

EDU 420 Microcomputers in the Classroom

Spring 2011 (3 Credit Hours)

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Class Meeting: Monday 6:30-9:15pm, SPH 240

Office Hours: Wednesday & Thursday 10:00am -12:00pm, Friday 2:00pm-4:00pm.
Other time by appointment

Required Reading

Digital Textbook: Instructional Technology in 21st Century Classroom 3.0, at
<http://webspace.ship.edu/hliu/420/420home.html>

Outlines in Brief:

- Millennial Learner
- 21st Century Learning
- ICT Literacy
- Media Literacy
- TPCAK: Technology, Pedagogy, & Content Knowledge
- Wisdom of the Crowd: Connectivism, Collectivism, and Sharism
- Learning by Gaming, Learning by Searching, & Learning by Creating
- Web2.0 Technology in Teaching and Learning

I. Catalog Description

This course provides basic knowledge of the evolution and operation of a microcomputer system. Variety of educational applications will be reviewed and analyzed for instructional contributions. Using recommended evaluation procedures, software reviewed and discussed as to classroom utilization.

II. SU Conceptual Framework Standards

For those Preparing to Teach, Counsel and Lead in Public Schools ***“Collaborative Decision-makers: Assessing, Planning, Reflecting”***

Our unit of certification programs is a body of collaborative decision-makers who perform within a conceptual framework of assessing, planning and reflecting. Our faculty and candidates are committed to the following standards developed collaboratively by the members of our unit.

1. Promote supportive educational environments that are respectful of and responsive to individual differences.
 - 1.1. Demonstrate understanding of the differences in how students learn and know how to accommodate diversity. Diversity includes, but is not limited to, differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area.
 - 1.2. Accommodate diverse learning needs through informed decision-making that supports academic success for all students. Diversity includes, but is not limited to, differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area.
 - 1.3. Show respect for the diverse needs and talents of all learners and demonstrate commitment to helping them develop self-efficacy and achieve academic success. Diversity includes, but is not limited to, differences among groups of people and individuals based on ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographical area.
2. Reflect continuously upon one's own performance and demonstrate progress in the development of the knowledge, skills and dispositions required for effective professional performance.
 - 2.1. Affirm the University's educational and ethical responsibility to produce highly qualified education professionals.
 - 2.2. Demonstrate academic integrity and uphold the trust of those with whom one works.
 - 2.3. Respond productively and respectfully to the responsibility of meeting professional standards, including state and national standards.
 - 2.4. Demonstrate commitment to ethical practices as described in relevant institutional and professional codes of conduct.
 - 2.5. Demonstrate professional and ethical responsibility through active engagement in the development of the knowledge, skills, and dispositions required to be an effective educator.
 - 2.6. Demonstrate initiative in fulfilling program requirements and in seeking advice and feedback that support achievement of professional goals.
 - 2.7. Respond positively to learning experiences and constructive feedback intended to improve professional knowledge, skills and dispositions.
 - 2.8. Demonstrate qualities that characterize professional conduct in both university and clinical settings.
3. Demonstrate the use of best practices and technologies in order to positively impact the achievement of all learners.
4. Demonstrate the use of appropriate authentic assessments and analytical data to make informed decisions that impact learner achievement.
5. Collaborate with critical others in making informed decisions within educational contexts.

III. INTASC Standards (Interstate New Teachers Assessment and Support Consortium)

INTASC 1: Making content meaningful

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 these aspects of subject matter meaningful for students.

INTASC 2: Child development and learning theory

The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.

INTASC 3: Learning styles/diversity

The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

INTASC 4: Instructional strategies/problem solving

The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

INTASC 5: Motivation and behavior

The teacher uses an understanding individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagements in learning, and self-motivation.

INTASC 6: Communication/knowledge

The teacher uses knowledge of effective verbal, nonverbal and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

INTASC 7: Planning for instruction

The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

INTASC 8: Assessment

The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

INTASC 9: Professional growth/reflection

The teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

INTASC 10: Interpersonal relationships

The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well being.

IV. National Educational Technology Standards for Teachers (NETS.T 2008)

1. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Teachers:

- a. promote, support, and model creative and innovative thinking and inventiveness.
- b. engage students in exploring real-world issues and solving authentic problems using digital tools and resources.
- c. promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes.
- d. model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments.

2. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessment incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S. Teachers:

- a. design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity.
- b. develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress.
- c. customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.
- d. provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching.

3. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. Teachers:

- a. demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations.
- b. collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation.

- c. communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats.
- d. model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning.

4. Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers:

- a. advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources.
- b. address the diverse needs of all learners by using learner-centered strategies providing equitable access to appropriate digital tools and resources.
- c. promote and model digital etiquette and responsible social interactions related to the use of technology and information.
- d. develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools.

5. Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:

- a. participate in local and global learning communities to explore creative applications of technology to improve student learning.
- b. exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others.
- c. evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning.
- d. contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community.

V. Course Objectives

This course is trying to promote the awareness and enhance the understanding of the role of information technology in K-12 classrooms, and help teacher candidates develop the knowledge,

skills, and dispositions necessary to apply computer technology effectively into their specific instruction and learning environments. The course content and activities are aligned with the Institutional Standards (PA-SUCOE-CF), the ISTE National Educational Technology Standards for Teachers (NETS.T 2008) and for Students (NETS.S 2007), Pennsylvania Academic Standards for Science and Technology, and the INTASC (Interstate New Teachers Assessment and Support Consortium) principles. This course will focus on the cutting-edge theories and practices of 21st century information technology and tilt to the techniques of integrating online resources, especially Web2.0 technologies into meaningful learning experiences. Upon successful completion of this course, students will be able to:

Understand the role of computer technology in education (**PA-SUCOE-CF 1,2,3; INTASC 9; NETS.T 1,2,3,4,5**)

- ❑ Demonstrate full awareness of the important role of computer technology in social change in general and in education reform in particular
- ❑ Realize that to be good teacher in the information age requires teacher candidates to be fully armed with cutting-edge information technologies and 21st century skills that enhance instruction and life-long professional development.
- ❑ Recognize that future learners in a rapidly changing and globally competitive world must learn the necessary knowledge and skills of learning with use of computer technology to raise learning quality and enhance learning efficiency.
- ❑ Recognize the past and current factors/issues that shape the current and the future role of information technology in education

Understand the paradigm change in teaching and learning (**PA-SUCOE-CF 1,2,3; INTASC 4, 9; NETS.T 1,3,4**)

- ❑ Recognize the changes of cognitive patterns of the younger generation in the digital age under a broad societal background
- ❑ Understand the imperative role change of teachers from knowledge experts to learners' facilitators and co-learners in helping student learning
- ❑ Obtain the knowledge of and be able to apply the current pedagogical theories and strategies in integration of technology into curriculum and instruction
- ❑ Demonstrate ICT fluency in classroom instruction, self-learning, and communication within the school community and beyond
- ❑ Advocate, model, and teach digital citizenship and responsibility

Learn the subject matter of computer technology (**PA-SUCOE-CF 1,2,3; INTASC 1,4; NETS.T 1,3,5**)

- ❑ Understand the basic concepts and terms of computer technology as required by the National Education Technology Standards for Teachers and the Pennsylvania Academic Standards for Science and Technology
- ❑ Learn the basic knowledge and skills of using different applications to solve specific problems in classroom environment and in the real word setting
- ❑ Adapt to the online learning environment as a learner and as an instructor.

- ❑ Take full advantages of Web2.0 technologies for learning, teaching, and professional development

Develop lesson plans with computer technology integration (**PA-SUCOE-CF 1,2,3; INTASC 2,3,4,5,6,7,8; NETS.T 1,2,3**)

- ❑ Create lesson plans with instructional skills and class activities embedded with technology use that motivate learners and promote cooperative learning
- ❑ Construct digital-age learning environments that nurture and encourage students' creativity
- ❑ Develop technologically enhanced instructional activities that successfully meet student's special needs
- ❑ Create student-centered and open-ended learning environments that foster independent inquiry, and problem solving abilities in the real world
- ❑ Apply technology to integrate traditional and alternative assessment tools to evaluate student performance

Gain learning skills for life-long professional development (**PA-SUCOE-CF 2, 3; INTASC 9; NETS.T 5**)

- ❑ Use computer technology, especially Web2.0 technology as a powerful tool for life-long learning as a professional
- ❑ Maintain a sustainable level of knowledge and skills in information technology with persistent self-learning through effective and efficient use of technology
- ❑ Be able to identify and locate learning resources and evaluate them for accuracy, suitability, and influence on future educational practices
- ❑ Build individualized databases of online resources
- ❑ Constantly communicate with, contribute to and share with a larger learning community of the profession

VI. Course Requirements:

- ❑ **Computer Technology Competency.** This course is designed as a web-enhanced course delivered from both classroom and the Internet. Students enrolled in this course should have the basic knowledge and skills of computer technology, such as word processing, graphic editing, online searching, and experiences of learning with web2.0 technology.
- ❑ **Email Account.** All students of the class are required to use only Shippensburg University email to communicate with the instructor, or to submit assignments. Other email accounts are not accepted by the instructor. Students are responsible for checking their Shippensburg University emails for messages from the instructor or classmates on a daily basis.
- ❑ **D2L.** Students need to check D2L regularly for updated grades.
- ❑ **Course Website.** A course website is available to students for free. The website hosts the digital textbook, course schedule, lecture PPTs, tutorials, videos, and other related resources.

- ❑ **Attendance.** Students are to notify the instructor prior to class via e-mail, voice mail, or by submitting an Absence Notification Form, if he/she is unable to attend the class. Students missing three or more classes (excused or unexcused) shall receive a reduced grade (one full level). Late arrivals are strongly discouraged. Excessive and chronic late attendance will be counted as absences (four late attendances equal to one absence). A sign-in sheet will be used to track attendance status.
- ❑ **Assignments Submission:** All the assignments should be uploaded to the Wikispace ePortfolio website. Some assignments also need to be submitted as email attachments to the instructor for grading.
- ❑ **Late Assignments.** Late Assignments will not be accepted unless the student has discussed the situation with the instructor prior to the due date and an extension is granted. Students are not allowed to make up points granted for in-class activities. Students must be in class to receive credit for lab activities.
- ❑ **Incomplete.** No “Incomplete” grade will be given unless extreme circumstances exist and only with the approval of the Dean of the College of Education and Human Services.
- ❑ **Academic Honesty.** Shippensburg University will not tolerate academic dishonesty in the form of plagiarism or cheating under any circumstances. Offenders will be held accountable for any form of academic misconduct under the terms found within the Shippensburg University Catalog on [academic dishonesty and Plagiarism](#).
- ❑ **Lab Property and Safety.** Everyone is responsible for the safe use of lab equipments. Lab rules should be strictly observed. Please report to the Lab attendant if you need anything or have any questions regarding lab facility and security issues.
- ❑ **Data Backup.** Bring a flash card with you to each class to save your work or save your work by sending yourself an email with your document attached.
- ❑ **Group Activities.** Everyone is required to play a full role in group activities as defined in the assignment requirements. Absence from group activity will result in no credit for that assignment.

VII. Assignment Descriptions

e-Portfolio Project

Each student will build a website on <http://www.wikispaces.com/content/for/teachers> hosting his/her e-Portfolio of this course. The project consists of two coherent sections: the website set up and the e-Portfolio content. Students’ creativity is strongly encouraged in designing the website, arranging the contents, and putting up educational technology resources with individual preferences. Specific requirements will be delivered with separate handouts.

Mini-Lecture

Each Student is required to give a mini-lecture to the whole class on technology integration for teaching and learning. In this 10 minutes short lecture, student will first share with the class his/her own learning experiences with use of information technology at any formal or informal learning environment. Then students will identify a lesson topic to teach content in K-12 subject areas. They need to search online resources (websites, images, sounds, graphs, games, videos, movies, or quizzes, etc) that will engage the learner, help teach the particular content accurately and effectively, and assess how well the students are learning. Lastly, students will give the class a surprise by showing/demonstrating a new technology or tech trick.

HootCourse Learning Community Project

Based on the research and successful practice of “teaching students where they virtually are”, [HootCourse](#) will be used as a major tool to reach students for instruction delivery and learning sharing. The social network sites involved with [HootCourse](#) are [Twitter](#) and [Facebook](#). There will be 12 HootCourse posts from the instructor, and students need to respond to 5 of the 10 posts by making comments or provide something new relevant to this course.

Cross-Culture Blog Project (Blog)

This blog project discusses hot world issues by two classes from China and the United States. In addition to blogging, other web2.0 tools such as Skype, Windows Movie, Internet Conferencing, etc. will be used for audio and visual communication and content presentation. At the same time students from both sides will be paired and conduct cross-culture communication through emails or other individualized channels. There will be Five blogging sessions with open-ended questions on hot world issues of common concern. The questions will be posted to the class blogging website <http://culturetalksp2011.wordpress.com/>.

Technology Integration Strategy Showcase Project

This is the culminating project for this course where students will demonstrate their knowledge and skills of integrating technology in teaching and learning with self-selected subject contents, technology tools, and the targeted learners in K-12 classroom.

Internet Safety in School Project (Group)

This is a group research project focusing on Internet safety issues in school. It covers topics of copyright, privacy invasion, cyber-bullying, identity theft, pornography, violence, Internet addiction and health, etc. This project will also touch the current rules and laws governing safe and legal use of the Internet and education for digital citizenship.

Class Conference

On the last day of the semester, there will be a class conference where the e-Portfolios, the Technology Integration Strategy Showcase Project, and the Internet Safety in School Research Project will be presented. The Instructor will present a summary of the course.

Labs

There are 10 labs that should be completed in class sessions.

Lab #1 Graphic Organizer

Lab #2 Inspiration

Lab# 3 Jeopardy Game

Lab# 4 Survey Monkey

Lab# 5 Glogster

Lab #6 Podcast (Digital Story Telling)

Lab #7 Xtranormal

Lab #8 Jing

Lab #9 Windows Movie

Lab #10 Google Earth

VIII. Assignments & Points Distribution:

#	Assignments/Labs	Total	Format
	<i>Pre-Semester Survey</i>	5	<i>Online Survey</i>
1	e-Portfolio @ Wikispace for Educators	50	Website Building
2	Mini Lecture	20	Presentation from Webpage
3	HootCourse Project	20	Online Submission
4	Cross Culture Blog Project	25	Blogging
5	Showcase Project	35	Presentation with New Tools
6	Internet Safety Research Project (Group)	30	Group Research Project
7	Class Conference Presentation	10	Presentation
8	Labs (10 labs, 10 points each)	100	Lab
	<i>Post-Semester Survey</i>	5	<i>Online Survey</i>
Total		300	

VIII. Grade Policy

Letter Grade	300 Scale	100 Scale
A	285-300	95-100
A-	270-284	90-94
B+	261-269	87-89
B	252-260	84-86
B-	240-251	80-83
C+	231-239	77-79
C	219-230	73-76
C-	210-218	70-72
D	180-209	60-69
F	179 and under	59 and under

EDU 420 Class Schedule – Spring 2011

(Monday 6:30pm - 9:15pm)

#	Date	Lecture Topics	Reading	Assignments Due Dates
	01/17 M	MLK Day -- No Class Meeting		
1	01/24 M	<ul style="list-style-type: none"> ▪ Course Introduction ▪ D2L ▪ EDU 420 Website and Digital -Textbook ▪ EDU 420 Class Blog Website ▪ Set up Wikispaces Account ▪ Set up e-Portfolio Framework ▪ HootCourse ▪ Online Survey ▪ <i>Mini Lecture Demo</i> 	Syllabus 420 Website Digital Textbook	e-Portfolio Project Starts @ Wikispaces http://www.wikispaces.com/content/for/teachers
2	01/31 M	<ul style="list-style-type: none"> ▪ Lecture 01 - Technology Standards ▪ TPCK ▪ Instructional Models with Technology ▪ Academic Standards ▪ HootCourse ▪ e-Portfolio Building ▪ Mini Lecture #1 	Read & Watch	HootCourse Posting Starts Mini-Lecture Starts Mini-Lecture-#01
3	02/07 M	<ul style="list-style-type: none"> ▪ Lecture 02 - Open Source: OCW & OER ▪ In-Class Activity: Blogging ▪ Mini Lecture #2 ▪ Lab - 01 Graphic Organizer 	Read & Watch	Mini-Lecture-#02 Lab #1
4	02/14 M	<ul style="list-style-type: none"> ▪ Lecture 03 - ICT & Media Literacy ▪ In-Class Activity: Image Editing ▪ Mini Lecture #3 ▪ Lab-02 Inspiration 	Read & Watch	Mini-Lecture-#03 Lab #2
5	02/21 M	<ul style="list-style-type: none"> ▪ Lecture 04 - Millennial Learner ▪ In-Class Activity: Writing Tools ▪ Mini Lecture #4 ▪ Lab-03 Jeopardy Game 	Read & Watch	Mini-Lecture-#04 Lab #3
6	02/28 M	<ul style="list-style-type: none"> ▪ Lecture 05 - 21st Century Learning ▪ In-Class Activity: Poll Everywhere ▪ Mini Lecture #5 ▪ Lab-04 Survey Monkey 	Read & Watch	Mini-Lecture-#05 Lab #4
	03/07 M	Spring Break		
7	03/14 M	<ul style="list-style-type: none"> ▪ Lecture 06 - Connectivism & Sharism ▪ In-Class Activity: Charts and Graphs ▪ Mini Lecture #6 ▪ Lab-05 Glogster 	Read & Watch	Cross Culture Blog Starts (see separate schedule) #1 Blog Submission Due Mini-Lecture-#06 Lab #5

8	03/21 M	<ul style="list-style-type: none"> ▪ Lecture 07 - Web2.0 Tools ▪ In-Class Activity: Virtual World ▪ Mini Lecture #7 ▪ Lab-06 Podcast 	Read & Watch	Mini-Lecture-#07 #2 Blog Submission Due Lab #6
9	03/28 M	<ul style="list-style-type: none"> ▪ Lecture 08 - Learning by Searching ▪ In-Class Activity: Special Search Engines ▪ Mini Lecture #8 ▪ Lab 07- Xtranormal Project 	Read & Watch	Mini-Lecture-#08 Lab #7 #3 Blog Submission Due
10	04/04 M	<ul style="list-style-type: none"> ▪ Lecture 09 - Learning by Gaming ▪ In-Class Activity: Game Resources ▪ Mini Lecture #9 ▪ Lab-08 Jing Project 	Read & Watch	Mini-Lecture-#09 Lab #8 Showcase Project Starts #4 Blog Submission Due
11	04/11 M	<ul style="list-style-type: none"> ▪ Lecture 10 - Web Source Evaluation ▪ In-Class Activity: Website Evaluation ▪ Mini Lecture #10 ▪ Lab-09 Window Movie Maker 	Read & Watch	Mini-Lecture-#10 Lab #9 #5 Blog Submission Due
12	04/18 M	<ul style="list-style-type: none"> ▪ Lecture 11– Weapons of Mass Instruction ▪ In-Class Activity: Google Docs ▪ Mini Lecture #11 ▪ Lab-10 Google Earth 	Read & Watch	Mini-Lecture-#11 Lab #10
13	04/25 M	<ul style="list-style-type: none"> ▪ Guest Speaker ▪ Assignments and Labs Clean Up 	Read & Watch	e-Portfolio Project Due Las t HootCourse Submission Due
14	05/02 M	<ul style="list-style-type: none"> ▪ Class Conference ▪ Showcase Project Presentation ▪ Internet Safety Project Presentation ▪ Course Summary Presentation (Instructor) ▪ <i>Post-semester survey</i> 		Showcase Project Due Class Conference Internet Safety Project Due