



LOYOLA UNIVERSITY CHICAGO

Preparing people to lead extraordinary lives

Teaching, Learning and Leading with Schools and Communities
School of Education, Loyola University of Chicago: Fall Semester 2018

Graduate Sequences 4 – Elementary

TLSC 420: Mathematics in Elementary Classrooms

Days: Tuesdays

Location: Saint Ann School

Instructor Information:
Name: Gretchen Geerts E-mail: Ggeerts@luc.edu Office Hours: By appointment

Module Description:

During this rigorous module, candidates learn effective methods for teaching mathematics in the elementary school. The module takes a student centered, problem solving approach that targets conceptual understanding for diverse learners. This sequence addresses TLLSC Enduring Understandings 3, 6, 7, and 9.

IDEA Objectives:

- Gaining factual knowledge (methods)
- Learning to apply course materials
- Developing specific skills, competencies, and points of view needed by professionals in the field

Essential Questions:

- How do teachers teach elementary mathematics in a developmentally appropriate way?
- How do teachers of elementary mathematics teach conceptual understanding of mathematics?
- How do teachers adjust and adapt learning materials and instruction for diverse learners?
- How is problem solving most effectively taught for transfer and modeling?

Essential Understandings:

- Incorporate research and evidence-based practices into the design of instruction (e.g. UbD, IB, SIOP and UDL). (5S; 9A) (IB)
 - Design a standards-based instructional lesson that uses backward design (e.g. UbD) to align objectives with formative assessments and instructional practices based on high expectations for each student's learning and behavior. (3H; 3I) (IB)
 - Select relevant instructional content, materials, resources and strategies for differentiated and universally designed instruction. (3Q; 5O) (IB)
 - Use assessment strategies and devices that are nondiscriminatory, and take into consideration the impact of disabilities, methods of communication, cultural background, and primary language on measuring knowledge and performance of students. (7R) (IB)
 - Use data to differentiate assessments to meet the needs of diverse learners. (1H; 3J; 5P) (IB)
 - Analyze and use student information to design instruction that meets the diverse needs of students and leads to ongoing growth and achievement (1H) (IB)
 - Use data to plan for differentiated instruction to allow for variations in individual learning needs (3J) (IB)
 - Use assessment data, student work samples, and observations from continuous monitoring of student progress to plan and evaluate effective content area reading, writing, and oral communication instruction (6H)
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Conceptual Framework:

This course embodies the conceptual framework –*Social Action through Education*– of the School of Education (SOE) at Loyola University Chicago. As teachers, we recognize our connection to students as individuals and as members of a larger community. We serve others (students as well as families and communities) by creating experiences that encourage creative, moral and intellectual development. Leaders in our classrooms and larger school communities, we must consider how education can be transformational and how we might be agents of change. In this course sequence, we will explore what it means to hold high expectations for all learners that include academically challenging, personally and socially relevant knowledge and complex learning skills. In order to successfully provide opportunities for youth to meet these expectations, we must also be committed to reflecting on our own practice and to continually developing our own knowledge, skills and professional dispositions.

Dispositions:

Each sequence and module in the Teaching and Learning with Schools and Communities Program (TLSC) focuses on several professional dispositions. Candidates are offered opportunities to receive feedback on their dispositional growth. The teacher candidate commits to appropriate professional and interpersonal behaviors in this module by:

420 Dispositions Assessment:

- D7 valuing the unique identities and backgrounds of all students, families and communities as essential assets in learning environments.
 - D 9 recognizing his/her own point of view and biases about diverse learners and how this perspective can impact teaching and learning.
 - D13 acknowledging one's ability to influence the motivation and achievement of students and to attain positive learning results using his/her personal and professional capacities. (d.1.D)
 - D16 Valuing and promoting curiosity and creativity in students.
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Diversity:

Course instructors strive to facilitate an inclusive environment respectful of all members of the class community with appreciation and respect for age, ability, color, creed, cultural background, ethnicity, gender identity or expression, national origin, race, religious affiliation or spiritual affinity, sexual orientation, socioeconomic class, or other status. If you are a student who requires any special considerations, please inform the instructor during the first week of class.

Sequence Four Professionalism and Participation Policies:

It is expected that teacher candidates in Sequence Four partner sites will demonstrate high levels of professionalism and responsibility in all aspects of their work in this sequence. In order to complete the module assessments and requirements in a satisfactory manner, candidates must be present for all sessions, while in partner classrooms, sequence instructional sessions on campus and at any informal partner sites. In the event of approved absences, candidates should contact their professors and school sites in the manner that is requested by the administration at the respective schools. The following guidelines for participation will be considered in the module grades.

Professional Attitude and Demeanor Part I

- 2-Always prompt and regularly attend sessions. (no absences or tardies)
- 1-Rarely late and regularly attend sessions (No more than 1 absence).
- 0-Often late and/or poor attendance at sessions (More than 2

absences).

Professional Attitude and Demeanor Part II

- 2-Always prepared for sessions with assignments and required materials.
- 1-Rarely unprepared for sessions with assignments and required materials.
- 0- Often unprepared for sessions with assignments and required

materials.

Level of Engagement in Class

- 2-Always a willing participant. Contributes by taking initiative, offering ideas and asking questions in sessions, small groups and classroom sessions.
- 1-Often a willing participant. Contributes by taking initiative, offering ideas and asking questions in sessions, small groups or classroom sessions
- 0-Rarely a willing participant. Rarely contributes to sessions by taking initiative, offering ideas or asking questions.

Integration of Readings into Classroom Participation

- 2-Often cites from readings; use readings to support points.
- 1-Occasionally cites from readings; sometimes use readings to support points.
- 0-Rarely cite from readings; rarely use readings to support

points.

Listening Skills

- 2-Listens when others talk, both in groups and in sessions. Incorporate or build off of the ideas of others.
- 1-Listens when others talk, both in groups and in sessions
- 0-Rarely listens when others talk, both in groups and in sessions.

Course Evaluation

Grading

All assignments will be graded using the rubrics posted on Sakai and LiveText throughout the semester. Each assignment will be calculated into the total number of points for the course. The number of points earned will be divided by the number of points possible, and a letter grade will be assigned using the scale below.

Assignments and readings are due on the dates listed on the course syllabi unless permission to hand them in late is given. Conflicts with an assignment deadline should be discussed and resolved prior to the assignment's due date. Late work will only be accepted under special circumstances (e.g., family emergency, illness). Please *contact your professor* in person or by phone or email *prior to any given due date* to discuss assignment extensions requests. Failure to do so in a timely manner will result in significant grade deductions. **Computer or technical problems are not an acceptable excuse for late work.**

Unless otherwise noted, all assignments must be typed. Please double-space your work and use 12 point font. Attend closely and carefully to spelling and grammar. If referencing course or other textual materials, please follow American Psychological Association style guidelines (APA – 6th edition). You can access the APA style manual through Loyola University Chicago's libraries or online at <http://www.apastyle.org>

All assignments in this course will be submitted via **Sakai**. If an assignment is a core assignment, I will ask that you also submit it on **LiveText**. I will notify you in advance if it must be submitted on LiveText.

Grading Scale:

A	93 - 100
A-	90 - 92
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
D	61 - 69
F	60 - 0

TLSC 420 Assignments

Greater detail and rubrics will be provided for all assignments on Sakai.

Course Participation – 20%

Candidates are expected to consistently and actively participate in all class activities in discussions. They must arrive on time and stay for the duration of the class session. Class sessions will build directly on assigned readings; candidates must come to class having read all assigned texts and articles. Candidates will further complete an interactive reflection following each class period.

Article Reflections – 20%

Candidates will reflect on or make sense of the experiences you have during this module in response to classic pieces of mathematics education research. Each week, candidates will be assigned a different article to read and reflect on how the article pertains to learning, doing and teaching mathematics.

Guided Math Lessons – 30%

Candidates will videotape themselves teaching two guided math lessons in their classrooms. They will further watch the video of themselves and write a reflection of their teaching.

Lesson Plan – 20%

Candidates will design a standards-based lesson plan that aligns standards, objectives and assessments. The lesson plan will demonstrate candidate's knowledge of evidence-based practices and developmentally appropriate teaching methods.

Strategy / Algorithm of the Week – 10%

Each candidate will select one strategy or algorithm to teach the class. The candidate will prepare a mini-lesson and corresponding activity to teach the strategy / algorithm. The candidate will then teach the strategy / algorithm to his / her peers using the mini-lesson and activity.

Required Texts:

Boaler, J: (2015) *Mathematical Mindsets: Unleashing Students' Potential through Creative Math, Inspiring Messages and Innovative Teaching.*

Loyola University Chicago
School of Education
Syllabus Addendum

IDEA Course Evaluation Link for Students

Each course you take in the School of Education is evaluated through the IDEA Campus Labs system. We ask that when you receive an email alerting you that the evaluation is available that you promptly complete it. To learn more about IDEA or to access the website directly to complete your course evaluation go to: <http://luc.edu/idea/> and click on **STUDENT IDEA LOGIN** on the left hand side of the page.

Dispositions

All students are assessed on one or more dispositional areas of growth across our programs: **Professionalism, Inquiry, and Social Justice**. The instructor in your course will identify the dispositions assessed in this course and you can find the rubrics related to these dispositions in LiveText. *For those students in non-degree programs, the rubric for dispositions may be available through Sakai, TaskStream or another platform.* Disposition data is reviewed by program faculty on a regular basis. This allows faculty to work with students to develop throughout their program and address any issues as they arise.

LiveText

All students, *except those who are non-degree*, must have access to LiveText to complete the benchmark assessments aligned to the Conceptual Framework Standards and all other accreditation, school-wide and/or program-wide related assessments. You can access more information on LiveText here: [LiveText](#).

Syllabus Addendum Link

- www.luc.edu/education/syllabus-addendum/

This link directs students to statements on essential policies regarding *academic honesty, accessibility, ethics line reporting* and *electronic communication policies and guidelines*. We ask that you read each policy carefully.

This link will also bring you to the full text of our conceptual framework that guides the work of the School of Education – ***Social Action through Education***.

