

SYLABUS : CIEP M80

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COURSE DESCRIPTION

This course provides the fundamental methodology for teaching middle school mathematics. Candidates study the underlying principles of mathematics instruction for grades 5-9. Candidates use Principles and Standards for School Mathematics from the National Council of Teachers of Mathematics (NCTM) and compare the national standards to the Illinois State learning goals <http://www.isbe.state.il.us/ils/lmath.html> and local mathematics standards such as the Chicago Academic Framework from the Chicago Public Schools (CPS) <http://intranet.cps.k12.il.us/Standards/CAS.html>.

COURSE RATIONALE and RELATIONSHIP to the TEACHER EDUCATION PROGRAM

To prepare teachers who can deliver high-quality mathematics education, the Loyola University Chicago teacher preparation/inservice program provides a strong knowledge base, positive attitude, and a wide range of instructional strategies. This course introduces the inservice and preservice teachers to the content and the methodology for grades 5-9 mathematics.

CONCEPTUAL FRAMEWORK STANDARDS

CF1: Candidates demonstrate an understanding of a current body of literature and are able to critically evaluate new practices and research in their field.

CF2: Candidates demonstrate knowledge and skills in a variety of school and professional settings.

CF3: Candidates demonstrate an understanding of issues of social justice and inequity.

CF4: Candidates demonstrate skills that will enable them to work effectively with diverse clients.

CF5: Candidates demonstrate technological knowledge and skills which enhance education.

CF6: Candidates demonstrate professional decision-making skills and behaviors in advancing social justice and service.

CF7: Candidates demonstrate how moral and ethical decisions shape actions directed toward service to others.

CF8: Candidates apply ethical principles in professional decision-making.

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.

TECHNOLOGY

Teacher candidates learn how to integrate productivity tools on the computer into mathematics instruction. They learn how to use spreadsheets to solve problems and improve student understanding of algebra. Teacher candidates view videotapes of students responding to high quality instruction. Candidates are expected to use the internet to find and use excellent mathematical sites such as <http://www.forum.swarthmore.edu/> ; to research historical information about mathematics topics; <http://www.history.mcs.st> and <http://www.ac.uk/~history/> ;and to make connections with mathematics and other topics such as art at <http://library.thinkquest.org/16661/>, the tessellations of M. Escher.

METHOD OF ASSESSMENT

Participation and Assignments 10%

Students are expected to meet all classes. Candidates are expected to participate in each class. All assignments should be typed. All assignments are due for the next class period. Candidates hand in assignments in a 2-pocket folder. **No late assignments will be accepted.**

Because this course is part of your professional program, the quality of your work is important. The rubric for grading assignments is:

Standard	Points
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

Clinical Activity 40%

Students will design and deliver two lessons per week in middle school grades from September 9 to November 18. They will be assessed on the quality of their lesson which will include instructional materials. The same rubric used to evaluate lesson plans on *Livetext* will be used to evaluate lesson plans. Candidates are expected to arrive at the clinical site on time, dressed appropriately and exhibit professional behavior. Any missed clinical experiences must be completed at the end of the term. In the event of questionable behavior at the clinical site, the student will meet with the professor and appropriate forms will be completed.

Midterm 25%

Final 25%

GRADE ASSIGNMENTS

- A 95-100%
- A- 93-94%
- B+ 91-92%
- B 87-90%
- B- 85-86%
- C+ 83-84%
- C 80-82%
- C- 78-79%
- D 77-70%
- F 0-69%

COURSE OUTLINE

WEEK	STANDARD
1	Algebra
2	Algebra
3	Algebra
4	Algebra
5	Algebra
6	Geometry
7	Geometry
8	Geometry
9	Data Analysis & Probability
10	Data Analysis & Probability
11	Measurement
12	Measurement

13	Number & Operations
14	Number & Operations

TEXTBOOKS

"Mathematicians Are People, Too: Stories from the Lives of Great Mathematicians ", **Volume**

2. Luetta Reimer, Wilbert Reimer

“It’s in the Cards! Math Card Games”, Diane Schiller

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

NCTM Membership (order *Middel School Math* journal)

More Stories to Solve

Optional

Algebra with Pizzaz

Academic Honesty

Academic honesty is an expression of interpersonal justice, responsibility and care, applicable to Loyola University faculty, students, and staff, which demands that the pursuit of knowledge in the university community be carried out with sincerity and integrity. The School of Education’s Policy on Academic Integrity can be found at: http://www.luc.edu/education/academics_policies_integrity.shtml. For additional academic policies and procedures refer to: http://www.luc.edu/education/academics_policies_main.shtml

Accessibility

Students who have disabilities which they believe entitle them to accommodations under the Americans with Disabilities Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: <http://www.luc.edu/sswd/>

Harassment (Bias Reporting)

It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias.

In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias

Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting/>