**Purpose of Course**

This course will offer an overview of microcomputer usage in general and special education. Topics covered include: current research; identification of needs by exceptional children that can be met through use of microcomputers; evaluation and prescription of software, hardware and assistive devices; writing computer-assisted instructional programs to meet special needs; time management; and the general implementation of microcomputers into a general and special education program. The content meets the identified technology standards for special and general educators as determined by the California Commission on Teacher Credentialing (CCTC).

**Goals**

This course is devised as to allow the student learner to achieve elements of the CTC Program

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**Standard 9: Using Technology in the Classroom**, for those using the course to meet CTC *Professional Induction Standard 16* (see last pages of syllabus), and all or part of the listed objectives, depending upon interests.

1. General knowledge of microcomputer usage and its various implementations in general and special education settings;
2. Familiarity with basic principles of operation of computer hardware and software, plus the ability to implement basic trouble-shooting techniques for computer systems & peripheral devices;
3. The ability to use computer applications to manage records and to communicate through printed media (e.g., word processing, spreadsheets, multimedia, etc.);
4. The ability to interact with others using e-mail and familiarity with a variety of computer-based collaborative tools;
5. The ability to devise a microcomputer time-management program for a class.
6. The ability to utilize the Internet for student usage, professional research, and communication.
7. The ability to examine a variety of current educational digital media and use established selection criteria to evaluate materials.
8. The ability to choose software for its relevance, effectiveness, alignment with the content standards, and recognize the value added to student learning.
9. The ability to consider the content to be taught and select the best technological resources to support, manage, and enhance all student learning in relation to prior experiences and level of academic accomplishment.
10. The ability to contribute to a site-based plan per technology.
Text/Assignments

I. Final Exam (50 pts. Due: March 24th)
   a. Text: Technology for Inclusion, Ch. 1–15
   Miscellaneous: Specified lecture and Supplementary Notebook materials

II. Document Notebook (10 pts.[BONUS ASSIGNMENT], Due: March 10th)
The organization of the Supplemental Notebook: EDS 291—Ostertag into topical chapters shall be worth 10 bonus points. A word processed Cover Page [include your name!], word processed Table of Contents (minimum of 10 entries), and Tab Separators per section must be included. This is an individual assignment (will be checked in class).

III. Tool Application (30 pts. [10 pts. each], Due: March 17th)
   [Requirement for Level 1 Candidates]
   Complete each of the following available on our class website:
   a) Word Processing – Provide a hard copy or an electronic version to the instructor of the posted Microsoft Word lesson. Make sure it includes an inserted graphic, weblink, and table. OPTION: More advanced students may provide evidence of an equivalent activity that has been previously completed.
   b) Spreadsheet - Provide a hard copy or an electronic version to the instructor of the posted Microsoft Excel lesson. Make sure it includes an inserted graphic and table. OPTION: More advanced students may provide evidence of an equivalent activity (class grade sheet or database) that has been previously completed.
   c) Multimedia - Provide a hard copy or an electronic version to the instructor of the posted Microsoft PowerPoint lesson. Make sure it includes inserted graphics, sounds, transitions, and links. OPTION: More advanced students may provide evidence of an equivalent activity (class lesson) that has been previously completed.

   OR

   Technology Plan (30 pts. Due: March 17th)
   [Requirement for Level 2 Candidates]
   Development or revision of a site-based technology plan. Submit your school technology plan with a summary of your participation plus an analysis how this plan meets the needs of students with challenges. Include modifications to the plan that you’d recommend.

IV. Software Evaluation (40 pts. Due: March 24th)
   Students may team with up to three other candidates to evaluate four software programs for a specified special needs population. Submit an electronic or hard copies (see course web page). Utilize the sample software evaluation scale attached to the syllabus.

V. Options (100 pts. Due: March 31st)
   Choose One:
   a. Students will submit a hard copy word-processed teaching unit that utilizes microcomputer technology for a specified special education program. Assume the students have minimal or no microcomputer knowledge. This teaching unit may cover any relevant educational topic (e.g., survival math, keyboard skills, health, social studies, writing, etc.). The unit should be of approximately one month or more in duration with a minimum of five daily lesson plans of 15 - 30 minutes in length. Provide an outlined script, handouts, materials needed, goals and objectives, evaluation criteria, technology employed, etc.

   OR

   b. Students will submit a word-processed report with recommended hardware and assistive devices (maximum of one microcomputer), software (maximum of $750.00), and total cost for equipping a specified special education class. Delineate if the environment will be a Macintosh or Windows environment. Also, a time-management operation plan for that class must be included.
c. Students will create an extended lesson for a specified special needs population using *PowerPoint*, *Hyperstudio*, *Hypercard*, or etc. Graphics, sound, links, etc. should be included. A *word-processed* lesson plan, time-management operation and (if appropriate) hard copy must accompany this program. This is an extension of Assignment III.

OR

d. Students will develop a computer-awareness in-service for parents and peers (special education teachers). The topic will be: *Technology and Special Education*. Include a *word-processed* lesson plan plus all appropriate handouts, overheads, etc. General in-service time expectation is thirty minutes.

OR

e. Students will create an Internet lesson for a specified special needs population using *Netscape*, *Explorer*, etc. A *word-processed* lesson plan, time-management operation supportive material, and (if appropriate) hard copy should accompany this assignment.

OR

f. Similar to the first project option: participant(s) will submit a *word processed* teaching unit which utilizes *IntelliKeys* (an alternative keyboard) and *Access Bundle* (these separate programs used with *Intellikeys* — e.g., for mouseless access to programs *ClickIt*, a multimedia creativity tool [*IntelliPics*], and a design/editor for overlays *Overlay Maker*) for a specified special education program or student receiving special services. OPTION: Similar programs designed for the Windows-environment may be substituted. This teaching unit may cover any relevant educational topic. The unit should be of approximately one month or more in duration with a minimum of five daily lesson plans of 15–30 minutes in length (depending on capabilities of the target program/student). Provide an outlined script, handouts, sample hard copies of materials made with *Mac Access Pac*, goals and objectives, evaluation criteria, and a disk copy of programming developed and employed, etc. This would be a highly desirable project for special educators who will be working with people who have physical challenges.

OR

g. Participant(s) will create a website for use with a specified special needs population and/or class. This website will include multiple areas (e.g., *Welcoming Comments*, *Homework Section*, *Grade Postings*, *Chat Room section*, Graphics/picture of self, and Hyperlinks to other relevant sites, etc.).

OR

h. Go to a series of educational web sites (ten) that are of interest to you and write up a brief (paragraph) synopsis per site of the contents. Include the URLs for these sites. Provide an example (paragraph) per site on how you might use the site as an educator per students with unique needs. Lastly, develop a lesson plan incorporating one or more of these sites.

OR

i. An independently derived project, approved by the course instructor.

Additionally, you may team with up to four other candidates to complete the selected assignment option and submit one joint report.

VI. **Attendance** (80 pts. Due: When Class Meets)

Classroom attendance is required. Ten points will be given for each class meeting attended (Maximum = 80 points); twenty points for the last class meeting. Two absences, regardless of reasons, will lead to an automatic grade reduction for the class. Three or more absences, regardless of reasons, will lead to an automatic grade of “F.” Additionally, students who arrive late or leave early will have points deducted. Chronic leaving or tardiness will also lead to an automatic grade reduction or “F” at the discretion of the instructor.

NOTE: Please be aware that participants who miss the first day of class will be dropped from the course unless previous arrangements have been made with the instructor.
Summary of Test/Assignments

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notebook (Bonus *)</td>
<td>10*</td>
<td>3/10</td>
</tr>
<tr>
<td>Tool Application/Plan</td>
<td>30</td>
<td>3/17</td>
</tr>
<tr>
<td>Software Evaluation</td>
<td>40</td>
<td>3/24</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50</td>
<td>3/24</td>
</tr>
<tr>
<td>Option(s)</td>
<td>100</td>
<td>3/31</td>
</tr>
<tr>
<td>Attendance</td>
<td>80</td>
<td>As Scheduled</td>
</tr>
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</table>

Grade (A cumulative point total)

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Point Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>285-300</td>
<td>94</td>
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<tr>
<td>A-</td>
<td>276-284</td>
<td>91</td>
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<tr>
<td>B+</td>
<td>264-275</td>
<td>87</td>
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<td>B</td>
<td>252-263</td>
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<td>F</td>
<td>179 or less</td>
<td>59 or less</td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td></td>
</tr>
</tbody>
</table>

NOTE: LATE SUBMISSIONS OF COURSE ASSIGNMENTS/TEST
- One week late = 25% points deducted
- Two weeks late = 50% points deducted
- Three weeks or more late = 0 points

Please contact your instructor for extra assistance, questions, or to discuss any issues concerning your professional preparation.
# EDS 291A/B Course Schedule • Spring 2004

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January 28</strong></td>
<td>Introduction, Syllabus, ID cards, General Overview (Supplemental Notes), Lab set-up (Software, Hardware). The Information Superhighway, SacLink, Class Website, etc. Videos: <em>Empowering People with Disabilities Through Technology</em></td>
<td>(10 pts)</td>
</tr>
<tr>
<td><strong>February 11</strong></td>
<td>Using the Internet – Searching, Resources, Accessing, and Building a Website. Video: <em>Microcomputers and Early Childhood Special Education</em></td>
<td>(10 pts)</td>
</tr>
<tr>
<td><strong>February 18</strong></td>
<td><strong>Tool Application</strong> – Lessons posted on the class website. Work at home.</td>
<td>NO CLASS</td>
</tr>
<tr>
<td><strong>February 25</strong></td>
<td>Assistive Technology Implementation for Students with Special Needs. Internet – Creating and Using Internet Favorites/Bookmarks. <em>IntelliKeys</em> and supportive software. Video: <em>No More Limits; Kidability – Assistive Technology.</em></td>
<td>(10 pts)</td>
</tr>
<tr>
<td><strong>March 3</strong></td>
<td><strong>Optional Assignment Work</strong> – Group activities. Work may be done at home via internet, group meeting at other locale, group work in EUR 211, or individual work in EUR 211.</td>
<td>NO CLASS</td>
</tr>
<tr>
<td><strong>March 10</strong></td>
<td>Life-Span Technology Usage for Students with Special Needs (Meet at the CSUS High Tech Center, LIB 136.) Guests: Trevor, Allison. Video: <em>Effective Methods for Using Microcomputers for Children with Special Needs</em></td>
<td>(10 pts)</td>
</tr>
<tr>
<td><strong>March 24</strong></td>
<td><strong>Catch-up Time.</strong> - Work may be done at home, group meeting at other locale, group work in EUR 211, or individual work in EUR 211.</td>
<td>NO CLASS</td>
</tr>
<tr>
<td><strong>March 31</strong></td>
<td><strong>FINAL MEETING</strong> (Meet in EUR 211.) Discussion/Demonstrations of Optional Assignments or Other Relevant Material</td>
<td>(20 pts)</td>
</tr>
</tbody>
</table>
Technology-Assisted Instruction

Analysis done by: 

Level for Which Software Previewed (i.e., Intermediate Mild/Moderate) ____________________________

Title: _______________________________ Medium: □ disk □ CD-ROM □ other: ______

Producer: _______________________________ Computer: □ PC (Windows) □ Macintosh □ Other

Year: _______ Price: _______ Subject: ___________________________ Grade: _______

Type: □ Drill & Practice □ Tutorial □ Simulation □ Problems Solving □ Other

Describe the content and nature of the program:

Quality Analysis: 5= Exemplary 4= Very Good 3 = Acceptable 2 = Fair 1 = Poor

Circular Match: Correlates with guidelines for what is to be taught in California's schools (i.e., curriculum frameworks, content and performance standards)? Do the instructional support materials identify correlation? Explain. Rating: _______

Program Objectives: Are the objectives clearly stated? Will use of the program support the teaching and learning of program concepts in a variety of positive ways? Describe. Rating: _______

Content: Is there a depth and richness to the content that can extend the curriculum in a variety of ways (e.g., cross-disciplinary learning, support multiple instructional units throughout the school year)? Describe. Rating: _______


*Control: Can the teacher select concepts and/or sequence of presentation? Can word lists, problem sets, etc. be modified? Does it keep score? Describe. Rating: _______

*Flexibility: Does the program branch to easier or more difficult material when appropriate? Does it suggest solutions or give help in response to learner errors? Can a game or activity be saved in progress? Describe. Rating: _______
Technical: Runs efficiently with minimum delays? Easy to use (navigation, screen design speed, menus, branching)? Explain. Rating: ______

English Learners: Are the needs of English language learners provided for by the program content and in the teacher support materials (e.g. supplementing text by use of sound, read-aloud text, color images)? Are materials presented in more than one language? □ yes □ no Describe. Rating: ______

Learning Styles: Does the content presentation effectively accommodate a variety of learning styles (e.g., auditory, visual and/or kinesthetic learners)? □ yes □ no Describe. Rating: ______

Special Needs: Does the program pay attention to learner's special needs (e.g., hearing impaired, partially sighted, those needing assistive technologies)? How? Are these accommodations in the support materials? □ yes □ no Describe. Rating: ______

Recommended for Special Students Usage: □ yes □ no
Reading Level Required:  K  1  2  3  4  5  6  7  8  9  10  11  Adult
Estimated Interest Required:  K  1  2  3  4  5  6  7  8  9  10  11  Adult

Legal Compliance Analysis: Meets state legal guidelines (women's roles, ethnic balance, aged, etc.)? List areas where you believe it may not comply. □ yes □ no

OVERALL STRENGTH AND WEAKNESS: How good is it? Explain. OVERALL RATING: __________

*Unique to Technology-Assisted Education

Based on working draft of the Guidelines for Instructional Technology Resources in California Schools.
Reference or Utility Tools

Analysis done by: ________________________________

Level for Which Software Previewed (i.e., Intermediate Mild/Moderate) ________________________________

Title: ________________________________ Medium: □ disk □ CD-ROM □ other: □

Producer: ________________________________ Computer: □ PC (Windows) □ Macintosh □ Other

Year: _____  Price: _____  Subject: ________________________________  Grade: _____

Type: □ Encyclopedia/Almanac/Etc. □ Web Builder □ Graphics □ Problem-Solving □ Other

Describe the content and nature of the program:

Quality Analysis: 5 = Exemplary  4 = Very Good  3 = Acceptable  2 = Fair  1 = Poor

Circular Match: Correlates with guidelines for what is to be taught in California's schools (i.e., curriculum frameworks, content and performance standards)? Do the instructional support materials identify correlation? Explain.  Rating: ______

Program Objectives: Are the objectives clearly stated? Will use of the program support the teaching and learning of program concepts in a variety of positive ways? Describe.  Rating: ______

Content: Is there a depth and richness to the content that can extend the curriculum in a variety of ways (e.g., cross-disciplinary learning, support multiple instructional units throughout the school year)? Describe.  Rating: ______


*Searching for Content: Are there a variety of ways the student can search for information? Describe.  Rating: ______

*Search Tools: Are the search tool easy to use and master, transparent.? Can the student focus on content rather than the mechanics for doing searches? Describe.  Rating: ______
Technical: Runs efficiently with minimum delays? Easy to use (navigation, screen design speed, menus, branching)? **Explain.**

**Rating:** ______

**English Learners:** Are the needs of English language learners provided for by the program content and in the teacher support materials (e.g. supplementing text by use of sound, read-aloud text, color images)? Are materials presented in more than one language?  ☐ yes  ☐ no **Describe.**

**Rating:** ______

**Learning Styles:** Does the content presentation effectively accommodate a variety of learning styles (e.g., auditory, visual and/or kinesthetic learners)?  ☐ yes  ☐ no **Describe.**

**Rating:** ______

**Special Needs:** Does the program pay attention to learner's special needs (e.g., hearing impaired, partially sighted, those needing assistive technologies)? How? Are these accommodations in the support materials?  ☐ yes  ☐ no **Describe.**

**Rating:** ______

**Recommended for Special Students Usage:**  ☐ yes  ☐ no

Reading Level Required:  K  1  2  3  4  5  6  7  8  9  10  11  Adult

Estimated Interest Required:  K  1  2  3  4  5  6  7  8  9  10  11  Adult

**Legal Compliance Analysis:** Meets state legal guidelines (women's roles, ethnic balance, aged, etc.)? List areas where you believe it may not comply.  ☐ yes  ☐ no

**OVERALL STRENGTH AND WEAKNESS:** How good is it? **Explain.**

**OVERALL RATING:** ____________

*Unique to Reference Tools

Based on the draft *Guidelines for Instructional Technology Resources in California Schools.*
CCTC Program Standard 9: Using Technology in the Classroom

Through planned prerequisite and/or professional preparation, each candidate learns and begins to use appropriately computer-based technology to facilitate the teaching and learning process. Each candidate demonstrates knowledge of current basic computer hardware and software terminology and demonstrates competency in the operation and care of computer related hardware. Each candidate demonstrates knowledge and understanding of the legal and ethical issues concerned with the use of technology. Each candidate demonstrates knowledge and understanding of the appropriate use of computer-based technology for information collection, analysis and management in the instructional setting. Each candidate is able to select and evaluate wide array of technologies for effective use in relation to the state-adopted academic curriculum.

Program Elements for Standard 9: Using Computer-Based Technology In the Classroom

9(a) Each candidate considers the content to be taught and selects appropriate technological resources to support, manage, and enhance student learning in relation to prior experiences and level of academic accomplishment.

9(b) Each candidate analyzes best practices and research findings on the use of technology and designs lessons accordingly.

9(c) Each candidate is familiar with basic principles of operation of computer hardware and software, and implements basic troubleshooting techniques for computer systems and related peripheral devices before accessing the appropriate avenue of technical support.

9(d) Each candidate uses computer applications to manage records and to communicate through printed media.

9(e) Each candidate interacts with others using e-mail and is familiar with a variety of computer-based collaborative.

9(f) Each candidate examines a variety of current educational technologies and uses established selection criteria to evaluate materials, for example, multimedia, Internet resources, telecommunications, computer-assisted instruction, and productivity and presentation tools. (See California State guidelines and evaluations.)

9(g) Each candidate chooses software for its relevance, effectiveness, alignment with content standards, and value added to student learning.

9(h) Each candidate demonstrates competence in the use of electronic research tools and the ability to assess the authenticity, reliability, and bias of the data gathered.

Each candidate demonstrates knowledge of copyright issues and of privacy, security, safety issues and Acceptable Use Policies.
CCTC Professional Induction Program
Standard 16: Using Technology to Support Student Learning

Each participating teacher builds upon the knowledge, skills, and abilities acquired during preliminary preparation for the delivery of comprehensive, specialized use of appropriate computer-based technology to facilitate the teaching and learning processes. Each participating teacher is a fluent, critical user of technology, able to provide a relevant education and to prepare his/her students to be life-long learners in an information-based, interactive society. Each participating teacher makes appropriate and efficient use of software applications and related media to access and evaluate information, analyze and solve problems, and communicate ideas in order to maximize the instructional process. Such use of technology supports teaching and learning regardless of individual learning style, socioeconomic background, culture, ethnicity, or geographic location. Each participating teacher integrates these technology-related tools into the educational experience of students, including those with special needs.

As a part of the program approval process, the program collects evidence to demonstrate that this standard, including all of the following elements, has been met.

Program Elements for Standard 16: Using Technology to Support Student Learning

16(a) Each participating teacher communicates through a variety of electronic media.

16(b) Each participating teacher interacts and collaborates with other professionals through a variety of methods, including the use of computer-based collaborative tools to support technology-enhanced curriculum.

16(c) Each participating teacher uses technological resources available inside the classroom or in library media centers, computer labs, local and county facilities, and other locations to create technology enhanced lessons aligned with the adopted curriculum.

16(d) Each participating teacher designs, adapts, and uses lessons which address the students' needs to develop information literacy and problem solving skills as tools for lifelong learning.

16(e) Each participating teacher uses technology in lessons to increase students’ ability to plan, locate, evaluate, select, and use information to solve problems and draw conclusions. He/she creates or makes use of learning environments that promote effective use of technology aligned with the curriculum inside the classroom, in library media centers or in computer labs.

16(f) Each participating teacher uses computer applications to manipulate and analyze data as a tool for assessing student learning and for providing feedback to students and their parents.

16(g) Each participating teacher demonstrates competence in evaluating the authenticity, reliability and bias of the data gathered, determines outcomes, and evaluates the success or effectiveness of the process used. He/she frequently monitors and reflects upon the results of using technology in instruction and adapts lessons accordingly.