

EDUC-1020: EDUCATIONAL TECHNOLOGY

Cuyahoga Community College

Viewing: EDUC-1020 : Educational Technology

Board of Trustees:

December 2022

Academic Term:

Fall 2023

Subject Code

EDUC - Education

Course Number:

1020

Title:

Educational Technology

Catalog Description:

Identify, select, evaluate, use, and troubleshoot instructional technology, electronic media, operating and utility software to meet curricular goals. Examine legal and ethical practices with technology use in education. Use instructional design and integration strategies to design and produce developmentally and culturally appropriate materials that align with Ohio Standards for the Teaching Profession and Ohio's Learning Standards for Technology.

Credit Hour(s):

3

Lecture Hour(s):

3

Requisites

Prerequisite and Corequisite

None.

Outcomes

Course Outcome(s):

Identify, select, evaluate, use, and troubleshoot instructional technology, electronic media, operating and utility software to meet curricular goals.

Objective(s):

1. Develop basic technology competencies through effective use of multiple operating systems.
2. Use basic utility and application software.
3. Choose appropriate technology.

Course Outcome(s):

Use instructional design and integration strategies to design and produce developmentally and culturally appropriate materials that align with Ohio teaching profession and technology standards.

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Objective(s):

1. Produce a variety of educational media.
2. Give examples of ethical, legal, and societal issues related to technology.
3. Promote professional standards.
4. Work cooperatively and collaboratively with peers, students, and others.

Course Outcome(s):

Demonstrate effective presentation techniques while using instructional technology equipment and media.

Objective(s):

- a. Create presentations and electronic lesson plans that align to learning and technology standards.
 - b. Combine multiple techniques and uses of technology into meaningful learning experiences.
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Methods of Evaluation:

- a. Electronic thematic lesson plans
- b. Class participation
- c. Assignments
- d. Computer projects
- e. Quizzes and examinations
- f. Comprehensive project
- g. Presentations

Course Content Outline:

- a. Basic Technology Competencies
 - i. Basic components of an information system
 - ii. Components of multiple operating systems
 1. Hardware (by device and type)
 2. Application software
 3. Networking technologies
 - iii. Basic hardware and software troubleshooting
 - iv. Appropriate computer terminology
- b. Social and ethical behaviors when using technology (Positive and Negative)
 - i. Daily and professional use
 - ii. Current changes in technologies and effects on society
 - iii. Emerging technologies
 - iv. Informed choices among technology systems, resources, and services
- c. Learning Environment
 - i. Technology that enables and empowers learners with diverse backgrounds, characteristics, and abilities
 - ii. Technology resources that affirm diversity
 - iii. Legal and ethical practices related to technology use
 - iv. Equitable access to technology resources for all students
- d. Responsible Educational Technology Use
 - i. Issues related to responsible use of educational technology and consequences of inappropriate use
 - ii. Safe and healthy use of technology resources
- e. Professional Productivity Applications
 - i. Computer software productivity and utility application programs
 - ii. Electronic developmentally appropriate teaching materials in a chosen content area
 - iii. Networks for electronic communication
 - iv. Variety of productivity software
 1. Set up e-mail account to send/receive mail and attachments
 2. Word Processing (Word)
 3. Spreadsheet (Excel)
 4. Presentations (PowerPoint)
 5. File compression
 6. PDF (portable document format)
 7. History and current state of Internet
 8. WWW (World Wide Web)
 - a. Search engines/metasearch
 - i. Basic
 - ii. Advanced (Boolean)

- b. Research tool
 - c. Web development
- f. Media Production
 - i. Effective visual designs using:
 1. Scanning
 2. Digital audio and/or video
 - ii. Web site development
- g. Existing and emergent educational technologies
 - i. Stages in the instructional design process for educational technology planning
 - ii. Strengths and weaknesses of educational technology
 - iii. Evaluate, select, and incorporate media in design instruction
 - iv. Copyright law and other ethical issues
- h. Ohio Standards for the Teaching Profession and Ohio's Learning Standards for Technology
 - i. Subject matter knowledge
 - ii. Instructional Design
 - iii. Learning Environment
 - iv. Communication
 - v. Professional Development
 - vi. Students as diverse learners
 1. Learning styles
 2. Digital Literacy
 3. Digital Equity
 4. Racial and Gender Equity
 - vii. Instructional strategies
 1. Variety of technologies to enhance student learning
 2. Field trips, libraries (virtual)
 - viii. Instructional Design
 1. Learning theory
 2. Subject matter
 3. Curriculum and student development
 4. State and local curriculum guides
 5. Scope and sequence in specific disciplines
 6. Learner objectives and outcomes

Resources

Roblyer, M. D. & J.E. Hughes. (2023) (July 11, 2022) *Integrating Educational Technology into Teaching: Transforming Learning Across Disciplines*, Pearson.

Cennamo, K., Ross, J., Ertmer, P. A. (2019) *Technology Integration for Meaningful Classroom Use: A Standards-Based Approach*, Cengage.

Maloy, R. W., Verock, R. A., Edwards, S. A., Trust, T. (2021) *Transforming Learning with New Technologies*, Pearson.

Smaldino, S. E., Lowther, D. L., Mims, C. (2019) *Instructional Technology and Media for Learning*, Pearson.

Gunter, G. A. & R. E. Gunter . (2015) *Teachers Discovering Computers: Integrating Technology in a Changing World* , Cengage.

Resources Other

- a. Ohio's Learning Standards for Technology <https://education.ohio.gov/Topics/Learning-in-Ohio/Technology/Ohios-Learning-Standards-for-Technology>
- b. InTASC Model Core Teaching Standards https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKewidpevDqNj5AhV_IkEHXIVDlGQFnoECBQQAQ&url=https%3A%2F

%2Fccso.org%2Fsites%2Fdefault%2Ffiles
%2F2017-11%2FInTASC_Model_Core_Teaching_Standards_2011.pdf&usg=AOvVaw0chuoVM2bzzOFN69wNFN2K

- c. <http://www.iste.org>
- d. Ohio Standards for the Teaching Profession <https://education.ohio.gov/getattachment/Topics/Teaching/Educator-Equity/Ohio-s-Educator-Standards/TeachingProfessionStandards.pdf.aspx?lang=en-US>
- e. <https://www.si.edu/> Smithsonian Institution
- f. <http://www.aace.org> Association for the Advancement of Computing in Education

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