# *Department of Curriculum & Instruction*

College of Education PARTNERS for the FUTURE

UTeach Arlington
THE UNIVERSITY OF TEXAS AT ARLINGTON

***EDUC 4333: Multiple Teaching Practices*** ***Fall 2013***


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**Section Information:** EDUC 4333-002
**Time and Place of Class Meetings:** SH (Science Hall) 226, Tuesday/Thursday 5:00 PM – 6:20 PM

**Description of Course:** Content restricted to students in the UTeach Arlington program who have earned a passing score on the preliminary portfolio. Multiple research-based teaching practices including foundations of project-based, case-based, and problem-based learning environments; principles of project-based curriculum development in mathematics and science education; classroom management and organization of inquiry-based, problem-based/project-based learning classrooms. Three lecture hours a week for one semester with additional fieldwork hours to be arranged. Prerequisite: A University grade point average of at least 2.50, and EDUC 4332 with a grade of C or better.

**COURSE GOALS**

- To support the UTeach student's development by building a deep understanding of Project Based Learning (PBL), including differentiating between strong and weak theoretical approaches to PBL, and between PBL and other inquiry-based approaches.
- To enhance UTeach students' ability to design or adapt activities, lesson plans and a complete project based upon theoretical frameworks of inquiry-based learning and PBL
- To build UTeach students' capacity to analyze their own and others' instructional planning and enactment.
- To increase UTeach students' ability to measure student learning through the appropriate use of formative and summative measurement of student learning and to respond instructionally to assessment information.

## COURSE OBJECTIVES

Students will:

1. Discuss and critique the merits of PBL in terms of student's cognitive development, content-specific participatory practices, equity, and motivation.
2. Reflect on applications of education theory (e.g., constructivist and situated perspectives) and findings from the Learning Sciences research base (e.g., the importance of context and metacognition) in relation to classroom practice in the area of PBL.
3. Compare, contrast, and evaluate project based and other instructional approaches, including other approaches also based on inquiry such as problem or case based instruction.
4. Become familiar with and evaluate the usefulness of various technological tools in achieving learning objectives and select appropriate resources for student use based on the relationship of salient features of the technology to learning objectives.
5. Use inquiry methods with high school students in a problem based setting.
6. Be familiar with essentials of PBL as well as commonly perceived strengths and critiques of this form of instruction; describe examples of PBL in STEM (Science, Technology, Engineering, and Mathematics); and analyze those examples in terms of frameworks for PBL.
7. Use PBL design principles and theoretical frameworks to develop an interdisciplinary, multi-week PBL unit for secondary STEM courses, which explicitly links to district, state and/or national content and inquiry standards.
8. Create and evaluate "alternative" assessments appropriate for PBL.
9. Discuss lab safety and liability issues related to PBL and wet-lab or field environments.
10. Use relevant technology to develop projects, and integrate technology into curricular units
11. Become sensitive to and learn to proactively handle equity and diversity issues in classroom teaching, ensuring that all students have an opportunity to learn through instruction that promotes equitable and diverse participation, and become aware of students' funds of knowledge as a resource.
12. Locate, access, read and analyze research results and theoretical literature on PBL and employ these in analyses of their own teaching or observed lessons.

## REQUIRED TEXTBOOKS AND OTHER COURSE MATERIALS TEXTBOOKS

**Required:**

- Larmer, J., Ross, D., Mergendoller, J. R., & Buck Institute for Education. (2009). *PBL starter kit: To-the--point advice, tools and tips for your first project*. Novato, CA: Buck Institute for Education. ISBN: 978-0-9740343-2-4
- Torp, L. & Sage, S. (2002). Problems as possibilities: Problem-based learning for K-16 education (2nd ed.). Alexandria, VA: ASCD. ISBN-10: 0-87120-574-2

## LIST OF RESOURCES

**Videos**

1. Project-Based Learning Explained Buck Institute http://www.youtube.com/watch?v=LMCZvGesRz8
2. LadyBird Johnson Middle School Irving, TX http://www.youtube.com/watch?v=FVgCZlCRIRk
3. METSA (Carrollton, Texas) http://www.newtechnetwork.org/schools/metsa-math-engineering-technology-and-science-academy

**Websites on PBL**

- PBL Blog http://projectbasedinstruction.wordpress.com/
- NewTech Network Website http://www.newtechnetwork.org/
- Buck Institute Website http://www.bie.org/

- PBL Checklist http://pblchecklist.4teachers.org/index.shtml
- Project-Based Learning Space http://college.cengage.com/education/pbl/background.html
- RubiStar http://rubistar.4teachers.org/index.php
- CMAP Concept Mapping Tool http://cmap.ihmc.us/conceptmap.html
- Modifying Projects for Differentiated Learners http://www.np.k12.mn.us/TechIntegration/intelcd/CourseCD/HTML/m8pp.html
- Powerful Learning Article (Edutopia): http://www.edutopia.org/inquiry-project-learning-research
- Designing Your Project: Design Principles for Effective Project Based Learning http://pbl-online.org/pathway2.html
- National Center for Case Study Teaching in Science http://sciencecases.lib.buffalo.edu/cs/

**Social Networking**
Kid Blog http://kidblog.org/home/
Edmodo https://www.edmodo.com/

**Article**
Collaborative project-based learning and problem-based learning in higher education: a consideration of tutor and student roles in learner-focused strategies (Creative Commons)
http://www.aishe.org/readings/2005-1/donnelly-fitzmaurice-Collaborative-Project-based-Learning.html

**Journal**
The Interdisciplinary Journal of Project Based Learning
http://docs.lib.purdue.edu/ijpbl/

**DESCRIPTION OF MAJOR ASSIGNMENTS**

| | | |
|---|---|---|
| 1. | Class Participation/Dispositions | 10 pts |
| 2. | Assigned Readings and Discussions (BB) | 20 pts |
| 3. | Observation and Written Analysis of Field Placement Setting (4 hours) | 40 pts |
| 4. | Development of PBL Unit/Presentation | |
| | a. Draft 1 Learning Cycle within PBL | 10 pts |
| | b. Draft 2 Learning Cycle within PBL | 10 pts |
| | c. Final Learning Cycle within PBL | 20 pts |
| | d. Practice Teaching of Learning Cycle within PBL | 10 pts |
| | e. Field Teaching Project | 30 pts |
| | f. Draft 1 PBL Unit | 20 pts |
| | g. Final PBL Unit | 80 pts |
| | **Total** | **250 pts** |

**Details, further instructions, and rubrics will be posted in Blackboard and discussed in class.*

**LATE WORK, ATTENDANCE, AND TK20 POLICY**
*Class attendance, timely arrival to class, and remaining in class for the duration is expected and required.* When circumstances do occur, students must communicate with the professor in advance of any anticipated absence or late arrival to class. More than two absences and more than four late arrivals and early departures will result in a reduction by one letter grade in the student's final course grade.

**Late work is subject to a reduction in assignment grade and final course grade.**

**TK20**

***Posting key assessments (Learning Cycle/5E and PBL) to TK20 is required. Failure to post the identified assessments to TK20 will render the assignments ungraded and will result in a failing course grade.***

**TK20 INFORMATION**

The College of Education and Health Professions has implemented Tk20, a comprehensive data management system that provides powerful tools to manage growth and streamline processes to meet your needs more efficiently and effectively. The set of tools that is required as a course text is called *TK20 HigherEd*. The following is a partial listing of what the Tk20 system will enable you to do:

- Create your key assessments and performance artifacts online, which you will be able to access and use beyond graduation. This will enable you to present documented performance data and information to prospective employers, who are increasingly interested in data-supported evidence of an individual's current and potential performance.
- Submit forms online, including applications for field-based experiences such as student teaching, practicum, internships, or other clinical practice required for teacher or administrator certification, and receive timely notification of placement details sent directly to your Tk20 account.
- Create multimedia portfolios for documenting your work for presentation to faculty and prospective employers that can be exported to CDs or other media.
- Monitor your progress throughout the program and have access to a fully documented record of your program performance, creating a vested partnership between you and faculty in your progress through your academic program.

On-line tutorials and training materials will orient you to the Tk20 system and its use. For additional information, go to http://www.uta.edu/coehp/tk20. We appreciate your hard work and dedication toward completing your education in the College of Education and Health Professions at the University of Texas at Arlington.

**OTHER COURSE REQUIREMENTS**

Course assignments must be word-processed, posted in the course Blackboard site, and citations will follow the rules from the American Psychological Association, 6th Edition
http://owl.english.purdue.edu/owl/section/2/10/

The Blackboard course is accessed at https://elearn.uta.edu , where all course materials and additional resources will be posted. Email messages and discussion/correspondence will take place via Blackboard, as well as student posting of assignments and course grading. **Utilizing this website is a required function of the course. *Students must access course materials and be able to post discussion on the course Blackboard website to be successful in this course.***

**GRADING**

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

The grading system as per UTA policy is as follows.

A = 90 – 100
B = 80 – 89
C = 70 – 79
D = 60 – 69
F = Below 59

**Expectations for Out-of-Class Study**: For every credit hour earned, a student should spend 3 hours per week working outside of class.
**Revision Policy**: Revisions to PBL modules and full unit will be permitted as time allowed. First drafts and revisions will be factored into the overall grade.

**Grade Grievances**: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate catalog: http://wweb.uta.edu/catalog/content/general/academic_regulations.aspx#19

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity:** Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

**Professional Dispositions.** College of Education and Health Professions, approved 2/2013; Adopted by UTeach Program 3/2013.

***Each student/candidate in the College of Education and Health Professions of UT Arlington will be evaluated on Professional Dispositions by faculty and staff. These dispositions have been identified as essential for a highly-qualified professional. Instructors and program directors will work with students/candidates rated as "unacceptable" in one or more stated criteria. The student/candidate will have an opportunity to develop a plan to remediate any digressions.***

The full document regarding dispositions is posted in Blackboard.

**Student Support Services**: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is the staircase located immediately to the right outside of the classroom doors. When exiting the building during an

emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

UTA Emergency Procedures may be found at: https://www.uta.edu/policy/procedure/7-6

**Librarian to Contact:** Andy Herzog, MLS, amherzog@uta.edu . Phone: 817.272.7517.
Website: http://libguides.uta.edu/profile.php?uid=33755

**COURSE SCHEDULE**

| DATE | TOPIC | ACTIVITIES | TO DO |
|---|---|---|---|
| Thursday 8/22 | Introductions<br>Syllabus<br>Blackboard Setup | Inquiry Activity<br>Syllabus Discussion | Purchase Textbooks |
| Tuesday 8/27 | Inquiry Learning Revisited<br>Model Lesson | 5E and 3 E demonstration activity<br>Discussion | Renner & Marek (1990)<br>Complete Blackboard post by 9/2 at Midnight |
| Thursday 8/29 | Inquiry Continued | **No Campus Class Meeting**<br>Readings<br>Online Activity | Read West & Skoog (2006)<br>Complete Blackboard post by 9/2 at Midnight |
| Tuesday 9/3 | Inquiry and PBL | Activities | Develop and Search Ideas for Learning Cycle/5E and PBL |
| Thursday 9/5 | Class Discussion of Assigned Articles<br>Discuss of Real-World Learning | Complete Inquiry-based Lesson<br>Discussion of Drawbacks of Short, Inquiry-Based Units<br>Brainstorm Real-World Issues | Read pp. 4-8; and p. 37 in PBL Starter Kit<br>Explore Buck Institute Website<br>http://ww.bie.org/http://www.bi.org/ |
| Tuesday 9/10 | Brainstorming Real World Applications for PBL | Turn in List of Project Idea and Brainstorming | Read Spotlighting Projects on pp. 9-28 of PBL Toolkit and Chapter 1 in Torp and Sage |
| Thursday 9/12 | Overview of PBL Units | Look at the scope of a PBL unit from Start to finish | Read Chapter 2 in Torp and Sage before class<br>Watch Buck Institute Video<br>http://www.youtube.com/watch?v=LMCZvGesRz8 |
| Tuesday 9/17 | Building an Objectives-Based PBL Unit<br>Concepts versus Objectives | Introduction to an Entry Event<br>Start with the End in Mind | Review sample entry events and entry documents<br>Review TEKS for Math or Science – bring sample to review |
| Thursday 9/19 | Foundations of PBL<br>Discussion of Field Experience | Theoretical Foundations of PBL | Read Chapter 3 in Torp and Sage |
| Tuesday 9/24 | Building an Entry Event | Discuss Knows, Need to Knows, and Next Steps Protocol | Team up and design an Entry Event |

| DATE | TOPIC | ACTIVITIES | TO DO |
|---|---|---|---|
| Thursday 9/26 | Discuss and do short entry event presentations | Class presentations | |
| Tuesday 10/1 | Scaffolding Your PBL | Refresher on ZPD (Vygotsky's Zone of Proximal Development)<br>Formative and Summative Assessment in PBL | Read Geier et. Al (2007) and respond to post in Blackboard by 9/30 Midnight |
| Thursday 10/3 | Scaffolding Your PBL | What kind of teacher are you?<br>Discussion of guidance during PBL<br>Effective and Ineffective methods of Guidance during PBL Projects | Discuss Wilke (2004) Article |
| Tuesday 10/8 | Team Dynamics | Team Dynamics and Cooperative Learning Refresher | Brainstorm a List of Problems and Solutions with Student Dynamics<br>**Draft 1 Written Learning Cycle within PBL Due (Teacher Guide)** |
| Thursday 10/10 | Critical Friends Protocol | Go through Critical Friend Protocol and Mock Project Roll-Out | Critical Friends the Teacher |
| Tuesday 10/15 | Culminating Activities and Products | Explore Examples of Culminating Activities<br>List Five Culminating Activities in Blackboard; rank order of preference 1-5 | Online: Explore Alternatives to Powerpoint |
| Thursday 10/17 | Critical Friends Protocol | Divide into teams and evaluate 2 lessons | Discuss Peer Evaluations and Rubrics |
| Tuesday 10/22 | Culminating Activities and Products | Design Culminating Activity for Preliminary Unit and Rubric | Read article on the Flipped Classroom; Respond to post in Blackboard by 10/22 Midnight |
| Thursday 10/24 | Incorporating Technology into your PBL Unit | Social Media<br>The Flipped Classroom<br>1-N-1 Computing; Equity Issues | Explore websites relates to Social Media<br>**Draft 2 of Learning Cycle within PBL Due (Teacher Guide)** |
| Tuesday 10/29 | Other Technology Considerations | Computer/Technology activities<br>AUPs and Technology Abuse<br>Laptop Courtesy/Technology Etiquette | Read article by Kirschner, Sweller, and Clark (2006); Respond to post in Blackboard by 11/4 Midnight |
| Thursday 10/31 | Criticisms of PBL<br>Discussion of Field Experience and Requirements | Review Kirschner Article and Responses to the Article | Common Criticisms and Responses |

| DATE | TOPIC | ACTIVITIES | TO DO |
|---|---|---|---|
| Tuesday 11/5 | Practice Learning Cycle/5E within PBL Unit in Class | **Practice Teaching Learning Cycle/5E *(SIGN UP)*** | Edit Learning Cycle based on Feedback **Final Learning Cycle within PBL Due (Teacher Guide and Student Guide)** |
| Thursday 11/7 | Practice Learning Cycle/5E within PBL Unit in Class | **Practice Teaching Learning Cycle/5E *(SIGN UP)*** | Edit Learning Cycle based on Feedback **Final Copy of Learning Cycle within PBL Due(Teacher Guide and Student Guide)** |
| Tuesday 11/12 | Presentation of Learning Cycle within PBL Unit in the Field | **CLASS WILL NOT MEET** | Visit Participating Campuses |
| Thursday 11/14 | Presentation of Learning Cycle within PBL Unit in the Field | **CLASS WILL NOT MEET** | Visit Participating Campuses |
| Tuesday 11/19 | FIELD EXPERIENCE DEBRIEF Discussion of PBL End Product | DISCUSSION OF FIELD EXPERIENCES Review of TK20 Requirements | Computers or Computer Lab to review PBL product requirements for TK20 and Blackboard |
| Thursday 11/21 | Anchored Instruction Differentiating Instruction in PBL Accommodating ELL Students | Explore ideas about Differentiating Instruction | Accommodations in the PBL Environment |
| Tuesday 11/26 | Work on PBL Unit End Products | **Class will not meet –** Individual meetings by appointment | **First Draft of PBL Unit Due by 11/26 Midnight** |
| Thursday 11/28 | **THANKSGIVING HOLIDAY** | **CLASS WILL NOT MEET** | Work on Presentations |
| Tuesday 12/3 | Class Presentations of PBL Units | Presentation of PBL Unit (Critical Friends) | Team Presentations |
| Thursday 12/5 | Class Presentations of PBL Units | Presentation of PBL Unit (Critical Friends) | Team Presentations |
| Tuesday 12/10 | SUBMIT PROJECT TO TK20 AND BLACKBOARD | **CLASS WILL NOT MEET** | **FINAL PBL UNIT DUE MIDNIGHT ON 12/10** |

***As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Ann M.L. Cavallo, Ph.D.***