

**Department of Early Childhood, Elementary, and Middle Level Education**  
**EDU 2022 009: Teaching and Learning with Technology in Classrooms**

**Instructor:** Dr. Marie A. Fero  
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**Phone:** 581-7907  
**Class Meetings:** Tuesday 5-7:30pm

**UNIT Theme:** Educator as creator of effective educational environments, integrating diverse students, strategies, societies, subjects, and technologies.

**Course Description: (2-1-2)** This course, based on the national and state educational technology standards is designed to prepare teachers to integrate technology into the curriculum. This course will focus on the effective use of technology in teaching and learning.

Prerequisite: Passing score on the CEPS technology proficiency.

**Course Purpose:** EDU 2022 is structured to offer teacher candidates opportunities to:

1. Practice and expand personal use of various kinds of hardware and software.
2. Use technology in the design of curriculum for constructivist teaching and learning.
3. Apply learning theory to evaluate quality technology experiences.
4. Make informed judgments about social and ethical issues involving technology.
5. Develop strategies and commitment to explore new and emerging educational technologies.

**Textbooks:**

Shelly, G., Cashman, T., Gunter, R., & Gunter, G. (2008). *Teachers discovering computers: Integrating technology and digital media in the classroom* (5th ed.). Boston, MA, Thompson Learning.

Fewell, P. & Gibbs, W. (2006). *Microsoft office for teachers* (2<sup>nd</sup> ed.). Columbus, OH: Merrill Prentice Hall.

**Supplemental Materials:**

Flash drive

**Teaching Models:**

The Information-Processing Models

- Information-processing models emphasize ways of enhancing the human being's innate drive to make sense of the world by acquiring and organizing data, sensing problems and generating solutions to them, and developing concepts and language for conveying them.

Joyce, B., Weil, M., & Calhoun, E. (2009). *Models of teaching*. (8th ed.). Boston: Pearson.

**Dispositions:** Candidates in the Department of EC/ELE/MLE will exhibit professional ethical practices, effective communication, sensitivity to diversity, the abilities to provide varied teaching practices evidenced in a supportive and encouraging environment.

**Standards:**

**Course requirements and demonstrated competencies are aligned with the following standards:**

- Illinois Professional Teaching Standards (IPTS) <http://www.isbe.state.il.us/profprep/PDFs/ipts.pdf>
- Language Arts Standards for all Illinois Teachers ( ICLAS) [http://www.isbe.net/profprep/CASCDvr/pdfs/24110\\_corelangarts\\_std.pdf](http://www.isbe.net/profprep/CASCDvr/pdfs/24110_corelangarts_std.pdf)
- Technology Standards for all Illinois Teachers (ICTS) [http://www.isbe.net/profprep/CASCDvr/pdfs/24120\\_coretechnology.pdf](http://www.isbe.net/profprep/CASCDvr/pdfs/24120_coretechnology.pdf)
- Nets Standards for Teachers: ISTE National Technology Project: [http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS\\_for\\_Teachers\\_2008.htm](http://www.iste.org/Content/NavigationMenu/NETS/ForTeachers/2008Standards/NETS_for_Teachers_2008.htm)
- NETS Standards for Students: ISTE National Technology Project: [http://www.iste.org/Content/NavigationMenu/NETS/ForStudents/2007Standards/NETS\\_for\\_Students\\_2007.htm](http://www.iste.org/Content/NavigationMenu/NETS/ForStudents/2007Standards/NETS_for_Students_2007.htm)

SPA Standards Alignment (Special Professional Association Standards) based on \_\_\_\_\_

- ACEI (Association for Childhood Education International) program standards for elementary teacher preparation <http://www.acei.org/Synopsis.htm> and <http://www.acei.org/ncateindex.html>
- NAEYC (National Association for the Education of Young Children) NAEYC [http://www.naeyc.org/accreditation/next\\_era.asp](http://www.naeyc.org/accreditation/next_era.asp)

## Course Outcomes

Students will be able to

1. Review research studies of the effects and impact of technology on learning.
2. Evaluate ethical, legal and social equity issues pertaining to the impact of technology
3. Apply terminology of the field, including Web 2.0
4. Use, explore, and apply telecommunications opportunities: html editors as appropriate for teaching professionals, course management systems, videoconferencing, webcasts
5. Use and apply word processing, database, presentation and spreadsheet programs relating to teacher administration and the curriculum of elementary and middle schools.
6. Create multimedia learning options, especially interactive whiteboard (SmartBoard) tools and applications
7. Review and apply criteria to evaluate and select blogs, wikis, Web sites, educational software.
8. Design and produce appropriate technology supported instruction.
9. Appreciate the development of computer technology over time and implications of this history for instruction.
10. Practice strategies for continuous updating of computer literacy for teachers and students.
11. Practice ergonomics and proper care of computers and peripherals.
12. Design and maintain your own professionally appropriate website.

COURSE REQUIREMENTS	<a href="#">NETS Standards for Students</a>	DEMONSTRATED COMPETENCIES	ALIGNED STANDARDS
<b>PRODUCTIVITY</b>	NETS 6	Performance includes: Creation, editing, evaluation of appropriate professional documents in text and multimedia. Application of spreadsheet, database, presentation, and communications programs to classroom tasks. Focus is on demonstration of computer literacy, integration literacy and fluency, information literacy and fluency..	IPTS 1, 5, 6, 8p TSIT 1, 2, 5, 8 LASIT 1  Dispositions: PEP, PTSL
<b>WEB PRESENCE AND WEB 2.0</b>	NETS 2,3, 4,5	Performance includes: Review and evaluation of active, teacher maintained, classroom Web pages. Creation and use of a personal professional Web site, posted to individual student's account on the EIU pen server. Creation and use of selected personal accounts with such programs and participatory services as a blog, wiki, WebCT discussion board, del.icio.us, flickr, digg, twitter, google docs., etc. Focus is on participation in and creation of cyber environments for education.	ACEI 3e, 5d, NAEYC 2 IPTS 5, 6, 7, 9 TSIT 6 LASIT 2  Dispositions: PEP, EC
<b>CURRICULUM INTEGRATION</b>	NETS 1, 2, 3a.b.c.d. 4a.b.c.d., 5	Performance includes: Creation of a themed curriculum sequence based on a student selected <a href="#">essential question</a> appropriate for the classroom. The themed curriculum project may include: Introduction and rationale based on Internet research, site evaluations, podcast, Inspiration concept map, Excel graph, webquest evaluated or created, video evaluated or created, Turning Point (student response system) , handheld activities, SmartBoard activities. (Instructors may select stand-alone curriculum applications outside of the themed sequence.) Focus is on integrating and implementing several classroom technologies to investigate and present a single area of inquiry for diverse learners. Elements will be posted to the student's EIU (pen) website using file transfer protocol.	ACEI 2, 3, 4, NAEYC 1, 4 IPTS 1, 2e, 4e,f,g,h, 6 TSIT 3 LASIT 2  Dispositions: PTSL, SDE
<b>DIGITAL CULTURE, CONTEXT AND IMPACT</b>	NETS 1d, 4c, 5, 6	Performance includes: Analysis of turning points and trajectories in computer history, present trends, terminology, review of research, understanding and committing to strategies for keeping abreast of developments in educational	ACEI 1, IPTS 4q, 6  Dispositions:

		technology. Focus is on critical understanding of the role of technology in today's global society and attention to outside influences on classrooms.	SDE
<b>DIGITAL CITIZENSHIP</b>	NETS 4, 5a.b.c.d.	Performance includes research and commitment to the welfare of society and of all children and youth.. Student may investigate the following technology-based issues: Assistive technology, copyright (RIAA & MPAA) and creative commons, net safety, privacy and security, AUP/CIPA and appropriate use, digital divides (economics, gender, race), job loss, Internet addiction, cyber bullying, social networking, gaming, real vs.virtual libraries, virtual classrooms and online coursework, artificial intelligence, corporate controls, technology and health, technology and environment. Focus is on teachers as leaders by modeling best practice in educational technology.	ACEI 3, NAEYC 2 IPTS 2b, 3, 5f, 5k, 6, 9 TSIT 4, 7 LASIT 3  Dispositions: PEP, SDE
<b>PARTICIPATION</b>	NETS 2, 5	Performance includes display of professional dispositions, thoughtfulness, communication, and attention to course projects, assignments, and inquiries, prompt submissions, perfect attendance. Focus is on evident desire for excellence in teaching and learning with technology in classrooms.	ACEI 5, NAEYC 5 IPTS 9, 10, 11 TSIT 2  Dispositions: PEP, EC
<b>Evaluations</b>	NETS 5,6	The students will demonstrate their content knowledge of effective integration of technology in the classroom by completing assessment tools.	IPTS 1,3,4,6,8 ICTS 1,2,3,4,5,7,9 ICLAS 1A, 1B, 1G, 3F NAEYC 4b ACEI 3.1,3.2,3.3,3.4,3.5  Disposition: EC

CORE ASSIGNMENTS	DESCRIPTION	POINTS/DUE DATE	WEIGHTS
<b>PRODUCTIVITY</b>	Instructor will select classroom related projects created with word processing, publishing, spreadsheet, database, presentation, graphics, and communications programs.		10%
<b>WEB PRESENCE AND WEB 2.0</b>	Instructor will select classroom related projects: Review of active, teacher maintained, classroom Web pages. Creation and use of a personal professional Web site, posted to individual student's account on the EIU pen server using a file transfer protocol. Creation and use of selected personal accounts with such programs and participatory services as a blog, wiki, WebCT discussion board, del.icious, flickr, digg, twitter, google docs., etc.		15%
<b>CURRICULUM INTEGRATION</b>	Students will develop a themed curriculum sequence based on a student selected <a href="#">essential question</a> appropriate for the classroom. Instructors will select elements of the themed curriculum project. Included may be: Introduction and rationale based on Internet research, site evaluations, podcast, Inspiration concept map, Excel graph, webquest evaluated or created, video evaluated or created, PPT with Turning Point (student response system) , handheld activities, SmartBoard activities, computer generated books. Instructors may select stand-alone curriculum applications outside		15%

	of a themed sequence.		
<b>DIGITAL CULTURE, CONTEXT AND IMPACT</b>	Reviews of research and related literature in technology education.		5%
<b>DIGITAL CITIZENSHIP</b>	Research and discussion projects in ethical issues in technology education.. Topics include: assistive technology, copyright (RIAA & MPAA) and creative commons, net safety, privacy and security, AUP/CIPA and appropriate use, digital divides (economics, gender, race), job loss, Internet addiction, cyber bullying, social networking, gaming, real versus virtual libraries, virtual classrooms and online coursework, artificial intelligence, corporate controls, technology and health, technology and environment, technology and global community. Elements of course projects must adhere to copyright law and use with permission. Research and discussion may take place on WebCT, a class blog, a class wiki, etc.		5%
<b>PARTICIPATION</b>	Performance includes display of professional dispositions, thoughtfulness, communication, and attention to course projects, assignments, and inquiries, prompt submissions, perfect attendance. Focus is on evident desire for excellence in teaching and learning with technology in classrooms.		10%
<b>EVALUATIONS</b>	Instructor will select appropriate midterm and final exam formats.		10%
<b>Optional Assignments</b>	Students will complete optional assignments as determined by the instructor.		30%

**Optional assignments:**

Handhelds, WebCT Discussion board, podcasting, PowerPoint Producer, digital storytelling, emerging technologies, Student Response Systems, digital photography, Paint, resumes, newsletters, and cover letters

**Grading Scale:** A = 92%-100%, B= 84%-91%, C= 72%-81%, D= 62%-71%, F = Below 62%

**Web site for assistance with APA questions:**

<http://owl.english.purdue.edu/owl/resource/560/01/>

**Course Topics**

**I. Integrating Technology into the Curriculum**

- A. Information literacy and terminology
- B. Identifying today's digital kids
- C. ISTE standards
- D. Technology throughout the school and community

**II. Networks, communications, Internet and World Wide Web**

- A. Components of communications systems
- B. Browsers and search engines
- C. Web 2.0, social networking and K-8 teaching and learning
- D. Web impact on teaching and learning

**III. Productivity tools**

- A. Looking at operating systems and how they differ
- B. Teacher authoring and student authoring of documents and presentations
  - 1. Different programs for different purposes
  - 2. Expense, availability, and ease of use
- C. Video authoring and editing in K-8 schools.

**IV. Hardware for Educators**

- A. System units, ASCII, bits, bytes, input, output, storage
- B. ASCII, bits, bytes, MBs, GBs, binary code

**V. Digital Media for the subject areas**

- A. Use and creation of digital media
- B. Inquiry curriculum, learning cycle, project based models
- C. Examining models of best practice

**VI. Assistive Technology**

- A. Curriculum adaptations and accommodations
  - B. State services
  - C. classroom devices to meet special needs
- VII. Evaluation
- A. Evaluation of information sources
  - B. Evaluation of student learning
- VII. Ethical considerations throughout educational technology

#### EDU 2022 References

- Bissell, J., Manring, A., & Rowland, V. (2001). *Cybereducator: The internet and world wide web for K-12 and teacher education* (2<sup>nd</sup> ed.). New York: McGraw-Hill.
- Bloom, B. S. (1956). *Taxonomy of educational objectives. Handbook I: The cognitive domain*. New York: David McKay, Co.
- Brewer, T. (2003). *Technology integration in the 21<sup>st</sup> century classroom*. Eugene, OR: Visions Technology in Education.
- Dice, M. L., & Goldenhersh, B. L. (2002). *How to create a professional electronic portfolio*. Dubuque, IA: Kendall Hunt.
- Howell, J. H., & Dunnivant, S. W. (2000). *Technology for teachers: Mastering new media and portfolio development*. New York: McGraw-Hill.
- McKenzie, J. (1999). *How teachers learn technology best*. Bellingham, WA: FNO Press.
- McKenzie, W. (2002). *Multiple intelligences and instructional technology: A manual for every mind*. Eugene, OR: International Society for Technology in Education.
- Provenzo, E. F. (1999). *The internet and the world wide web for preservice teachers*. Needham Heights, MA: Allyn & Bacon.
- Richardson, W. (2006). *Blogs, wikis, podcasts, and other powerful web tools for classrooms*. Thousand Oaks, CA: Corwin Press
- Roblyer, M. D. (2006). *Integrating educational technology into teaching* (4th ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.
- Sharp, V. (2002). *Computer education for teachers: Integrating technology into classroom teaching* (4<sup>th</sup> ed.). New York: McGraw-Hill.
- Standley, M. & Ormiston, M. (2003). *Digital storytelling with PowerPoint*. Eugene, OR: Visions Technology in Education.
- Tapscott, D. (1999). *Growing up digital: The rise of the net generation*, New York, : McGraw-Hill.
- Tiene, D., & Ingram, A. (2001). *Exploring current issues in educational technology*. New York, NY: McGraw-Hill.
- Worchester, T. (2003). *50 quick & easy computer activities*. Eugene, OR: Visions Technology in Education.
- Willard, N.E. (2002). *Computer ethics, etiquette, and safety for the 21<sup>st</sup> century student*. Eugene, OR: International Society for Technology in Education

#### Helpful Websites:

- The Horizon Report (2007 edition) [http://www.nmc.org/pdf/2007\\_Horizon\\_Report.pdf](http://www.nmc.org/pdf/2007_Horizon_Report.pdf)
- EDUCAUSE <http://www.educause.edu>
- ISTE <http://www.iste.org>
- Thinkfinity <http://www.thinkfinity.com>
- Kathy Schrock's Guide for Educators <http://school.discovereducation.com/schrockguide/>
- WebQuests <http://webquest.org>
- Edutopia <http://www.edutopia.org>

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Students with Disabilities: If you have a documented disability and wish to discuss academic accommodations, please contact the Office of Disability Services at 581-6583.

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Projects/Assignments

<b>Quizzes</b>	<b>10%</b>
<b>Participation</b>	<b>10%</b>
<b>Webpage Development</b>	<b>10%</b>
<b>Word project</b>	<b>5%</b>
<b>Excel project</b>	<b>5%</b>
<b>PowerPoint project</b>	<b>5%</b>
<b>Database project</b>	<b>5%</b>
<b>Multimedia project</b>	<b>5%</b>
<b>Inspiration/Kidspiration project</b>	<b>5%</b>
<b>Article review – current trends</b>	<b>5%</b>
<b>Smartboard project</b>	<b>5%</b>
<b>Evaluation of various technology sources –WebQuests, web sites, etc.</b>	<b>5%</b>
<b>Assistive technology project</b>	<b>5%</b>
<b>WebQuest</b>	<b>15%</b>
<b>Assessment project</b>	<b>5%</b>

**\*The WebQuests and web sites are individual assignments.**

**Students will work as partners to create other various projects in each class meeting. These projects will be presented to the whole class as part of the evaluation. All projects are DUE the day they are created, except for the WebQuests and web sites. All projects will be saved on students' portable hard drives and attached to web sites.**

## **Tentative Class Schedule**

**Week 1: Introductions; overview of course; web site intro; WebQuest discussion; establish essential questions for WebQuest; begin website creation.**

**Week 2: continue WebQuest/IL standards; student examples, etc.**

**Week 3: Word – resume; cover letter**

**Week 4: PowerPoint**

**Week 5: Google Earth project**

**Week 6: Multimedia project**

**Week 7: Legal, ethical issues project**

**Week 8: Excel project; article review criteria discussion**

**Week 9: article review DUE with presentation**

**Week 10: Smartboard project**

**Week 11: Web sites evaluation**

**Week 12: Assistive/adaptive technology project**

**Week 13: Inspiration/Kidspiration project**

**Week 14: assessment project**

**Week 15: web sites and WebQuest DUE; present WebQuests; using digital images in lessons**

**Week 16: final – 12/15, 5:15**

**\*This is tentative calendar of activities. There may be changes made later.**

## **Attendance/Participation Policy**

**This class requires both partner and individual participation in projects at EACH class meeting. Each project is worth 5% of the total grade. Therefore, each absence will result in the loss of 5% of your final grade. This can add up if you have repeated absences, and cost you big time. Excused absences can only be attained BEFORE the actual absence, or in the case of illness, a doctor's note can be brought in later. I will decide if an excused absence can be applied. So, there it is; show up to class!**