Department of Interdisciplinary Learning and Teaching – ILT

Mission
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

Course Description
C & I 4353 Approaches to Teaching Science EC-6
Prerequisites: Admission to Teacher Certification Program, ECE 3143, ECE 3313, and ECE 3603
Concurrent enrollment in: ECE 4203, C & I 4403, and RDG 3823
Course Description: A study of pedagogical approaches, materials, and resources designed to support children’s meaningful exploration, discovery, and construction of basic concepts and skills in EC-Grade 6. Emphasis in the course will be on the interrelatedness of science in the daily lives of students, unifying concepts and processes common to all sciences, development of effective learning environments for science both inside and outside of the classroom, planning and implementation of inquiry-based science lessons, assessment of student learning, and the use of an integrated approach to teaching. This course must be completed with a “B” or better for it to serve as a prerequisite for C & I 4616
Student Teaching: EC-Grade 6. Restricted course: advisor code required for registration.
Field experiences required.

**Rationale**
The early grades of Early Childhood through grade 6 provide prime opportunities for teachers to work with students on developing, exploring, and understanding the science curricula. Teacher candidates must learn how to apply the knowledge and concepts of science curriculum within classroom settings using a variety of teaching models, explorations, and strategies. This will be done in an EC-6 school environment that will allow candidates to work directly with classroom teachers and students in an ongoing school context of learning and reflection. Emphasis will be placed on constructivist and socio-constructivist theoretical frameworks for the development of all learners. While the focus of this course will be on science curricula, there will be expectations for integration across other content areas.

**Course Objectives**
The student will be given the opportunity to:

1. examine the PreKindergarten Guidelines and K-6 Texas Essential Knowledge and Skills (TEKS) in science and relate these standards to instructional practices in diverse settings.

2. develop an understanding of various teaching models that reflect research-based instructional methods and strategies and to be able to apply this knowledge to teaching and learning specifically related to science.

3. develop an understanding of, and competency in using, lab materials that also promote safety awareness for children in grades EC-6. Go to www.utdanacenter.org, the Dana Center for a list of safety guidelines for science materials.

4. emphasize the interdisciplinary relatedness of instruction while systematically developing foundational competencies in science.

5. plan, implement, monitor, assess, and differentiate instruction to enhance the learning of all students within classrooms.

6. develop lesson plans and projects that are free from bias, take into account children’s diverse languages, culture, and communities and that provide active, meaningful learning opportunities consistent with community norms and the goals of the instructional program.

7. become familiar with available programs, instructional approaches, and ways to organize classroom environments relevant to instruction in science.

8. implement and monitor the use of technology as a tool for teaching and learning.

9. develop and apply principles of classroom management that facilitate a classroom ecology that promotes success for all learners.

10. develop and refine knowledge of authentic assessments in science and to apply this understanding to ongoing instruction in the classroom.

**Required Texts**
Overview of Course Requirements

Field Work
Extensive field experiences, offering preservice teachers opportunities to interact with diverse children, are closely linked with coursework in C&I 4353. These field experiences allow students to extend and refine their understanding of children, children’s learning and development and teachers’ work, under the supervision of university professors and cooperating teachers in elementary schools. Field experiences include, but are not limited to, instructional activities with students in the assigned classroom, observing lessons conducted by university professors in elementary schools, participation in faculty and parent meetings, participation in extracurricular school activities, and experiences in special area classrooms. Although no individual grade is attached to field work, assignments cannot be completed without completing the required time for field work. A student failing to complete the required field work will not receive a grade for the course or may receive a failing grade for the course.

It is expected that preservice teachers interact with children, not simply observe classroom routines and practices, during the field placement. Field work will consist of assisting/interacting with children during learning activities as well as the teaching of actual lessons. Preservice teachers will work with children in large and small groups as well as one-to-one, as requested by the cooperating teacher. Students enrolled in field-based classes are required to pass a criminal history screening prior to participation in learning opportunities with children. In addition, you must have your UTSA student i.d. visible at all times while on the elementary school campus.

All teacher candidates enrolled in a course that includes a field placement will be responsible for meeting the same course requirements for field experiences regardless of their employment status. Teacher candidates who work in an area school district or another educational environment will be required to complete their field experiences outside of their place of employment. Teacher candidates must remain in the assigned field placement throughout the semester or as required by the instructor. This means that teacher candidates must complete their required field experience for the duration of the semester or for the duration of the placement as described by the instructor. Teacher candidates may not alter their assigned schedule or placement in any way and may not choose their own field placements.

It is also mandatory that you maintain the following attitudes:
- **Preparedness.** Complete your assignments on time. Be ready for class and be prepared to teach your lessons with your elementary students. Being prepared is crucial in teaching.

- **Professionalism** includes (but is not limited to) the way in which we present ourselves in the school in which we’ll be working. The way we dress and act is important to our projection as teachers to both the students in the school as well as to the other teachers and administrators.

Any breach of professional ethics or conduct deemed unsuitable by the cooperating teacher in the field placement and/or 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 Fitness to Teach Guidelines and/or the UTSA Student Handbook.

Note: During the semester you will be using materials from the field-based elementary school and/or from your instructor. You are encouraged to use these materials and are expected to return the materials as soon as you are finished. All materials must be returned by the last day of class. A grade of “Incomplete” will be assigned for students who have not returned all materials by the last day of class.

**In addition, please keep in mind the following field work policies:**

- All teacher candidates enrolled in a course that includes a field placement will be responsible for meeting the same course requirements for field experiences regardless of their employment status. Teacher candidates who work in an area school district or another educational environment will be required to complete their field experiences outside of their place of employment.

- Teacher candidates must remain in the assigned field placement throughout the semester. Teacher candidates may not alter their assigned schedule or placement in any way and may not choose their own field placements.

- The completion of the minimum number of field experience days as required by the individual courses is required for a passing grade. Teacher candidates who do not meet the minimum requirement of field experience hours as required by the course will automatically receive an “F”.

- Students enrolled in field-based classes are required to pass a criminal history screening prior to participation in learning opportunities with children. UTSA student identification badges must be visible at all times while on the elementary school campus.

**If you must miss a field experience day or if you are going to be late to your field site, you are responsible for calling the school before 8:00 a.m and leaving a message for your classroom teacher and your course instructor.**

**Assignments**
Grading criteria and specifications for each assignment will be given by the instructor. **The following conditions apply to all assignments:**

1. Assignments must be turned in on the specified due date. **Assignments are due at the beginning of class.** Assignments that are submitted late will only be evaluated at the discretion of the instructor. A penalty of 5% will be deducted for each day late.

2. Assignments must be complete upon submission. No incomplete assignments will be accepted. Resubmissions may be requested by the instructor.
3. All written assignments must reflect competence in grammar, spelling, punctuation, and sentence construction. Assignments should be neat and error free. Points will be deducted for excessive, extraneous mistakes.
4. Other assignments will require the use of Blackboard and/or other electronic platforms. Facilities are available to students on campus for this purpose.
5. Some assignments must be prepared on a computer using appropriate word processing software. The student’s name and date should be included as a header on every page of the assignment.

**Field Work**
The student must complete supervised field work in an assigned classroom within a PK-6 public school setting or no grade will be given for the course. Field work will occur every Wednesday for the entire school day (7:45-3). Field experiences are an important class component and mandatory for completing the course. One-third of the course grade is derived from field work experiences. These points are embedded in course assignments that require observation and interaction within your field-placement classroom. These assignments include: Lessons and Reflections, Reflective Blog sessions and Project Choices (when applicable).

**Project WILD**
Project WILD is an interdisciplinary conservation and environmental education program for PK-12th grade students. During the semester, students will be required to attend a full-day Project WILD workshop from 8:30 a.m.- 4:00 p.m. The workshop will take place on a regularly scheduled class/or field day. Students who successfully complete Project WILD training will earn certification as a Project WILD environmental educator. Attendance is mandatory and cannot be made up. All students are required to attend for the full day, regardless of whether have taken a previous workshop at some other time. All activities will occur outdoors, so students are to dress appropriately for the weather and setting. In addition, students must bring a sack lunch along with plenty of water as no vending machines/food is available on-site.

**Lessons and Reflections**
Under the supervision of the cooperating teacher (substitute teachers are not valid supervisors), the student will plan and teach three lessons in their field-based classroom during the semester. Keep in mind the following when planning lessons:
- ALL lessons must relate to students’ lives and/or communities
- ALL lessons must be hands-on and actively involve all students
- At least one must include and incorporate cognitive reading structures (taught in RDG 3823)
- At least one must incorporate the use technology
- At least one must include and incorporate an activity from Project WILD
- At least one will include an original rubric to evaluate student understanding

Lessons will be planned for large group and/or small group instruction. The students will be expected to show evidence in their lesson plans of addressing the TEKS and the diverse and multicultural needs and abilities of the children in their field placement classroom. The lessons will follow the 5E lesson format that will be extensively covered in class.

Lessons must be submitted to the course instructor and the cooperating teacher prior to teaching. Lesson plans must be turned in to the instructor for grading and feedback according to the deadlines designated in the course schedule. Lessons taught without prior approval from the instructor will not graded, and you will not receive credit for teaching it. All lessons need to be evaluated by the cooperating teacher. Additionally, after lessons have been taught, the student is to use the reflection guidelines set forth by the instructor to evaluate their lesson. Additional information regarding this assignment is uploaded onto Blackboard.
Once you have taught your lesson and completed your reflection, you will need to turn in:

1. **Original graded lesson plans with peer and instructor comments (CT must sign and date the rough draft).** All draft feedback given (even electronic dialogue) needs to be printed and included. No grade will be given without this evidence.
2. **Corrected lesson plan that was actually taught,**
3. **Student self-evaluation reflection,**
4. **Cooperating teacher’s evaluation,** and
5. **Student work and/or evidence of activities covered in the lesson (copies of student work, photos of group activities, etc.).**

Deadlines for these submissions can be found on the attached course schedule.

**Integrated Math/Science WebQuest**

In small groups, students will be expected to develop and create in integrated math/ science WebQuest. This assignment will be a joint assignment between C&I 4403 and C&I 4353. A WebQuest is an inquiry-based learning activity that is centered on a guiding question that students investigate using information from resources like the internet. For this course, this assignment contains two parts: 1) Students are required to work as a group and design their own WebQuest that integrates math and science. 2) Students will be required to submit a copy of the WebQuest to the instructor prior to the group presentation for feedback and suggestions. The WebQuest will not have to be posted to the web, but it must be appropriate for grades PK-6. Additional information, directions and evaluation information will be posted on WebCT. For C&I 4353, students will be evaluated on the specific science components that are embedded within the WebQuest. Additional information will be provided in class.

**Globe Mini Unit**

Using the *Globe Elementary Curriculum* as a foundation, your group will compile a resource file that includes the components outlined below. The first four items are required. Additionally, your group will select 3 of the 5 remaining options to include in your unit. The final product will be shared in a well thought out, electronic presentation and posted on WebCT. Specific requirements for each item will be discussed further in class.

**Required elements:**

- Reading mini lesson that targets any of the cognitive reading structures covered in RDG 3823
- Three center ideas that support the Globe curriculum
- A daily math practice guide
- A podcast or vodcast that extends student understanding of a particular concept covered in the curriculum

**Choice elements (as a group, select 3)**

- A reader’s theater script of the Globe book or of a related piece of literature
- Five additional children’s literature resources (annotated)
- Two fine art extensions with rationale and directions
- A recording sheet that can be used for a related fieldtrip destination
- A poem/ song with lyrics that supports the concept

**HandsOn, Minds-On Inquiry Activity**

For this assignment, students will create a compact experiment that teaches a specific content strand in science. The experiment will align to the science content standards and specific TEKS for your grade level. This will not be a teacher facilitated inquiry, but rather an independent activity for in individual or a small group of children. All materials and directions will fit inside a shoebox size container. This compactness will demonstrate that you can use hands-on, minds-on inquiry learning in centers, with
buddies in another grade level/classroom, outside, at home, etc. Although a science lab is an amazing resource, many schools do not have formal science labs available. Portability/flexibility then becomes a key factor to ensure that science instruction does not become a mindless, worksheet based content area. We will present all the different activities at our class science fair.

**Reflective Blog Sessions**
A blog is an electronic tool used by many to reflect on daily events, activities, and topics. Blogs can be created by one individual or a group of individuals. For more information on blogs, visit [http://www.blogger.com/tour_start.g](http://www.blogger.com/tour_start.g)

According to timelines established by the class, students will participate in blogs on WebCT. These topics will be directly related to field work and cannot be completed apart from field experiences. Blog questions will be posted by in the instructor after class. Students will be expected to post a substantive response to each of the questions with a minimum of one well constructed paragraph. Responses should draw from personal experiences, class readings and discussions, and should particularly incorporate experiences or things noticed from field placement classrooms. You are also to read and comment on 1 (or more) other student’s responses. Such comments should be substantive, beyond “great stuff” to reflect comprehension and thoughtful commentary. Comments need not be lengthy, but should be clear and professional. The blog dates are on the course schedule.

**Student Evaluation**
Evaluation of student performance in this course is based on a combination of assessments/outcome based options to determine student understanding of course objectives. The final grade in the course will be calculated in the following manner:

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attendance</td>
<td>See Syllabus</td>
</tr>
<tr>
<td>Professionalism</td>
<td>15 points</td>
</tr>
<tr>
<td>Participation/in-class activities</td>
<td>25 points</td>
</tr>
<tr>
<td>Integrated Math/Science WebQuest</td>
<td>35 points</td>
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<tr>
<td>Hands-on/Minds-on activity</td>
<td>25 points</td>
</tr>
<tr>
<td>Globe Mini Unit Resource</td>
<td>35 points</td>
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<tr>
<td>Reflective Blog Sessions</td>
<td>15 points</td>
</tr>
<tr>
<td>Three lessons and Reflections</td>
<td>150 points</td>
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</tbody>
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A= 300-270   B= 269-240   C= 239-210   D= 209-180 + FTT   F= 179 and below + FTT

**Attendance and Professionalism**
Attending scheduled classes and participating in field-based experiences are mandatory for the completion of this course. Activities designed for class participation cannot be replicated and may not be completed outside of allotted class time. Therefore, attendance is expected for each class session. Attendance will be checked at the beginning of each class period. It is the student's responsibility to sign the attendance roster. Attendance will be checked at the beginning of each class period. It is the student's responsibility to sign the attendance roster. In order to be considered present for the class, the student must arrive on time and remain for the entire class period. **If you must be absent from class,**
arrange in advance for a classmate to obtain any handouts and other information for you. In addition, you are responsible for calling the school before 8:00 a.m. and leaving a message for and your classroom teacher and your instructor stating that you will not be attending on that day. There will be no exceptions to the attendance policy.

No absences are allowed for this field-based class, except for extreme emergencies at the discretion of the instructor. Any absence will result in a deduction of points. Students will receive a reduction in their final grade by 1 letter grade for each unexcused absence and each excused absence will result in a reduction of the final grade by five points. Upon the second unexcused absence of a student, the instructor will also initiate a Fitness to Teach review as described on http://coehd.utsa.edu/FTT/FTT.htm

Tardiness and leaving early is unprofessional. Tardiness and leaving early will result in a deduction of 2 points per occurrence. Students who come to class more than 30 minutes late will accumulate an absence. The consequences for absences explained above will then be applied by the instructor.

Policies and Procedures

Students are expected to demonstrate professional conduct and attire during class sessions. In order to minimize distractions, refrain from leaving class unless an emergency arises. Students will refrain from engaging in individual conversations during lectures or class discussions. ALL CELL PHONES AND BEEPERS MUST BE TURNED OFF DURING CLASS PERIODS UNLESS PRIOR PERMISSION HAS BEEN GIVEN BY THE INSTRUCTOR. LAPTOPS ARE NOT NECESSARY AND, UNLESS PRIOR PERMISSION HAS BEEN GIVEN BY THE INSTRUCTOR, ARE NOT PERMITTED IN CLASS.

Any incidence of scholastic dishonesty or other student discipline issues, the instructor will follow all the policies and procedures, in regard to students, as they are specified in the Fitness to Teach Guidelines and the UTSA Faculty Handbook. (Section IV, pages IV-311-vi).

UTSA Honor Code:
“On my honor, as a student at The University of Texas at San Antonio, I will uphold the highest standards of academic integrity and personal accountability for the advancement of the dignity and the reputation of our university and myself.”

No electronic recording of lectures or class sessions may be done without the prior permission of the instructor. No eating, drinking, or smoking is allowed in UTSA classrooms and laboratories. (Ad. Memorandum No. 54).

Students with disabilities must be registered with the Office of Disability Services (MS 2.03.18, telephone 458-4157) in order to receive support services and/or special accommodations.

Attention is directed specifically to the Fitness to Teach Guidelines, Part C, 2, unconditional acceptance: “… the teacher candidate has earned a grade of C or better in any or all Approaches or Models of Teaching courses.”

Student Support Services

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
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).

Other Student Support Services: 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; web: http://www.utsa.edu/disability/).

Texas Educator Standards
Download and familiarize yourself with the specific standards for Science (EC-6), Technology as well as for Pedagogy and Professional Responsibilities. These standards are the framework used to design the Texas Examinations of Educator Standards (TEXES).
http://www.sbec.state.tx.us/SBECOnline/standtest/edstancertfieldlevl.asp

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<tr>
<th>Science</th>
<th>Technology Standards</th>
<th>Pedagogy &amp; Professional Responsibilities</th>
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<tbody>
<tr>
<td>Standard I: 1.2k, 1.4k; 1.1s, 1.6s</td>
<td>Standard I: 1.2k, 1.5s, 1.6s, 1.8s, 1.10s</td>
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<td>Standard V: 5.3k, 5.3s, 5.4s</td>
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<td>Standard VI: 6.2k, 6.10k</td>
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<td>Standard VII: 7.4k, 7.5k; 7.4s, 4.6s</td>
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<td>Standard VIII: 8.5k; 8.6s</td>
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<td>Standard IX: 9.7k, 9.10s</td>
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<td>Standard X: 10.4k; 10.6s</td>
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<td>Standard XI: 11.1k, 11.3k; 11.1s</td>
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Quality Enhancement Plan (QEP)
The Quality Enhancement Plan (QEP) is a course of action designed to enhance student learning and is a required component of the accreditation process conducted by the Southern Association of Colleges and Schools (SACS).

The UTSA QEP Quantitative Scholarship: From Literacy to Mastery provides you with the skills needed to evaluate and interpret data, understand risks and benefits, and make informed decisions in your personal and professional lives. The plan focuses on integrating quantitative reasoning and communication skills in existing courses across the undergraduate curriculum.

The SACS team will visit UTSA during March 23-25, 2010 to review the reaccreditation plan. All UTSA students, faculty, and staff are encouraged to learn more about the QEP by visiting the website www.utsa.edu/qep