

EDUCATION 482-4

DESIGNS FOR LEARNING: EDUCATIONAL USES OF COMPUTERS

Regular Semester, 1987
May 4 - July 31
Wednesday, 5:30-9:20

Instructor: Larry Wiebe
Phone: 291-4498
Location: MPX 7600

PREREQUISITES: Educ. 401/402 or equivalent.

CALENDAR DESCRIPTION:

Students will develop a critical understanding of the role of computers in education and will learn how microcomputers can be used. The course focuses on learning about computers and software and provides experience with courseware designed for instruction and software tools designed to facilitate the task of teaching.

OBJECTIVES:

This course will examine the various ways that computers might influence the teaching-learning process and classroom management. This will include the use of microcomputers and related software found in the classroom, introduction to a mainframe computer, and accessing remote computers using an electronic networking system.

Students in this course will:

- a) develop competencies in the operation of microcomputers;
- b) develop skills in the selection, evaluation and appropriate uses of computer-based learning materials;
- c) develop awareness of the ways the computer can be used by the teacher to support instructional and administrative tasks.
- d) develop a critical awareness of the role of computers in society and the implication of this for education.

This course is *not* designed as a computer programming course which will prepare teachers to write computer-assisted learning materials or to prepare the teacher to teach computing science courses. In this course the student will achieve a level of computer literacy which will allow intelligent and critical utilization of existing microcomputer hardware and software.

OUTLINE OF TOPICS:

1. Operation of Microcomputers
 - a. components and their function
 - b. connecting peripheral devices
 - c. programs and programming
2. Modes of computer utilization
 - a. the computer as an instructor
 - b. the computer as a laboratory
 - c. the computer as an object of study
 - d. the computer as a teacher's aide
 - e. the computer as a communications device

3. Selection and utilization of software
 - a. sources of materials
 - b. evaluation of courseware
 - c. integrating computers into the curriculum
4. Computer literacy
 - a. print and non-print materials on computers
 - b. the role of computers in schools and society
 - c. status of computers in B.C. schools
 - d. uses and misuses of computers in education

COURSE ACTIVITIES:

Course activities will consist of lectures, demonstrations, readings and laboratories. Student demonstrations will be part of the course.

EVALUATION:

1. a paper reviewing the application of computers in a selected curriculum area (10 pages)
2. a critical evaluation of a piece of software (2-3 pages).
3. short tests related to lectures and readings.
4. completed assignments demonstrating computer operating skills.
5. a documented presentation to the class which demonstrates the use of a particular piece of computer hardware and/or software.

REQUIRED TEXTBOOK:

Kinser, Sherwood, and Bransford. Computer Strategies for Education: Foundations & Content-Area Applications. Merrill Publishing.

EDUCATION 482-4

Designs for Learning: Educational Uses of Computers

Regular Semester, 1987
(May 4 - July 31)
Thursday, 8:30 - 12:20
Location: MPX 8651

Instructor: Wolfgang Rothen
Office: MPX 8676
Phone: 291-3642

Prerequisite: Educ. 401/402 or equivalent.

Calendar Description:

Students will develop a critical understanding of the role of computers in education and will learn how microcomputers can be used. The course focuses on learning about computers and software and provide experience with courseware designed for instruction and software tools designed to facilitate the task of teaching.

Objectives:

The goal of the course is to provide students with a sense of and actual control over, computer technology and its application as tools for instruction and learning. Initially, we will examine the technical terms that have grown to talk about computer technology. These concepts will be related to instructional applications that are illustrated by demonstrations and laboratory exercises. Students will develop competencies in the operation of various microcomputers; however, we will also access networking and communication technologies. Lectures will emphasize the human, social, and ethical context of computer technology.

Midway our attention shifts more directly toward ways in which computer technology can be implemented in the curriculum and classroom so that it enhances the personal and instructional relationship between teacher and student. Lectures will emphasize procedures for courseware selection and evaluation; models of the instructional process; case studies of computer applications in various subject matter areas; means for creating courseware; and the psychology of human-computer interactions. Students will be expected to apply these issues to their teaching specializations. A review paper assignment will lay the groundwork for the analysis of a computer problem in education. Microteaching exercises are designed to provide an opportunity for concrete experiences in the development of microcomputer-based teaching skills.

Evaluation:

Participation in classroom discussions.

Laboratory exercises that demonstrate specific implementations and principles of computer-based instruction.

Short tests related to lectures and readings.

A short paper that reviews the application of computer-based technology in a subject-matter area of your choice.

Microcomputer microteaching exercises.

Required Textbook:

Kinzer, C.K., Sherwood, R.D., & Bransford, J.D. Computer Strategies for Education. Merrill Publishing Co.