The University of Texas at San Antonio
College of Education and Human Development
Department of Interdisciplinary Learning and Teaching
C&I 4443.001 Approaches to Teaching Math 4-8
Spring, 2010

Instructor: Jessica Sutton
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Class Meetings: Thursdays 5:30 – 8:15 PM 1604 Campus
Classroom number: HSS 3.04.28 1604 Campus

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

Study of curricula, instructional, and management approaches to teaching math grades 4–8. This course emphasizes a constructivist approach in developing inductive and inquiry teaching methods. Special emphasis is placed on the integration of technology in diverse learning environments. A minimum of 20 hours of interaction with public school students and teachers under the supervision of University faculty is required.

COURSE GOALS

- To have a better understanding of the relationship between the science teacher, student, content/standards, classroom/school/community, curriculum, instruction, and assessment; and
- To provide practical information about the design, development, implementation, and evaluation of science curriculum, instruction, and assessment and classroom management.

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.
INFORMATION ITEMS

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: http://www.utsa.edu/hop/chapter5/5-17.htm

Communication with the Instructor: Your official means of communication from The University of Texas at San Antonio Teaching will be through your UTSA email account.

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 typed, SINGLE-spaced one side only, in either 12 point Helvetica, or 12 point New Times Roman font. All papers are to be stapled (no paperclips).

Policy on Late Assignments: Assignments should be turned in by the announced due dates. Only assignments submitted complete and on time will be considered for full credit. 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 contact the instructor 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.

Required Text

None

Recommended Resources


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

Recommended Readings


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. The journal concentrates on technology in the classroom, assessment, and the use of mathematics in the world around us and is published August through May with a December/January double-issue. It is filled with excellent activities and is worth the money you pay to join the organization!

COURSE REQUIREMENTS
Class Participation/Attendance/Competencies/Activities (5 points): It is expected that students will participate fully in all aspects of the class. 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, each absence will equate to a deduction of 1 point. Absentees are responsible for all materials distributed or discussed. Students will be expected to sign the attendance sheet daily. Activities related to portfolio development will be periodically completed during the class.

Leading our Class Discussion through Minutes (5 points)
Each week, one student will be responsible for taking class minutes. This should be very similar to being a secretary and taking minutes at a meeting. You should focus on important issues and questions that emerge during the class discussion or activities. Taking the class minutes of our class discussions/activities will require that you write very carefully, thinking about discussion topics that you might succinctly present the next week for our discussion. You might want to examine the week’s minutes to assist you in thinking about ways to expand our classroom discussion the following week. Please bring in items to support your discussion of the minutes. These may include examples of student work, lesson plans, journal articles, curriculum materials, and pictures or short video clips, etc. You should send the minutes to the instructor via email and present any questions at least 2 days before our class meeting.

Field Experience (20 points):
A requirement for any course with field experiences in the schools is that every UTSA student must submit to a criminal history check. No students are 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 20 hours of observing and teaching in a middle 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. Weekly Progressive Field Experience
Student Reflections and Reports will be required.

Portfolio Components based on Conceptual Framework of Teaching Practice (70 points):

1. Teacher
   ❖ Who am I as a mathematics teacher?
2. Student
   ❖ Who are my mathematics students?
3. Content/Standards
   ❖ What is mathematics?
   ❖ How do I use the mathematics standards?
   ❖ How do I use the mathematics TEKS?
4. Classroom/School/Community
   ❖ How do I set up my mathematics classroom?
   ❖ How is mathematics used in the community?
5. Curriculum
   ❖ What curricular models should I use in mathematics?
   ❖ What interactive mathematics websites should I use?
   ❖ How is mathematics taught as a separate subject?
6. Instruction
   ❖ How do I plan a mathematics design down lesson?
   ❖ What mathematics strategies should I use?
7. Assessment
   ❖ What traditional assessments should I use in mathematics?
   ❖ What alternative assessments do I use in mathematics?
   ❖ How do I use formative assessment in mathematics?

90 – 100 points = A 80 – 89 points = B 70 – 79 points = C Below 70 points = F

Honor System
We will adhere to the UTSA student code of conduct in this course: 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/).

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). 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).

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. According to The Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22, "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, and act designed to give unfair advantage to a student or the attempt to commit such acts." Since scholastic dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.

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

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

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).
**Tentative Schedule**
Please note: Course content may vary from the outline to meet the needs of this particular group or because of unforeseen circumstances.

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<tr>
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<tbody>
<tr>
<td>• Field Experience Expectations</td>
<td>• Who am I as a math teacher?</td>
<td>• Who are my math students?</td>
<td>• What is mathematics?</td>
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<tr>
<td>• Introductions</td>
<td>• What characteristics make teachers motivational and inspiring to their students?</td>
<td>- Regular Education Students</td>
<td>• How do I use the math standards?</td>
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<tr>
<td>• Course Information</td>
<td>• What can teachers do to make a difference in the lives of students?</td>
<td>- Special Education students</td>
<td>• How do I use the math TEKS?</td>
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<td>• Conceptual Framework of Teaching Practice</td>
<td>• “Who am I as a math teacher?”</td>
<td>- GT students</td>
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<td>• Teacher Toolbox</td>
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<td>- ESL students</td>
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<tr>
<td>HW:</td>
<td></td>
<td>Pick a topic for presentation.</td>
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<tr>
<td>Print 8th Grade TAKS Released Test for April 2009</td>
<td>HW:</td>
<td>HW: Article: Banishing Boredom</td>
<td>Turn in topic with group names.</td>
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<tr>
<td>One paragraph – Who Am I As A Math Teacher?</td>
<td>HW:</td>
<td>Article: Diversity In The Classroom and Teaching Mathematics and English to English Language Learners Simultaneously</td>
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<tr>
<td>Article: Rules For Being A Middle School Teacher</td>
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<tr>
<th>January 28, 2010 (No Class)</th>
<th>February 25, 2010</th>
<th>February 4, 2010</th>
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<tbody>
<tr>
<td>• How do I plan a math design down lesson?</td>
<td>• What math strategies should I use?</td>
<td>• What traditional assessments should I use in math?</td>
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<tr>
<td>• What is a math concept contract?</td>
<td>• Centers in the math classroom – “Create a Center” Activity (Lesson Plan #1)</td>
<td>• What alternative assessments do I use for math?</td>
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<tr>
<td>• How is math taught as a separate subject?</td>
<td>HW: Article: Students Use Graphic Organizers to Improve Mathematical Problem-Solving Communications</td>
<td>• How do I use formative assessment in math?</td>
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<td>HW: Article: This We Believe: Keys to Educating Young Adolescents</td>
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<td>• How do I set up my math classroom?</td>
<td>• What curricular models should I use in math?</td>
<td>• How do I plan a math design down lesson?</td>
<td>• What traditional assessments should I use in math?</td>
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<td>• How is math used in the community?</td>
<td>• What interactive math websites should I use?</td>
<td>• What math strategies should I use?</td>
<td>• What alternative assessments do I use for math?</td>
</tr>
<tr>
<td>• What does a middle school classroom look like?</td>
<td>• What is a math concept contract?</td>
<td>• Centers in the math classroom – “Create a Center” Activity (Lesson Plan #1)</td>
<td>• How do I use formative assessment in math?</td>
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<tr>
<td>• Classroom Discipline</td>
<td>• How is math taught as a separate subject?</td>
<td>HW: Article: This We Believe: Keys to Educating Young Adolescents</td>
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<tr>
<td>• Create rubric for class</td>
<td>HW: Article: What Makes Great Middle Level Educators? and Homework</td>
<td>HW: Article: Students Use Graphic Organizers to Improve Mathematical Problem-Solving Communications</td>
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<th>March 4, 2010</th>
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<tbody>
<tr>
<td>• What traditional assessments should I use in math?</td>
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<tr>
<td>• What alternative assessments do I use for math?</td>
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<p>| Article: Students Use Graphic Organizers to Improve Mathematical Problem-Solving Communications |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Tasks</th>
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| March 11, 2010 | - Work on TEKS Analysis  
- Work on Lesson Plans #1 (Partner) and #2 (TEKS Analysis) and #3 Cultural Diversity  
- Work on “Who am I as a math teacher?” |
| March 18, 2010 | - Spring Break!! 😊                                                   |
| March 25, 2010 | - Work on TEKS Analysis  
- Work on Lesson Plans #1 (Partner) and #2 (TEKS Analysis) and #3 Cultural Diversity |
| April 8, 2010 | - TEKS Analysis Due  
- Lesson Plan #1 Due (Presentation)  
- #2 (TEKS Analysis) Due |
| April 15, 2010 | - Lesson Plan #2 Due  
- Lesson Plan #1 Presentations |
| April 22, 2010 | - Lesson Plan #3 Due  
- Lesson #3 Presentation  
- “Who am I as a math teacher?” Due |
| May 1, 2010   | - 5:00pm – 7:30pm                                                   |