in class, unless otherwise approved by the instructor, students are prohibited from engaging in any form of distraction—this includes, but is not limited to, pagers and cell phones. Electronic communications devices will be turned off anytime the class member is in

the school building—in our classroom or in a field experience classroom. Inappropriate behavior in the classroom shall result, minimally, in a request to leave class and a Professional Fitness Form will be filed for review with the college. If the instructor must file a Fitness Alert Form for any reason, including failure to demonstrate appropriate teaching dispositions, the student may receive an instructor drop with an "F" for the course.

Your participation in classes at a Professional Development School is a privilege, not a right. Our relationship with these schools is critical to the development of strong teachers. If, for ANY reason, you are asked to leave a Professional Development School, you will be dropped from the course in accordance with the Instructor Drop policy (see below) of the academic catalog. **This is your warning as required by the policy. If a candidate is taking 'blocked' courses that are taught at a Professional Development School, requiring field experience, the candidate will be dropped with an F from those classes as well.**

Attendance Policy

Absence Policy - Professional teachers are dependable, reliable, and responsible. Therefore, candidates are expected to be on time and in attendance at every class, and to stay for the entire class. Tardiness, leaving early, and excessive absences (3) are considered evidence of lack of dependability, and are taken seriously. **Candidates will receive a grade of F on the third absence. If a candidate is taking 'blocked' courses that are taught at a Professional Development School, requiring field experience, the candidate will be dropped with an F from those classes as well.**

After an absence from the course it is imperative that a student schedule an appointment with the course instructor to discuss attendance. Failure to schedule and attend a conference will result in the loss of classroom participation and disposition points and also in grade being lowered by one letter. It is the candidate's responsibility to make up any missed work. It is also expected that you will complete all course field experience hours in a professional manner. Professional conduct is expected when observing or participating in school settings (e.g., dressing appropriately, arriving on time, remaining for the entire pre-arranged time, not canceling, and demonstrating respect in all interactions with young people, parents, teachers, and staff). If you must miss your field experience for any reason, you are expected to call the school and the teacher you are working with before school begins for the day. You must also contact the course instructor by e-mail or phone to let me know you will not be present and arrange a time with me when we can discuss the most appropriate way to make up that absence. Excessive tardiness (determined by the professor) can be defined as an absence and subject to the absentee policy. Three instances of tardy arrival will be counted as one absence.

In the event that a class member is absent, for whatever reason, that individual assumes responsibility for contacting the instructor to account for missed work and to turn in work. **It is impossible to provide a summary of all that takes place during any given class via email.** If a student is going to be absent, they have the responsibility to contact the instructor to turn in assignments and obtain copies of any handouts from the missed class. Tentative assignment due dates are listed on the course schedule. While the actual due dates may vary due to the flow of the class, all assignment due dates will be finalized and announced in class well in advance of the specific date. Late work, unless arrangements are made by the student and approved **in advance** by the instructor, **will not be accepted.**

Instructor Drop.

An instructor may drop a student any time during the semester for excessive absences, for consistently failing to meet class assignments, for an indifferent attitude, or for disruptive conduct. The instructor must give the student a verbal or written warning prior to dropping the student from the class. An instructor's drop of a student takes precedence over the student-initiated course drop of a later date. The instructor will assign a grade of either WF or F through the first 8 weeks of a long semester, the first 6 weeks of a 10 week summer term, or

the 11th class day of a 4 or 5 week summer term consisting of 20 days. After these periods the grade will be an F. The date the instructor drop form is received in the Office of the Registrar is the official drop date.

Academic Honesty

MSU students demand of themselves the highest level of academic honesty as delineated in their honor creed. Academic honesty involves the submission of work that is wholly the student's own work, except in the case of assigned group work. Additionally, academic honesty involves the proper citation of other author's works.

By enrolling in this course, the student expressly grants MSU a "limited right" in all intellectual property created by the student for the purpose of this course. The "limited right" shall include but shall not be limited to the right to reproduce the student's work product in order to verify originality and authenticity, and for educational purposes.

Plagiarism Statement

"By enrolling in this course, the student expressly grants MSU a 'limited right' in all intellectual property created by the student for the purpose of this course. The 'limited right' shall include but shall not be limited to the right to reproduce the student's work product in order to verify originality, authenticity, and educational purposes." from Student Handbook

Disability Support

As the faculty of the West College of Education, we are dedicated to helping meet the needs of our students with disabilities and are eager to provide the accommodations to which such students are entitled. If you have a documented disability and are registered with the Office of Disability, please let your instructor know to expect a letter from that office describing the accommodations to which you are entitled. If you have a documented disability but are not registered with the Office of Disability, please contact that office immediately to register.

In accordance with the law, MSU provides students with documented disabilities academic accommodations. If you are a student with a disability, please contact your instructor as well as the Disability Support Services, Clark Student Center, Room 168, Phone: 397-4140

Campus Carry

Senate Bill 11 Handgun Policy -Senate Bill 11 passed by the 84th Texas Legislature allows licensed handgun holders to carry concealed handguns on campus, effective August 1, 2016. Areas excluded from concealed carry are appropriately marked, in accordance with state law. For more information regarding campus carry, please refer to the University's webpage at: [Campus Carry](#)

As a part of your preparation for becoming a teacher, you are expected to begin acting in a professional manner – starting today. This includes, but is not limited to:

Internship Experience – Throughout your internship experience, ask your mentor teacher to provide you with constructive feedback regarding your classroom presence, interactions with students and lessons that you present to the students. Use this information to make necessary improvements during the time that remains in the schedule. Always conduct yourself in a professional manner.

Participation – It is not enough to just "show up". In other words, you cannot just sit there and breathe. You need to be prepared to discuss the readings that are assigned, contribute appropriately and encourage the participation of your peers.

Preparation – Complete all assignments on time. Written assignments (whether submitted online or in class) will be discounted by 25% for each late day. They will not be accepted after the grade is reduced by 75%. Complete readings assigned prior to class in order to be able to participate in class discussions and activities.

Attitude – Demonstrate the following dispositions that are essential for learning:

- Curiosity (ask questions, look for additional answers, probe, reflect)
- Flexibility (take alternate points of view, be open-minded)
- Organization (plan ahead – literally, GET A PLANNER!)
- Patience (take time to reason, be persistent in efforts)
- Risk-taking (try things beyond your current repertoire)
- Passion (invest in ideas, processes, products, and most of all – other people)

Be aware that your attitude is conveyed to others by body language, conversation, neatness, completeness of work, willingness to assist and contribute and many other ways. A sense of humor and the ability to be flexible are crucial – not just in this class but from now on – that is the nature of the classroom.

Respect – Be considerate of others. Do not talk while others are talking; do not use foul language; behave in an ethical manner. This is particularly important considering our classroom location - we are guests in the Wichita Falls school district and should behave as such.

Professional Development – Remember that teaching requires a commitment to continual learning. You will be asked to complete several “chores” as the semester rolls along and the points earned for dispositions are affected by those “chores”. Timely completion of tasks (or “chores”) is an indication of your “fitness” to this profession.

Learning experiences at WCOE

Clinical experiences at the WCOE, including both initial clinical experiences (e.g. classroom observations) and clinical teaching, are an essential part of the professional preparation program. Clinical experiences vary across many WCOE undergraduate programs and are designed and implemented through collaboration with school district and community partners. WCOE teacher candidates gain essential knowledge, skills, and dispositions through observations and teaching opportunities in a wide variety of diverse settings (e.g. urban/rural, SES, special needs, race/ethnicity). WCOE believes in gradual release of responsibilities and exposes and evaluates teacher candidates throughout the program so as to provide them with the best learning experience. Below are the assessments that are used across courses and programs to effectively monitor teacher candidates’ progress.

Dispositions

Candidates in the teacher education program are evaluated on their dispositions towards the 10 InTASC standards three times (beginning, middle, end) during their program in Educational Psychology, Professional Methods Block A, and Clinical Teaching in the following areas:

- Candidates respect learners’ differing strengths and needs and are committed to using this information to further each learner’s development.
- Candidates believe that all learners can achieve at high levels and persist in helping each learner reach his/her full potential.
- Candidates are committed to working with learners, colleagues, families, and communities to establish positive and supportive learning environments.
- Candidates realize that content knowledge is not a fixed body of facts but is complex, culturally situated, and ever evolving. He or she keeps abreast of new ideas and understandings in the field.

- Candidates value flexible learning environments that encourage learner exploration, discovery, and expression across content areas.
 - Candidates are committed to using multiple types of assessment processes to support, verify, and document learning.
- Candidates respect learners' diverse strengths and needs and are committed to using this information to plan effective instruction.
- Candidates are committed to deepening awareness and understanding the strengths and needs of diverse learners when planning and adjusting instruction.
 - Candidates take responsibility for student learning and use ongoing analysis and reflection to improve planning and practice.
 - Candidates actively share responsibility for shaping and supporting the mission of his/her school as one of advocacy for learners and accountability for their success.

Candidates are evaluated by faculty in those courses at a developing, beginning, and mastery level of competency as determined by the academic committee on program quality. The evaluation is based upon evidence gathered through classroom participation, assignments, observed field experiences and unit planning.

Data Literacy Assignment

Teacher candidates are expected to demonstrate the ability to interpret standardized test data and make instructional decisions based on the test data from students. At the conclusion of Classroom Assessment/Assessment in PE, students will develop an understanding of assessment practices that enable them to accurately read and interpret testing data. In addition, teacher candidates will apply concepts learned in the course to explain what the data means and what, if any, interventions should be implemented for targeting specific groups of students. By identifying weak areas of conceptual understanding of their students, teacher candidates can create appropriate instructional strategies that lead to greater student success.

Lesson Planning

Teacher candidates must demonstrate the ability to plan, assess, and implement instruction. This begins in the Foundational block where the teacher candidates create and write lessons for effective teaching. Teacher candidates are required to develop lesson plans. The specific format can be adapted, but should always include the objectives (TEKS), procedures, materials/resources, and assessment. Student engagement is a key element in a good lesson with a goal of student learning/success is the ultimate goal.

Candidates must form an assessment strategy to determine the extent to which students are able to master learning of objectives. Candidates also describe the instructional delivery method addressing the following step-by-step procedures:

1. Questions and concerns listed in the directions given to you by your instructor
2. Setting purposes ("Today we will be...I want you to...because you will...")
3. Method(s) for engaging students in the lesson
4. Any questions asked during the lesson should be in **bold**
5. Higher order thinking reflected in questions
6. Instructional Strategies: Modeling, Discussion, "Hands-on", Inquiry, etc.
7. Grouping: when and how
8. Instruction that addresses learners' needs (ELLs, Special Education, 504, Gifted, Struggling Learner)
9. Closure

After teaching the lesson, candidates are then required to reflect on the lesson delivery, appropriateness of instructional strategies, impact for future planning, and opportunities for collaboration with mentor teacher. The skill acquired during lesson planning provides the foundation and are also built upon for unit planning and other key assessments.

Unit Plan

Teacher candidate's ability to demonstrate the ability to plan, assess, and implement instruction continues in the professional block with the Unit plan assessment. The unit plan assessment is a modified form of Midwestern Impact on Student Learning (MISL) that requires teacher candidates to plan a unit of teaching. Candidates are required to determine a set of multiple learning objectives aligned to state content standards Texas Essential Knowledge and Skills (TEKS) appropriate to the lesson(s) the candidate is preparing.

Co-Teaching

West College of Education adopts a co-teaching model for the candidates during their clinical experiences. These strategies include the following:

- **One Teach, One Observe** — One teacher has primary instructional responsibility while the other gathers specific observational information on students or the (instructing) teacher. The key to this strategy is to have a focus for the observation.
- **One Teach, One Assist** — One teacher has primary instructional responsibility while the other teacher assists students with their work, monitors behaviors, or corrects assignments.
- **Station Teaching** — The co-teaching pair divide the instructional content into parts and the students into groups. Groups spend a designated amount of time at each station. Of-ten an independent station will be used.
- **Parallel Teaching** — Each teacher instructs half of the students. The two teachers are addressing the same instructional material and present the lesson using the same teaching strategy. The greatest benefit is the reduction of student to teacher ratio.
- **Supplemental Teaching** — This strategy allows one teacher to work with students at their expected grade level, while the co-teacher works with those students who need the information and/or materials extended or remediated.
- **Alternative/Differentiated Teaching** — Alternative teaching strategies provide two different approaches to teaching the same information. The learning outcome is the same for all students, however the instructional methodology is different.
- **Team Teaching** — Well planned, team taught lessons, exhibit an invisible flow of instruction with no prescribed division of authority. Using a team teaching strategy, both teachers are actively involved in the lesson. From a student's perspective, there is no clearly defined leader, as both teachers share the instruction, are free to interject in-formation, and available to assist students and answer questions. (Adapted from Cook & Friend (1995))

MISL- Midwestern Impact on Student Learning

Successful completion and submission of a MISL portfolio is required during the first six weeks of clinical teaching. Teachers candidates are required to plan, implement, and assess student learning within a unit of study. The Midwestern Impact on Student Learning (MISL) measures content knowledge, pedagogical knowledge, and effect on student learning in the following areas/domains : Learning Environments; Individual Development and Diversity; Collaboration; Planning Process and Content; Assessment; Strategies and Methods; Reflection; Professional Development; and Communication.

Each of the 10 areas is scored with one of 4 ratings: Exemplary 4, Competent 3, Needs Improvement 2, and Unsatisfactory 1. An overall score of 20 (meets expectations) is required for successful completion of student teaching for all teacher candidates.

The MISL is a record of candidates' ability to carefully consider all contextual factors that influence instruction and to then use those factors to plan and design a unit of instruction, including an assessment plan that can demonstrate changes in student knowledge, skills, or dispositions resulting from instruction. The MISL includes both reflexive (description of instructional decision making during the unit) and reflective components that

encourage candidates to plan instruction strategically and to approach teaching in a purposeful, thoughtful, and methodical manner.

Class Assignments and Grading

Assignment	Grade Points
Article Critique	50 Points
Lesson Plan	100 Points
Classroom Teaching	100 Points
Breakout edu	50 Points
Activities (Vocab flipgrid-12 points and App evaluation 18 points)	30 Points
Unit Plan – Part 1 (10 points), Part 2(20 points), Part 3 (20 Points)	50 Points
Disposition/Classroom Participation	90 Points
Final Unit Plan	180 Points
Math Quiz	50 Points
Total Points	700 Points

DISPOSITIONS/CLASSROOM PARTICIPATION

All assignments of the course are designed to help you experience teaching and learning of mathematics in elementary grades in a reflective way. The design of this course is to provide you with the basic knowledge of teaching effective mathematics lessons based upon the NCTM/TEKS Standards. During this class, you will actually participate in hands-on mathematics activities in order to fully understand the process of this type of learning from a student's perspective. Additionally, because many may not have a background in learning mathematics actively, you will need to experience this hands-on type of learning. There is not enough time during the semester to teach you "how to teach" every concept at each grade level. As a growing teacher, you have to take the basic information you learn and be able to apply it to your needs in your specific situation. Candidates are evaluated by faculty in those courses at a developing, beginning, and mastery level of competency as evaluated by the academic committee on program quality. In this Block A, candidates are evaluated at the developing level of competency based upon evidence gathered through observed field experiences and unit planning.

Much of the learning in this course takes place by participating, sharing, and experiencing. This cannot take place if you are absent, late to class, or if you are not fully engaged in class activities. Your total points for this course component will be determined through you dispositions and participation in class activities. A part of the participation grade is also kept specifically for tardies. Another major part of the participation grade will be from class discussions, volunteering to take initiative, and assigned activities. **So be alert and be ready to talk!!!!**

Final Grade Possibilities

A = 90% - 100%

B = 80% - 89%

C = 70% - 79%

D = 60% - 69%

**Note: Twenty Five percent point reduction in assignment grade per day late.
All assignment are due at 11:30pm - Sunday**