

Johns Hopkins University
School of Professional Studies in Business and Education

Course: 893.508.61 Technology and the New Science of Learning
Location: Columbia, MD
Date/Time: Summer II, 2008
M, W 4:10 – 6:40 p.m.
07/14/08-08/20/08
Instructor: Ryan Schaaf
Columbia Center
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If you require any special accommodations to this course, please bring them to my attention at the beginning of the semester. Course notes, handouts, syllabus, lectures, and resources are available electronically.

I. Course Description

New technologies are part of the intellectual landscape in which new kinds of knowledge are breaking down the boundaries of previous distinct disciplines. The design and use of new technologies make possible new approaches to learning, new contexts for learning, new tools to support learning, and new understandings of the dynamics of the learning process itself. This course examines the role of technology relative to the key concepts of active learning, metacognition, and transfer of knowledge from multidisciplinary perspectives on learning. Based on the new science of learning, students will develop and implement technology related strategies that: align instructional technology to standards based instruction; teach problem-solving and higher-order thinking skills; promote cooperative learning; and use reflective teaching and inductive approaches to increase student achievement.

II. Required Readings

International Society for Technology in Education (2000). *National educational technology standards*. (Available at <http://cnets.iste.org/teachers/pdf/page09.pdf>).

Prensky, M. (2001). Digital natives, digital immigrants. From *On the Horizon*, NCB University Press, 9 (5). (Available at: <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>).

Prensky, M. (2006). Listen to the natives: Learning in the digital age. *Educational Leadership*, 63(4).

Kennedy, M. (2002). Technology push. *American School & University*, Primedia Business Magazines & Media, Inc. 80(7).

Vannatta, R. & Fordham, N. (2004). Teacher dispositions as predictors of classroom technology use. *Journal of Research on Technology in Education*, 36(3).

Jukes, I. & McCain, T. (2006). Change is hard: You go first. *The Committed Sardine* (Available at :<http://web.mac.com/iajukes/thecommittedsardine/Handouts.html>)

Villano, M. (2006). Picture this! *T.H.E Journal*, 33(16). Pgs. 16-18, 20.

III. Course Objectives

Upon completion of the course, the students will demonstrate the ability to:

- Facilitate technology-enhanced experiences that address content standards and student technology standards.
- Use technology to support learner-centered strategies that address the diverse needs of students.
- Apply technology to develop students' higher order skills and creativity.
- Facilitate equitable access to technology resources for all students.
- Model and teach legal and ethical practice related to technology use.
- Manage student learning activities in a technology-enhanced environment.
- Use technology resources to engage in ongoing professional development and lifelong learning.
- Continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- Apply technology to increase personal productivity.

Course Policies:

- *Academic integrity*: “Students are obliged to refrain from acts that they know or, under the circumstances, have reason to know will impair the integrity of the university. Violations of academic integrity include, but are not limited to, cheating, plagiarism, unapproved multiple submissions, knowingly furnishing false or incomplete information to any agent of the university for inclusion in academic records, and falsification, forgery, alteration, destruction, or misuse of official university documents or seal.”
- *Incomplete grade designation*: “An *I* (incomplete grade) is used when the instructor is not prepared to give a final grade for the course because of some justifiable delay in the completion of specific work. Submission of a grade of *I* must be accompanied by an incomplete grade contract signed by both the student and the instructor. The contract specifies what projects (papers, tests, etc.) must be completed for a final grade, a date by which these projects must be completed, and what grade will be given should the incomplete projects not be completed.”

- *Written assignment requirements:* Written assignments should be typed, double spaced with a 12 font size and one inch margins. Assignments should demonstrate a high standard of grammar, spelling and overall organization. As this is a graduate level course, assignments are expected to be turned in on time. For each week an assignment is overdue, there will be a one unit grade decrease (example: A- reduced to a B+). Any assignment overdue by 3 weeks, will receive a failing grade. Any legitimate reason for a late assignment must be discussed with the instructor prior to the due date.
 - Assignments need to be received in two formats. One hard copy needs to be handed to me in class. The second electronic copy needs to be submitted to the Blackboard Digital Dropbox in the following format: **(LastName_Assignment)**. **For example: (Schaaf_SoftwareEval.doc)**
- *Grading structure:*

A = 94+	B+ = 87-89	C+ = 77-79	D+ = 67-69	F= 59 &
A- =90-93	B = 84-86	C = 74-76	D =64-66	below
	B- = 80-83	C- = 70-73	D- =60-63	

Grade interpretation:

- A means outstanding achievement; available only for the highest accomplishment
- A- means excellent performance; clearly exceeds course requirements
- B+ means high achievement; substantially meets requirements and criteria
- B means praiseworthy performance; definitely above average
- B- means acceptable performance in a graduate class; meets nearly all course requirements and criteria
- C+ means marginal performance in a graduate class

In general, the award of “A” grades acknowledges achievement that far exceeds course expectations and criteria. By its very nature, this kind of performance cannot always be clearly spelled out in advance. The grade of “a” is reserved for special efforts and performance that go beyond expectations and that demonstrate exceptional creativity, responsiveness, ingenuity, or elegance.

NOTE: An incomplete is reserved for those individuals encountering a significant life-altering event during the course. If you have a death in your immediate family, or some other event, please let your instructor know as soon as possible. All assignments not completed by the end of this course will be considered late and assigned a grade of zero. An “I” (incomplete) grade will be recorded if work to be turned-in is justifiably late (serious illness, death in the family, etc.). Unexcused absence is not a valid reason.

<p>Digital Portfolio (15 Points) Each student will be responsible for developing one ISTE standard in the electronic portfolio. Each student will identify one standard from ISTE, write an interpretation of that standard, develop an appropriate artifact, complete the artifact, link the artifact to your portfolio, explain the link to the identified standard, and present on the last night of class. Feedback from these presentations will be provided with an opportunity to discuss the feedback with your peers and instructor.</p>	<p>Due Session 11 August 18th</p>
<p>Differentiated Instruction Plan (30 Points) Participants will develop a curriculum unit comprised of 5 lesson plans on the subject of their choice. Each lesson plan should integrate technology wherever possible. Examples could include a PowerPoint presentation, drill practice, or groups designing a brochure. The possibilities are endless for technology integration. Each lesson plan should also be differentiated so that all general and special education students can access the curriculum. Each participant will be asked to share their presentation on a given night towards the end of the semester.</p>	<p>Due Session 12 August 20th</p>
<p>Software or Internet Website Evaluation aligned with learning preferences (15 Points) Each person has a unique learning preference. In this activity, each participant will evaluate a piece of software and align it with a learning preference. An example of a piece of software might be a drill and practice CD-ROM or an online educational game. These software evaluations must include what type of software it is, the educational level of the software, a brief synopsis (2-3 paragraphs) of the software, benefits/drawbacks of the software, and which learning preference the software would appeal to most</p>	<p>Due Session 6 July 30th</p>
<p>Web 2.0 Student Activity (20 Points) Each person will evaluate a Web 2.0 application and introduce how to use it to the class. Each presentation will include an introduction and hands-on class activity for others to experience. The presenter should develop a general lesson plan for the activity, lead the group in a learning presentation, and facilitate a practice session with the class. Afterwards, presenters should write a brief reflection of the lesson and the experience. Each presenter will be allotted a time limit according to class size.</p>	<p>Due Session 8 August 4th (Lessons are on July 30th or August 4th)</p>
<p>Reading Assignments, Discussions, & Activities (20 Points) Throughout the course there will be required reading assignments. These assignments will vary according to the nature of the text. All articles will be posted on the Blackboard class site in .pdf format for universal access.</p>	<p>Due Sessions 3,4,5,8</p>

Course Schedule

Date	Topic	Readings & Assignments
<p>Session 1 July 14</p>	<p>TOPIC: Technology and the New Science of Learning</p> <ul style="list-style-type: none"> ➤ How do these concepts relate? ➤ School Reform and NCLB—What are the requirements and the consequences? ➤ What are indicators that kids think differently ➤ ISTE (International Society for Technology in Education) Standards ➤ Course Purpose and Design—How does this course content relate to the requirements you need to effectively integrate technology into instruction? ➤ Personal Technology Evaluation and personal goal for technology integration 	<p><u>Due Session 2</u></p> <p>Explore Blackboard class website</p> <p>Read Prensky’s Digital natives, digital immigrants.</p>
<p>Session 2 July 16</p>	<ul style="list-style-type: none"> ➤ Digital Portfolio ➤ Mock discussion on Blackboard ➤ Software ➤ Software Evaluation 	<p><u>Due session 3</u></p> <p>Read Prensky’s Listen to the natives: Learning in the digital age.</p> <p>Reading Activity 1 - Respond to the Blackboard discussion thread</p>
<p>Session 3 July 21</p>	<ul style="list-style-type: none"> ➤ Differentiating Instruction ➤ Differentiated Units ➤ Instructional Strategies ➤ Web 2.0 & the Internet 	<p><u>Due session 4</u></p> <p>Read Kennedy’s Tech Push</p> <p>Reading Activity 2 – Respond to the Blackboard discussion thread</p>

Session 4 July 23	<ul style="list-style-type: none"> ➤ Overcoming Obstacles & Barriers ➤ Becoming and Agent of Change ➤ Read Jukes Change is Hard: You Go First ➤ In-class Literature Circle 	<u>Due Session 5</u> Read Vannatta & Fordham Reading Activity 3 – Respond to the Blackboard discussion thread
Session 5 July 28	<ul style="list-style-type: none"> ➤ Models of teaching and learning ➤ Assessment of Student Learning (Clickers) ➤ Best Practices ➤ Electronic Portfolio 	<u>Due Session 6</u> Software/Internet Evaluation
Session 6 July 30	<ul style="list-style-type: none"> ➤ Review Software/Internet Evaluation ➤ Web 2.0 Student Presentations ➤ CTE /ELC practice ➤ Work Time 	
Session 7 August 4	<ul style="list-style-type: none"> ➤ Web 2.0 Student Presentations ➤ CTE /ELC practice ➤ Work time 	<u>Due Session 8</u> Web 2.0 Lesson Plan and Reflection
Session 8 August 6	<ul style="list-style-type: none"> ➤ Visual Literacy ➤ Multimedia 	Due Session 9 Read Villano's Picture This Reading Activity 4 – Digital Scrapbooking
Session 9 August 11	<ul style="list-style-type: none"> ➤ Review Digital Scrapbooks ➤ Copyright ➤ Internet Safety 	

Session 10 August 13	<ul style="list-style-type: none"> ➤ Mobile Computing ➤ Webquests ➤ Thinkport 	Due Session 11 Completed Electronic Portfolio Standard
Session 11 August 18	Electronic Portfolio Presentations / Discussions	
Session 12 August 20	Final Presentations of Differentiated Instruction Plans	

Final note: While it's unlikely, the course schedule and readings are subject to change. If this happens, you will be given ample notice.