The University of Texas at San Antonio  
College of Education and Human Development  
Department of Interdisciplinary Learning and Teaching  

C&I 4203.004 Models of Teaching in the Content Areas  
of the Secondary Schools: Mathematics  
Spring 2010

“This Syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. I reserve the right to make any changes I deem necessary and/or appropriate. I will make my best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of these changes.”

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Classroom number: Main Building 1.304  
Final Exam: Monday, May 3, 2010 - 5:00 PM - 7:30 PM

Department of Interdisciplinary Learning and Teaching  

MISSION AND VISION

The mission of the department of ILT is to foster the intellectual and professional growth and integrity of students and faculty through critical reflection and dialogue, civic responsibility, and leadership. This mission will be accomplished by nurturing a community of interdisciplinary learners who:

- Promote excellence in academic and pedagogical knowledge and research  
- Engage in reflective practice  
- Embody a strong professional identity and can articulate their philosophies and values  
- Value diversity and multiple perspectives  
- Promote equality and social justice  
- Care about their students and their profession  
- Advocate for educational change and reform

GOALS

The department of ILT will create a context that nurtures interdisciplinary learners who:

- Acquire and demonstrate content and discipline knowledge  
- Demonstrate an awareness and acknowledgement of and engagement in research-based, reflective, culturally responsive practices  
- Are producers, disseminators, and critical consumers of research  
- Demonstrate an awareness and acknowledgment of and engagement in social justice and equitable practices  
- Articulate their professional philosophy and demonstrate a strong professional identity

CATALOG DESCRIPTION (2006-2008)
C&I 4203 Models of Teaching in the Content Areas of the Secondary Schools  
(3-0) 3 hours credit. Prerequisites: Admission to the Teacher Certification Program, EDP 3203, and EDU 2103. Prior or concurrent enrollment in EDP 4203 is required. (Not required for music majors.) Study of curricular, instructional, and management approaches to subject areas taught in the secondary schools.
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Emphasis on developing instructional and curricular strategies that are effective in teaching content areas. Course will address special population of students, application of instructional media, technology, and classroom management for the content areas. Twenty-five to 30 hours of field experience are required. This course may be offered in multiple sections according to subject-matter emphasis and may be offered in six-hour field-based block with RDG 3773. Not offered in the summer. Restricted course; advisor code required for registration. This course must be completed with a grade of “B” or better for it to serve as a prerequisite for C&I 4646 Student Teaching: Secondary. This course must be completed with a grade of “C” or better for it to serve as a prerequisite for C&I 4796 Student Teaching: All-Level Art.

COURSE GOALS
- To have a better understanding of the relationship between the secondary models of teaching and the mathematics teacher, student, content/standards, classroom/school/community, curriculum, instruction, and assessment; and
- To provide practical information about the design, development, implementation, and evaluation of mathematics curriculum, instruction, and assessment and classroom management. Including but not limited to mathematics enrichment units, literature in mathematics, and culturally relevant pedagogy for diversity in the classroom.

Course Objectives
In this course the student will be provided the opportunity to:
- Discuss theories of education in regard to high school mathematics issues,
- Identify and become familiar with secondary school NCTM Standards, College and Career Readiness Standards (CCRS) and the mathematics Texas Essential Knowledge and Skills (TEKS),
- Develop and present lessons reflecting a specific secondary school mathematics TEKS incorporating technology, Literature and the CCRS,
- Reflect in writing and orally about learning experiences at the field experience class,
- Create an e-professional within a wiki.

Academic excellence is a goal of educators. When teachers reflect upon their philosophy and values, examine their teaching style and preferences, consider their personality traits, and use this information when developing and delivering curriculum, instruction, and assessment, then academic excellence occurs. When professional judgment is used to make sound decisions regarding how to respect and address the cultural contexts, personal knowledge, and voices of each and every student in curriculum, instruction, and assessment, then academic excellence occurs. When school and district-level, state-mandated, and professional association standards are analyzed for clarity and purpose and developmentally appropriate content is identified, then academic excellence occurs. When the school (e.g., students, teachers, administrators, staff, parents) is true to its vision and mission, when the community (e.g.,
you and elderly, advantaged and disadvantaged) develops a sense of place, and when the school and the community work together for the betterment of each other, then academic excellence occurs. Academic excellence represents an accumulation of high standards, rigorous learning, and meaningful work occurring across time.

**COURSE RATIONALE**

Today, like never before teachers must take a more active part in designing curriculum that will prepare students for the ever-changing societal demands of the 21st century. In order to meet the needs of the diverse students in today’s classrooms, teachers need to understand a variety of teaching strategies, which are relevant and motivating to students and which are important in the development of curriculum and instruction. Students in this course will be provided opportunities in which to construct their own ideas about curriculum and instruction by participating in whole class and small group discussions, reflections on readings provided, class presentations, etc.

**USE OF TECHNOLOGY**

We live in a technological world, students are involved with technology on a daily basis, and technology should be utilized in the classroom as a teaching strategy to benefit students. With this in mind, various forms of technology as instructional tools will be implemented in this course. This will include, but not limited to, Moodle, WebCT/Blackboard, internet resources, vodcasts, video tapes and other computer software. The use of technology will be required not only in the writing of all written work submitted for evaluation but also for the projects (how-to-videos utilizing PowerPoint with and without tablets, and/or movie maker, vodcasts, etc) that will be created and presented.

NOTE: If you do not have Microsoft Office you can download [Open Office](http://www.openoffice.org) for free.

**Democratic Classroom:** In this course, democratic learning will be practiced. In a democratic classroom students and teachers work collaboratively in making decisions about what is to be learned; how learning and assessment should occur; and the importance of that learning. In a democratic classroom, the students and teacher collaboratively determine the structure.

**REQUIREMENTS/RECOMMENDATIONS**

**Required Text**


**Recommended Readings**


**Recommended Resources**


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The Texas Essential Knowledge and Skills (TEKS) for mathematics:
http://www.tea.state.tx.us/rules/tac/chapter111/index.html

The College and Career Readiness Standards for mathematics
http://www.pvamu.edu/pages/5544.asp

**Recommended Professional memberships**
It is recommended you join the National Council of Teachers of Mathematics or another professional organization (for example: National Middle School Association (NMSA)) that promotes your growth and development in mathematics education (the website for information on a NCTM membership is above in the recommended resources). Be sure to indicate a student membership. Most professional memberships send materials and journals that will help in your development as a teacher and in this class. With the NCTM membership you will get the *Mathematics Teaching in the Middle School* (5–9), a journal that features teaching concepts, issues, and practical ideas for the middle grades or another journal for high school. The journals concentrates on technology in the classroom, assessment, and the use of mathematics in the world around us and are published August through May with a December/January double-issue. They are filled with excellent activities and are worth the money you pay to join the organization(s)!

**INFORMATION ITEMS**

**Course Structure:** The class sessions will be a combination of discussion, lecture, presentations, whole group, and small group activities, and assignments.

No electronic recording of lectures or class sessions may be done without the prior permission of the instructor.

**Communication with the Instructor:** Your official means of communication from The University of Texas at San Antonio will be through moodle email account or for more immediate response the instructor’s email provided above.

**Participation:** You are expected to come to class prepared to participate actively in the class discussions of readings, activities, and experiences and to share with and learn from your fellow classmates. This includes thoughtful interaction with the readings for the class ahead of time, active participation in class discussions—both small group and large group, and careful attention to the contributions of classmates. This course is designed to enable you to participate in a collaborative learning community; most of class time will be spent on group discussions and activities. You are expected to participate fully in discussions. It is also important that you arrive to class in a timely manner. Tardiness or leaving early will affect your class participation grade.

**Attendance:** Attendance is required. You are expected to attend class. The absence of one individual affects the performance of all members of the class or working group. As a professional courtesy, promptness, and regular attendance should be the rule. Be aware that some of the information is announced during class meetings only.
After the first absence each additional absence, will affect your grade by 5 additional points each, regardless if the absence is excused or unexcused. Missing more than thirty minutes of a class, (arriving late or leaving class early) will be considered an unexcused absence.

Absentees are responsible for all materials distributed or discussed. It is the student’s responsibility to sign in on the attendance sheet each class period, failure to do so will be an absence. If student is absent for more than 50% of the total class periods, a grade of “F” will be assigned.
If you have to miss a class for any reason, please notify me by email or contact me immediately to discuss your situation. It is your responsibility to arrange with a colleague to obtain any missed information or assignments. You are also responsible for all assignments that are due the class following your absence.

An **excused absence** is one that arises from a medical condition or an emergency or an event that keeps you from attending all of your classes. It is each student’s responsibility to make up the work and **provide evidence** of excused absence (doctor’s excuse, conference registration, etc). Please be prepared to provide documentation for an excused absence upon your return.

**All other absences are unexcused.** In the event of an unplanned unexcused absence (e.g., babysitting, oversleeping, etc.), you must submit your work before the next class period.

**Assignments:**
The following format is required for every assignment submitted. Deviating from the format may result in reduced points, returned paper, or rejection of the assignment completely. All submissions will be done via the class moodle or the course wiki (if available). **All assignments must have a header** with student name, assignment title and date submitted, be double-spaced, in either 12-point Helvetica, or 12-point New Times Roman font.

**Policy on Late Assignments:** Assignments should be turned in by the announced due dates. Only assignments submitted complete and on time via moodle will be considered for full credit. Some late work may be accepted after deadline but points will be deducted accordingly. Any assignments turned more than one week late will receive zero points. Resubmission of assignments for improved grades will not be accepted, therefore in case a health or family emergency prevents you from turning in an assignment by the due date please see me immediately to work out an alternative due date. You are encouraged to seek assistance and feedback prior to due dates so as not to fail to submit assignments by due date.

**Scholastic Integrity:** Students are expected to be above reproach in scholastic activities. Students who violate university rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the university. “Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts” (Regent’s Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, subdivision 3.22). Since scholastic dishonesty harms the individual, all students and the integrity of the university, policies on scholastic dishonesty will be strictly enforced.

**Fitness to Teach Policy:** The COEHD’s “Fitness to Teach Policy” specifically addresses issues of attendance, dispositions, professionalism, and scholarship. Students are advised to review the policy at the following url: [http://www.utsa.edu/hop/chapter5/5-17.htm](http://www.utsa.edu/hop/chapter5/5-17.htm)

**Honor System**
We will adhere to the UTSA student code of conduct in this course: [http://www.utsa.edu/osja/conductoutline.cfm](http://www.utsa.edu/osja/conductoutline.cfm). All assignments, activities, and exams for this course are under an honor system. Please cite all sources of information for your work using the APA format/style. Because a major purpose of many of the assignments for this course is to provide you with experience in utilizing various sources of information and ideas, I encourage you to incorporate from outside sources. Again, please provide all sources of these ideas. Please feel free to ask me if you have any questions about what is acceptable.

**Accommodations**
UTSA students with documented disabilities have access to an array of support services through the Office of Disability Services (office: MS 2.03.18; phone: 458-4157; 458-4981; Downtown FS 1.526, 458-2816; web: [http://www.utsa.edu/disability/](http://www.utsa.edu/disability/)).
It is my goal to fully include all persons in this course. Students with disabilities must be registered with the Office of Disability Services in order to receive support services. Register with the Office of Disabilities Services and let me know via a letter from the Office of Disabilities Services if you have a special need(s) that will require any accommodations in the curriculum, instruction, or assessments of this course in order to enable you to successfully participate. I will maintain the confidentiality of the information that you share with me.

**COEHD Policies and Procedures**

Students are expected to demonstrate professional conduct and attire during class sessions (see Fitness to Teach policy document located in the Department website) and during field experience. All cell phones and beepers must be turned off during class periods unless the instructor grants prior permission.

The instructor will follow all the policies and procedures, in regard to students, as they are specified in the UTSA Faculty Handbook and the Fitness to Teach Policy document. Any incidence of scholastic dishonesty or other student discipline issues will be managed as the Handbook specifies (Faculty Handbook, Section 2.37, pages IV-3li-vi).

**Conduct Expected of Students**

“A student is expected and required to obey federal, state and local laws, to comply with the Regent's Rules and Regulations, with University Rules and Regulations, with directives issued by an administrative official of the System or the University in the course of his or her authorized duties, and to observe standards of conduct appropriate for an academic institution” (Student Code of Conduct, sect. 201). For more information go to: http://www.utsa.edu/osja/conductoutline.cfm

**University Policy on Academic Dishonesty**

*University Policy on Academic Dishonesty:* Students are expected to be above reproach in scholastic activities. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University. "Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts" (UT Regent's Rules of Regulation). Since scholastic dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. If you have any questions about this (especially what constitutes plagiarism), please stop by my office and I'd be most happy to discuss it. You can also refer to the UTSA Student Code of Conduct on scholastic dishonesty and disciplinary action. This is available at: http://www.utsa.edu/OSJA/index.cfm

**Academic Success and the Tomás Rivera Center**

*Academic Success and the Tomás Rivera Center:* The TRC provides an array of services to assist student in achieving learning success. A large proportion of beginning students find that the skills they develop in high school may not be adequate for success at the college level. The TRC provides training and assistance in such areas as study skills, test taking strategies, note taking skills, etc. The Center also has individual advising and tutoring for some courses. At the moment, tutoring is not available for this course but the various skills workshops that they run along with individual advising may prove extremely helpful. The TRC is located in the University Center 1.01.02 (far west end of the UC). You can reach them via the web (www.utsa.edu/trcss) or by phone (458-4694).

**FLEXIBILITY CLAUSE:**

Flexibility is one key to learning. The instructor reserves the right to modify or change assignments, sequence of assignments, or weight of assignments as necessary and as reflected by the needs of individual students or the group during the semester. This course outline represents a tentative listing of information and modifications may
be assigned as necessary and appropriate. If you are not in class, you may miss important information that directly affects your grade.

COURSE REQUIREMENTS
C&I 4203 (Spring 2010)
Models of Teaching in the Content Areas of the Secondary Schools: Mathematics

1. **Class Participation/Attendance (10 points)**
   It is expected that students will participate fully in all aspects of the class including discussions, and complete all assignments/activities.

   Attendance is **essential** in this course. Activities related to portfolio development will be periodically completed during the class and you will miss out on these opportunities if you are absent. As a professional, **courtesy**, **promptness**, and **regular attendance** should be the rule. If you know you are going to be absent, please discuss it with the instructor prior to the absence. Missing more than thirty minutes of a class will be considered an absence. Unless approved, 3 absences will equate to a 10 point deduction in final grade. Absentees are responsible for all materials distributed or discussed. Students will be expected to sign the attendance sheet daily.

   The following outline is a tentative plan for assessment of assignments. Final participation grades are based on a growing mastery of teaching and learning techniques/strategies in mathematics. Grades will be determined by individual growth and development.

2. **Philosophy of Teaching (15 points):**
   Twice during the semester, you will be asked to write a statement on your philosophy of teaching mathematics. The first statement is due during the 3rd class meeting (5 pts). This statement will serve as a baseline for growth over the semester. A revised philosophy will be written at the end of the semester (10 pts).

   **Philosophy of Mathematics Teaching: Initial Statement**
   A philosophy is a statement that describes your personal values, beliefs, aims, and goals as they relate to a particular context or topic. As you enter the field of mathematics teaching, you should carefully consider your thoughts about teaching, about mathematics, and about your own ambitions related to this new career.

   **Initial Philosophy Assignment Expectations:**
   In 1-2 pages, write your philosophy of mathematics teaching. Answer each of the following:

   - According to your experience, what is the purpose of mathematics education?
   - What special skills/knowledge/background/history do you have that will make for a positive classroom experience?
   - How is your particular content area important to a child’s education?
   - What teaching strategies best help students learn mathematics?
   - Over the long term, what do you hope to achieve as a mathematics teacher?

   Please respond to these 5 questions in your philosophy essay, and to better organize my reading of your paper, please use the questions as subheadings in your paper. Please bring two print copies of your philosophy statement to class on the date due. One paper will be turned in at the beginning of the class period; the other will be used for class discussion.
A revised philosophy of mathematics teaching will be due at the end of the semester.

For additional information on statements of philosophy, please visit this Ohio State University website. However, you are not required to visit this site as part of the requirements of this writing assignment. The website can be found at this URL: http://ftad.osu.edu/portfolio/philosophy/Philosophy.html.

3. Teaching an Enrichment Unit with a Teaching Strategy (10 points)

Each student will be responsible for taking the lead in the teaching of an enrichment lesson (from the book’s enrichment units section or one of your own choice as approved by instructor). This should be very similar to being a teacher and introducing/teaching a short lesson (15-20 minutes max). You should focus on grade level TEKS and the NCTM standards.

Teaching this lesson will require that you prepare very carefully, thinking about teaching strategies that you might present to engage all students present. You might want to think of ways to expand the lesson by bringing items to support the participation of students. Items to consider to support the lesson may include but are not limited to journal articles, pictures, short videos clips, technologies, calculators, manipulatives, etc.

You should post your lesson plan electronically via moodle. You should meet with the professor to discuss what you decide to do at least two days before your presentation. Present any questions to me at least 2 days before our class meeting.

Presentations are tentatively scheduled for March 8, 2010.

4. Field Experience (25 points):

A requirement for any course with field experiences in the schools is that every UTSA student must submit to a criminal history check. Students are not allowed in a school until this check is conducted and confirmed by our administration. Successful completion of the field experience is required for obtaining course credit. This includes 10 weeks of observing and teaching in a high school. A course grade cannot be determined until documentation of satisfactory completion of fieldwork has been provided. Specific guidelines for the field experience will be provided. Students must demonstrate professional conduct and attire that is appropriate for teaching young adolescents in educational settings. Students must adhere to all policies and regulations of the school or facility serving as a field-base site. Any breach of professional ethics or conduct deemed unsuitable by the cooperating teacher in the field placement and the course instructor could result in the student being dropped from the course or disciplinary action by the university following the policies specified in the UTSA Faculty Handbook.

- For this class you are to keep a journal where you describe and reflect upon your experiences at the campus. You are required to provide the instructor a copy of Progressive Field Experience journal (3 times): 3 short reflection papers (2 page maximum) and a wordle of the paper about your experiences in the classroom at the end of each of the three intervals of the field experience. After week 2, week 6 and week 10{Due Date: TBA depends on FE schedule}
- Mentor Teacher Classroom Lesson Evaluation Form of lesson taught to Field Experience class.
- Mentor teacher’s surveys/evaluations (at least 2), [surveys will be sent to mentor teacher by instructor]
- Final Evaluation Form for Mentor Teacher
- copy of your field placement logs three times during the semester, also submit logs to the Teacher Education Office (MB 0.500)
5. **4 Lesson Plans/Presentations (40 points)**
You will be working on creating 4 lesson plans (one involving literature to teach mathematics and 3 culturally relevant lessons. Template will be provided for you. Be sure that all elements are complete. You will be asked to present your lesson to your fellow classmates and present the same or another (mentor teacher’s approved) lesson at your field experience classroom. You are required to provide your instructor:
- copy of **complete** lesson plans [follow Lesson Plan Template].
- presentation of lessons to peers, and
- Reflection paper of your lessons and presentations. {Due date: TBA}

NOTES on Culturally Relevant Teaching:

Type I: Highly individualized, teacher directed, teaching as performance, competitive

Type II: Teacher as facilitator, teaching as performance, mediating instruction

Type III: Student focused, guided instruction, creating space for learning to take place. Context and process is so refined that the content will happen.