The University Of Toledo

New Graduate Course Proposal

* denotes required fields

   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 6240
   Please input 2-4 characters for Item 3 Subject Area. Please input the 4-digit numeric code for Item 3.

4. Proposed title*: Science pract
   Character 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? ☐ ☑
   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: 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 *
      Field

   b. Minimum Credit Hours *
      3 Please Enter Only Numbers

   Maximum Credit Hours *
      3 Please Enter Only Numbers
c. Weekly Contact Hours *  
8. Terms offered: ☑ Fall  ☑ Spring  ☑ Summer
   Years offered: ☑ Every Years  ☑ 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
   ☑ PIN (Permission From Instructor)  ☑ PDP (Permission From Department)
   Co-requisites (must be taken together):
   Cl6140 Science methods of teaching
   ☑ 100 Max.

12. Catalog Description* (75 words Maximum)
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: [Signature]
Date 3-16-12

Department Chairperson: [Signature]
Date 3/16/12

College Curriculum Authority or Chair: [Signature]
Date 7-9-12

College Dean: [Signature]
Date 7-6-12

Graduate Council:
Date 8-2-12

Dean of Graduate Studies:
Date

Office of the Provost:

Administrative Use Only

(YYYY/MM/DD)
CI 6240 Science Practicum  
Course Syllabus

Instructor:  
Email:  
Office Hours:  
Phone:  
Office: 2000 Gillham Hall  
Time/Location Course:  
Webpage: http://alcot.utoledo.edu

Overview

Designed for individuals planning to teach middle or high school science, this course explores both the teacher's and the students' role in the secondary science classroom. As prospective teachers (candidates) we will focus on the role of the teacher, but always with reference to the ways in which teachers interact with students to create positive environments that foster inquiry and promote learning. We will touch on numerous aspects of science classrooms including: designing curriculum, planning lessons, determining and adapting appropriate teaching methods, promoting inquiry, fostering dialogue, meeting district and national standards, using technology to promote learning, and assessing students' learning. The classroom-based portion of the course will focus on learning about teaching through enactment and interactions with students.

Prerequisites: Admission to SECE or MIDD LAMP program

Corequisite: CI 6140 Science Methods of Teaching

Driving Question

The following question will be the focus of our work in this class: What can a teacher do to promote motivation and learning in science classrooms? In addressing this question, we will focus on two topics that concern us as teachers: teaching and learning.

Objectives

During the semester, emphasis will be placed on exploring appropriate teaching models that reflect the nature, method and content of your domain; 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 content educator and the knowledge and tools to develop further. As perspective teachers (candidates), you will become designers of instructional materials. You will utilize the principles of design in developing lessons, curriculum, and assessments.

In the classroom, emphasis will be placed on exploring first-hand the characteristics of students, and the nature of the instructional setting, and enactment of appropriate instructional plans. For teachers this means knowing how to learn from students and enactment to improve practice.

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

1. Synthesizing a rationale for teaching content
2. Designing instruction, both daily and long term, for teaching the content and processes of your domain 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. Utilizing specific teaching methods that encourage inquiry and construction of understanding
5. Assessing students' ideas and learning
6. Reflecting on your instructional practices and student learning
7. Developing and presenting a professional manner and disposition

Activities and Evaluation
Your performance will be evaluated on the following:

Weekly reflection journal
This is informal writing to help you reflect on and learn from your experiences in the classroom. You will reflect on your learning about teaching science. This includes: 1) reflection on teaching you observe, your own teaching, and student learning your teaching, 2) questions about teaching science based on field or class experience, and 3) reflection on class activities. Initially, your entries will be observations of students and the interactions in the classroom. Later, during your teaching you can reflect on successes and challenges in the classroom and how your think you can improve your teaching. Each week you will be given a question to guide your reflection. Responses should be approximately one to two paragraphs.

Cycle 1 planning: Science Task
Intern will develop a plan for science task for a small group or whole class for 2-3 days of instruction. Plans may be developed from your mentor teachers’ plans and may focus on a specific science idea.

Cycle 2 planning: Inquiry Science Unit
Interns will develop an inquiry science unit that covers approximately 15 class days. You do not need to start from scratch but you must cite all of your sources for materials and ideas. Unit plans will include student learning objectives, science concept map, annotated calendar, and specific lesson plans. One lesson will focus on investigation, another on engaging students with phenomena, and third on student use of learning technologies. In addition, one lesson must include a performance-based assessment. As part of the unit design, students will include a design rationale based upon course content and students’ ideas based on enactment in your field experience.

In the classroom: At least four school days prior to teaching, you must discuss your plans with your instructor and your mentor teacher. Plans must be approved by both before you are allowed to teach. Teaching will be delayed if necessary.

Assessment of Student Learning
Interns will assess students’ science ideas before and after their cycle 2 teaching. Samples of student work will be collected and analyzed.

Teaching (in the classroom)
Interns will teach at least 2-3 day for Cycle One and at least 10 to 15 days for cycle Two of linked lessons to middle or high school students. A lesson addresses one or more learning objective but is not necessary 50 minutes. You will teach lessons from the unit you designed. You will critique this teaching experience. Evaluations will be provided by your cooperating teacher and university supervisor. You will videotape at least one lesson to submit with this assignment. You should plan to teach mid October to mid November. You will observe in the classroom both before and after your own teaching. Your teaching evaluation will include aspects of how you 1) guide student thinking and 2) your classroom rapport, management, and environment.

Video of teaching and commentary. You will video one lesson to highlight your inquiry teaching. Your edited video will be 20 minutes long and have no more than three segments. You will include a short written commentary describing the lesson.

Professional interaction (in the classroom)
As a teacher candidate you will need to think and behave professionally with students, your mentor teacher, other teachers and school personnel, your supervisor, and parents and guardians. This includes
developing a professional disposition or frame of mind. Your professionalism will be evaluated based on your behaviors and statements in the classroom, school, and community, and written work.

**Critical performances**
As part of your licensure program at the University of Toledo you will be completing a series of *critical performances*. *Critical performances* are program-based assessments of your readiness to continue at each phase of the licensure program. During the methods and field experience 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 requirement described by The University of Toledo and must be completed satisfactorily before student teaching.
Assessment Scheme: Assignments are due on the dates noted below. **You must submit an assignment on time in order to participate in the revision option.** 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.**

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<thead>
<tr>
<th>Assignments in the classroom</th>
<th>Percent of Grade</th>
<th>Due Date</th>
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<tbody>
<tr>
<td><strong>Assessment of Student Learning</strong>*</td>
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<tr>
<td>• Prior to lesson development</td>
<td>20</td>
<td></td>
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<td>• After lesson enactment</td>
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<tr>
<td><strong>Cycle 1: Planning Instructional Module (3-5 days)</strong></td>
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<tr>
<td>• Instructor evaluation 2 school days prior to teaching</td>
<td>15</td>
<td>9-13</td>
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<td>• Mentor teacher evaluation 2 school days prior to teaching</td>
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<td>• Field instructor evaluation 2 school days prior to teaching</td>
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<tr>
<td><strong>Cycle 2: Planning Unit (2 weeks)</strong></td>
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<tr>
<td>• Instructor evaluation 4 school days prior to teaching</td>
<td>20</td>
<td>10/25</td>
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<td>• Mentor teacher evaluation 4 school days prior to teaching</td>
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<tr>
<td>• Field instructor evaluation 4 school days prior to teaching</td>
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<tr>
<td><strong>Cycle 1: Teaching Instructional Module</strong></td>
<td>15</td>
<td>September</td>
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<tr>
<td>• Video of teaching with reflection</td>
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<td>• Field instructor evaluation</td>
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<td>• Mentor teacher evaluation</td>
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<tr>
<td><strong>Cycle 2: Teaching Unit</strong></td>
<td>20</td>
<td>November</td>
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<td>• Video of teaching with reflection*</td>
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<td>• Field instructor evaluation</td>
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<td>• Mentor teacher evaluation</td>
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<tr>
<td><strong>Weekly/daily reflections</strong></td>
<td>10</td>
<td>ongoing</td>
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*Critical performance