

LOCK HAVEN UNIVERSITY OF PENNSYLVANIA  
LOCK HAVEN, PENNSYLVANIA

College of Education and Human Services

Syllabus

**TEACHING AND LEARNING IN AN INFORMATION AGE  
EDTL 601**

**I. Introductory Information**

- A. Department Name:** Graduate Studies
- B. Department Catalogue Number:** EDTL 601
- C. Course Title:** Teaching and Learning in an Information Age
- D. Credit/Semester Hours:** 3
- E. Clock Hours Per Week:** 3
- F. Restrictions upon Student Registration:**  
Graduate course provisions apply.

**II. A. Description of the Course:**

The purpose of this course is to provide graduate students an understanding of the teaching/learning process in relation to the emergence of the “information age.” Students will consider paradigm shifts in the roles of teacher, learner and technology. Students will compare and contrast the effectiveness of various technology types and how they impact the teaching/learning process. Students will develop technology enhanced learning experiences while developing technology skills reflective of best practices and applications.

**B. Comprehensive Description:**

This course provides graduate students opportunity to explore, compare and contrast technology applications relating to the teaching/learning process. Students identify technologies available to them and evaluate the effectiveness and potential of those technologies. Students develop technologically enhanced learning experiences appropriate to their grade level and/or subject area. Students have opportunity to examine and reflect on their role as it relates to the application of technology to enhance learning. Students consider the rapid development of technology and its implications for them as professionals. Utilizing NCATE

standards, the five core propositions of the National Board for Professional Teaching Standards, and the ISTE National Educational Technology Standards for Teachers (NETS-T), graduate students will explore the present and future impact of technology on education and how emerging technologies can connect learners with their community both locally and globally.

This course addresses the following National Board for Professional Teaching Standards Propositions (NBPTS).

### **NBPTS Proposition 1**

**Teachers are committed to students and their learning.**

- Teachers recognize individual differences in their students and adjust their practice accordingly.
- Teachers have an understanding of how students develop and learn.
- Teachers' mission extends beyond developing the cognitive capacity of their students.

### **NBPTS Proposition 2**

**Teachers know the subjects they teach and how to teach those subjects to students.**

- Teachers command specialized knowledge of how to convey a subject to students.
- Teachers generate multiple paths to knowledge.

### **NBPTS Proposition 3**

**Teachers are responsible for managing and monitoring student learning.**

- Teachers call on multiple methods to meet their goals.
- Teachers place a premium on student engagement.
- Teachers regularly assess student progress.
- Teachers are mindful of their principal objectives.

### **NBPTS Proposition 4**

**Teachers think systematically about their practice and learn from experience.**

- Teachers are continually making difficult choices that test their judgment.
- Teachers seek the advice of others and draw on education research and scholarship to improve their practice.

### **NBPTS Proposition 5**

**Teachers are members of learning communities.**

- Teachers contribute to school effectiveness by collaborating with other professionals.
- Teachers take advantage of community resources.

The course addresses the following ISTE National Educational Technology Standards for Teachers (NETS-T):

### **I. Technology Operations and Concepts**

Teachers demonstrate a sound understanding of technology operations and concepts.

- A. demonstrate introductory knowledge, skills, and understanding of concepts related to technology.
- B. demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

### **II. Planning and Designing Learning Environments and Experiences**

Teachers plan and design effective learning environments and experiences supported by technology.

- A. design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- B. apply current research on teaching and learning with technology when planning learning environments and experiences.
- C. identify and locate technology resources and evaluate them for accuracy and suitability.
- D. plan for the management of technology resources within the context of learning activities.
- E. plan strategies to manage student learning in a technology-enhanced environment.

### **III. Teaching, Learning, and the Curriculum**

Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning.

- A. facilitate technology-enhanced experiences that address content standards and student technology standards.
- B. use technology to support learner-centered strategies that address the diverse needs of students.
- C. apply technology to develop students' higher order skills and creativity.
- D. manage student learning activities in a technology-enhanced environments.

### **IV. Assessment and Evaluation**

Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies.

- A. apply technology in assessing student learning of subject matter using a variety of assessment techniques.
- B. use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.

#### **V. Productivity and Professional Practice**

Teachers use technology to enhance their productivity and professional practice.

- A. use technology resources to engage in ongoing professional development and lifelong learning.
- B. continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.
- C. apply technology to increase productivity.
- D. use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

#### **VI. Social, Ethical, Legal, and Human Issues**

Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in the PK-12 schools and apply those principles in practice.

- A. model and teach legal and ethical practice related to technology use.
- B. apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- C. promote safe and healthy use of technology resources.
- D. facilitate equitable access to technology resources for all students.

### **III. Exposition**

#### **A. Objectives**

The Graduate Student will be able to:

1. access and navigate course delivery technologies including, but not limited to all course tools, email, audio and video conferencing and PowerPoint software.

2. describe and discuss what the “information age” is and why it is significant as it relates to the teaching/learning process.
3. develop an inventory of available technologies to enhance the teaching/learning process and discuss the advantages, disadvantages and best practices of selected technological tools.
4. discuss issues related to internet safety and develop strategies for assisting learners to effectively evaluate World Wide Web resources.
5. develop an age and developmental appropriate Web Based Lesson Plan aligned with state learning outcomes standards.
6. utilizing appropriate resources, design and develop a web-quest that encourages and supports collaboration between classes and/or schools.
7. describe and discuss factors and considerations related to "special needs" learners including what technologies are available to assist and support them.
8. analyze and discuss considerations related to effective integration of technology into the teaching/learning process including implications of not using technology in the classroom.
9. discuss and justify legal considerations relating to appropriate and fair use of technologies instructional media in the teaching/learning process.
10. compare and contrast technologies designed to increase productivity by supporting non-instructional activities related to the educational process.
11. create and defend a proposed future technology that will solve an educational problem.

## **B. Activities and Requirements**

1. Readings/Information - Students will complete assigned readings in printed as well as electronic format.
2. Participation - Students will be encouraged to actively share ideas and information, to question, and to reflect during discussions.
3. Using available resources, students will write a reflective paper describing and discussing what the "information age" is and how teaching/learning is different now that we are in it.

4. Students will develop an inventory of available technologies that support the teaching/learning process. Identify the technology tool, describe its advantages and disadvantages as well as "best practices" application of the tool in a variety of instructional settings.
5. Students will develop a management/retrieval scheme to organize internet resources to assist in the instructional process.
6. Students will develop a process for evaluating internet resources that could be used by both teachers and learners at all levels.
7. Students will develop a grade level and discipline appropriate "web-based" or web enhanced lesson plan.
8. Students will develop a collaborative "internet project" that could be implemented between or among schools represented by the course or any other schools.
9. Using available resources, students will write a reflective paper describing technology considerations relating to the "special needs" population.
10. Students will develop a technology integration proposal that could assist in solving a problem in the educational process.
11. Using available resources, students will write a paper that identifies and describes technology tools that support non-instructional functions of the educational system.
12. After completing some "blue sky" dreaming, students will write a paper describing possible technologies for the future.

**C. Major Units and Time Allotted**

<b>No. of Week(s)</b>	<b>Topic</b>
1	Introduction and background: The Information Age and the implications to education and technology.
1	Instructional resources: Identifying, accessing, organizing and managing for effective utilization in the teaching/learning process.

- 2 The Internet: A resource for teaching and learning, critical analysis and evaluation of web resources.
- 2 Learning activities on the Web: Integration of web based materials with lesson planning.
- 3 Learning beyond the walls and borders: Collaborative web based learning experiences.
- 2 Special needs and technology.
- 2 Technology integration: Effective and efficient application of instructional technology in the teaching/learning process.
- 1 Technology tools for support: Improving productivity through effective technology application.
- 1 Technology and the future: Learning from the past for future emerging technological solutions to educational challenges.

#### **D. Materials and Bibliography**

- Barron, A. (2002). *Technologies for education: A practical guide*. Englewood, CO: Libraries Unlimited.
- Beckett, E. C., Wetzel, K., Chrisholm, I. M., Zambo, R., Buss, R., Padgett, H., Williams, M. K. & Odom, M. (2003). Supporting technology integration in K-8 multicultural classrooms through professional development. *TechTrends*. 47(5), 14-17.
- Christmann, E. P. & Christman, R. R. (2003). Technologies for special needs students. *Science Scope*. 26(6), 50-53.
- Day, J. & Huefner, D. (2003). Assistive technology: Legal issues for students with disabilities and their schools. *Journal of Special Education Technology*. 18(2), 23-34.
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- Fishman, B. J. & Zhang, B. (2003). Planning for technology: The link between intentions and use. *Educational Technology*. 43(4), 14-18.
- Tileston, D. (2004). *What every teacher should know about using media and technology*. Thousand Oaks, CA: Corwin Press.
- Tomei, L. (2003). *Challenges of teaching with technology across the curriculum: Issues and solutions*. Hershey, PA: Information Science Publishers.
- Vidoni, K.L. & Maddus, C.D. (2002). WebQuests: Can they be used to improve critical thinking skills in students? *Computers in the Schools*. 19(1-2), 101-117.
- Weikle, B. & Hadadian, A. (2003). Can assistive technology help us to not leave any child behind? *Preventing School Failure*, 47(4), 177-180.
- Weinburgh, M., Colier, S. & Rivera, M. (2003). Preparing elementary teachers: Infusing technology as recommended by the international society for technology in education's national educational technology standards for teachers (NETS.T). *TechTrends*. 47(4), 43-46.

#### **IV: Standards:**

All grades will be assigned in accordance with university policy and based on criteria to include participation, completion of assignments relating to front-end analysis, instructional design and development practices including the development of formative and summative evaluation procedures. Emphasis will be placed on effective application of instructional design principles and practices in the classroom as evidenced by the development and evaluation of appropriate instructional experiences.

Assessment:

Assignments and rubrics will be used to assess objectives 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Other assessment tools may be developed and used by the instructor.

## **V. Rationale and Impact**

This course will be one of the core requirements for the Master of Education Program in Teaching and Learning. The course will be offered each semester as well as summer to insure appropriate time to completion scheduling. The course will be an online offering making it accessible regardless of location.

The course is open to all graduate students including non-degree students.

The course is designed to provide an in depth and practical study of application and integration of educational technologies and their impact on the teaching/learning process. The course is specifically designed for in-service teachers and will provide skills and knowledge applicable to becoming a National Board for Professional Teaching Standards certified teacher. However, the concepts and practices of technology integration are also meaningful in training and development for business and industry,, thus making this course significant for anyone responsible for, or interested in, the learning process.

The outcomes of this course will have direct application to existing classroom responsibilities at all levels and all disciplines. The course will enhance the in-service teacher's ability to focus on individual learning needs and improve student performance.

## **VI. Cost and Staff Analysis:**

This course will utilize existing faculty in the Master of Education Program, but may also be available, on a needs basis, for other faculty.

Revised: 6 January 2009

## Syllabus

### EDTL 601 Teaching and Learning in an Information Age

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Dr. Keith T. Miller, President  
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Date