ED 653 Instructional Design

3 Credits
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Catalog Description

Instructional design combines technology skills with application of learning theory to maximize the effectiveness of education. This course explores instructional design from a practical perspective. Students will acquire hands-on practice with a variety of computer-based tools while exploring instructional methods and principles of design.

Prerequisites

Students must either be admitted to the School of Education M.Ed program or obtain instructor permission to enroll in this course.

Students in the Course will:

- create media-rich educational content
- write effective, measurable learning objectives
- create multi-layered rubrics for assessing student work
- design assessments based on desired outcomes
- map strategies for learning activities that link to outcomes
- critically evaluate tools and methods

Meeting Information

This is an online course. Please log in to Blackboard:
http://classes.uaf.edu

Alignment with School of Education Mission

This course supports the UAF School of Education's mission by providing students with the skills necessary to design thoughtful individualized instructional environments utilizing technologies and strategies appropriate to all learners. Students will acquire skills in the management and implementation of technology that will enhance their professional qualifications based on ISTE and Alaska teacher standards for technology and instructional design.

Plagiarism and Academic Honesty

Plagiarism. Plagiarism is representing someone else's ideas and work as your own. Plagiarism includes not only copying verbatim, but also rephrasing the ideas of another without properly acknowledging the source. As work is prepared and submitted to meet course requirements, whether a draft or a final version of a paper or project, take care to distinguish personal ideas and language from information derived from sources. Sources include published primary and secondary materials, electronic media, and information and opinions gained directly from other people. Students are required to use the plagiarism programs available on Blackboard for each assignment. The UAF Student Code of Conduct is adhered to in this course. http://www.uaf.edu/schedule/conduct/ - condu

Disability Services

UAF has a Disability Services office that operates in conjunction with the College of Rural and Community Development (CRCD) campuses and UAF Center for Distance Education (CDE). Disability Services, a part of UAF Center for Health and Counseling, provides academic accommodations to enrolled students who are identified as being eligible for these services. If you believe you are eligible, please visit the Office of Disability Services at http://www.uaf.edu/disability or contact a student affairs staff person at your nearest local campus. You can also contact Disability Services on the Fairbanks Campus at (907) 474-5655, fydso@uaf.edu.

Student Services

The Division of Student Services provides student-centered programs and services   designed to assist students in achieving their personal, academic and career goals. In collaboration with the academic deans, we lead the university in recruiting a diverse student body. With the use of ongoing assessment we support and develop programs and communities that contribute to the retention, success and leadership development of students. Go to http://www.uaf.edu/ses/ to learn more.

The Center for Distance Education provides student service support for this online course. See their website at: http://distance.uaf.edu

Writing support services are available to UAF students through the Writing Center, located in 801 Gruening, 474-5314, online at: http://www.alaska.edu/english/studentresources/writing/. You are encouraged to use this resource to meet writing expectations.

Technology support services are available through the OIT Support Center, 450-8300 (Toll Free: 800-478-8226), online at: http://www.alaska.edu/oit/sc/about/contact.xml, and via email to helpdesk@alaska.edu.

Required Text

Wiggins, G. P., & McTighe, J. (2005). *Understanding by design* (2nd ed., p. 370). Alexandria, VA: Association for Supervision and Curriculum Development.

Required Readings

Choi, H. J., & Johnson, S. (2005). The effect of context-based video instruction on learning and motivation in online courses. *American Journal of Distance Education, 19*(4), 215-227.

Hew, K. F. (2008). Use of audio podcast in K-12 and higher education: A review of research topics and methodologies. *Educational Technology Research and Development, 57*(3), 333-357.

Jonassen, D. H., & Hernandez-Serrano, J. (2002). Case-based reasoning and instructional design: Using stories to support problem solving. *Educational Technology Research and Development, 50*(2), 65-77.

Krathwohl, D. R. (2002). A revision of Bloom   s taxonomy: An overview. *Theory Into Practice, 41*(4), 212–218.

Mayer, R. E. (2008). Applying the science of learning: Evidence-based principles for the design of multimedia instruction. *The American Psychologist, 63*(8), 760-769.

Moreno, R. (2004). Decreasing cognitive load for novice students: Effects of explanatory versus corrective feedback in discovery-based multimedia. *Instructional Science, 32*(1/2), 99-113.

Pintrich, P. (2002). The role of metacognitive knowledge in learning, teaching, and assessing. *Theory Into Practice, 41*(4), 219-225.

Course Fees

There are no fees associated with this class. Software used in the course will be available as freeware, shareware or trial versions for both Windows and Macintosh operating systems. A personal web domain will have been established in ED 651 Web 2.0 Fundamentals.

Writing Standards

Citations and references should adhere to the American Psychological Association (APA) Formatting and Style Guide. Homework and projects will be evaluated for proper spelling and grammatical usage.

Technology Requirements

This is an online course. Students will use a computer to communicate, to access online multimedia (audio, video, Flash), and to create multimedia. Consistent Internet access and a computer with the ability to record and broadcast sound via a built-in or external mic or a headset will be required.

Students are expected to be active participants in online exchanges with MITI cohorts and with other colleagues and mentors through a personal learning network. Additionally, there will be periodic online interaction with the instructor using Elluminate (ELive).

Students will be expected to have the most current versions of several applications that will be used in this course, including QuickTime, Flash (Mac|Windows), iTunes and Java.

Instructional Methods

A variety of instructional methods will be used in this course, including Internet research, reading assignments, discussion, reflection, presentation, peer evaluation, and hands-on practice. There will be 3 required synchronous check-in times to assist students with this course.

Assessment

Students will be assessed in three areas: technical skill, practical application of learning theory, and contribution to the community of learners.

Final course grade will be calculated using the following formula:
- active contributions to class discussion: 15%
- reflection activities: 10%
- homework: 25%
- critical evaluation of tools and methods: 10%
- projects: 20%
- online learning module design: 20%

Course Assignments

Class discussions—15%

Students are required to contribute meaningfully to online class discussions and peer review of projects. The minimum quantity of participation is one original post and one response per week. Beyond this minimum requirement, grading will be based on the quality of participation, not on the number of posts.

Reflection activities—10%

At three points in the semester, students will be asked to reflect on their own learning. Scoring for these activities will be based on thoughtful, articulate descriptions of challenges, progress, and focus for sustained growth or improvement.

Homework—25% (five assignments @ 5% each)

1. Establish or revitalize your personal learning network (5%)

2. Identify one *enduring understanding* and outline a strategy map to include essential questions, desired evidence of learning, assessments, and learning activities. (5%)

3. Write three measurable learning objectives for the *enduring understanding* in homework #2. (5%)

4. Design and implement a student assessment, complete with a scoring rubric. (5%)

5. Create one page of text and graphics or one multimedia element. Demonstrate how your design addresses issues of accessibility and copyright. (5%)

Critical evaluation of tools and methods—10%

Write a 5-page evaluation paper. Using the strategy map developed in Homework Assignment 2, consider at least three tools (or methods) that might be used to reach the desired outcome. Compare and contrast strengths and weaknesses of each. Cite research-based evidence to support your final conclusions about the most effective tool/methods for use in this instance. Citations and references must adhere to the American Psychological Association (APA) Formatting and Style Guide.

Projects—20% (four projects @ 5% each)

1. Create an original graphic for use in instruction (examples might include diagrams, photos, annotated screen shots, course banner) (5%)

2. Create a brief (~5 minutes) audio podcast for use in instruction. (5%)

3. Create and publish a brief video or screencast (5%)

4. Use web-based tools to design a learning activity. (5%)

Online Learning Module Design—20%

The culminating project for the course is the design of an online learning module. It may be presented either in a Learning Management System (e.g., Blackboard, Moodle), or on a web site (e.g., Google Sites), and should include objectives, content, learning activities, and assessment. Scoring will be based on coherence, navigability, thoroughness, clear instructions, and purposeful content.

Portfolio

The instructor will review and comment on each assignment. Most assignments will also undergo a peer review process before they are included in the student's portfolio.

Assignment Due Dates

This is a cohort-based class with assignment and activity deadlines. Late assignments will be penalized at 10% per day unless an excused exception has been arranged with the instructor.

Attendance Policy

Students bring a variety of experiences and knowledge to the class cohort. Each student's unique perspective is an important component of the learning experience for their peers and colleagues—students will be expected to contribute and collaborate actively. During the eighth week of the semester, students who have not participated significantly will be withdrawn from the course.

Schedule of Topics

Topics will be explored on a weekly schedule (one topic per week). Assignments related to each topic will span multiple weeks, incorporating a cycle of draft, peer/instructor feedback, revision, final evaluation. Weekly topics:
- Personal Learning Environments
- Instructional Design Foundations
- Learning Outcomes
- Content Creation: graphics
- Learning Management Systems
- Learning Assessment Cycle
- Content Creation: audio and podcasting
- Structure and Cognitive Load
- Content Creation: video
- Copyright, Creative Commons, and Fair Use
- Designing for Accessibility
- Content Creation: web-based tools

Tentative Schedule

Week	Topic	Homework Assigned	Homework Due
1	Introduction & Orientation to the Course	• Class introductions • Account setup • Personal Learning Network (PLN)	
2	Personal Learning Environments	• Online class discussion • First reflection paper	• Class introductions • Account setup • Personal Learning Network (PLN)
3	Instructional Design Foundations	• Online class discussion • Enduring Understanding and Strategy Map	• Online class discussion • First reflection paper
4	Learning Outcomes	• Online class discussion • Peer review process • Measurable learning objectives	• Online class discussion • Enduring Understanding and Strategy Map
5	Content Creation: Graphics	• Online class discussion • Project 1 (graphic)	• Online class discussion • Peer review of Strategy Maps • Measurable learning objectives
6	Learning Management Systems	• Online class discussion • Online learning module	• Online class discussion • First draft of Project 1
7	Learning Assessment Cycle	• Online class discussion • Assessment with scoring rubric • Second reflection paper	• Online class discussion • Refined Strategy Map • Peer review of Project 1
8	Content Creation: Audio & Podcasting	• Online class discussion • Project 2 (audio)	• Online class discussion • Refined version of Project 1 • Assessment with scoring rubric • Second reflection paper
9	Structure and Cognitive Load	• Online class discussion • Critical evaluation of tools and methods	• Online class discussion • First draft of Project 2
10	Content Creation: Video	• Online class discussion • Project 3 (video or screencast)	• Online class discussion • Peer review of Project 2
11	Copyright, Creative Commons, and Fair Use	• Online class discussion • Third reflection paper	• Online class discussion • First draft of Project 3
12	Designing for Accessibility	• Online class discussion • Web-based content that meets accessibility & copyright standards	• Online class discussion • Peer review of Project 3 • Critical evaluation of tools and methods
13	Content Creation: Web-based Tools	• Online class discussion • Project 4 (web-based learning activity)	• Online class discussion • Refined versions of Projects 2 and 3 • First draft of learning module • Third reflection paper
14	Wrap Up	• Online class discussion • Transfer to degree-based portfolio	• Online class discussion • Web-based content • Project 4

| 15 | Student Presentations of Work | | • Learning module & degree portfolio |