

**SYLLABUS: Math 147/CIEP 104 Mathematics for Elementary School Teachers I: Section 1**  
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\*Virtual Office Hours: 10:00-10:50 MWF and by request.

This is a synchronous class during class hours on MWF.

\*Responsiveness: Students can expect a reply to email within 24 hours. Assignments for weeks 1-3 can be resubmitted for feedback. Students can email requests for clarification or help with assignments.

\*Group or Class MTGS: Students will be encouraged to form study groups for quizzes and final exam.

**Course Description:** This course provides the fundamental knowledge base for teaching elementary school mathematics. Candidates study the underlying principles of mathematics appropriate for grades pre-k-9. Candidates use Common Core Standards and Principles and Standards for School Mathematics from the National Council of Teachers of Mathematics (NCTM).

**Course Rationale and Relationship to the Teacher Education Program:** To prepare teachers who can deliver high-quality mathematics education, the Loyola teacher preparation program provides a strong knowledge base, positive attitude, and a wide range of instructional strategies.

### **Conceptual Framework and Conceptual Framework Standards**

The School of Education's *Conceptual Framework—Social action through education*—is exemplified within the context of this course. It is the goal of this course to help you become excellent math teachers. Since algebra is the key to higher education, the foundation work that you do in mathematics will assist all students to achieve their highest potential.

#### STANDARDS

##### SOE Conceptual Framework Standards (CFS)

- CFS1: Candidates critically evaluate current bodies of knowledge in their field.
- CFS2: Candidates apply culturally responsive practices that engage diverse communities.
- CFS3: Candidates demonstrate knowledge of ethics and social justice.
- CFS4: Candidates engage with local and/or global communities in ethical and socially just practices.

#### **IDEA Objectives**

1. Learning fundamental principles, generalizations, or theories
2. Learning to apply course material (to improve thinking, problem solving, and decisions)
3. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

#### **Syllabus Statement**

In this class software will be used to record live class discussions. As a student in this class, your participation in live class discussions will be recorded. These recordings will be made available only to

students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. All recordings will become unavailable to students in the class when the Sakai course is unpublished (i.e. shortly after the course ends, per the [Sakai administrative schedule](#)). Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured. Please discuss this option with your instructor.

The use of all video recordings will be in keeping with the University Privacy Statement shown below:

### **Privacy Statement**

Assuring privacy among faculty and students engaged in online and face-to-face instructional activities helps promote open and robust conversations and mitigates concerns that comments made within the context of the class will be shared beyond the classroom. As such, recordings of instructional activities occurring in online or face-to-face classes may be used solely for internal class purposes by the faculty member and students registered for the course, and only during the period in which the course is offered. Students will be informed of such recordings by a statement in the syllabus for the course in which they will be recorded. Instructors who wish to make subsequent use of recordings that include student activity may do so only with informed written consent of the students involved or if all student activity is removed from the recording. Recordings including student activity that have been initiated by the instructor may be retained by the instructor only for individual use.

### **DIVERSITY**

Issues of diversity (socio-economic, ethnic, exceptionalities, and gender) are addressed through instructional methodology, assessment and technology. Teacher candidates study mathematics contributions made by a wide array of mathematicians. Candidates teach five lessons to a small group of children at Swift School, one of the most diverse schools in Chicago. Course readings exemplify the international nature of mathematics.

### **METHOD OF ASSESSMENT**

*Candidates are expected to put in a minimum of 1.5x class time in additional outside study.*

A wide variety of evaluation strategies are used. Math problems, math notebook, participation, integrative activities, lesson plans, instructional materials, quizzes, a final exam, teaching small groups of elementary school children and computer activities contribute to the final grade.

### **35%: Assignments and Participation**

Candidates are expected to participate in each class. All assignments (except for math problems from the Jacobs text) should be **typed**. All assignments are due for the next class period.

*No late assignments will be accepted unless approved.*

### **5% Lesson Plans and Instructional Materials (5 @ 1% each)**

You will prepare and teach five lessons to a small group of children in 4<sup>th</sup> grade at Swift School as the service learning component of this class.

Because this course is part of your professional program, **the quality of your work is important.**

The rubric for grading assignments and lesson plans is:

<b>Standard</b>	<b>Points</b>
I would show this to my principal.	1.0
I would show this to my colleagues.	0.9
I would show this to my students.	0.8
This is just for me.	0.7
I was not able to complete the whole assignment.	0.6-0.1
No assignment.	0

**30% Quiz 6 @ 5%** (No make-up quizzes will be provided. There will be a 7<sup>th</sup> quiz during the last class. Candidates who miss a quiz must take Quiz 7. Candidates who would like to improve their grade by substituting the Quiz 7 grade for their lowest grade may take Quiz 7.

### **25% Final Exam**

**5%: NCTM Standards Notebook** (All assignments and class activities will be organized into a binder using the NCTM Standards and assessed at the final exam.)

#### **NCTM Standards Notebook Rubric**

<b>Criteria</b>	<b>%</b>
Introduction	1
Neatness	1
5 NCTM tabs	1
Interesting cover	1
100% % of assignments	1

**Extra Credit: Candidates will be able to earn up to 5% extra credit for the course through opportunities that will become available during the semester.**

· Some of the opportunities include volunteering at schools; attending workshops/lectures on campus; developing children's books to support math content, etc.

#### **Grade Assignments: Minimum %**

A	94%
A-	90%
B+	87%
B	84%
B-	80%
C+	77%
C	74%
C-	70%
D+	67%
D	60%
F	0%

## Textbooks

-*Mathematics: a Human Endeavor: a Book for Those Who Think They Don't Like the Subject*,

**Third Edition** Harold Jacobs, 3rd Edition 0-1767-2426-x

-*Mathematicians Are People, Too Volume I: Stories from the Lives of Great Mathematicians* Luetta Reimer, Wilbert Reimer

-*Riddle Math: Using Student-Written Riddles to Build Mathematical Power*, Carl Sherrill, electronic version

-*The Number Devil: A Mathematical Adventure*, Hans Ensenberger ISBN 0-8050-6299-8

-*More Stories to Solve: Fifteen Folktales from Around the World* by George Shannon (Author) , Peter Sis (Illustrator)

## COURSE OUTLINE

Week	Essential Math Ideas
1	Multiplication is Everywhere
2	Patterns: The Heart of Mathematics
3	Algebra is for Everyone
4	Math Works
5	Mathematics is Multi-cultural
6	Mathematical Inventions
7	Teach Probability and Fractions Together
8	Geometry:
9	Topology may be in your Future
10	Measurement
11	Measurement: Data
12	Problem Solving
13	Math and the Arts

## 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](#).

## Livertext Dispositions

### Professionalism

- Candidate embraces personal responsibility and agency by excelling in proactive problem resolution and conflict management.
- Candidate takes initiative in the development of self and others and actively fosters collaborative relationships that are mutually beneficial.
- Candidate exemplifies ethical practices, guidelines and professional standards of his/her profession, including but not limited to: arriving to class prepared and on time; submitting assigned work on time; reflecting the expectations of the assignment in submissions.
- Candidates participate in all classes
- Candidates prepare high quality instructional materials
- Candidates arrive at clinical site ready to teach

### Inquiry

- Candidate demonstrates the ability to generate their own knowledge by carrying out discipline-recognized, systematic approaches to gathering and using multiple forms of data to inform instruction and promote learning for all. Identifies adaptations for students by name in lesson plan

### Social Justice

- Candidates consistently welcome and affirm diversity at all levels and demonstrate respect and understanding of differences across groups in their academic and/or field-based work.
- In their written, spoken, and collaborative course contributions, candidates continuously examine and challenge their own beliefs about equity and social justice.
- Candidates clearly and actively model their commitment to taking action to promote multiple perspectives, to seek justice and prevent injustice, and to advocate for the marginalized in schools and society.

**\*School of Education Commitment - COVID-19:** Loyola's School of Education (SOE) recognizes that this is an unprecedented time. We understand that moving into the 2020-2021 academic year while living in the context of the COVID-19 pandemic may stir feelings of uncertainty, fear, or anxiousness. We want you to know that your safety, health, and well-being, as well as that of our faculty and staff, remain our primary concern. We want to be able to support you in any way that we can. We ask you to embody the Jesuit value of *Cura Personalis*, or care for the whole person, as we prepare to learn together. We ask that you consider your way of being in this community, to act with care, and treat all with dignity to keep yourself and others safe.

- The University understands that you may encounter obstacles that make reaching academic goals more difficult. We strongly encourage you to access the Student Resources on [Loyola's COVID-19 Response webpage](#) for information, supports, and resources on basic needs such as housing, food, financial aid, and medical and mental health. This web page also offers information on official University communications, access to technology, and student services. All Loyola University Chicago administrators, faculty, and advisors are also here for you.

- The SOE is committed to working with all students to address any challenges that may arise during the semester. Please reach out to your professor as early as possible to discuss any accommodations you think may be necessary in order for you to successfully complete your coursework. We know this will be a semester like none other, but through collaboration, communication, and shared responsibility, we will not only get through this difficult time; we will thrive.
- **\*COVID-19 Reporting Protocol:** In preparation for our upcoming semester, Loyola University Chicago's Emergency Response Management team has been working to develop [protocols](#) in accordance with Centers for Disease Control and Prevention (CDC) guidelines that help ensure the health and safety of our community. Given the rising number of COVID-19 cases across our country, it is very likely that incidence within our community will occur in the fall.

Students, faculty, and staff who have tested positive for COVID-19 must report their case to the University as soon as possible. **If you have tested positive for the virus, please contact us at [covid-19report@LUC.edu](mailto:covid-19report@LUC.edu) or by calling 773-508-7707. All COVID-19-related questions or feedback should continue to be sent to [covid-19support@LUC.edu](mailto:covid-19support@LUC.edu), not the new case reporting email address.**

**Syllabus Addendum Link** [www.luc.edu/education/syllabus-addendum/](http://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*.

### **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 in to how to improve their teaching and the department can learn how best to shape the curriculum.

### **School of Education Mission**

The School of Education at Loyola University Chicago, a Jesuit Catholic urban university, supports the Jesuit ideal of knowledge in the service of humanity. We endeavor to advance professional education in service of social justice, engaged with Chicago, the nation, and the world. To achieve this vision, the School of Education participates in the discovery, development, demonstration, and dissemination of professional knowledge and practice within a context of ethics, service to others, and social justice. We fulfill this mission by preparing professionals to serve as teachers, administrators, psychologists, and researchers who work across the developmental continuum, and by conducting research on issues of professional practice and social justice.

### **\*Synchronous Meetings**

All class meetings from August and September will be synchronous via Zoom. During October, November and December, one of the three meetings will be asynchronous. Students are expected to attend sessions or view the Zoom recording.

### **\*Student Participation**

Students are expected to participate in course questions/discussions. They are expected to have material for the session ready. Students are expected to find someone to teach. Each class will require a teaching activity and reflection.

### **\*Class Conduct**

One important aspect of a Jesuit education is learning to respect the rights and opinions of others. Please respect others by (1) allowing all classmates the right to voice their opinions without fear of ridicule, and (2) not using profanity or making objectionable (gendered, racial or ethnic) comments, especially comments directed at a classmate.

### **\*Student Support**

#### **Special Circumstances--Receiving Assistance**

Students are urged to contact me should they have questions concerning course materials and procedures. If you have any special circumstance that may have some impact on your course work, please let me know so we can establish a plan for assignment completion. If you require assignment accommodations, please contact me early in the semester so that arrangements can be made with [Services for Students with Disabilities](http://www.luc.edu/sswd/) (SSWD) (<http://www.luc.edu/sswd/>).

### **\*Center for Student Access and Assistance (CSAA)**

*Should you encounter an unexpected crisis during the semester (e.g., securing food or housing, addressing mental health concerns, managing a financial crisis, and/or dealing with a family emergency, etc.), I strongly encourage you to contact the Office of the Dean of Students by submitting a CARE Referral for yourself or a peer in need of support: [www.LUC.edu/csaa](http://www.LUC.edu/csaa). If you are uncomfortable doing so on your own, please know that I can submit a referral on your behalf.*

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