



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 2019

Graduate Sequences 4 – Elementary **TLSC 420: Mathematics in Elementary Classrooms**

Instructor Information:

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Office Hours: Before or after class and by appointment.

Days and Times: Tuesdays from 6:00-7:45pm

Location: St. Agnes of Bohemia, 2643 S Central Park Ave

Course 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 TLSC Enduring Understandings 3, 6, 7, and 9.

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)

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.

-This course assesses one of the Conceptual Framework Standards:

CFS1: Candidates critically evaluate current bodies of knowledge in their field.

-To address this standard, you will:

- Read, respond to and discuss texts in the field of Elementary Mathematics.

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:

- o D7 valuing the unique identities and backgrounds of all students, families and communities as essential assets in learning environments.
- o D 9 recognizing his/her own point of view and biases about diverse learners and how this perspective can impact teaching and learning.
- o 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)
- o D16 Valuing and promoting curiosity and creativity in students.

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.

Smart Evaluation

Towards the end of the course, students will receive an email from the Office of Institutional Effectiveness as a reminder to provide feedback on the course. Students will receive consistent reminders throughout the period when the evaluation is open, and the reminders will stop once the evaluation is completed.

- The evaluation is completely anonymous. When the results are released, instructors and departments will not be able to tell which student provided the individual feedback.
- Because it is anonymous and the results are not released to faculty or departments until after grades have been submitted, the feedback will not impact a student's grade.
- The feedback is important so that the instructor can gain insight into how to improve their teaching and the department can learn how best to shape the curriculum.

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

Policy Regarding Attendance & Assignments

Students are expected to commit to full attendance at all classes since this is a fundamental ingredient to student success. When students are absent, arrive late for, or leave early from class, valuable learning opportunities are lost. Therefore, **absences** will cause students to lose points from assignments for that week. Repeated late arrivals will be considered an absence.

One absence is allowed for a family emergency, a required school event that you can't get out of, or the discretion of the instructors. After one absence, please talk to the instructor about next steps. You cannot earn participation points if you are not in attendance at the in-person meetings.

Unless there is a documented illness/emergency, your assignment grade will be **lowered by 20% if submitted late**. *Late assignments will only be accepted up to one week after the set due date. Failure to turn in the assignment in that time frame will result in a zero. Extensions are to be granted by the instructor—you should not assume that turning in an assignment late is your privilege.* If you are requesting an extension, that request should not be submitted the day the assignment is due. Please do not submit parts of an assignment, especially if you are absent or if you forget to bring a section to class. Assignments will not be accepted until all of the required parts are submitted together.

TLSC 420 Assignments

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

Course Attendance/Participation/In-class Activities– 25%

Teacher candidates will be expected to attend class and participate in class activities and discussions. Work from daily activities that are not otherwise graded will be included here. Punctuality, responsibility, professionalism, preparedness and contributions are considered.

Lesson Plan (Core Assignment) – 25%

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.

Guided Math Lesson – 20%

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

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.

SUMI Reflection - 20%

Complete a SUMI reflection based on what you learned about teaching mathematics during this course.

Required Texts

Lemov, Doug, 1967-. (2015). *Teach like a champion 2.0 : 62 techniques that put students on the path to college*. San Francisco :Jossey-Bass.

Date:	Focus:	Reading and Responsibilities Prior to Class:	Assignments Due:
August 27th	-Introductions -Course Overview -Syllabus -Our Mathematical Experiences -Sign-Up for Algorithm of the Week		
September 3rd	Breaking Down the CCSS: Standards of Mathematical Content and Standards of Mathematical Practice	Read the Common Core State Standards for Mathematics, specifically those standards for the grade that you teach, the standards for the grade below what you teach and the standards for the grade above what you teach. (i.e. If you teach third grade, you will read the CCSS for 2nd, 3rd and 4th grades)	
September 10th	Standards for Mathematical Practice Strategy: Combinations of Ten	<i>Debunking Myths about the Standards for Mathematical Practice</i> By Victor Mateas	
September 17th	Creating Objectives Aligned with the SMPs and SMCs Algorithm: Partial Sums Addition	Technique 7: THE 4 M's from <i>Teach Like a Champion</i> Pages 137-140	
September 24th	Assessing Students' Mastery of the SMPs and SMCs	Chapter One from <i>Teach Like a Champion</i> Pages 27-55	

	Algorithm: Counting Up Subtraction	*Note: we will watch some of the See it in action videos in class!	
October 1st	Meeting the Needs of All Learners Through Differentiation Algorithm: Area Model	<i>Productive Struggle for All: Differentiated Instruction</i> By: Sararose D Lynch, Jessica H. Hunt, and Katherine E. Lewis	
October 8th	Fall Break: No Class		
October 15th	Lesson Plan Evaluation & Mid-Semester Feedback		Final Copy of Lesson Plan #1
October 22nd	Reasoning and Constructing Viable Arguments through Math Talks Algorithm: Lattice Multiplication	<i>Engaging All Students in Mathematical Discussions</i> by Damon and Kim Bahr	
October 29th	Strategies and Fact Fluency Algorithm: Partial Products Multiplication	<i>Three Steps to Mastering Multiplication Facts</i> by Gina Kling and Jennifer Bay-Williams	
November 5th	Productive Struggle		Guided Math Lesson and Reflection due at 6:00pm on November 5th Note: Video will be dropped into OneDrive.
November 12th	Games in the Mathematics Classroom Algorithm: Partial Quotients Division	Bring a Math game that aligns with the CCSS from your grade to share with the class.	
November 19th	Word Problems	<i>Avoiding the Ineffective Key Word Strategy</i> Karen S. Karp, Sarah B. Bush and Barbara J. Dougherty	
November 26th	Lesson Plan Evaluation		Final Copy of Lesson

			Plan #2 due to Sakai at 6:00pm on November 26th
December 3rd	-Post-Assessment -Course Evaluation		
December 10th	Finals Week		-Final SUMI Reflection Due at 6:00 pm on the 10th -Final Copy of Lesson Plan #2 due to LiveText at 6:00pm on December 10th

Loyola University Chicago
School of Education
Syllabus Addendum

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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.

