Zucker Family School of Education

EDUC 544-W1 - Project Based Learning and Interdisciplinary Teaching Spring 2017	
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Credit Hours: 3	

PREREQUISITES: None

REQUIRED READING AND VIDEO: Available on-line. See weekly assignments for information and hyperlinks.

Note: If you should encounter a computing issue, The Citadel's Information Technology Service may be able to help. Their web page includes computer recommendations as well as help center contact information: http://www.citadel.edu/root/its

SUPPLEMENTARY SUGGESTED READING: (see recent special issues related to the topics below)

- Association for Supervision and Curriculum Development. Available: www.ascd.org
- Buck Institute. Project Based Learning for the 21st Century. Available: www.bie.org
- Edutopia. Available: www.edutopia.org
- Expeditionary Learning. Available: www.elschools.org
- Franklin Institute Science Leadership Academy. Available: www.scienceleadership.org
- Flat Classroom Project. Available: www.flatclassroomproject.org
- Franklin Institute Science Leadership Academy. Available: www.scienceleadership.org
- International Society for Technology Education (ISTE) National Education Technology Standards (NETS) for Students, Teachers, and Administrators. Available: www.iste.org
- National Council of Teachers of Mathematics. Available: www.nctm.org
- National Science Teachers Association. Available: www.nsta.org
- New Tech Network. Available: www.newtechnetwork.org
- Project Approach. Available: www.projectapproach.org

STUDENT INFORMATION:
This course is designed for STEM Educators. If you should encounter a computing issue, The Citadel's Information Technology Service may be able to help. Their web page includes computer recommendations as well as help center contact information: http://www.citadel.edu/root/its

COURSE DESCRIPTION:
This course will enable students to learn how to use a Standards Focused Project Based Learning (PBL) Model to develop specialized instructional curriculum to be implemented and integrated into an existing interdisciplinary educational system. Interactive and practical assignments are used to help teach the five major planning elements of PBL. Online discussions and interactive learning modules will be focused on the learning and application of PBL concepts. Furthermore, coursework is designed to help the student create a Project Based Learning curriculum for use in their teaching. For students enrolled in the STEM degree program, the curriculum developed in this class will be used as a component in their Capstone Project.

THE CITADEL'S SCHOOL OF EDUCATION'S CONCEPTUAL BASE

Developing Principled Educational Leaders for P-12 Schools

The Citadel's Professional Education Unit prepares principled educational leaders to be knowledgeable, reflective, and ethical professionals. Candidates completing our programs are committed to ensuring that all students succeed in a learner-centered environment.

The Citadel's Professional Education Unit is committed to the simultaneous transformation of the preparation of educational leaders and of the places where they work. Specifically, The Citadel's Professional Education Unit seeks to develop principled educational leaders who:

- have mastered their subject matter and are skilled in using it to foster student learning;
- know the self who educates (Parker J. Palmer) and integrate this self-knowledge with content knowledge, knowledge of students, and in the context of becoming professional change agents committed to using this knowledge and skill to ensure that all students succeed in a learner-centered environment; and
- exemplify the highest ethical standards by modeling respect for all human beings and valuing diversity as an essential component of an effective learner-centered environment.

The Citadel's Professional Educational Unit is on the march, transforming itself into a Center of Excellence for the preparation of principled educational leaders. Through our initial programs for teacher candidates for P-12 schools and our advanced programs for professional educators in P-20 schools, The Citadel's Professional Education Unit transforms cadets and graduate students into principled educational leaders capable of and committed to transforming our schools into learning communities where all children and youth succeed.
The Citadel's Professional Education Unit has identified 15 performance indicators for candidates to demonstrate that they are principled educational leaders who are knowledgeable, reflective, and ethical professionals:

Knowledgeable Principled Educational Leaders…

1. Have mastered the subject matter of their field of professional study and practice;
2. Utilize the knowledge gained from developmental and learning theories to establish and implement an educational program that is varied, creative, and nurturing;
3. Model instructional and leadership theories of best practice;
4. Integrate appropriate technology to enhance learning;
5. Demonstrate a commitment to lifelong learning;

Reflective Principled Educational Leaders…

6. Develop and describe their philosophy of education and reflect upon its impact in the teaching and learning environment;
7. Develop and manage meaningful educational experiences that address the needs of all learners with respect for their individual and cultural experiences;
8. Construct, foster, and maintain a learner-centered environment in which all learners contribute and are actively engaged;
9. Apply their understanding of both context and research to plan, structure, facilitate and monitor effective teaching and learning in the context of continual assessment;
10. Reexamine their practice by reflectively and critically asking questions and seeking answers;

Ethical Principled Educational Leaders…

11. Demonstrate commitment to a safe, supportive, learning environment;
12. Embrace and adhere to appropriate professional codes of ethics;
13. Value diversity and exhibit a caring, fair, and respectful attitude and respect toward all cultures;
14. Establish rapport with students, families, colleagues, and communities;
15. Meet obligations on time, dress professionally, and use language appropriately.

Course Goals with Relationship to the conceptual base:
(Related performance indicators are displayed in parenthesis)

Master of Science in STEM Education candidates who take this course will:

- identify and apply attributes of quality examples of Project Based Learning (PBL) (CF 1 &2)
- evaluate a variety of technologies, models, and visual representations to aid instruction within a project-enhanced STEM classroom. (CF 1-4)
- develop and implement a standards based PBL unit of instruction in a school setting. This unit should include activities, resources, safety information, assessments as well as adjustments to meet the needs of all learners and career connections. (CF 7-11, 13)
- reflect on their role as mentor and teacher as they implement the PBL unit and guide learners through the process of effective PBL participation. (CF 6-10, 11-15)
- document the impact of implementation on achievement. (CF 1,2,4,9,10)

CLASS EXPECTATIONS
This course is an online course. As you move through the course, you will discover that while there are content similarities, on-line instruction for this course is different from what you would experience in a traditional, face to face course. Please know that while the course is asynchronous in format and you will be working from different locations, interaction within the discussion boards is an essential part of the learning process for this course.

Class Attendance
Participation in asynchronous class discussions is expected each week with at least two responses to discussion posts made by others in the course.

Assignments
In this course, you will have readings and videos to view, discussions to participate in and projects to complete. You will be working on several of these assignments throughout the course. As the course progresses, you will be reminded of the due dates. Please remember that it will be your responsibility to keep up with the assignments. All assignments are to be turned in on time. Late assignments might not be accepted or assigned lower grades. ***See Assessment, Assignment Instructions, and Grading Rubrics information that are included in the weekly discussions. Contact me at Kathryn.Jones@citadel.edu if you have concerns or need help completing the work.***

Project Based Learning Instructional Unit Expectation
It is expected that each participant will create a standards based project based learning unit to be used with a group of students. More information about format and expectations will be integrated into the course. Reflections about this experience along with impact on student learning are expected to be posted CITLearn.

Disability Disclosure
If you need accommodations because of a disability, please inform us immediately. Please e-mail privately to let us know about your specific needs. If you need additional support as you move through this and other courses, The Citadel maintains an Office of Access Services, Instruction and Support (OASIS) located in room 105 Thompson Hall. To receive additional assistance, email Dr. Jane Warner – jane.warner@citadel.edu or call 953-1820 to set up an appointment. OASIS is responsible for reviewing documentation provided by students requesting academic accommodation and for accommodation in cooperation with students and instructors as needed and consistent with course requirements.

Honor Statement
Integrity is an expectation. Students of The School of Education at The Citadel are expected to meet the standards set forth in the Citadel Graduate School Catalog: "The Citadel has among its primary purposes teaching, research, and the expansion and dissemination of knowledge. Products of these endeavors include the development and use of intellectual property. It is the policy of the College that its faculty, staff, and students carry out their scholarly work in an open and free atmosphere that encourages publication and creation of such works without constraint but consistent with applicable laws and College policy. This policy will be in accord with the guidelines and criteria published in The American Association of University Professors' 'Statement of Copyright' (Policy Documents and Reports. Ninth Edition, 2001, or subsequent editions)."

ASSESSMENT
Grades for EDUCATION 544 are based on a variety of assignments. ***Specific information about each of these are included in the weekly discussions.*** The relative weights used for calculating the course grade are as follows:

Assignment	Percent
Discussion Forum Posts and Replies	30%
Project Based Learning Unit	30%
Reflections about PBL Unit Implementation and Impact on Student Achievement	30%
Professionalism	10%

90.0-100.0=A, 85.0-89.9=B+, 80.0-84.5=B, 75.0-79.5=C+, 70.0-79.9=C, 0-69.9=F

Assessments are in rubric form and will be included as appropriate in the discussion board.

Course Schedule for EDUC 544

Week 1 – Introductions and Edutopia's Project Based Learning Resources

Week 2 – "The Project Approach"

Week 3 – "Flat Classroom Project"

Week 4 – "Expeditionary Learning"

Week 5 - "Science Leadership Academy

Week 6 - "New Tech Network"

Week 7 – "Project Based Learning"

Week 8 – Project Development: Integrating Content Standards and 21st Century Skills Based Project

Week 9 - Project Development: Constructing an Interdisciplinary Driving Question, Infusing Literacy Skills, and Creating an Entry Event

Week 10 - Project Development: Major product(s), Presentations and Assessment

Week 11 Project Development: Project Management Planning

Week 12-13 – Project Implementation Trial Run

Weeks 14-16 - End of CGC classes – Reflecting and Perfecting - Project sharing

Final replies due by Midnight, May 1

Information about Discussion Postings (per The Citadel's On-line Faculty Academy)

Discussion Answer Postings: "This category reflects the quality of a student's answers that contribute in a meaningful way to producing a fruitful learning environment for all participants. The criteria for grading answers can vary based upon the nature of the question, but the following are helpful tips to use, as applicable, to particular questions:

1. Ensure that you answer the question(s) being asked, as well as all parts of the question. So, read the question carefully.
2. Explicitly cite relevant concepts.
3. Apply concepts to offer an in-depth explanation, i.e., state why your answer makes sense.
4. Cite examples from real life cases, your experience, or things you've read.
5. Compare and contrast varying views on an issue.

Discussion Replies: This category reflects the quality and quantity of a student's Replies to the answers that others have posted. In order to receive any credit, replies must be substantive and relevant to the corresponding answer. Effective replies offer some reflection upon the specific ideas in the answers posted by others. See items 1-5 in Discussion Answer Postings above for ideas when you're unsure how to reply to an answer. No credit will be given for replies that simply state things like the following: I agree, nice job, well done, and the like, i.e., if a particular reply could apply to any answer, anywhere, then it is inadequate. The reply should have information that relates to the particular answer to which it pertains. At least two Replies are required for each Discussion throughout the course, unless otherwise specified."

Everyone must participate in each discussion.
Discussion replies are due within one week of each lesson's start date.

Rubric for Weekly Assignment

CATEGORY	Meets Standards	Approaching Standards	Not Acceptable
Information	The entry demonstrates that the participant learned something new.	The entry includes basic information	There are no specific descriptions.
Personal Application Position	A specific position with personal applications is included.	A position is included but includes no personal applications.	No personal application is included

Rubric modified by Dr. Kathryn Richardson Jones

The Buck Institute's Project Design Rubric will be used to evaluate the overall project. Available at: http://bie.org/object/document/project_design_rubric

The project and its implementation should be created to also be evaluated using South Carolina's ADEPT Model for Short-range Planning of Instruction and Short Range Planning, Development and Use of Assessments

Domain 1: Planning	
APS 2 -Short-range Planning of Instruction	
2A	The STEM candidate develops unit objectives that facilitate student achievement of appropriate academic standards and long-range learning and developmental goals. Key Elements: ○ identifies appropriate unit objectives; and ○ gives a sound explanation of the relevance of these objectives to student learning needs and interests.
2B	The STEM candidate develops instructional plans that include content, strategies, materials, and resources that are appropriate for the particular students. Key Elements: ○ presents an appropriate, logically sequenced instructional plan for the unit; and ○ provides a sound explanation of factors that must be taken into consideration in balancing grade-level standards/ expectations and individual students' needs, abilities, and developmental levels.
2C	The STEM candidate uses student performance data to guide short-range planning of instruction. Key Elements: ○ makes appropriate determinations regarding the need to make adjustments to the instructional plans; and ○ presents a solid rationale for making these determinations.
APS 3 – Short-range Planning, Development, and Use of Assessments	
3A	The STEM candidate develops/selects and administers a variety of appropriate assessments. Key Elements: ○ develops and/or selects appropriate key unit assessments; and ○ presents sound evidence that these assessments are valid and reliable for all students.
3B	At appropriate intervals, the STEM candidate gathers and accurately analyzes student performance data and uses this information to guide instructional planning. Key Elements: ○ provides an appropriate and accurate analysis of student performance, and ○ displays sound reasoning in describing the way(s) in which this information was helpful in determining individual students' strengths and weaknesses as well as aspects of instruction that need to be modified.
3C	The STEM candidate uses assessment data to assign grades (or other indicators) that accurately reflect student progress and achievement. Key Elements: ○ uses appropriate methods for determining student grades (or other performance indicators) for the unit, ○ appropriately and accurately summarizes overall student performance for the unit, and ○ provides a well-thought-out summary of the overall "success" of the unit, based on overall student performance.

The Final Presentation will be evaluated using applicable components from the Buck Institute's Presentation Rubric. Available at: http://bie.org/object/document/9_12_presentation_rubric_ccss_aligned