



Sultan Qaboos University
College of Education
Department of Instructional & Learning Technologies

SYLLABUS: TECH2111 Instructional Computer **FALL SEMESTER 2008/2009**

Course Type:	Department Requirement
Prerequisite:	None
Credit Hours:	3
Contact Hours:	2 hours lecture (Monday 12:00 13:50) + 2 hours lab (Wednesday 10:00 11:50), Lab EDU 06
Instructor	Dr. Alaa Sadik (Ph.D, University of Hull, UK, 2002) E-mail: alaasadik@squ.edu.om Web Site: www.alaasadik.net Ext. 2414 3988 Office: ILT Department, Room 1078

Course Description

This course is designed for ILT students and focuses on the educational uses of the computer and its roles in the educational environment. This practical course balances fact, theory and application as it examines the computer's role in education as a tool of the mind. It presents theories and models relating to computer-assisted instruction and discusses strategies for using computers in education settings, demonstrates practical applications and closes with a discussion of management and administrative concerns.

Course Objectives

By the end of this course, the student will be able to:

1. Show awareness of the different uses of computers in teaching and learning.
2. Identify the relationship between instructional design, learning theories and computer-based instruction.
3. Identify and implement strategies for integrating computers into schools and other educational settings; increase sensitivity to attitudinal and Apply instructional design principles in the evaluation and selection of existing software for educational uses; develop appropriate software evaluation forms for the review of commercial materials.
4. Identify computer components, define common computer terminology and explain a basic model of computer processing; demonstrate basic skills in operating the computer to run existing software and solve common operating problems.
5. Uses an authoring tool to develop courseware.
6. Assess important issues related to computers in education: the role of computers in home and school, equity issues; future trends and new developments.
7. Demonstrate competence in using applications (e.g. word processors, databases, spreadsheets, presentation packages and internet software) for personal and classroom use.

Subject Matter Content

- A. Impact of the computer on education
- B. Computer applications in education
- C. Perspectives on teaching and learning with computers

- D. Taxonomy of software types, including their appropriate uses.
- E. Microcomputer as a productivity tool
 - a. word processing
 - b. database and spreadsheet
 - c. photo editing
 - d. numerical analysis
 - e. programming languages
 - f. multimedia authoring
 - g. the Internet and the WWW
- F. Computers in the content areas.
- G. Strategies for using computers with exceptional students.

Course Activities

- Lecture and discussions
- Mediated presentations
- Hardware and software demonstrations
- Lab activities - hands-on computer experience

Expectations

- Attend all of the course classes. Attendance will be taken every class. Absent student is responsible for obtaining the information covered in lecture from other students or through an out-of-class appointment with Dr. Alaa Sadik.
- Complete all of the reading and review other resources as required.
- Complete all assignments to the best of your ability
- Submit assignments ON TIME.
- Participate in class through discussions and presentations.
- Participate asynchronously through email, forum discussions and blogs.

- Cooperate with other students through face-to-face or some sort of informal assignments.
- Contact Dr. Alaa Sadik if any question arise about what is expected or about how to use technology that is necessary to complete assignment

Schedule of Course Content and Activities

These activities are subject to change depending on class interest and progression

Week	Date	Topic and Activity
1	6/9/2008	Introduction to instructional computer and the impact of the computer on education
2	13/9/2008	Perspectives on teaching and learning with computers
3	20/9/2008	Computer applications on the classroom: Taxonomy of software types
4	27/9/2008	Classroom applications: Word processor tools [Tools: MS Word, MS Publisher]
5	4/10/2008	Eid AlFitr
6	11/10/2008	Classroom applications: Photo editors and drawing tools [Tools: PhotoShop, Picasa, Paint Shop Pro, Smart Draw]
7	18/10/2008	Mid term exam Classroom applications: Digital Movie editors and producers [Tools: MS Photo Story, MS Movie Maker]
8	25/10/2008	Classroom applications: Spreadsheets & databases [Tools: MS Excel, MS Access]
9	1/11/2008	Classroom applications: Hypertext, multimedia & hypermedia [Tools: MS PowerPoint, HyperStudio, ToolBook Instructor]
10	8/11/2008	Classroom applications: Internet tools and Internet applications into the curriculum [Tools: E-mail, discussion groups, search engines, etc]
11	15/11/2008	Classroom applications: HTML editors and design for the Web [Tools: MS Front Page and establishing Web servers]
12	22/11/2008	Classroom applications: Programming languages [Tools: Visual Basic 6.0]
13	29/11/2008	Classroom applications: Teacher utilities and management tools [Tools: Al-Edara Almadrasiya from Sakher]
14	6/12/2008	Submission, discussion and evaluation of the short assignments and digital portfolios
15	13/12/2008	Revision and discussions

Course Assessment

Student work will be evaluated based upon the assignments and digital artifacts submitted. This course will involve both individual and group assignments. Rubrics will be used to provide students with an understanding of teacher expectations for each assignment. It is the student's responsibility to refer to the rubric as well as the assignment explanation to best understand teacher expectations. While Dr. Alaa Sadik does his best to make the rubrics and assignment descriptions understandable, sometimes the words don't convey the intended information and a misunderstanding may occur. Please contact Dr. Alaa Sadik about any questions you may have.

1. Group-based presentation (*on one of the topics mentioned above to be developed and presented by students during the course from week 3 to week 13*).
(5%)
2. Mid term exam (*written exam including short answer, multiple-choice, true/false questions, week 7*).
(20%)
3. Digital portfolio (*including a production of multimedia presentations, interactive tools, databases, spreadsheets, Web sites, Word documents, images, video, etc.*) stored on a CD (*to be developed throughout the course and evaluated by the end of week 14. Late portfolios will lose 5% of the final grade for each day late including weekends. A student who is found using materials or tools produced by others improperly will be penalized*).
(25%)
4. Short assignment (*printed assignment on one of the classroom applications of the computer, submitted by the end of week 12. Late assignments will lose 5% of the final grade for each day late including weekends. A student who is found using scholarly work improperly will be penalized*).
(10%)
5. Final exam (*written exam including short answer, multiple-choice, true/false questions*).
(40%)

Required Textbook

Forcier, C. & Descy, E. (2005). The computer as an educational tool: Productivity and problem solving (4th ed.), Upper Saddle River, NJ: Merrill Prentice Hall.

Suggested Resources

Books available at SQU Main Library

Title: Microcomputers in education
Editor: I.C.H. Smith
Publisher: Chichester: Horwood, 1982

Title: Teachers, computers, and the classroom
Editor: Ivan Reid and James Rushton
Publisher: Manchester: Manchester University Press, 1985

Title: The educational software selector
Author: TESS / EPIE Institute
Publisher: New York: Teachers College Press, 1984

Title: Young people, creativity and new technologies : the challenge of digital arts
Editor: Julian Sefton-Green
Publisher: London : Routledge, 1999

Title: Using information technology effectively in teaching and learning : studies in pre-service and in-service teacher education
Editor: Bridget Somekh
Publisher: London : Routledge, 1997 London : Routledge, 1997.

Title: Teaching with computers : a new menu for the '90s
Author: Mary Jo Langhorne et al
Publisher: London: Page, 1989

Title: Software for educational computing : a general-purpose driver for computer-assisted instruction, interrogation and system simulation
Author: K. Ahmed, D. Ingram, C.J. Dickinson
Publisher: Lancaster: MTP Press, 1980

Title: Learning and teaching with computers : artificial intelligence in education
Author: Tim O'Shea, John Self
Publisher: Brighton, Sussex: Harvester Press, 1983

Web Resources

The Integration of Computer Technology into the Curriculum
<http://www.lausd.k12.ca.us/lausd/resources/integration>

Computer-Assisted Instruction
<http://www.nwrel.org/scpd/sirs/5/cu10.html>

An Introduction to Computer Based Instruction
http://scs.une.edu.au/573/573_1.html

The Computer as an Educational Tool: Productivity and Problem Solving
<http://www.prenhall.com/forcier>

