

COURSE OUTLINE

Instructional Technology

Course Description

ED 222. Instructional Technology. 3 hours credit. This course will enable the student to facilitate learning with technology for elementary and secondary students. By exploring current theories of computer pedagogy and by participating in a classroom practicum, the student will work with practicing teachers to plan, develop, review, facilitate, and analyze a comprehensive lesson plan that requires elementary or secondary students to use technology for engaged content learning.

Course Relevance

With the ever-increasing use of technology in the workforce and in society, it is critical that elementary and secondary classroom teachers use technology in the classroom to better prepare students to enter the technological workforce. The course will provide the student with direct, hands-on experience developing lesson plans that incorporate technology. The student will gain valuable knowledge by working with a practicing teacher to facilitate a student-developed lesson that requires elementary and secondary education students to use technology to promote learning.

Required Materials

Ryan, K., Cooper, J.M., & Tauer, S. (2008). *Teaching for student learning: Becoming a master teacher*. Boston: Houghton Mifflin.

Supplemental Materials

Intel Teach to the Future. (ND). *Lesson resources*. (Pre-Service Teacher Edition). Sunnyvale, CA: Intel Corporation.

Learning Outcomes

The intention is for the student to be able to

1. Plan, design, review, facilitate, and analyze effective unit plans supported by technology
2. Develop methods and strategies for evaluating student practice and understanding of concepts that apply technology to maximize student learning
3. Identify the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and model appropriate practice

Learning PACT Skills that will be DEVELOPED and/or documented in this course

Through the student's involvement in this course, he/she will develop his/her ability in the following PACT skill areas:

Technology Skills

1. General computer use

- Through the construction, evaluation, analysis, and demonstration of technologically enhanced unit lesson plans, the student will develop his/her computer literacy skills.

Major Summative Assessment Task(s)

These learning outcomes and Learning PACT skill will be demonstrated by

1. Development and facilitation of a lesson plan in the elementary or secondary classroom with the following requirements:
 - A. Comprehensive lesson plan
 - B. Use of technology by elementary or secondary students for content engagement
 - C. Assessment measure(s) for student learning objectives
 - D. Evaluation and supervision of lesson facilitation from practicing classroom teachers
 - E. Reflection of facilitation experience
2. Development and presentation of an electronic portfolio of the student's course projects

Course Content

- I. Themes – Key recurring concepts that run throughout this course:
 - A. Lesson plan development
 - B. Lesson plan review
 - C. Lesson plan evaluation
- II. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Recognizing successful teaching techniques for a diverse group of learners
 - B. Incorporating technology into learning for a diverse group of learners
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Lesson plan
 - B. Technology
 - C. Learning objectives
 - D. Evaluation
- IV. Skills/Competencies – Actions that are essential to achieve the course outcomes:
 - A. Identify technology options in the elementary or secondary classroom
 - B. Create comprehensive lesson plan
 - C. Develop successful technology enhancements to lesson plan
 - D. Analyze usefulness of technology in the lesson plan
 - E. Evaluate lesson plan for effective practice of concepts
 - F. Develop a rubric for evaluation of learning objectives
 - G. Review lesson and rubric for consistency
 - H. Facilitate lesson plan in the elementary or secondary classroom
 - I. Construct final electronic portfolio

Learning Units

- I. Typical approaches to teaching elementary and secondary students about technology
 - A. Firsthand accounts of teachers' trials and triumphs with technology

- B. Students' firsthand accounts of using technology to learn and grow
 - C. Current theories about appropriate implementation of computers in elementary education
- II. Proposed activities and established guidelines for implementing technology in elementary and secondary education
 - A. Software and hardware for different ages
 - B. Appropriate classroom arrangements
 - C. Health and safety concerns
 - III. Skills for developing lesson plans (in elementary or secondary education) enhanced by technology
 - A. Lesson Plan Outline
 - B. Lesson Plan Evaluation and Revision
 - C. Assessment of learning objectives
 - IV. Teaching and learning experiences interpretation
 - A. Learning activities that were successful in the lesson plan
 - B. Ways to improve learning activities in the lesson plan
 - C. Collaborative reports on proposed activities and learning
 - V. Effective lesson plans, learning environments, and experiences supported by technology
 - A. Developmentally appropriate learning opportunities for diverse needs of learners
 - B. Current research on teaching and learning with technology when planning learning environments and experiences
 - C. Technology resources and evaluation strategies
 - VI. Methods and strategies for applying technology to maximize student learning
 - A. Methods to facilitate technology-enhanced experiences
 - B. Technology used to support diverse needs of learners
 - C. Technology strategies that develop students' higher order skills and creativity
 - D. Management of student learning activities in a technology-enhanced environment
 - VII. Social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and models for appropriate practice
 - A. Legal and ethical practice related to technology use
 - B. Technology resources that enable and empower learners with diverse backgrounds, characteristics, and abilities
 - C. Safe and healthy use of technology resources
 - D. Equitable access to technology resources for all students

Learning Activities

Independent and group learning activities using technology will be assigned to assist the student to achieve the intended learning outcomes. Activities identified in the syllabus, such as class discussion, projects, presentations, peer and self-critiquing,

development of lesson plans using various technological enhancements, practicum in the elementary or secondary classroom, and other activities at the discretion of the instructor will contribute to learning.

Grade Determination

The student will be graded on learning activities and assessment tasks. Grade determinants may include the following: preparation, analysis, and facilitation of final lesson plan; demonstration and practice of technology skills; evaluation of all online assignments; group discussion; an electronic portfolio; and other methods of evaluation employed at the discretion of the instructor.