Course: ED.893.508. Technology and the Science of Learning

Instructor: Beth Poss
Please contact 301-367-8763 (best time for texts or phone calls are weekdays 5 pm to 9 pm or on weekends from 9 am to 4 pm)
bposs1@jhu.edu

Credits Hours: 3
Location: Off Campus/Online
Class Time: Online

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 multidiscipline 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.

Student Learning Outcomes:
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 and 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 productivity both for solitary and collaborative tasks.

**Required Text and Other Materials**


**Optional/Supplemental Text**


**Assignments**

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Due Date(s)</th>
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</thead>
<tbody>
<tr>
<td><strong>I. Course Participation:</strong> 40 pts, including participation in online discussions and collaborative activities.</td>
<td>ongoing</td>
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<tr>
<td><strong>II. Web Journaling:</strong> 10 pts</td>
<td>Session 6</td>
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<tr>
<td>Pick a topic and find an educational blog or interactive educationally based community website. Follow the blog for 2 weeks and post a comment. Submit a reflection on this form of communication via email to the instructor.</td>
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<tr>
<td><strong>III. Collaborative Mini Lesson</strong> 20 pts.</td>
<td>Session 8 or Session 10</td>
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<tr>
<td>Small groups of 3-5 students will collaborate online to develop a mini lesson on a relevant topic to present to the class via the Discussion tab of the ELC. Each lesson will consist of resources (articles, video, websites, etc) to build background knowledge on the topic and a related discussion question that will be facilitated and monitored by the hosting group. Submit an individual reflection on the group experience.</td>
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**IV. Final Project:** Technology Infused Lesson Plan or Blog on Education Related Topic: 30 pts

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 project from the choices below, complete the project, post it on the ELC, explain the link to the identified standard, and present online before the last night of class. Feedback from these presentations will be provided online with an opportunity to discuss the feedback with your peers and instructors.

*Pick one of these 2 assignments to complete as your Final Project:*

Participant will create a lesson plan incorporating at least one of the interactive web-based or innovative technology tools addressed in this class. Each participant will post their lesson online for the class before the end of the semester.

Or

Participant will create a blog or interactive website related to education and will create at least 4 entries over the course of 2 weeks. Website must be well thought out and highlight interactive web-based tools and/or other technology resources used in education or for teacher professional development.

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**Evaluation and Grading**

**I. Course Participation** (includes online discussion and integrated collaborative activities, such as a curated resource list and mind map): 40%

**II. Web Journaling Assignment (including reflection)** 10%

**III. Collaborative Mini-Lesson (including individual reflection)** 20%

**IV. Final Project** 30%

**Grading Scale** (grading scale is determined by the university)

- A = 100-92%
- A- = 91-90%
### Course Outline

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Readings</th>
<th>Assessments Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Information Literacy/Digital Citizenship</td>
<td>Ch. 4, 8, 11 Hayes Jacobs</td>
<td>Course Participation: Discussion--Initial Post by Day 3 and responses to 2 peers by Day 7</td>
</tr>
</tbody>
</table>

B+ = 89-87%
B  = 86-82%
B-  = 81-80%
C+  = 79-77%
C   = 76-72%
C-  = 71-70%
F   = 69-0%

“The grades of D+, D, and D- are not awarded at the graduate level.”
<table>
<thead>
<tr>
<th>Session</th>
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</tr>
</thead>
</table>
| 4       | The World as the Classroom: How Social Media and the Internet Impact 21st Century Learners | Ch. 6, 7 Hayes Jacobs  
[http://langwitches.org/blog/2014/06/03/blogging-as-pedagogy-facilitate-learning/](http://langwitches.org/blog/2014/06/03/blogging-as-pedagogy-facilitate-learning/) | Find a blog to follow for Web Journaling Assignment and submit for approval  
Self Select Group for Collaborative Mini Lessons                                                                                            |
| 5       | Visual Literacy: The Power and Impact of Images                      | The Power of Images: Creating the Myths of Our Times  
A Shared Culture:  
[http://www.youtube.com/watch?v=1DKm96Ftko](http://www.youtube.com/watch?v=1DKm96Ftko)  
The Power of Images:  
[http://www.youtube.com/watch?v=aThOZNFrCEM&noredirect=1](http://www.youtube.com/watch?v=aThOZNFrCEM&noredirect=1)  
Visual Literacy:  
[http://www.youtube.com/watch?v=XQNbAtK3c3g](http://www.youtube.com/watch?v=XQNbAtK3c3g) | Collaborative Mini Lesson—Topic Approval  
Course Participation: Discussion—Initial Post by Day 3 and responses to 2 peers by Day 7 |
| 6       | Flexible Tools for Gaining and Sharing Information: Universal Design for Learning | The Future is in the Margins (required)  
[http://marylandlearninglinks.org/950](http://marylandlearninglinks.org/950) (optional resources)  
Not Just Group Work  
Course Participation: Discussion—Initial Post by Day 3 and responses to 2 peers by Day 7 |
| 7       | The New Digital Taxonomy                                               | Andrew Churches--Bloom's Digital Taxonomy  
Ch. 13 Hayes Jacobs  
Teaching Creativity – The Case for Mind Mapping  
Mind Mapping Definition:  
<table>
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<tr>
<td>8</td>
<td>Collaborative Mini Lessons (1) 2 weeks</td>
<td></td>
<td>Course Participation: Discussion--Initial Post by Day 3 and responses to 2 peers by Day 7 of each week</td>
</tr>
<tr>
<td>9</td>
<td>The Role of Technology in Improving Outcomes for Students</td>
<td>Your Brains on Google <a href="http://www.pbs.org/wgbh/pages/frontline/digitalnation/living-faster/where-are-we-headed/your-brain-on-google.html">http://www.pbs.org/wgbh/pages/frontline/digitalnation/living-faster/where-are-we-headed/your-brain-on-google.html</a></td>
<td>Course Participation: Discussion--Initial Post by Day 2, at least 3 responses to peers by Day 7</td>
</tr>
<tr>
<td>10</td>
<td>Collaborative Mini Lessons (2) 2 weeks</td>
<td></td>
<td>Course Participation: Discussion--Initial Post by Day 3 and responses to 2 peers by Day 7 of each week</td>
</tr>
<tr>
<td>11</td>
<td>Guiding Questions</td>
<td></td>
<td>Course Participation: Discussion--Initial Post by Day 3 and responses to 2 peers by Day 7</td>
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<tr>
<td>12</td>
<td>Feedback</td>
<td></td>
<td>Submit draft of <strong>final project</strong> for review and feedback</td>
</tr>
<tr>
<td>13</td>
<td>Sharing of Final Projects</td>
<td><strong>Reflection on Collaborative Mini-Lesson due</strong></td>
<td>Course Participation: Review and provide feedback on at least 2 peers projects</td>
</tr>
</tbody>
</table>

**Academic Conduct**
The School of Education defines academic misconduct as any intentional or unintentional act that provides an unfair or improper advantage beyond a student’s own work, intellect, or effort, including but not limited to cheating, fabrication, plagiarism, unapproved multiple submissions, or helping others engage in misconduct. This includes the misuse of electronic media, text, print, images, speeches and ideas. Any act that violates the spirit of authorship or gives undue advantage is a violation. Students are responsible for understanding what constitutes academic misconduct. (Please refer to the School of Education’s Academic Catalog for the current academic year for more information on the School’s policies and procedures relating to academic conduct--
http://www.students.education.jhu.edu/catalog/, see Academic and Student Conduct Policies under the Academic Policies section.)

Please note that student work may be submitted to an online plagiarism detection tool at the discretion of the course instructor. If student work is deemed plagiarized, the course instructor shall follow the policy and procedures governing academic misconduct as laid out in the School of Education’s Academic Catalog.

**Religious Observance Accommodation Policy**

Religious holidays are valid reasons to be excused from participating in an online course on a particular day. Students who are not able to participate on a particular day should notify the instructor in advance of his/her planned absence. In the event that a specific assignment is due on a day in which a student will be absent for religious observance purposes, please make alternative arrangements to submit an assignment on another day. It is expected that students will complete all required work within a course.

**Participation**

Active engagement is an essential component of the learning process. Participation in online courses includes active reading and discussion within online forums and activities during the week in which the class is engaged with the same content. Students are expected to log into the course, monitor course discussions, and engage as appropriate for the course several times a session (e.g., typically a session lasts one week). It is unlikely that students can fully engage with the knowledge construction within the online context if they log in only once or twice a week (e.g., only on weekends). Please notify the instructor in the case that you are not able to participate in a session at the designated time. See the Grading and Evaluation section of this syllabus for the weighting assigned to course participation when determining the course grade. If you are unable to participate in a scheduled session, points will be deducted from your participation grade, unless prior notice is provided and the instructor grants approval. If you are ill or have an emergency, which precludes your ability to participate unexpectedly, please notify the instructor via phone, text message or email as soon as possible in order to determine the need for an alternative course participation assignment for that session.
**Statement of Academic Continuity**

Please note that in the event of serious consequences arising from extreme weather conditions, communicable health problems, or other extraordinary circumstances, the School of Education may change the normal academic schedule and/or make appropriate changes to course structure, format, and delivery. In the event such changes become necessary, information will be posted on the School of Education website.

**Accommodations for Students with Disabilities**

If you are a student with a documented disability who requires an academic adjustment, auxiliary aid or other similar accommodations, please contact Jennifer Eddinger in the Disability Services Office at 410-516-9734 or via email at soe.disabilityservices@jhu.edu. For more information on the School of Education’s disability services, please visit the disability services website (http://www.students.education.jhu.edu/disability/).

**Diversity and Inclusion**

Johns Hopkins University is a community committed to sharing values of diversity and inclusion in order to achieve and sustain excellence. We believe excellence is best promoted by being a diverse group of students, faculty, and staff who are committed to creating a climate of mutual respect that is supportive of one another’s success. Through its curricula and clinical experiences, the School of Education purposefully supports the University’s goal of diversity, and, in particular, works toward an ultimate outcome of best serving the needs of all students in K-12 schools and/or the community. Faculty and candidates are expected to demonstrate a commitment to diversity as it relates to planning, instruction, management, and assessment.

**IDEA Course Evaluation**

Please remember to complete the IDEA course evaluation for this course. These evaluations are an important tool in the School of Education’s ongoing efforts to improve instructional quality and strengthen its programs. The results of the IDEA course evaluations are kept anonymous—your instructor will only receive aggregated data and comments for the entire class. An email with a link to the online course evaluation form will be sent to your JHU email address towards the end of the course. Thereafter, you will be sent periodic email reminders until you complete the evaluation. Please remember to activate your JHU email account and to check it regularly.
note that it is the School of Education’s policy to send all faculty, staff, and student email communications to a JHU email address, rather than to personal or alternative work email addresses.) If you are having difficulty accessing the course evaluations, you haven’t received an email notification about the course evaluation, or if you have any questions in general about the IDEA course evaluation process, please contact Liesl McNeal (410-516-9759; idea@jhu.edu or LMcNeal@jhu.edu).

Supplemental Reading List

Bibliography


Creative Commons. (n.d.). Creative Commons: About. Retrieved December 12, 2014, from Creative Commons: http://creativecommons.org/about


Davis, J. Power of Images: Creating the Myths of Our Time, Retrieved from Center for Media Literacy; http://www.medialit.org/reading-room/power-images-creating-myths-our-time


Epiphio. (2013, May 6). What the Internet is Doing to Our Brains. Retrieved from YouTube: https://www.youtube.com/watch?v=cKaWJ72x1r1


Attachment A

InTASC Core Teaching Standards (April 2011)

**Standard #1: Learner Development.** The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

**Standard #2: Learning Differences.** The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

**Standard #3: Learning Environments.** The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.

**Standard #4: Content Knowledge.** The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.

**Standard #5: Application of Content.** The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

**Standard #6: Assessment.** The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher’s and learner’s decision making.

**Standard #7: Planning for Instruction.** The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

**Standard #8: Instructional Strategies.** The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

**Standard #9: Professional Learning and Ethical Practice.** The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

**Standard #10: Leadership and Collaboration.** The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.
ISLLC Standards
(Standards for School Leaders)

Standard 1: A school administrator is an educational leader who promotes the success of all students by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by the school community.

Standard 2: A school administrator is an educational leader who promotes the success of all students by advocating, nurturing, and sustaining a school culture and instructional program conducive to student learning and staff professional growth.

Standard 3: A school administrator is an educational leader who promotes the success of all students by ensuring management of the organization, operations, and resources for a safe, efficient, and effective learning environment.

Standard 4: A school administrator is an educational leader who promotes the success of all students by collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources.

Standard 5: A school administrator is an educational leader who promotes the success of all students by acting with integrity, fairness, and in an ethical manner.

Standard 6: A school administrator is an educational leader who promotes the success of all students by understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.