

Summer, 2002  
California State University San Marcos  
College of Education

**EDUC 500 Computer-Based Technology in Education**

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**COURSE DESCRIPTION:**

In December of 1998, the CTC adopted a new technology standard for Multiple and Single Subject Teaching Credential candidates. The new technology standard requires credential candidates to 1) demonstrate their effective use of technology at a "basic" level (Level 1) prior to issuance of a preliminary credential; and 2) demonstrate their effective use of technology at an "advanced" level (Level II) prior to issuance of a professional clear credential. The purpose of this class is to prepare credential candidates to meet this new technology standard.

**Standard 20.5 - Use of Computer-Based Technology in the Classroom**

Candidates are able to use appropriate computer-based technology to facilitate the teaching and learning process.

This class emphasizes the curricular implications of computer-based technologies in education. It has been designed to work in tandem with other courses in the Teacher Education Program in meeting the California State requirement for computer education course work to obtain a preliminary teaching credential. If you are entering the teacher education program, you will be challenged to use what you have experienced in educational settings, EDUC 350, and what you know about teaching children. If you are already teaching in the classroom you will be encouraged to apply what you are learning in educational settings.

**PREREQUISITE**

Successful completion of the CSUSM Computer Literacy requirement or approval of instructor. This course is designed to enable decision making regarding the use of computers to an educational setting. It does not cover instruction of basic computer competencies.

**REQUIRED TEXT AND MATERIALS**

- Teachers Discovering Computers: Integrating Technology in the Classroom (Shelly & Cashman)
- EDUC 500 Customized Reader includes articles and handouts.
- Zip Disk (2) (Label with your name and class #, time)
- Pay for Print Card: May be purchased in Academic Hall 202

**HIGHLY RECOMMENDED TEXT**

NETS for Students: Connecting Curriculum & Technology. (2000). International Society for Technology in Education (ISTE). ISBN 1-56484-150-2

## Optional Resources

- Online at <http://www.blackboard.com/courses/CBT>

### COE Mission Statement

The mission of the College of Education Community is to collaboratively transform public education by preparing thoughtful educators and advancing professional practices. We are committed to the democratic principles of educational equity and social justice for all learners, exemplified through reflective teachers, learning and service. We value diversity, collaboration, professionalism and shared governance.

### COURSE OBJECTIVES:

This class will help you to:

- gain proficiency in the use of computers
- make informed and critically reflective decisions regarding the choice, use and creation of educational technology applications

The following required competencies for all California teachers have been established by legislation. Commencing January 1, 2000, the minimum requirements for the preliminary multiple or single subject credential include demonstration of the ability to do the following:

(1) Identify issues involved in the access to, use of, and control of computer-based technologies, including, but not limited to:

- (a) the impact of technology upon the learning process;
- (b) the moral, legal, and ethical implications, including copyright infringement;
- (c) the economic and social implications of that access, use, and control, including the need to provide equitable access to technology.

(2) Demonstrate, within appropriate subject areas and grade levels, the application and use of computer-based technology as a tool to enhance the development of problem solving skills, critical thinking skills, or creative processes through course-based projects and demonstration lessons. Demonstrate knowledge of basic operations, terminology, and capabilities of computer-based technology and the use of computer hardware, software, and system components.

(3) Appropriate to the subject area and grade level, demonstrate a basic understanding of and ability to use representative programs from each of the following categories:

- (a) computer applications and electronic tools, such as word processing, data bases, graphics, spreadsheets, telecommunications (including email), portfolio management, page-layout, networking, reference, and authoring software;
- (b) technology-based activities, such as simulations, demonstrations, tutorials, drill and practice, and interactive software;
- (c) utility programs for classroom administration, such as those for record keeping, gradebook, lesson planning, generating instructional materials, and managing instruction.

(4) Demonstrate the application and use of computer-based technologies as tools to enable the development of problem-solving skills, critical thinking skills, and creative processes. Examples of such skills and processes are: gathering and analyzing data, generating and testing hypotheses, classifying, comparing and contrasting, inferring, evaluating and composing and designing.

## ADMINISTRATIVE REQUIREMENTS OF STUDENTS

This class will utilize distributed learning instructional strategies. Students must keep up with class assignments from week to week and will complete the lab assignments in both on-campus or off-campus locations. Plan to spend up to seven hours out of class each week to complete required readings, complete or expand lab assignments and to gain familiarity with educational technology applications.

Students are required to keep a copy of all work and are expected to submit examples of best practice for their portfolio evaluation. All proof of work accomplished is the responsibility of the student. Summer semester students are advised to construct a notebook style portfolio of the work done over the semester to serve as a professional portfolio and sampling of technology accomplishments.

Please be sure to read and understand the CSUSM policy on plagiarism and cheating as it will be strictly enforced. Academic dishonesty including plagiarism or copyright infringement will be reported to the University and will result in a course grade of F.

### Attendance Policy

Due to the dynamic and interactive nature of this course, all students are expected to attend specifically designated classes and communicate regularly with email study groups and instructor to participate in distributed learning activities. Attendance for EDUC500 is measured by the degree of active participation both online and in class, the quality of lab work assignments, and the degree of investment as evidenced by positive interaction with professor and peers. Should the student have extenuating circumstances, s/he should contact the instructor as soon as possible.

## GRADING PROCEDURES AND ASSIGNMENTS:

California State University San Marcos has adopted an all-university writing requirement. In each course, students are required to write at least 2500 words in essays, exercises, papers and examinations. Keep a copy of each submitted assignment for back-up and possible inclusion into your portfolio.

- **Lab & Writing Assignments = (60%)**

Lab Assignments will reflect work done at the computers in class or on your own time. All assignments should be printed out free of spelling and/or grammar mistakes. Writing Assignments will enable you to reflect on various aspects of software and Internet application integration in your classroom curriculum.

- **Final Exam: = (20%)**

The final exam will cover all material from the textbook based on your weekly study guide.

- **Class Investment (20%)**

Your investment in this class is demonstrated through regular class attendance and participation, through active, constructive and creative contributions - both online and in class. Your experience, teaching and computer expertise, will benefit everyone and provide a valuable resource for the class. Dependability and promptness are expected. Unexcused absences will be penalized. Late assignments will receive 10% reduced points per week. If you find you cannot be in class, please make sure another class member delivers your assignment.

Grading is calculated on the standard of

94 - 100 = A	80 - 83 = B-	70 - 73 = C-
90 - 93 = A-	77 - 79 = C+	60 - 69 = D
87 - 89 = B+	74 - 76 = C	below 60 = F
84 - 86 = B		

You must maintain a B average in your teacher education courses.

### Statement of CLAD Emphasis

In 1992, the College of Education voted to infuse Cross-cultural, Language and Academic Development (CLAD) competencies across the curriculum. The CLAD competencies are attached to this syllabus and the competencies covered are highlighted.

### Definitions

The following definitions are applied from SEC. 2. Section 44259.3 in the Education Code:

- (1) "Educational technology" means the use of computer-based technology in instruction.
- (2) "Computer-based technology" means technologies based on the computer, such as telecommunications, interactive video, and compact disks.
- (3) "System components" means hardware and includes, but is not limited to, printers, monitors, modems, disk drives, scanners, video capture devices, video projection devices, compact disk-read only memory (CD-ROM), and other peripherals that work together in a system.
- (4) "Telecommunications" means the use of computers, modems, and telephone lines to move voice, video information, and data over distances.
- (5) "Networking" means terminals or computers, or both, linked for the purpose of moving information and data over distances.
- (6) "Course-based project" means an end of course or challenge requirement for the purpose of demonstrating technology competency, especially computer centered subject area expertise.
- (7) "Authoring software" means text, graphics, photos, pictures, video, and sound are typically sewn together into a project using authoring software. These software tools are designed to manage multimedia elements and provide user interaction.

	Monday	Wednesday	Thursday (Assignments due are numbered below)
<b>Week One</b> <b>June 16</b> Chapter One Computers in Ed	Syllabus and class schedule review California Teaching Standards: < <a href="http://www.score.k12.ca.us/">http://www.score.k12.ca.us/</a> > Technology Standards < <a href="http://www.iste.org/">http://www.iste.org/</a> > Email Accounts	LAB: Internet Searches "Seven Steps" worksheet <a href="http://edweb.sdsu.edu/webquest/searching/sevensteps.html">http://edweb.sdsu.edu/webquest/searching/sevensteps.html</a> Web Basics < <a href="http://itdc.sbcss.k12.ca.us/staffdev/trainingbookmarks.html">http://itdc.sbcss.k12.ca.us/staffdev/trainingbookmarks.html</a> >	Discuss Chapter exercises 1. Email Confirmation 2. Chapter 1 scantron 3. Discuss Article Review #1
<b>Week Two</b> <b>June 23</b> Chapter Two Internet/WWW	Inspiration Web Design with MS Word	Web Design, Continued	Web Design, Continued 4. Discuss Article Review #2 5. Chapter 2 scantron
<b>Week Three</b> <b>June 30</b> Chapter Three Software App.	MS Excel	LAB: PowerPoint	6. Chapter 3 (due Monday) 7. Excel Exercise (Due Monday) 8. Discuss Article Review #3 (Due week 5, Thursday) CLOSED – HOLIDAY WEEKEND
<b>Week Four</b> <b>July 7</b> Chapter Four Hardware App.	LAB: MS Access or Claris Works Database < <a href="http://www2.ncsu.edu/ncsu/cep/clt/workshops/database.html">http://www2.ncsu.edu/ncsu/cep/clt/workshops/database.html</a> > < <a href="http://www.cs.ndsu.nodak.edu/~ppeterse/cwdb.html">http://www.cs.ndsu.nodak.edu/~ppeterse/cwdb.html</a> > < <a href="http://www.50states.com/">http://www.50states.com/</a> >	LAB: Microsoft Drawing Tools, Word Art Filamentality < <a href="http://www.kn.pacbell.com/wired/fil/guide_beginners.html">http://www.kn.pacbell.com/wired/fil/guide_beginners.html</a> >	Open Lab 9. DUE: Database Exercise 10. Chapter 4 scantron 11. Discuss Article Review #4 12. PowerPoint Exercise
<b>Week Five</b> <b>Mary Meade</b> <b>July 14</b> Chapter Five Multimedia	LAB: Online Resources, WebQuests < <a href="http://projects.edtech.sandi.net/projects/">http://projects.edtech.sandi.net/projects/</a> >	CyberGuides Project Based Learning < <a href="http://www.4teachers.org/projectbased/checklist.shtml">http://www.4teachers.org/projectbased/checklist.shtml</a> >	13. Filamentality Exercise 14. Chapter 5 scantron Open Lab
<b>Week Six</b> <b>July 21</b> Chapter Six Tech Integration	WebClinic < <a href="http://www.csusm.edu/ilast/clinic/clinic.html">http://www.csusm.edu/ilast/clinic/clinic.html</a> > Rubrics: online examples < <a href="http://school.discovery.com/schrockguide/assess.html">http://school.discovery.com/schrockguide/assess.html</a> >	Ethics & Copyright: <a href="http://www.csusm.edu/ilast/agendas/copyright.html">http://www.csusm.edu/ilast/agendas/copyright.html</a> <a href="http://www.nytimes.com/library/tech/98/08/cyber/education/12education.html">http://www.nytimes.com/library/tech/98/08/cyber/education/12education.html</a>	15. Web Quest Exercise 16. Chapter 6 scantron Open Lab
<b>Week Seven</b> <b>July 28</b> Chapter Seven	Quia <a href="http://www.quia.com">http://www.quia.com</a> SchrockWeb Site Evaluation: < <a href="http://school.discovery.com/schrockguide/chaff.html">http://school.discovery.com/schrockguide/chaff.html</a> >, < <a href="http://lrs.ed.uiuc.edu/wp/credibility/index.html">http://lrs.ed.uiuc.edu/wp/credibility/index.html</a> > < <a href="http://school.discovery.com/schrockguide/eval.html">http://school.discovery.com/schrockguide/eval.html</a> >	ListSers and NewsGroups <a href="http://www.dejanews.com">http://www.dejanews.com</a> <a href="http://www.listz.com">http://www.listz.com</a>	17. Schrock Evaluations 18. ListServ Exercise 19. Chapter 7 scantron Open Lab
<b>Week Eight</b> <b>August 4</b> Chapter Eight Copyright	OPEN LAB	Project Demonstrations	20. Chapter 8 scantron 21. Web Site Project 22. Software Evaluation Forms 23. Final Exam

DUE on THURSDAYS:

**1. DUE: Email Confirmation**

Let your classmates know who you are. Get an email from one of your classmates and email them and me an introduction note.

**2. DUE: Chapter 1 Scantron :**

Complete the 25 question handout for Chapter One. Put your answers on a 50 question per side scantron. These will become your study guides for the Final Exam.

**3. DUE: Article Review #1**

Find online a journal article specifically related to educational technology; use the list of online publications on our class website or search for one of your own. Write (type) a brief summary (one paragraph) of the article, as well as an opinion statement (one paragraph) about it and how you might (or might not) use this information in your own classroom. Use the standard APA citation method to cite your article at the bottom; make sure your name and class time is also on the bottom of the page. Be prepared to share your review with the rest of the class on Fridays.

**4. DUE: Article Review #2**

**5. DUE: Chapter 2 Scantron**

**6. DUE: Chapter 3 Scantron**

**7. DUE: Excel Exercise**

Use any spreadsheet program you have available, e.g., Excel, Works, Corel...

Place the following elements in your worksheet:

Cell A1: Name

Cell A2: Grade Level

Cell A3: Content Area

Cell A4: CA Content Standard (Just put in the Number.)

Include a description of your spreadsheet to clarify it's use.

Begin your simple Spreadsheet in Column B, Row 5. Make sure it contains the following components:

Labels (minimum of 4, e.g. Monday, Tuesday, Wednesday, Thursday,...; a Title would also be nice)

Values (minimum of 5 values for each label, see below)

Formulae (minimum 1, =A1+B1\*C1)

Function (minimum 1, average, sum)

A1 - A4:

Mary Meade

Grade: HS

Standard:.....

B5 - H8:

Car Sales

Name Monday Tuesday Wednesday Thursday Friday Total  
Values.....Formula  
Values.....Formula  
Values.....Formula  
Values.....Function

From this spreadsheet create a quick and simple chart.  
Print out the chart and spreadsheet to be turned in on Friday.

**8. DUE: Article Review #3**

**9. DUE: Database Exercise**

Create a database that includes the following fields from 5 states of your choosing (use the 50 states resource: <http://www.50states.com/>)

1. Area (sq. mi.)
2. Land (sq. mi.)
3. Water (sq.mi.)
4. Coastline (mi)
5. Highest point (feet)
6. Lowest point (feet)

Print 2 reports with different fields sorted and a header specifying your name and which field is sorted in each report.

**10. DUE: Chapter 4 Scantron**

**11. DUE: Article Review #4**

See details above, Article Review #1

**12. DUE: PowerPoint Exercise**

Create a minimum of 5 PowerPoint slides based on the CA Teaching Standards for your curriculum area. <<http://www.score.k12.ca.us/>>. Include graphics, animation and slide transitions with sound.

**13. DUE: Filamentality**

Handout: <<http://www.csusm.edu/ilasi/agendas/fil.html>>

SITE: <<http://www.kn.pacbell.com/wired/fil/>>

Create a Filamentality Page: Sign in: \_\_\_\_\_

Add required components listed below. Password: \_\_\_\_\_

Filamentality WebPage Address: \_\_\_\_\_

**BEFORE CLASS:** In preparation for the Filimentality exercise...

Go to the filamentality site and start to look over the introduction to filamentality information:

<<http://www.kn.pacbell.com/wired/fil/index.html#intro>>

Then, on the same page, click on "Search The Registry" to see the kinds of filamentalities other teachers have already created in your grade level and content area.

To be prepared to work on your own filamentality please bring to our class a list of a minimum of six websites you like, complete with the url, as well as a brief (one to two sentences) description of each site. You can email the info to yourself or post it in the student dropbox for copying in class.

Requirements:

- ... Revise introduction including a description and summary of activity for students and standard listed.
- ... spelling and grammar have been proof read and edited
- ... At least 6 links related to the theme
- ... At least 2 categories or groups of links
- ... Each link has a summary of link resource and may include a question.
- ... links are all working.

Deliverable: A Print-out of your Filamentality Site as viewed from your browser as a visitor to your link.

#### 14. DUE: Chapter 5 Scantron

See details above, Article Review #1

#### 15. Web Quest Exercise

#### 16. Chapter 6 Scantron

#### 17. DUE: Schrock Evaluations

Step 1:

Review the below links to learn about how to evaluate websites.

<<http://school.discovery.com/schrockguide/chaff.html>>

<<http://rs.ed.uiuc.edu/wp/credibility/index.html>>

<<http://school.discovery.com/schrockguide/eval.html>>

(If the link won't work from your computer you may simply copy and paste these addresses into your location bar).

Step 2: Print three copies of the Kathy Schrock evaluation form that applies to your preferred grade level. The form may be found at: <<http://school.discovery.com/schrockguide/eval.html>>

There are two choices of links for each grade level – the first is a web page format and the other is the pdf format that requires the Adobe Acrobat Reader add-in. Don't use this one - It just makes the page look prettier.

Step 3: Search on Altavista <<http://www.altavista.com>> for either "cyberguide" or "webquest" to find hundreds of online lessons to choose from.

Step 4: Pick three sites to evaluate with your forms. Complete the form in pen/pencil and turn these in when we next see each other.

#### 18. ListServ Exercise

#### 19. Chapter 7 Scantron



## **20. Chapter 8 scantron**

### **21. DUE: MS Word WebSite Project**

Deliverable: Print out three separate web pages containing the following:

A link on each page to the other two pages;

A list of at least three other links from the Internet on one page;

A table of any kind, for any purpose;

A minimum of one graphic on any page;

Contact information, including your name and a working email link, on the first page;

Two or more different font sizes and font families;

The Standard your web site will supplement on the bottom of your first page (in a smaller font); feel free to use the National Technology Teacher Standards if that is more appropriate.

### **22. Software Evaluation Forms**

Print five copies of the form from our class website. Make an appointment sometime during the semester to visit any local school district or the County Office of Education technology center to preview and evaluate five K-12 software packages.

Complete with pen/pencil one form for each package.

### **23. Final Exam**

Test on Textbook (Multiple Choice on the readings of all the chapters in the textbook – bring a 50 question per side Scantron).

Assignments:	Value	You Earned
Discuss Chapter exercises		
1. DUE: Email	0	
2. Chapter 1 Scantron (8 @ 25)	25	
3. DUE: Article Review #1 (4 @ 25)	25	
4. DUE: Article Review #2	25	
5. DUE: Chapter 2 Scantron	50	
6. DUE: Chapter 3 Scantron	50	
7. DUE: Excel Exercise	100	
8. DUE: Article Review #3	25	
9. DUE: Database Exercise	100	
10. DUE: Chapter 4 Scantron	50	
11. DUE: Article Review #4	25	
12. DUE: PowerPoint Exercise	50	
13. DUE: Filamentality	100	
14. DUE: Chapter 5 Scantron	50	
15. DUE: Web Quest Exercise	100	
16. DUE: Chapter 6 Scantron	50	
17. DUE: Schrock Evaluations	100	
18. DUE: ListServ Exercise	50	
19. DUE: Chapter 7 Scantron	50	
20. DUE: Chapter 8 Scantron	50	
21. DUE: MS Office Web Site	200	
22. DUE: Software Evaluation Forms	100	
23. DUE: Final Exam (Textbook)	200	
23. DUE: Portfolio	200	
25. DUE Class Participation	200	

Lab & Writing Assignments = 60%

Final Exam: = 20%

Class Investment: (attendance, class participation) = 20%