

**LTMS 510.01**

Learning Technologies and Solutions (3 credits)  
Spring 2012

Room 1258

**INSTRUCTOR AND CONTACT INFORMATION:**

Instructor: Andy Petroski

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Office Hours: By Appointment

Corporate Affiliation: Harrisburg University, Director of Learning Technologies and Assistant Professor of Learning Technologies

LinkedIn: <http://www.linkedin.com/pub/0/176/315>

Blog: <http://learnev.blogspot.com/>

Slideshare: <http://www.slideshare.net/apetroski>

Twitter: @apetroski

**COURSE DESCRIPTION:**

Learning Technologies and Solutions: LTMS 510

This course presents an overview of multiple technology-based solutions to realize learning outcomes. Beyond a survey of learning software, the course challenges students to think broadly about emerging technology trends that present opportunities. By establishing a systematic decision analysis process, students will be able to assess suitable technology tools for specific environments and learning needs. A broad survey of open source and proprietary solutions will be explored as well as emerging trends in learning technologies. Course topics are examined within a framework of a learning strategy and a learning architecture.

**COURSE DELIVERY METHOD:**

This course will be delivered through face-to-face instruction, online synchronous communication and online asynchronous communication

**COURSE / DEGREE PRE-REQUISITES:**

- BA/BS Degree or POI

**MINIMUM PRE-REQUISITE SKILLS:**

- Basic computer skills
- Basic search engine experience

- Experience completing web forms
- Basic software download and installation experience
- Basic writing, presentation, and communication skills

## **COURSE GOALS AND OBJECTIVES:**

### **Course Goal:**

After completing this course students will be able to select appropriate learning technologies to achieve desired learning outcomes and will have a foundation to support successful management, design, and development of learning technology solutions.

### **Course Objectives:**

- List and describe domains of learning related to desired learning outcomes
- Consider goal, audience and technology analysis to aid in selecting appropriate learning technologies
- Consider learning technology selection within a learning technology architecture
- Describe the strengths, weaknesses and considerations of various learning technologies
- Systematically identify, evaluate, and select learning technologies
- Identify and discuss future learning technology solutions and implications

## **TEXTBOOKS AND OTHER COURSE MATERIALS:**

NO TEXTBOOK REQUIRED FOR THIS COURSE

- Book excerpts as assigned
- Articles as assigned
- Reports as assigned
- Site visits
- Guest speakers

### **Course page:**

Access the course site at <http://moodle.harrisburgu.edu/>

### **LTMS Laptop Requirement:**

- Students enrolled in Harrisburg University of Science and Technology's degree programs are required to have a laptop computer in order to complete specific course requirements.
- If you already have a laptop and want to continue using it at Harrisburg University, please be aware of the minimum required specifications for the LTMS program. Information can be found on the LTMS web site (<http://www.harrisburgu.edu/academics/graduate/learning-technologies/ltms-laptop-req.php>).
- Minimum requirements for connecting to the HU wireless network can also be found on the HU web site ([http://www.harrisburgu.edu/campuslife/technology/faq/wireless\\_network\\_req.php](http://www.harrisburgu.edu/campuslife/technology/faq/wireless_network_req.php)).

## **COURSE COMPETENCIES:**

### **1. Critical Thinking**

- Select appropriate learning technologies based on desired learning outcomes, audience analysis, and technology analysis
- Systematically evaluate learning technologies
- Consider the similarities and differences among learning technologies and their uses in K-12, higher education and business
- Think about learning technologies beyond standard uses
- Evaluate the wide reaching impact of learning technologies on the instructor, the student, the organization, and the society
- Consider future learning technologies, potential uses, and ultimate impact

### **2. Communication**

- Post thoughts about and experiences with learning technologies on a blog
- Respond to instructor and student Moodle posts in writing to expand upon points made or present alternate points-of-view
- Present information about learning technologies
- Create podcasts for learning
- Discuss learning technologies in class and online
- Ask questions of learning technology professionals

### **3. Teamwork and Collaboration**

- Work in groups as directed by the instructor to present information and complete assignments
- Work in a collaborative online environment to contribute to an online learning technologies encyclopedia

### **4. Entrepreneurship**

- Identify gaps in learning technologies and discuss opportunities for filling gaps
- Discuss future technology advancements, their application to learning solutions, and their potential to be marketable products

### **5. Information Literacy**

- Research and evaluate information about learning technologies
- Follow copyright law and fair use guidelines

### **6. Ethical Decision Making**

- Identify and evaluate security and privacy issues related to the use of learning technologies
- Follow intellectual copyright laws when creating instructional materials

### **7. Global Awareness**

- Consider how different cultures react to new ways of learning
- Identify ways in which learning technologies can impact the individual, the organization and the community
- Discuss the holistic impact learning technologies can have on personal success, organizational success, and social and environmental issues

## EVALUATION AND ASSESSMENT:

225 points (36%) = Assignments

100 points (15%) = Learning Technology Presentation

150 points (27%) = Learning Technology Selection Report

140 points (22%) = Participation (in class, at site visits and online discussion)

615 points = Total

## GRADING CRITERIA:

Your work will be evaluated according to the following general guidelines:

**Excellent:** Exceptional effort. Individual was always prepared to discuss, present, and provide feedback. Work reflects consistent participation and engagement in a manner that reflects a deep interest in and understanding of the course content. Regular contributions are consistently thoughtful, constructive, and beneficial to all involved in the course. Assignments and projects are thoroughly and thoughtfully completed, always indicating additional work, insight, and integration of ideas. Assignments and projects are completed on time, according to requirements, and with a thorough understanding of how individual pieces of the course build upon and integrate with each other. ~~(Range of grades: A; 96-100)~~

**Above Average:** Good effort. Individual was often prepared to discuss, present, and provide feedback. Work reflects consistent participation and engagement in a manner that reflects an advanced interest in and understanding of the course content. The majority of contributions are consistently thoughtful, constructive, and beneficial to all involved in the course. Assignments and projects are thoroughly and thoughtfully completed, often showing some additional work, insight, or integration of ideas. Assignments and projects are completed on time, according to requirements, and with an understanding of how individual pieces of the course build upon and integrate with each other. ~~(Range of grades: A; 91-95, B+; 88-90)~~

**Average:** Basic Effort. Individual was sometimes prepared to discuss, present, and provide feedback. Work reflects consistent participation and engagement in a manner that reflects some interest in and understanding of the course content. Some contributions are thoughtful, constructive, and beneficial to all involved in the course. Assignments and projects are completed, occasionally showing some additional work, insight, or integration of ideas. Assignments and projects are completed on time, according to requirements, and with a basic understanding of how individual pieces of the course build upon and integrate with each other. ~~(Range of grades: B; 84-87, B-; 81-83)~~

**Below Average:** Lack of Effort. Individual was rarely prepared to discuss, present, and provide feedback. Work reflects some participation and engagement, but in a manner that reflects little interest in and understanding of the course content. A few contributions are thoughtful, constructive, and beneficial to all involved in the course. Assignments and projects are completed, but do not show additional work, insight, or integration of ideas. Assignments and projects are completed on time, but lack requirements and indicate little understanding of how individual pieces of the course build upon and integrate with each other. ~~(Range of grades: C+, C, C-, D; 80 and below)~~

## STUDENT SUPPORT:

Academic and Student Affairs Office  
Phone: 717-901-5139  
Email: [ldimino@harrisburgu.edu](mailto:ldimino@harrisburgu.edu)

Student Success/Tutoring Center  
Phone: 717-901-5139  
Email: [ldimino@harrisburgu.edu](mailto:ldimino@harrisburgu.edu)  
Web: <http://www.harrisburgu.edu/current-students/success/>

Tech Support  
Phone: 717-901-5177  
Email: [helpdesk@harrisburgu.edu](mailto:helpdesk@harrisburgu.edu)  
Web: <http://www.harrisburgu.edu/campuslife/technology/helpdesk.php>

Library  
Access to proprietary databases  
Phone: 717-901-5188  
Email: [library@harrisburgu.edu](mailto:library@harrisburgu.edu)  
Web: <http://www.harrisburgu.edu/campuslife/library/>

## HONOR CODE:

The HU Student Code of Conduct/Honor Code is found in the Student Handbook at <http://www.harrisburgu.edu/current-students/>. Students are expected to adhere to it at all times.

## COURSE DELIVERABLES

- ~~Learning Technology Presentation (100 points)~~
- ~~Learning Technologies Blog (30 points)~~
- ~~Podcasts (45 points)~~
- ~~Learning Technologies Encyclopedia (60 points)~~
- ~~Game and Simulation Olympics (35 points)~~
- ~~Mindmaps (55 points)~~
- ~~Learning Technology Selection Report (150 points)~~

## COURSE SCHEDULE (subject to change to meet scheduling and student needs)

### Class 1: Monday, January 9

- Introductions
- About the course
- Course resources
- Assignments and projects
- Equipment and other preparation
- **Topic 1:** Learning Strategy and Domains of Learning
- **Topic 2:** Analysis

### Reading:

- Read eLearning Tools & Technologies, Chpt. 19 (pgs. 405-432)

~~Management Systems: LMS vs. LCMS vs. CMS vs. VLE~~

~~Management Systems: Read How to By E-Learning Systems, Tools, and Services report: Learning Management Systems, Top 10 Characteristics (pgs. 23-25)~~

~~Management Systems: Read How to By E-Learning Systems, Tools, and Services report: Learning Content Management Systems, Points of Pain (pgs. 43-45)~~

**Assignments:**

- Student survey
- ~~Moodle Discussion~~
- Select Learning Technology Presentation Topic
- ~~Mind Map 1~~
- ~~Mind Map 2 (Management Systems)~~
- Upload a photo

**NO CLASS MONDAY JANUARY 16: MLK HOLIDAY**

**Class 2: Monday, January 23**

- Review
- **Topic 1:** Learning Technology Architecture
- **Topic 2:** Flowcharting
- **Topic 3:** Storyboarding
- ~~Topic 4: Management Systems~~

**Reading:**

~~Media: Read Media, Modes and Learning (Background Concepts, Media Characteristics and Impacts on Learning, Print and Text, Still Graphics and Static Displays, Sound and Music, Video and Animation, Multimedia)~~

~~Graphics: Read "5 Common Visual Design Mistakes"~~

~~Audio: Read "4 Simple Tips for Recording High Quality Audio"~~

~~Audio: Read "13 More Tips to Help you Record Narration Like a Pro"~~

**Assignments:**

~~Mind Map 3 (Media)~~

**Class 3: Monday, January 30**

- Review
- ~~Topic 1: Media~~
- ~~Topic 2: Copyright Introduction~~
- ~~Podcasts~~
- Learning Technology Selection Report

**Reading:**

- None

**Assignments:**

- Learning Technology Selection Report: Phase 1
- ~~Podcast Tutorials~~
- ~~Moodle Discussion~~
- ~~Media Production Facility site questions~~

## Class 4: Monday, February 6

- ~~Media Production Facility Site Visit~~

### Reading:

- ~~Multimedia: Read "The Value of Multimedia in Learning"~~
- ~~Authoring Tools: Read eLearning Tools & Technologies Chpts. 14 (pgs. 279-304), 15 (pgs. 305-317)~~
- ~~Read How to Buy E-Learning Systems, Tools, and Services report: Authoring Tools (pgs. 9-17)~~

### Assignments:

- ~~Prepare for audio recording (Download and install Audacity, Download and install LAME MP3 converter, bring microphone)~~
- ~~Mind Map 4~~

## Class 5: Monday, February 13

- ~~Site Visit Review~~
- ~~Review/Discussion~~
- Student Presentation: ~~Online Tutorials~~
- Student Presentation: ~~Online Courses~~
- Student Presentation: ~~Software Demos~~
- **Topic 1:** eLearning / Online Learning
- **Topic 2:** Audio recording
- **Topic 3:** Strategies and criteria for selecting tools
- **Topic 4:** Use cases
- **Topic 5:** Decision Analysis

### Reading:

- ~~Read How to Buy E-Learning Systems, Tools, and Services report; Writing a Use Case for Evaluation Purposes (pgs. 33-34)~~

### Assignments:

- ~~Podcast 1~~

## Class 6: Monday, February 20

- ~~Review/Discussion~~
- ~~Topic 1:~~ eLearning / Online Learning
- **Topic 2:** Strategies and criteria for selecting tools
- **Topic 3:** Use cases
- **Topic 4:** Decision Analysis
- ~~Topic 2:~~ Collaboration / Community (Social Learning)

### Reading:

- ~~Web 2.0 and Emerging Technologies Introduction~~
- ~~Web 2.0 and Collaborative Learning~~
- ~~Collaborative Environments: Read Horizon Report 2010 K-12 (pgs. 13-16)~~
- ~~User Created Content: Read Horizon Report 2007 (pgs. 9-11)~~
- ~~Social Networking: Read Horizon Report 2007 (pgs. 12-14)~~
- ~~Collaboration Webs: Read Horizon Report 2008 (pgs. 13-16)~~
- ~~Collective Intelligence: Read Horizon Report 2008 (pgs. 23-25)~~

- *Social Operating Systems: Read Horizon Report 2008 (pgs. 26-29)*
- *Why eLearning 2.0?*

**Assignments:**

- *Mind map 5*

**Class 7: Monday, February 27**

- ~~Review/Discussion~~
- Student Presentation: ~~Learning Communities~~
- Student Presentation: ~~Blogging~~
- Student Presentation: ~~Microblogging~~
- Student Presentation: ~~Social Networking~~
- ~~Topic 1: Collaboration/Community~~
- Learning Technology Selection Report

**Reading:**

- *Virtual Meetings: Read “7 Things You Should Know about Virtual Meetings”*
- *Web Conferencing: View “The Future of Web Conferencing in Education”*
- *Web Conferencing: Read “Energizing Virtual Instruction”*
- *Web Conferencing: Read How to By E-Learning Systems, Tools, and Services report (Brandon Hall, pgs 48—52)*
- *Virtual Labs: Read “The Emerging Value of Virtual Labs (pgs. 10-18)*
- *<http://campustechnology.com/articles/2012/04/05/using-twitter-to-support-learning.aspx?#CTEL>*

**Assignments:**

- *Learning Technology Selection Report: Phase 2, Part 1*
- *Learning Technologies Blog Post 1*
- *Learning Technologies Encyclopedia: Intro and Topic 1*
- *Mind Map 6*
- *Mid-term Adjustment Evaluation*
- *Download and install SecondLife*

**NO CLASS MONDAY MARCH 5: SPRING BREAK**

***Meet in SecondLife for testing during scheduled class time***

**Class 8: Monday, March 12 (Online Session)**

- Review/Discussion
- ~~Topic 1: Collaboration/Community~~
- Student Presentation: ~~Virtual Classroom~~
- Student Presentation: ~~Virtual Computer Labs~~
- ~~Topic 2: Virtual Teaching, Learning and Communication~~
- ~~Topic 3: Games and Simulations~~
- **Topic 4: Decision Analysis (cont.)**

**Reading:**

- *Games in Education: View “Technology in Education: Games”*
- *Digital Games in Learning: Read “Getting Serious About Digital Games in Learning”*
- *Digital Gaming Goes Academic <http://ow.ly/4gbfs>*
- *Massively Multiplayer Educational Gaming: Read Horizon Report 2007 (pgs. 25-27)*
- *Simulations: Read Wikipedia article, “Simulation”*

~~Simulations: Read How to By E-Learning Systems, Tools, and Services report: Simulation Development Tools (Brandon Hall, pgs 53 - 55)~~

~~<http://techkingames.blogspot.com/2012/02/gamification-of-education-infographic.html>~~

Assignments:

- ~~Learning Technologies Encyclopedia: Topic 2~~
- ~~Learning Technology Selection Report: Phase 2, Part 2~~
- ~~Podcast 2~~
- ~~Mind Map 7~~
- ~~Moodle Discussion~~
- ~~Games & Simulations Olympics, Team Names~~

**Class 9: Monday, March 19**

- ~~Review/Discussion~~
- ~~Student Presentation: Games~~
- ~~Student Presentation: Simulations~~
- ~~Student Presentation: Alternate Reality Games~~
- **Topic 1: Games and Simulations**
- **Topic 2: Virtual Worlds**
- ~~Virtual Worlds Preparation~~

Reading:

- None

Assignments:

- ~~Game and Simulation Olympics, Game 1~~
- ~~Learning Technology Selection Report: Phase 2, Part 3~~
- ~~Learning Technologies Encyclopedia: Topic 3~~
- ~~Moodle Discussion~~

**Class 10: Monday, March 26**

- ~~Medical Simulation Site Visit~~

Reading:

~~Virtual Worlds: Read "7 Things You Should Know About Virtual Worlds"~~  
~~Second Life: Read "7 Things You Should Know About Second Life"~~  
~~Virtual Worlds: Read Horizon Report 2007 (pgs. 18-20)~~  
~~Virtual Worlds: Read Horizon K-12 Online~~  
~~Virtual Worlds: Read "Second That"~~  
~~Second Life: Read "Second Life QuickStart Guide"~~

Assignments:

~~Mind Map 8~~  
~~Learning Technologies Blog Post 2~~  
~~Learning Technologies Encyclopedia: Topic 4~~

**Class 11: Monday, April 2 (Online Session)**

- ~~Review/Discussion~~
- ~~Student Presentation: Virtual Worlds~~

- Student Presentation: Virtual Reality
- ~~Topic 1: Virtual Worlds (cont.)~~
- ~~Topic 2: Classroom Technology~~

Reading:

- ~~Student Response Systems: Read "7 Things You Should Know about Clickers"~~
- ~~Student Response Systems: Read "Clickers in the Classroom: An Active Learning Approach"~~
- ~~Interactive Whiteboards: Read "Interactive Whiteboards for the Classroom"~~
- ~~Interactive Whiteboards: Read "Insightful Videos About Using SMART Boards in the Classroom"~~

Assignments:

- ~~Mind Map 9~~
- ~~Game and Simulation Olympics, Game 2~~
- ~~Learning Technologies Encyclopedia: Topic 5~~
- Learning Technology Selection Report: Phase 2, Part 4

## Class 12: Monday, April 9

- Review/Discussion
- Student Presentation: Interactive Whiteboards
- Student Presentation: Student Response Systems
- ~~Topic 1: Classroom Technology (cont.)~~
- ~~Topic 2: Assessment~~

Reading:

- ~~Assessment: Read "Motivate While You Integrate Technology: Online Assessment"~~
- ~~Assessment: Read "Adaptive and Interactive Assessments with E-Learning"~~
- ~~Assessment: The Promise of E-Portfolios to Improve Learning~~
- ~~<http://www.eschoolnews.com/2012/01/19/performance-assessment-making-a-comeback-in-schools/>~~

Assignments:

- ~~Moodle Discussion~~
- ~~Game and Simulation Olympics, Game 3~~
- Learning Technology Selection Report: Phase 3

## Class 13: Monday, April 16

- ~~Review/Discussion~~
- Student Presentation: Assessment Technology
- Student Presentation: Mobile Learning
- Student Presentation: Augmented Reality
- Student Presentation: Assistive Technologies
- Student Presentation: Alternative Devices for Learning
- ~~Topic 1: Assessment (cont.)~~
- ~~Topic 2: Devices~~

Reading:

- ~~Mobile Phones: Read Horizon Report 2009 K-12 (pgs. 16-18)~~
- ~~Assistive Technology: Read "Introduction to Assistive Technology"~~

Assignments:

- ~~Mind Map 10~~

**Class 14: Monday, April 23**

- ~~Review/Discussion~~
- Learning Technology Selection Report Presentations
- ~~Game and Simulation Olympics Awards~~
- ~~Topic 1: Future Learning Technologies~~
- Final Evaluations