Department of Early Childhood, Elementary, and Middle Level Education
EDU 2022-006: Teaching and Learning with Technology in Classrooms

Instructor: **Dr. Marie A. Fero**
Office: **2217 Buzzard**
Email: **mafero@eiu.edu**
Office Hours: **posted on office door**
Phone: **581-7907**
Class Meetings: **TR 1-2:15pm**

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.

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:
Lever-Duffy, J. & McDonald, J.B. (2011). *Teaching and learning with technology* (4th ed.). Boston, MA: Pearson Education, Inc.

Fewell, P. & Gibbs, W. (2009). *Microsoft office for teachers* (3nd 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
- Technology Standards for all Illinois Teachers (ICTS) 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
- NETS Standards for Students: ISTE National Technology Project: 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

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	NETS Standards for Students	DEMONSTRATED COMPETENCIES	ALIGNED STANDARDS
PRODUCTIVITY	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
WEB PRESENCE AND WEB 2.0	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.icious, 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
CURRICULUM INTEGRATION	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 essential question 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
DIGITAL CULTURE, CONTEXT AND IMPACT	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 technology. Focus is on critical understanding of the role of	ACEI 1, IPTS 4q, 6 Dispositions: SDE

		technology in today's global society and attention to outside influences on classrooms.	
DIGITAL CITIZENSHIP	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
PARTICIPATION	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
Evaluations	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
PRODUCTIVITY	Instructor will select classroom related projects created with word processing, publishing, spreadsheet, database, presentation, graphics, and communications programs.		10%
WEB PRESENCE AND WEB 2.0	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%
CURRICULUM INTEGRATION	Students will develop a themed curriculum sequence based on a student selected essential question 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 of a themed sequence.		15%

DIGITAL CULTURE, CONTEXT AND IMPACT	Reviews of research and related literature in technology education.		5%
DIGITAL CITIZENSHIP	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%
PARTICIPATION	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%
EVALUATIONS	Instructor will select appropriate midterm and final exam formats.		10%
Optional Assignments	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

Academic Integrity

"The Department of EC/ELE/MLE is committed to the learning process and academic integrity as defined within the Student Conduct Code Standard I. "Eastern students observe the highest principles of academic integrity and support a campus environment conducive to scholarship." Students are expected to develop original and authentic work for assignments submitted in this course. "Conduct in subversion of academic standards, such as cheating on examinations, plagiarism, collusion, misrepresentation or falsification of data" or "submitting work previously presented in another course unless specifically permitted by the instructor" are considered violations of this standard."

Student Success Center

Students who are having difficulty achieving their academic goals are encouraged to first contact their instructor. If needing additional help, please contact the Student Success Center (www.eiu.edu/~success) for assistance with time management, test taking, note taking, avoiding procrastination, setting goals, and other skills to support academic achievement. The Student Success Center provides individualized consultations. To make an appointment, call 217-581-6696, or go to 9th Street Hall, Room 1302.

EDU 2022 References

Bissell, J., Manring, A., & Rowland, V. (2001). *Cybereducator: The internet and world wide web for K-12 and teacher education* (2nd 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 21st 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* (4th 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 21st 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
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

****

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.

Projects/Assignments

Participation	**10%**
Webpage Development	**10%**
Word project (Google Docs)	**5%**
Digital Citizenship project	**5%**
PowerPoint project	**5%**
Web 2.0 evaluation	**5%**
Multimedia project - Prezi	**5%**
Inspiration/Kidspiration project	**5%**
Google Earth Project	**5%**
Smartboard project (2)	**10%**
Evaluation of teacher web sites	**5%**
Assistive technology project	**5%**
Wordle	**5%**
WebQuest	**15%**
Final	**10%**

*** 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.

Attendance and Participation

This class is hands-on, meaning that there is very little lecture, and a lot of project creation with the technologies that are being used in P-12 classrooms today. You will work with a partner in this endeavor, and stay with this partner throughout the semester. This is one reason that it is imperative that you attend class each week. The other reason is that, of course, you must attend class! When a partner is absent, the person left behind will need to do the project alone. This is a huge issue for your future collegiality as a teacher. For these reasons, I need to be informed immediately about an absence, and I will make the determination as whether it is excused or unexcused. You and you alone will be responsible for doing the project if you are absent. Half of the project points are for the presentation. If you complete a project with your partner, but are not in attendance to present, you will lose those points. Each project is worth 5 points. Also, 10 points of your grade are for participation, and you cannot participate if you're not here. One (1) point will be subtracted from the final points for each unexcused absence, regardless of the reason.

Note about partnerships: As part of your grade, EACH partner will be expected to contribute to the creation of each project. This means that one person will not do all of the typing while others watch. Every student is expected to learn and manipulate the various technologies explored in class. I encourage only partnerships of two (2). If class numbers are uneven, please consider working alone, if that is a learning style that you prefer.

Tentative Class Schedule

Week I: 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 Docs exploration – send form for url

Week 6: Multimedia project – Prezi

Week 7: Web2.0 review of web sites

Week 8: Digital Citizenship project

Week 9: Google Earth

Week 10: Smartboard project

Week 11: Web sites evaluation

Week 12: Assistive/adaptive technology project

Week 13: Smartboard project II

Week 14: Wordle

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

Week 16: final

***This is tentative calendar of activities. There may be changes made later due to the instructor's desire to explore and teach new technology innovations.**