

SIED 5325 001 "Inquiry Science Education in Bilingual Settings"

SYLLABUS

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Catalogue Description: Inquiry Science Education in Bilingual Settings (3-0)

Provides a review of basic content in physical science, biology and chemistry. The content will be imbedded in activities that model the inquiry approach to teaching and learning with strategies to ensure content and language development in bilingual communities. Students learn to develop curriculum using instructional models such as sheltered instruction, the learning cycle, the 5-E model, and constructivism. Content directly related to the essential elements in the elementary, middle, and high school science curricula in Texas. Source: UTEP Graduate Catalogue online at <http://www.utep.edu/catalogs/2006/graduate.htm>

Participants are encouraged to bring a wireless-enabled laptop if they have one, but must remain on task in the classroom.

Requirements

This course requires a final product in the form of a high quality document that supports a lesson developed by your instructor-assigned team. An online collaborative environment, WebCT is used for interactive instruction, discussions, and protected content.

Each participant must be able to use their UTEP WebCT account. You **MUST** have both a UTEP email address and password to take this course. Because the course is taught in a partial online "web-enhanced" or "hybrid" style, you cannot effectively participate without access to the online course environment. The instructor will not accept projects or course materials that are not submitted through either the UTEP email or UTEP WebCT system (** why not? because other email systems cannot be adequately associated with a particular student, and because they have no way to document "down" times that may affect coursework. We can look up what is happening with UTEP's system, but we have no way to adjust for the vagaries of AOL, Juno, Earthlink, MSN, or other systems*). You may ACCESS your course environment and email from any internet provider, but you must PARTICIPATE from within the UTEP course environments: UTEP email (webmail) and UTEP WebCT or the instructor-developed WIKI. The MY.UTEP.EDU site gives you access to ALL UTEP online functions: WebCT, Goldmine, and Webmail, among others. *For use of this account you will need your UTEP email login and password..* If you have trouble, the UTEP Information Systems help desk number is (915) 747-5257. You must have access to UTEP email and WebCT prior to the beginning of the second day of the course.

If you do not have one yet, you may apply for your UTEP email account, login, and password from a form available online at: <https://newaccount.utep.edu>

The course is organized around a mix of lectures, laboratory exercises, readings, video, interactive multimedia, online research, and student projects. Grades are derived from mastery of basic concepts (as indicated by student presentations, exercises, projects, activities, and student reading and writing exercises). STUDENTS CANNOT PASS THE COURSE WITHOUT REGULAR ATTENDANCE. Students

who are frequently absent shall be dropped from the course on the third absence. Graded course activities take place in the first half hour of class, and students who miss these activities are not eligible to make them up. Two latenesses of, or exceeding, 20 minutes will be treated as an absence. This is an internet-enriched course. An informational website for all of Dr. Giza's courses is located at: <https://mspace.utep.edu/bhgiza/web> and it does not need a login or password. Information about this particular course is found in the "TECH ED" section of the bhgiza website at <https://mspace.utep.edu/bhgiza/web>. Dr. Giza also maintains a non-UTEP-affiliated consulting website that has a number of tutorials in the "modules" section of that site. It is located at: <http://www.educationtechnologies.com>. There is a course WIKI online at <http://www.utepsied5325fall2008.pbwiki.com> which provides a number of additional interactive and collaborative options.

The daily assignments and activities, as well as the objectives for each day are online in the "course sequence" at Dr. Giza's <https://mspace.utep.edu/bhgiza/web> course website. The course sequence list is a guide and it will adjust during the semester, as we learn together what is the best pace for the course. Still, it will give you a fairly clear idea of what will be covered, and when. As the course goes on, individual aspects and details of each assignment will be posted on the course sequence page, so it is a key location that you should visit often.

Textbooks

There are Three Texts for the Course, with other required readings, and step-by-step tutorials.

1. The First REQUIRED TEXT for this course is "Educating Language-Minority Children"; Author: Diane August and Kenji Hakuta, Editors; Committee on Developing a Research Agenda on the Education of Limited-English-Proficient and Bilingual Students, National Research Council and Institute of Medicine. It is available online for reading for free at http://www.nap.edu/catalog.php?record_id=6025, or it can be purchased from the publishers online.
2. The second REQUIRED TEXT for this course is "Science for English Language Learners: K-12 Classroom Strategies"; Edited by: Ann K. Fathman and David T. Crowther, NSTA Press, ISBN-10: 0873552539 or ISBN-13: 9780873552530. It is available online for purchase (\$24.95 - Nonmember Price) from the National Science Teachers Association at http://www.nsta.org/store/product_detail.aspx?id=10.2505/9780873552530, or it can be purchased from the publishers online. Because this text is out of stock at Barnes and Nobles and Amazon.com, Dr. Giza will keep you informed of its availability and adjust the course requirements accordingly.
3. Another REQUIRED reading is Libros de Ciencias en Español (2008) by Isabel Schon, a free resource online at http://www.nsta.org/store/product_detail.aspx?id=10.2505/4/sc08_045_07_52
4. Additional Readings are required. The readings for the course are all either available online from the "readings" page of the Tech Ed area of Dr. Giza's <https://mspace.utep.edu/bhgiza/web> website, or for copyright reasons may be found in WebCT, as UTEP Library links, or on reserve at the UTEP Library. These are either in Adobe Acrobat or HTML format. The Adobe Acrobat reader is free and may be obtained from Adobe's website at: www.adobe.com.
5. Dr. Giza provides a number of tutorials online at his consulting website at www.educationtechnologies.com - you may find step-by-step instructions for many of the course activities at that free site.

Course Objectives

This course intends to prepare teachers to meet the Texas State Board of Educator Certification standards for a "Master Science Teacher". Particular standards addressed by this course are:

- Master Science Teacher Standard I:
Content: The Master Science Teacher knows and understands and is able to mentor the teaching of the Texas Essential Knowledge and Skills (TEKS) in science.
- Master Science Teacher Standard II:

History, Nature, and Context of Science: The Master Science Teacher understands, applies knowledge of, and guides others to understand the historical perspectives of science, the nature of science, and how science interacts with and influences personal and societal decisions.

- Master Science Teacher Standard III:
Scientific Inquiry: The Master Science Teacher understands, applies knowledge of, and guides others to understand processes of scientific inquiry and the role of inquiry in science learning and teaching.
- Master Science Teacher Standard VI:
Inclusive Instruction: The Master Science Teacher uses and guides others to use a variety of instructional strategies and resources to meet the diverse needs of all learners.
- Master Science Teacher Standard IX:
Mentoring and Shared Leadership: The Master Science Teacher facilitates standards-based science instruction by: communicating and collaborating with educational stakeholders; exhibiting leadership, mentoring, coaching, and consulting with colleagues; facilitating professional development; and making decisions based on research.

Finally, because this course integrates technology throughout its activities, it uses creative, collaborative, and Problem-based-learning approaches that have been developed to fit with the new 2008 versions of the ISTE NETS for teachers, which may be downloaded in PDF form from this link:

http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_T_Standards_Final.pdf

Expectations and Procedures

Individual and collaborative student projects are an important part of the student's grade. You will be required to research and present back to the class both individually and in *instructor-assigned* groups. There are daily classroom activities, and there is no make-up for work missed due to unexcused absences. All work is due at the assigned time. Missing work will result in a significant impact on the student grade. BECAUSE IT IS IMPORTANT TO STAY ON TASK, STUDENTS WHO FALL BEHIND ON THEIR ASSIGNMENTS WILL BE CONTACTED, AND IF THE BEHAVIOR CONTINUES, THEY WILL BE DROPPED FROM THE COURSE (no more than two absences, a drop on the third absence). Two tardies of half an hour or more each will be counted as an absence. Attendance is especially important in an activity-intensive course. There is a great amount of reading and collaboration. In addition, expect a short assignment at the beginning of each class. Of course, there is no make up for this assignment should you miss it due to tardiness. You will need an internet connection to perform the work required (the internet is available from the UTEP campus). You will also need access to a relatively modern computer (running Windows XP, or Mac OS X or above). You must use one of the recent JavaScript-capable browsers: Mozilla, Firefox, and /or Internet Explorer 5.5 or above in order to interact with the course WebCT online environment. Microsoft Office 2000 or 2003 file types BUT NOT OFFICE 2007 FILE TYPES are the recommended file formats for many assignments, especially for PowerPoint Presentations. Microsoft Office is available on all UTEP laboratory computers.

Because collaboration among participants is important to this course, and in order to ensure that all participants can read each other's files, course assignments must be turned in in one of the following formats: Plain text (.txt), RTF text (.rtf), PowerPoint (.ppt), MS Word (.doc) format, instructor-assigned formats for multimedia (e.g.: .SWF "Flash", or MP3 "Audio") or HTML format. **Materials turned in in Office 2007 (DOCX, XLSX, PPTX) formats will be rejected and considered "not turned in"**. Note that you can create the regular doc, ppt or doc file formats in Office 2007 with the **File Save As** command. You may even set these to be the default formats for Office 2007 (highly recommended). For the same reason, the following products are strongly discouraged: "Works" packages (*in other words, please do not use Appleworks, Clarisworks, or Microsoft Works*) unless you save your files in the standard doc, rtf, xls, or ppt formats (which many of them will also do using their "Save As" commands). These "works" or Office 2007 packages can produce proprietary files that cannot be read by other users who are using more standard productivity packages and file formats. For this reason, students may wish to obtain and use a free office productivity suite that works across platforms and creates all the file formats required in the course, OpenOffice (OpenOffice is free at www.openoffice.org). Other formats may be required for a specific assignment as part of a learning activity (for example, jpg format images). The preferred approach for

including materials in a WebCT post is to copy and paste text into the body of a message (avoiding attached documents). This ensures that everyone can read the message. Email assignments or posts that are due in WebCT MAY NOT BE TURNED IN THROUGH THE INSTRUCTOR'S UTEP EMAIL, and MUST be turned in via WebCT. You may alert the instructor through UTEP email if there is a problem, but all online assignments can only be accepted ONLY through WebCT.

You shall be working in instructor-assigned curriculum writing teams made up of an Editor, a Language specialist, and a Content specialist. Each team must create a lesson based upon content provided by an external content expert. Each team must also produce a piece of academic writing to support the lesson (including an appropriate literature review). This document may be in the form of a "Book chapter", a "journal article" or a "Conference Presentation", and it will be expected to meet a very high level of quality. During the course there will typically there will be assigned readings every day, along with a list of key points, and a hands-on assignment. There is a great deal of reading and writing and project-building in this course, and it is difficult to catch up if you fall behind. Please let me know if you are unavailable, or unable to complete an assignment due to some conflict, or if there is a network or access problem. There are alternatives available for that, but I must know in time to work with you. This course is meant to help you use technology effectively, and your contribution in the design of technology-enriched classroom lessons is a critical component of the course. We shall work to help you feel comfortable with a few key tools and approaches that will be useful in both the classroom and in life. My bottom line is making sure that you understand these concepts and that you come away with a useful experience. I love teaching, I love technology, and I hope that you will get a feeling for why I feel that way while we participate together in this course. Please contact me if you run into barriers or problems, and we'll work to overcome them together.

Grading Scale

- A = 90 - 100%
- B = 80 - 89%
- C = 70 - 79%
- D = 60 - 69%
- F = below 60%

Grade calculations are derived from the following formula: There are daily reading or laboratory assignments, usually worth 5 to 10 points. Summing up the points received and dividing this total by the points possible gives a decimal fraction that provides a running total of the grade. In other words, a student who has a total of 41 points received out of 55 points possible at a particular point in the course would have a grade of $41/55$ or 0.745 (74.5 percent).

Academic Policies

Cheating/Plagiarism: Cheating is unethical and not acceptable. Plagiarism is using information or original wording in a paper without giving credit to the source of that information or wording: it is also not acceptable. Do not submit work under your name that you did not do yourself. You may not submit work for this class that you did for another class. If you are found to be cheating or plagiarizing, you will be subject to disciplinary action, per UTEP catalog policy. Refer to <http://www.utep.edu/dos/acadintg.htm> for further information.

Disabilities: I will make any reasonable accommodations for students with limitations due to disabilities, including learning disabilities. Please see me personally before or after class in the first two weeks or make an appointment, to discuss any special needs you might have. If you have a documented disability and require specific accommodations, you will need to contact the Disabled Student Services Office in the East Union Bldg., Room 106 within the first two weeks of classes. The Disabled Student Services Office can also be reached in the following ways:

Web: <http://www.utep.edu/dsso>

Phone: (915) 747-5148 voice or TTY

Fax: (915) 747-8712