

Using Computers in Education

W200

Spring Semester, 2002

Section B685, Wednesdays, 1:00 p.m. – 3:40 p.m. in ES2119

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Materials

- The Textbook required for the course is *Great Teaching in the One-Computer Classroom, 5th edition* by David A. Dockterman, Tom Snyder Productions, 1998; ISBN 1-57809-681-2. It is available at the campus bookstore. There will be other printed material supplied by the instructor. Another book, highly recommended but not required, is *Failure to Connect: How Computers Affect Our Children's Minds--and What We Can Do About It* by Jane M. Healy, Simon & Schuster, 1998, ISBN 0-684-85539-9 (Pbk).
- You will need at least two 3 1/2 inch high density floppy diskettes on which to store your work, or you are welcome to use a Zip disk.
- You will need to obtain an IUPUI e-mail account and you are advised to have your IUPUI e-mail forwarded if you use another account more regularly.

Catalog Description

Required of all students pursuing teacher education. Introduction to instructional computing and educational computing literature. Hands-on experience with educational software utility packages and commonly used microcomputer hardware.

Major Learning Outcomes

- The student will have gained a basic understanding of the issues related to the *appropriate* use of technology in an educational setting.
- The student will be able to do basic word processing with ease and be able to use it within an educational setting.
- The student will be able to create simple databases and spreadsheets and be able to design lessons that utilize them.
- The student will be able to use the Internet for research and communication, and to design a lesson to guide children in its appropriate use.
- The student will be able to use several educational software packages and to evaluate their usefulness and appropriateness in an educational setting.
- The student will be able to create and present a simple presentation using *PowerPoint*.

Projects

The course will be divided into seven major areas, with a project required for each one. The various elements of the course will be given the following weights:

- Project 1: Word processing/Internet (10% of final grade) (Includes 3 separate assignments)
- Project 2-3: Database and Spreadsheet (20% of final grade)
- Project 4: Software Evaluation (10% of final grade)
- Project 5: Computer Graphics and Telecommunications (10% of final grade)

- Project 6: Hardware (10% of final grade)
- Project 7: Presentations (10% of final grade)
- Project 8: Strategic Plan/spreadsheet (15% of final grade) (In-class final project)
- Midterm quiz related to the textbook, class discussion, and course materials: (10% of final grade)
- Attendance and participation: 5% of final grade

Grading, based on +/- scale, is weighted according to the project.

A- = 90-92%; A = 93-96%; A+ = 97-100%

B- = 80-82%; B = 83-86%; B+ = 87-89%

C- = 70-72%; C = 73-76%; C+ = 77-89%

D- = 60-62%; D = 63-66%; D+ = 67-69%

F = 59% or lower

Late projects

Arrangements can be made to submit some projects by e-mail. Late projects will be penalized in grade. **Failure to turn in a project within one week of the due date without prior arrangement with the instructor will result in no grade being awarded.**

Attendance

The importance of regular attendance cannot be overemphasized. It is our expectation that you will attend classes and **arrive on time**. Information not in the textbook will be presented, software will be demonstrated, and you will have some time during the class to work on your project assignments with the help of your instructor. **Students are responsible for material missed when absent or tardy.** Papers due on a day a student is absent will be considered late unless prior arrangements are made. Prior notification of the instructor that you will be absent is also most advisable. Class will begin promptly!

If for any reason you need to withdraw from class, please do so officially; if you simply stop coming to class you will be recorded as having failed the course.

Project Descriptions

Project 1: Word Processing/Internet. The purpose of this activity is to develop the level of competency in basic word processing skills that a teacher needs in order to use this tool effectively and effortlessly. Students will also be introduced to some of the educational resources available on the Internet and to some considerations of appropriate Internet use. This project will be prepared with the word processor *Microsoft Word*.

Please incorporate the following enhancements into your documents for Project 1:

- minimum of 2 fonts, one *serif*, one *sans serif*
- minimum of 2 point sizes
- boldface, italics, underlines
- centered title
- single spacing
- pages numbered in footers
- use of computer spell checker
- careful proofreading
- Save documents to your floppy disk and print out hard copies for your instructor.

Project 1, Assignment 1. You will draft and revise a Personal History of Microcomputer Use, describing how you first came to use microcomputers and how your use of them has changed over the last few years. Begin with a short introductory paragraph explaining the nature of your narrative. Please include also a section about your expectations and attitudes regarding computer literacy and how computers should be used in the schools. End with a summary and conclusion, restating your main points (approximate length: 1 1/2 to 2 pages.)

Project 1, Assignment 2. Net Surfing and Searching: You will visit sites in the Internet recommended by your instructor and first write a description of 3 sites, evaluating how/whether each one might be used in your teaching. You will then find three additional sites on the Internet directly related to an area/subject that you might wish to teach, and write summaries and evaluations of them as well. (approximate length: 2 to 3 pages.)

Project 1, Assignment 3. Web Quests and strategies for using Web resources. You will explore WebQuests and read Web-based articles concerning Internet use. You will then write an evaluation of each, related to criteria discussed in class.

Project 2-3: Data bases and Spreadsheets. The purpose of this double project is to introduce the student to data bases and spreadsheets, to help you to gain some facility in creating them, and to explore some of the ways in which they can be useful in an educational setting. This project will be prepared with Microsoft *Excel*. This project's focus is to create a data base application and a spreadsheet application that would be of use to enrich your students' learning. Then you will use a word processor to describe how you would present and use your database and spreadsheet in an educational setting. You will receive an assignment sheet presenting the exact format that you will need to use. Use some care in selecting the subject of your database; it will be helpful to you if you can use the same subject (e.g., presidents, trees, butterflies, inventions) as the basis of your other projects as well.

Project 4: Software Evaluation. The purpose of this activity is to explore and evaluate software for the educational environment. You will visit the Curriculum Resource Center to learn about the resources that are available to you. You can also check out software from the CRC to use within the building. You will learn about evaluating software, evaluate three pieces of educational software yourself, and write a short paper describing and evaluating the three software packages, using the format presented in the assignment sheet. Additionally, you will use make a brief presentation of one piece of software to the class, with emphasis on your evaluation of its usefulness and appropriateness for students at a particular grade level.

Project 5: Computer Graphics, Telecommunications, and Word Processing. In this project you will explore the use of a graphics application in conjunction with using the Internet. The purpose of this project is threefold: you will gain more experience in finding educationally appropriate information on the Internet, you will have practice in using a graphics program, and you will use the word processor to combine text and graphics and explore the very basics of desktop publishing

Project 6: Hardware. In this project, you will explore computer catalogs, magazines, and showrooms, if you wish, as well as the Internet, to find your “dream” computer system and peripherals for your classroom. You will submit a word processed description of the equipment and your reasons for choosing it and also create a spreadsheet for items, sources, and prices, and balance remaining.

Project 7: Presentations. In this project you will explore the use of presentation software for teacher and student presentations. Using Microsoft *PowerPoint*, you will create a presentation regarding the topic you used for your database and spreadsheet in Project 2-3 or another subject of your choice.

Project 8: A Plan for School Microcomputer Integration (in-class final project). In this role playing activity, it is hoped that you will be able to use the work you have done in all the preceding projects to convince your (hypothetical) school or district to provide you with the equipment that you feel you would need to best present your set of related lessons in a school setting. You will need to summarize the lesson projects you have created, the software and hardware that would make these lessons possible, and then write a request for the purchase. There will also be a small spreadsheet to create.