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APR 10 2012

## The University Of Toledo

## 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 6180 Please input 2-4 characters for Item 3 Subject Area. Please input the 4-digit numeric code for Item 3.
4. Proposed title\*: Science adva 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 \*

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

C or higher in CI 6110, or CI 6120, or CI 6130, or CI 6140  
admission to SECE or MIDD LAMP program required

100 Max.

- ☐ PIN (Permission From Instructor) ☒ PDP (Permission From Department)

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

CI 6280 Science student teaching and internship

100 Max.

12. Catalog Description\* (75 words Maximum)

A continued in-depth study of methods and materials for teaching Science in middle and secondary classrooms with an emphasis on academic language and learning assessments; for LAMP Middle Childhood and AYA licensure only. Prerequisite: C or higher in CI 6110, 6120, 6130, or 6140. Co-requisite: CI 6280.

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 Sosaude Date 3-16-12

Department Chairperson: Heigh Chavelot Date 3/16/12

College Curriculum Authority or Chair: Rebecca Schneider Date 4-9-12

College Dean: Barbara J. Benjamin Date 4-9-12

Graduate Council: [Signature] Date 5-17-2012

Dean of Graduate Studies: [Signature] Date [ ]

Office of the Provost : [Signature] Date [ ]

### Administrative Use Only

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## CI 6180 Science advanced methods of teaching

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Instructor: Dr. Mark Templin

Email: [Mark.Templin@utoledo.edu](mailto:Mark.Templin@utoledo.edu)

Office Hours: 10-12:30 M, W

Phone: 530-8458

Office: 2000A Gillham Hall

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### Overview

This course is an advance study of content specific teaching and learning including: planning, teaching, student learning, reflection, and professional development. During the semester, emphasis will be placed on exploring appropriate teaching models that reflect the nature, method, and content of your discipline, the characteristics of students, and the nature of the instructional setting. The major course goal is to further develop and integrate ideas about teaching and learning introduced in previous courses and to provide you with appropriate experiences for growth as a professional science educator and the knowledge and tools to develop further.

**Prerequisites:** C or higher in CI 6110, or CI 6120, or CI 6130, or CI 6140

**Corequisite:** CI 6280 Science student teaching and internship

### Activities and Evaluation

Your performance will be evaluated on the following tasks for each of the two courses labeled A & B below:

#### Cycle 3: Content specific plan/teach/reflect cycle highlighting assessment of student learning

This is the third plan/teach/reflect cycle in the LAMP program. This cycle will highlight assessment plans and use of those plans to illustrate student learning in your content. Cycle 3 includes the following components:

- Series of lessons with rationale (following content specific guidelines)
- Videotape of inquiry lessons
- Assessment of student learning in your content area (highlighting assessment plan)

Content specific components being evaluated on this cycle are described below.

#### Cycle 4: Content specific plan/teach/reflect cycle for portfolio

This is the fourth plan/teach/reflect cycle in the LAMP program. **This set of materials will also be submitted online to EAS as your college assessment portfolio assignment.** It will include:

- Series of related lessons with rationale (following content specific guidelines)
- Videotape of an inquiry lesson with commentary
- Assessment of student learning in your content area
- Analysis of teaching and growth (both contents for MG)

These components match the Teacher Performance Assessment (TPA). All four components are described in the TPA handbook for each content area.

Content specific components being evaluated on this cycle are described below.

#### Content specific components to be embedded in cycles 3 and 4

Each plan/teach/reflect cycle (3 and 4) will be in a specific content area. Adolescent and Young Adult (AYA) candidates will use the same content specific directions for both Cycle 3 and 4. For example, an AYA science candidate will complete a science set for Cycle 3 and a science set for Cycle 4. Middle Grades (MG) candidates will use one content area for Cycle 3 and their other content area for Cycle 4. For example, a LA and science candidate will complete a LA set for one cycle and a science set for the other cycle. Which content area you will use for Cycle 3 will be the same content area you used for cycle 2 in the fall. Cycle 4 will be the same as the content for Cycle 1.

## Science

*Series of related lessons:* This will be a unit plan addressing a theme or driving question for approximately 2-3 week of instruction. In this unit, one lesson will focus on a student **investigation**, another on engaging students with **scientific phenomena**, and a third on student use of **learning technologies**. In addition, the unit must include a plan for teaching the **nature of science** and issues and context of science. As part of the unit design, students will include a **design rationale** based upon course content.

*Videotape of a lesson with commentary:* This video will be one of the three focus lessons listed above.

*Assessment of student learning:* Your analysis should include explicit components that will help middle or high school students develop and demonstrate their ideas about: 1) scientific facts, 2) scientific concepts, 3) scientific processes (inquiry skills), 4) the nature and history of science, 5) an issue in science, and 6) science in the community.

*Analysis of teaching and professional growth:* This will be science specific essay. (Note: This analysis is completed only for cycle 4.)

### *Safety in the science classroom.*

A safety plan ensures that you are familiar with safety procedures you can and should know as a practicing teacher. This should be a fully developed action plan containing all the information you need to safety guide and manage your classroom. Candidates must meet expectations or revise and resubmit plan until expectations are met in all categories.

**Safety map:** Candidate will draw a map of the classroom and a map of the school as a whole. The maps will include: (a) an analysis of the classroom for the presence of safety posters and safety equipment and label these locations on the classroom map; (b) use of different color arrows on the school map to show egress patterns for fire, tornado, and terror safety threats; (c) notes on the map indicating specific safety procedures such as: “bring the grade book,” “no talking in line, walk in single file during drills” or “bring medical records sheets on field trip”; and (d) classroom seating chart (s) with details such as power cord placement that show how students can move safely around the room.

**Classroom safety procedures and rules:** Candidates will develop classroom safety rules lists and post them visibly in the classroom (with mentor teacher permission).

**Safety instruction:** Candidates must discuss classroom protocol and safety rules and issues with class such as: following established emergency procedures, classroom rules, proper classroom behavior, potential hazards, compliance with laws governing ethical treatment of animals (if applicable) and collection of animals/bio-materials from the wild.

Classroom and laboratory safety contract: Candidate will develop a safety contract and send it home for parent signature (with mentor teacher permission).

**Assessment Scheme:** Assignments are due on the dates noted below. Grades will be lowered by one letter grade for each day an assignment is late unless prior arrangements are made with the professor. The requirements are subject to change and adaptation at the discretion of the professor. **Candidates must earn a grade of C or better on each assignment in order to earn a passing grade for the course.**

**Note:** Cycle 4 will be submitted to EAS for the College Assessment Portfolio. Successful completion of cycle 4 as described in the Teacher Professional Assessment (TPA) handbook is required in order to earn a passing grade for this course.

Assignment	Percent of Grade	Due Date
<b>Cycle 3: Content specific plan/teach/reflect cycle highlighting assessment of student learning</b> <ul style="list-style-type: none"> <li>• Series of lessons (following content specific guidelines)</li> <li>• Videotape of inquiry lessons (peer review)</li> <li>• Assessment of student learning in your content area (highlighting assessment plan)</li> </ul> Content specific components are evaluated on this cycle	50 Specifics components of grades defined by methods instructors	March 9
<b>Cycle 4: Content specific plan/teach/reflect cycle for portfolio (Note: each component must be passed with the TPA rubric for overall passing of course)</b> <ul style="list-style-type: none"> <li>• Series of lessons (following content specific guidelines)</li> <li>• Videotape of inquiry lesson with commentary</li> <li>• Assessment of student learning in your content area</li> <li>• Analysis of teaching and growth</li> </ul> Content specific components are evaluated on this cycle	50 Specifics components of grades defined by methods instructors	April 27
<b>Content specific components embedded in Cycles 3 and 4 Science</b> <ul style="list-style-type: none"> <li>• Investigation, science phenomena, technology</li> <li>• Nature of science (NOS); Issues and context of science</li> <li>• Assessment of science ideas (6 types)</li> <li>• Safety in the science classroom</li> </ul>	Embedded in above percents for cycles 2 and 3	Either March 9 or April 27