



Texas A & M University – Texarkana
ED 591 Interdisciplinary Curriculum Design
Credits: 3 SCH

Course Syllabus
Fall 2014

COURSE DESCRIPTION

This course is designed to provide teachers with the knowledge and skills needed to facilitate the effective design of a Science-Technology-Engineering-Mathematics (STEM) and/or Innovation, Design, and Exploration of the Arts (IDEAS) focused curriculum. Students will master the development of a concept-based curriculum in a learner-centered classroom using an interdisciplinary approach. Cognition and innovation, as applied to the development and delivery of an interdisciplinary curriculum, will be examined as students explore contemporary research in instructional practice and 21st century skills. Students will learn and develop alternative forms of assessment appropriate for the non-traditional, learner-centered classroom. Learners will develop a personal research-based curriculum design model reflecting their educational philosophy and approach.

REQUIRED TEXTS

FOR ALL TEACHERS:

Markham, T., Larmer, J., & Ravitz, J. (2003). *Project Based Learning: A Guide to Standards-/Focused Project Based Learning for Middle and High School Teachers*. Oakland, CA: Wilstead and Taylor.

Ritchhart, R., Church, M., & Morrison, K. (2011). *Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners*. San Francisco, CA: Jossey-Bass.

Silver, G., Strong, R. & Perini, M. (2007). *The Strategic Teacher: Selecting the Right Research-Based Strategy for Every Lesson*. Alexandria, VA: Association for Supervision and Curriculum Development.

Swartz, Robert J., Costa, A.L., Beyer, B.K., Reagan, R., & Kallick, B. (2008). *Thinking-Based Learning: Promoting Quality Student Achievement in the 21st Century*. New York, NY: Teachers College Press.

FOR ELEMENTARY TEACHERS ONLY:

Helm, J., & Katz, L. (2011). *Young Investigators: The Project Approach in the Early Years*, 2nd Ed. New York, NY: Teachers College Press.

RECOMMENDED TEXTS

- Armstrong, T. (1998). *Awakening Genius in the Classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Blackburn, B. (2008). *Rigor is NOT a Four-Letter Word*. Larchmont, NY: Eye on Education.
- Boss, S. & Krauss, J. (2007). *Reinventing Project-Based Learning: Your Field Guide to Real-World Projects in the Digital Age*. Washington, DC: International Society for Technology in Education
- Friedman, T. (2005). *The World is Flat: A Brief History of the Twenty-First Century*. New York, NY: Farrar, Straus and Giroux Publishers.
- Jackson, R. (2009). *Never Work Harder Than Your Students*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Johnson, D., Johnson, R. & Holubec, E. (1994). *Cooperative Learning in the Classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Harvey, S. & Goudvis, S. (2000). *Strategies That Work: Teaching Comprehension to Enhance Understanding*. Portland, OR: Stenhouse Publishers.
- Richardson, W. (2009). *Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms*. Thousand Oaks, CA: Corwin Press.
- Sprenger, M. (2005). *How to Teach so Students Remember*. Alexandria, VA: Association for Supervision and Curriculum Development.

COURSE OBJECTIVES

Students will:

1. Develop an understanding of the curriculum development process, including: concept identification, cognitive levels, essential questions, enduring understanding, rigor, relevance, and assessment.
2. Engage in the process of curriculum design guided by learning goals, objectives, and student outcomes.
3. Examine and practice the incorporation of project and work-based contextual learning with a global perspective into a STEM/IDEAS curriculum.
4. Develop ideas and tools to facilitate the effective integration of technology into all aspects of curriculum design.
5. Examine and practice the facilitation of literacy as a tool to shift students away from learning discrete bits of knowledge and toward investigating and questioning the interrelated facets of the world.
6. Identify effective instructional strategies and demonstrate appropriate use of strategies in supporting the development of students who are innovative, critical thinkers, and who are able to analyze information, evaluate other's ideas, and think independently.
7. Organize and practice the guided discovery process as it relates to concept attainment and extension of learning.
8. Discuss and design practical, hands-on, interdisciplinary units of instruction which will stimulate intellectual curiosity and challenge both advanced and emerging 21st century learners.
9. Analyze and develop alternative assessment tools which are authentic, continuous, and related to student learning.

COURSE REQUIREMENTS

- A. Attend class as determined by university calendar and course activities. **Instructor must be notified in advance if student will be absent.** Students who are absent will be required to complete additional assignments that provide evidence of competencies.
- B. Participate in class discussions and comprehension activities as assigned.
- C. Complete all assignments and demonstrate proficiency in the course objectives.
- D. Turn in all assignments by the designated due dates. No late work will be accepted unless prior arrangements have been made with the instructor.
- E. Use standard formatting for all written assignments (text double spaced, 10-12 point font, one-inch margins on all sides, APA format).

METHODS OF INSTRUCTION

Methods of instruction will include lectures, presentations, large and small group discussions, group work, collaboration, independent inquiry, and reflection.

TECHNOLOGY INTEGRATION

Students will

- Use electronic resources to conduct research
- Construct assignments in a variety of environments including word processing, spreadsheets, and publishing software.
- Model digital age work and learning, exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

ACADEMIC HONESTY

Academic honesty is expected of students enrolled in this course. Cheating on examinations, unauthorized collaborations, falsification of research data, plagiarism, and copying or undocumented use of materials from any source constitute academic dishonesty, and may be grounds for a grade of "F" in the course and/or disciplinary action. The student is responsible for reading and understanding the University Policy on Academic Integrity.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Accommodations can be provided for students with a disability only after the student requests an accommodation and provides the appropriate written documentation of a disability. To request accommodations for this course, students are responsible for the following:

1. Contact the A&M-Texarkana Student Services Office to request appropriate accommodations;
2. Provide documentation of a disability to the A&M-Texarkana Student Services Office and documentation must be less than 5 years old;
3. Contact the instructor to discuss implementation of accommodations for this course.

CHANGES TO COURSE

The instructor reserves the right to make changes to assignments, the class schedule, or the syllabus if the need arises.