APPROVED RECEIVED

The University Of Toledo

APR 10 2012

New Graduate Course Proposal

COLLEGE OF GRADUATE STUDIES

* denotes required fields

1. College*: J Herb Edu, Hlt Sci, Human Ser

   Department*: Curriculum and Instruction

2. Contact Person*: Rebecca Schi Phone: 530-2504 (xxx-xxxx) Email: Rebecca.Schi Please input the correct Contact Person. Please input phone number in this format: xxx-xxxx. Please input the correct Email Address.

3. Alpha/Numeric Code (Subject area - number)*: CI - 6130 Please input 2-4 characters for Item 3 Subject Area. Please input the 4-digit numeric code for Item 3.

4. Proposed title*: Mathematics r Charactor not allowed.

   Proposed effective term*: 201240 (e.g. 201140 for 2011 Fall) Please input the 6-digit numeric code for term.

5. Is the course cross-listed with another academic unit? ○ Yes ◉ No

   Approval of other academic unit (signature and title)

   Is the course offered at more than one level? ○ Yes ◉ No

   If yes, an undergraduate course proposal form must also be submitted. If the undergraduate course is new, complete the New Undergraduate Course Proposal; if the undergraduate course is existing, submit an Undergraduate Course Modification Proposal.

6. Credit hours*: Fixed: 3 or Variable: to Please Enter Only Numbers for Fixed Credit Hours Please Enter Only Numbers for variable Credit Hours From Please Enter Only Numbers for variable Credit Hours To

7. Delivery Mode:

	Primary*	Secondary	Tertiary
a. Activity Type *	Recitation	--SelectType--	--SelectType--
b. Minimum Credit Hours *	3 Please Enter Only Numbers	Please Enter Only Numbers	Please Enter Only Numbers
Maximum Credit Hours *	3 Please Enter Only Numbers	Please Enter Only Numbers	Please Enter Only Numbers

c. Weekly Contact Hours * 2,5

8. Terms offered: ☑ Fall ☐ Spring ☐ Summer

Years offered: ◉ Every Year ○ Alternate Years

9. Are students permitted to register for more than one section during a term? ◉ No ○ Yes

May the courses be repeated for credit? ◉ No ○ Yes Maximum Hours

10. Grading System*:

◉ Normal Grading (A-F, PS/NC, PR, I)

○ Passing Grade/No Credit (A-C, NC)

○ Credit/No Credit

○ Grade Only (A-F, PR, I)

○ Audit Only

○ No Grade

11. Prerequisites (must be taken **before**): i.e. C or higher in (BIOE 4500 or BIOE 5500) and C or higher in MATH 4200

admission to SECE or MIDD LAMP program required

100 Max.

○ PIN (Permisson From Instructor) ◉ PDP (Permission From Department)

Co-requisites (must be taken **together**):

CI 6230 Mathematics practicum

100 Max.

12. Catalog Description* (**75 words Maximum**)

An initial in-depth study of methods and materials for teaching Mathematics in middle and secondary classrooms with emphasis on planning, content standards and instruction strategies; for LAMP Middle Childhood and AYA licensure only. Co-requisite: CI 6230

13. Attach a syllabus and an electronic copy of a complete outline of the major topics covered. Click here for template.

Syllabus: * File type not allowed.

Additional Attachment 1: File type not allowed.

Additional Attachment 2: File type not allowed.

Course Approval:

Department Curriculum Authority:	Rebecca Schrock	Date 3-16-12
Department Chairperson:	Leigh Chiarelott	Date 3/16/12
College Curriculum Authority or Chair:	Rebecca Schrock	Date 4-9-12
College Dean:	Barbara J. Speyer	Date 4.9.12
Graduate Council:		Date 5-17-2012
Dean of Graduate Studies:		Date
Office of the Provost :		Date

Administrative Use Only

(YYYY/MM/DD)

The University of Toledo
Judith Herb College of Education, Health Sciences, and Human Services
Department of Curriculum and Instruction

CI 6130 Mathematics Methods of Teaching
3 Credit Hours

Instructor:
Office:
Office Phone:
Home Phone:
Email:

Methods:
Methods Lab:
Office Hours:
Course Website: http://alcot.utoledo.edu

Prerequisites: Admission to the LAMP Cohort program.

Corequisite: CI 6230 Mathematics Practicum

Cohort Objectives and Conceptual Framework
During the semester, emphasis will be placed on exploring appropriate teaching that reflect the nature, method and content of the domain of mathematics; the characteristics of students; and the nature of the instructional setting. The major course goal is to provide you with appropriate experiences for initial growth as a professional mathematics educator and the knowledge and tools to develop further. As prospective teacher (candidates), you will become designers of mathematics instructional materials. You will utilize the principles of design in developing lessons, curriculum, and assessments.

As the result of the course, you will gain experiences in the following.

1. Synthesizing a rationale for teaching mathematics
2. Designing instruction, both daily and long term, for teaching the content and processes in a way that addresses local and national content standards and accounts for the nature of your content and the nature of the learner
3. Planning and modifying instruction based on context, recommended practices, and student learning to meet the needs of various student populations
4. Assessing students' ideas and learning
5. Reflecting on your instructional practices and student learning

Mathematical Objectives and Conceptual Framework

It is assumed that learners have to construct their knowledge—individually and collectively. Each learner has a toolkit of conceptions and skills with which he or she must construct knowledge to solve problems presented by the environment. The role of the community—other learners and the teacher—is to provide the setting, pose the challenges, and offer the support that will encourage mathematical construction. (Davis, Maher & Noddings, 1990)

The above statement is intended to give a feeling of the spirit of what mathematics teaching and mathematics learning should encompass. In the first set of *Standards* published by the National Council of Teachers of Mathematics (NCTM, 1989) 5 basic goals were outlined. All students need to: (1) learn to value mathematics, (2) become confident in their ability to do mathematics, (3) become problem solvers, (4) learn to communicate mathematically, and (5) learn to reason mathematically. In order to create a learning environment where these goals are achievable we ourselves need to work toward understanding mathematics in this way. In our methods course we will explore what it means to think mathematically and to have mathematical power. We will consider what it means when you claim to know something mathematically. We will consider the role discourse and language play in the learning process. We will extent the ideas and experience we have in our on-campus methods course out into your school field placement by exploring how you create rich curriculum and learning environments that allow students to construct rich mathematical understanding. The following serve as our guiding themes:

1. understanding the mathematics subject matter that you teach both conceptually and procedurally;
2. understanding how students learn, think, and reason mathematically, and
3. learning how to use this information to inform planning and teaching—both present and future.

Course Materials:

No purchased books are required for this course. Materials will be provided by the instructor. Important websites include:

NCTM: http://www.nctm.org

Common Core State Standards for Mathematics: http://www.corestandards.org/

Ohio Department of Education Academic Content Standards for Mathematics:
http://education.ohio.gov/GD/Templates/Pages/ODE/ODEDetail.aspx?Page=3&TopicRelationID=1704&Content=110228

Grading and Policies:

Class Attendance and Participation: You need to be present for each class. Your attendance and participation will be evaluated. For each class you miss, you will lose the equivalent of a letter grade for this portion of your complete grade. Your attendance grade will be lowered one-half of a full letter grade for each time you are tardy to class.

Assignment Due Dates and Grading: For any late assignment, the grade will be lowered one letter grade for each day the assignment is late unless prior arrangements are made with the professor. Keep this in mind since a candidate must earn a grade of C or better on each assignment in order to earn a passing grade for the course.

Special Needs: Please contact the instructor if you need special arrangements for taking tests, taking notes, special print, or other considerations that may help you more effectively learn of demonstrate learning.

UTAD Account and ALCOT: You will be required to have activated and regularly check you UTAD email. Throughout the course we will also use ALCOT (http://alcot.utoledo.edu) as a web-based site for course activities. More information will be provided in class.

Academic integrity is expected as defined by the *Undergraduate/Graduate catalog*:
Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious offense. Students are considered to have cheated if they copy the work of another during an examination or turn in a paper or assignment written, in whole or in part, by someone else. Students are guilty of plagiarism, intentional or not, if they copy material from books, magazines, or other sources without identifying and acknowledging them. Students guilty of or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or dismissed from the university. (*Undergraduate/Graduate Catalog*, 2006-2008, p. 29)

***Critical Performances:** As part of your full licensure program at the University of Toledo you will be completing a series of *critical performances* that are aligned with 4 teaching cycles spread across the academic year. Two of these cycles will be completed in the fall semester. If you are an AYA licensure candidate, both Cycle 1 and Cycle 2 will be completed as part of your mathematical methods (CI 6130) and field experience (CI 6230) courses. If you are a middle grades licensure candidate, you will complete one of your two cycles teaching mathematics and the other cycle teaching in your other content. *Critical performances* are program-based assessments of your readiness to continue at each phase of the licensure program. During the methods (CI 6130) and field experience (CI 6230) courses that you concurrently enrolled in this semester you will be demonstrating readiness to student teach by completing 3 critical performances. These include: (1) videotaped lesson with commentary, (2) assessment of student learning, and (3) unit plan. Each critical performance must conform to all requirements described by the University of Toledo and must be completely satisfactorily before student teaching. Assignments that have a critical performance embedded with it are indicated with an asterisk.

Grading Scale:

	90-92 B+	80-82 C+	70-72 D+	62 or under F
95-100 A	86-89 B	76-79 C	66-69 D	
93-94 A-	83-85 B-	73-75 C-	63-65 D-	

Methods Course Graded Activities and Assignments

1. **Weekly Homework (20%)** This includes textbook assignments, writing assignments, guided lesson planning assignments, specific field-based activities and reflections. For example, you will be doing a discourse study of your classroom and writing up your findings to turn in. Full descriptions of the weekly assignments will be provided in class.
2. **Professionalism, Participation and Attendance (10%)** You are expected to be present, prompt, prepared and participating (the 4 Ps) during each class session. Points will be deducted when late, absent, without materials, or not engaged (this would include using your cell phone or a computer for non-class activities). In the teaching world we refer to the four Ps as acting professionally.
3. **Cycle One Post-Teaching Instructional Module/Short 3-5 Days Assignment (20%)**
4. ***Cycle Two Post-Teaching Unit/Long 10-15 Days Assignment (30%)** This assignment includes a critical performance.
5. **Final Exam (20%)** Date and Time to be Announce