Texas A&M University - Corpus Christi  
College of Education – Teacher Education Department – Educational Technology  
ETEC 5302.001 Microcomputers in Education - Spring 2012

Professor:  
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Office Hours:  
M/W 9 am – noon  
Other times by 24+ hour advanced appointment through email  
correspondence to susan.elwood@tamucc.edu, if regular office hours  
are not possible.

Class times and location:  
January 11 – May 11, 2011  
Location: online; TBA sites / TAMUCC

I. COURSE DESCRIPTION  
ETEC 5302, Microcomputers in Education  
An introduction for the inservice teacher to the uses of microcomputers in the public schools. Emphasis  
will be placed on both understanding the basic fundamental operation of the microcomputer and its  
utilization in the schools.

II. RATIONALE AND OVERVIEW  
The course is intended to have a practical focus, which will assist you—a working or future teacher—in  
making better use of computers with your students. A culminating, individual project and research paper  
are required for each of you. The research paper will be your choice of: (a) research review paper related  
to your final course project, (b) conference abstract and paper, or (c) research review paper related to a  
grant call for proposal. The project should address an instructional question or problem of your  
choosing. We will negotiate the focus and scope of work when timely. You are also to be expected to  
present an overview of your project to the class.

III. STATE ADOPTED PROFICIENCIES  
TEA Recommendation for All Educators:  
The State Board for Educator Certification (SBEC) has approved educator certification standards  
in Technology Applications for all beginning educators. The standards have been developed for  
inclusion in SBEC-approved educator preparation programs, and are assessed in the Pedagogy  
and Professional Responsibilities test. The TExES PPR domains and competencies will serve as  
this course’s primary base for course objectives.

IV. STUDENT LEARNING OUTCOMES  
Students in this graduate program will:

- apply and document skills and knowledge as educational technologists  
in order to solve appropriate real world instructional problems;  
(ETEC 5397 is linked to this student learning outcome.)  
- develop an original plan and instructional materials for integrating  
educational technologies in an overall instructional strategy;  
(ETEC 5320 is linked to this student learning outcome.)  
- demonstrate knowledge of the field;  
(ETEC practicum is linked to this student learning outcome.)
V. TExES COMPETENCIES

TExES Pedagogy and Professional Responsibilities EC-12
The TExES PPR technology related standards followed for this course are as follows:

Domain I – Designing Instruction and Assessment to Promote Student Learning

Competency 004
The teacher understands learning processes and factors that impact student learning and demonstrates this knowledge by planning effective, engaging instruction and appropriate assessments.

The beginning teacher:
1. Understands the role of learning theory in the instructional process and uses instructional strategies and appropriate technologies to facilitate student learning (e.g., connecting new information and ideas to prior knowledge, making learning meaningful and relevant to students.)

Domain II – Creating a Positive, Productive Classroom Environment

Competency 006
The teacher understands strategies for creating an organized and productive learning environment and for managing student behavior.

The beginning teacher:
1. Schedules activities and manages time in ways that maximize student learning, including using effective procedures to manage transitions; to manage materials, supplies, and technology; and to coordinate the performance of non-instructional duties (e.g., taking attendance) with instructional activities.
2. Uses technological tools to perform administrative tasks such as taking attendance, maintaining grade books, and facilitating communication.

Domain III – Implementing Effective, Responsive Instruction and Assessment

Competency 008
The teacher provides appropriate instruction that actively engages students in the learning process.

The beginning teacher:
1. Applies criteria for evaluating the appropriateness of instructional activities, materials, resources, and technologies for students with varied needs.

Competency 009
The teacher incorporates the effective use of technology to plan, organize, deliver, and evaluate instruction for all students.

The beginning teacher:
1. Demonstrates knowledge of basic terms and concepts of current technology (e.g., hardware, software applications and functions, input/output devices, networks.)
2. Understands issues related to the appropriate use of technology in society and follows guidelines for the legal and ethical use of technology and digital information (e.g., privacy guidelines, copyright laws, acceptable use policies).
3. Applies procedures for acquiring, analyzing, and evaluating electronic information (e.g., locating information on networks, accessing and manipulating information from secondary storage and remote devices, using online help and other documentation, evaluating electronic information for accuracy and validity).
4. Knows how to use task-appropriate tools and procedures to synthesize knowledge, create and modify solutions, and evaluate results to support the work of individuals and groups in problem-solving situations and project-based learning activities (e.g., planning, creating, and editing word processing documents, spreadsheet documents, and databases; using graphic tools; participating in electronic communities as learner, initiator, and contributor; sharing information through online communication).

5. Knows how to use productivity tools to communicate information in various formats (e.g., slide show, multimedia presentation, newsletter) and applies procedures for publishing information in various ways (e.g., printed copy, monitor display, Internet).

6. Knows how to incorporate the effective use of current technology; use technology applications in problem-solving and decision-making situations; implement activities that emphasize collaboration and teamwork; and use developmentally appropriate instructional practices, activities, and materials to integrate the Technology Applications TEKS into the curriculum.

7. Knows how to evaluate students’ technologically produced products and projects using established criteria related to design, content delivery, audience, and relevance to assignment.

8. Identifies and addresses equity issues related to the use of technology.

Competency 010
The teacher monitors student performance and achievement; provides students with timely, high-quality feedback; and responds flexibly to promote learning for all students.

   The beginning teacher:
   1. Demonstrates knowledge of the characteristics, uses, advantages, and limitations of various assessment methods and strategies, including technological methods and methods that reflect real-world applications.

Domain IV – Fulfilling Professional Roles and Responsibilities

Competency 011
The teacher understands the importance of family involvement in children’s education and knows how to interact and communicate effectively with families.

   The beginning teacher:
   1. Applies knowledge of appropriate ways (including electronic communication) to work and communicate effectively with families in various situations.

Competency 012
The teacher enhances professional knowledge and skills by effectively interacting with other members of the educational community and participating in various types of professional activities.

   The beginning teacher:
   1. Knows the roles and responsibilities of specialists and other professionals at the building and district levels (e.g., technology coordinator).

Competency 013
The teacher understands and adheres to legal and ethical requirements for educators and is knowledgeable of the structure of education in Texas.

   The beginning teacher:
   1. Knows and adheres to legal and ethical requirements regarding the use of educational resources and technologies (e.g., copyright, Fair Use, data security, privacy, acceptable use policies).
VI. COURSE OBJECTIVES AND OUTCOMES
Upon completion of this course, you should be able to:
- Demonstrate basic knowledge of basic terms and concepts of current technology;
- Explain the concepts of “mindtools” and “constructivism” and develop technology integrated student activities consistent with this orientation;
- Discuss issues and concerns that become important when implementing technology resources in schools and classrooms;
- Identify how learning theories influence the development of technology integration strategies;
- Identify the various teaching and learning functions that instructional software can fulfill;
- Identify the unique capabilities of each of the basic software tools (word processing, database, spreadsheet, graphics);
- Identify capabilities and educational applications of multimedia and hypermedia systems;
- Match specific kinds of instructional software and software tools to classroom needs;
- Design lesson integration strategies for instructional software, technology tools and multimedia / hypermedia;
- Identify the capabilities of selected distance learning resources and recognize the teaching and learning functions they can fulfill;
- Identify the role that Internet resources and strategies can play in teaching and learning;
- Develop integration strategies for each of these current and future technologies that match their capabilities to classroom needs;
- Describe some popular uses for technology in today’s curricula;
- Identify exemplary Internet sites for subject-area instruction;
- Create instructional activities that successfully model subject-area integration strategies;
- Understand legal, ethical and equity issues related to educational technology.

Participants are strongly encouraged to combine goals from this class with goals in other current courses and/or professional teaching activities.

VII. Course Topics
Session #   Topic
1. Overview of Technology in Education
   a. Purpose of course- review syllabus
   b. Intro to Constructivism and Mindtools
   c. Goal of Mindtools: Critical Thinking
      Skill Acquisition – Hypermedia with PowerPoint / Google Docs
2. Interpretation Tools
   a. Use and evaluation of search engines and intelligent agents
   b. Use and evaluation of visualization tools
      Skill Acquisition – Web search strategies
3. Semantic Organizational Tools – Use and evaluation of:
   a. Databases as Mindtools
   b. Semantic networks as Mindtools
      Skill Acquisition – Semantic Networks
4. Dynamic Modeling Tools – Use and evaluation of:
   a. Spreadsheets as Mindtools
   b. Microworlds as Mindtools
   Skill Acquisition – Spreadsheet activity creation; Microworlds evaluation and integration paper

5. Knowledge Construction Tools – Use and evaluation of:
   a. Hypermedia as Mindtools
   b. Hypermedia and multimedia connections
   Skill Acquisition – Hypermedia / multimedia mini-activity

6. Conversation Tools – Use and evaluation of:
   a. Synchronous conferencing
   b. Asynchronous conferencing
   Skill Acquisition – Creating asynchronous/synchronous activities

7. Implementation and assessment of learning with Mindtools
   a. The role of Mindtools in society
   b. Challenges to teachers
   c. Assessing learning with Mindtools

8. Ethical, Legal, and Equity Issues
   c. Copyright and fair use policies
   d. Acceptable use policies (AUPs)
   e. Cultural / multicultural equity issues
   f. Economic equity issues
   g. Special education / special needs

VIII. Instructional Methods and Activities:
Methods and activities for instruction include: lecture, discussion, cooperative groups, videos, individual presentations including multimedia, Internet searches, journaling and other activities.

IX. Evaluation and Grade Assignment:
Many projects will be assessed upon rubrics provided early in the project assignment. Student evaluation will consist of an assessment of the following:
40% final portfolio components (technology-integrated samples from class sessions)
20% team topic presentation (BlackBoard ch map, tech tool samples exploration, mentoring)
20% individual paper
15% timely BlackBoard quality, referenced discussion thread posts and attached sample activities
5% final portfolio presentation

Final portfolio components will be progressively presented throughout the course. Include all the activities you started in class; include peer (referenced!) works posted to BlackBoard; and especially include your half to one page summary (per topic of the week) of how you plan to integrate such Mindtool technologies into your curricular designs. Your research project and all individual class activities will also be included in your final portfolio.

Research presentation and paper will be a result of progressive processes and products related to an individual research paper. The main overall goal of this project is to provide students some tools and
collaborative feedback related to the research and writing process while exploring some of the most current applications of technology today. A secondary, but equally important goal, is for students to create a brief paper for peer-reviewed submission to a national conference or as a literature review article for a grant.

BlackBoard discussion posts will be weekly. Note deadlines on the course schedule. You will be evaluated upon the timeliness of your replies, the quality of your discussions, how well you reference your discussions (rather than simply state opinions), and the inclusion of quality sample projects attached to the post after team presentations.

Final portfolio presentations will promptly start at the designated time. Failure to have one’s presentation saved to a hard drive and ready at such time will result in a great reduction of the final presentation grade. Students are greatly encouraged to bring appropriate external storage media (ZIP disks) for sharing of files with classmates. Your final portfolio is basically an accumulation of resources and reflections for use gained during the course.

The primary reason for your course portfolios is that everyone can have a variety of tools to use and adapt for individual curricular use. Do include a single spaced cover page for each topic that synthesizes discussion thread posts and quality references to Jonassen’s key points per topic. Hyperlink to samples on the web, as well as the sample file you created for the topic. Also include referenced samples from your peers. You are to highlight your works in the class, but also include multiple peer samples for you to reference in the future.

**Grading Scale:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
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<tr>
<td>B</td>
<td>80-89%</td>
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<tr>
<td>C</td>
<td>70-79%</td>
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<tr>
<td>D</td>
<td>60-79%</td>
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<tr>
<td>F</td>
<td>Below 60%</td>
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</tbody>
</table>

**X. COURSE SCHEDULE (TENTATIVE) & CLASS POLICIES**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topic</th>
<th>Due Sun. eve. before class</th>
<th>Due Sat. noon after class</th>
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</thead>
<tbody>
<tr>
<td>1/11</td>
<td>Course intro; Mindtools and Constructivism</td>
<td>Introductory Google Presentation Slide</td>
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<tr>
<td>1/18</td>
<td>Critical Thinking: The Goal of Mindtools; BB introduction and practice</td>
<td>Chs 1,2,3 BB maps</td>
<td>Finished comments to Chs 1, 2 3 BB maps</td>
</tr>
<tr>
<td>1/25</td>
<td>Modeling Phenomena (Chs 4-8)</td>
<td>Skim read chs 4-8; ready for class discussion</td>
<td>Research focus + keywords via BB discussion thread</td>
</tr>
<tr>
<td>2/1</td>
<td>Modeling Phenomena (Chs 4-8)</td>
<td>Chs 4-8 maps and finished discussion / comments</td>
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<tr>
<td>2/8</td>
<td>Individual paper research week. Sign-up for tonight's topic</td>
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<tr>
<td>2/15</td>
<td>Modeling with Semantic Networks (Ch10) Team</td>
<td>Read chapter &amp; respond to Team's map</td>
<td>BB post-class discussion thread</td>
</tr>
<tr>
<td>Date</td>
<td>Activity Description</td>
<td>Read Chapter and Respond to Team's Map</td>
<td>Discussion Thread Details</td>
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<tr>
<td>2/22</td>
<td>Semantic Networks activity session</td>
<td>on BB</td>
<td>BB post-class discussion thread</td>
</tr>
<tr>
<td>3/1</td>
<td>Modeling with Spreadsheets (Ch11)</td>
<td>Read chapter &amp; respond to Team's map on WebCT</td>
<td>BB post-class discussion thread</td>
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<tr>
<td>3/8</td>
<td>Spreadsheet activity session</td>
<td>BB post-class discussion thread</td>
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<tr>
<td>3/15</td>
<td>Spring Break</td>
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<tr>
<td>3/22</td>
<td>Hard-Copy of Research Paper DUE - WebCT week; review others' papers and critique</td>
<td>*Review 5 others' papers with meaningful content and APA critiques (participation grade); keep number of reviewers per person as equal as possible</td>
<td>* BB Research paper final draft DUE 3/24 to BB thread for peer review and feedback; * FINAL RESEARCH PAPER DUE to discussion thread AND BB email to Dr.E by 3/28</td>
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<tr>
<td>3/29</td>
<td>Modeling with Databases (Ch9) Team; Research Team presentations due (ONLINE; focus on online database use with HOTS questions, queries, data representation with common tools)</td>
<td>*Read chapter &amp; respond to Team's map on BB *Post Research Team Presentation to discussion</td>
<td>BB post-class discussion thread</td>
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<tr>
<td>4/05</td>
<td>Modeling with Hypermedia (Ch16) Team</td>
<td>Read chapter &amp; respond to Team's map on BB</td>
<td>BB post-class discussion thread</td>
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<tr>
<td>4/12</td>
<td>Hypermedia activity session</td>
<td></td>
<td>BB post-class discussion thread</td>
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<tr>
<td>4/19</td>
<td>Modeling with Structured Computer Conferences (Ch17) Team</td>
<td>Read chapter &amp; respond to Team's map on BB</td>
<td>BB post-class discussion thread</td>
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<td>4/26</td>
<td>Final Portfolio DUE Submit portfolio to BB discussion thread and instructor station. Make sure all documents are included (downloaded) to instructor station.</td>
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<tr>
<td>5/07-09</td>
<td>Final Exams</td>
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**Class Policies:**
Attendance is essential. Participants should attend class regularly and consider punctuality as very important. The following rules related to attendance apply to this course:

- Weekly attendance via online interaction as directed within the online delivery system is expected.
- Absences due to illness or for other reasonable cause as deemed by professor, with appropriate proof
of documentation, do entitle the student to make up the work missed, even though the absence itself will not be excused.

- It is the student’s responsibility to retrieve materials and information from classmates if he or she misses any class time. It is highly recommended to have two course “buddies” – people who will take notes and save extra copies if you miss any class time.

Participants are expected to involve themselves in class discussions, attend any synchronous and/or face to face sessions, complete assigned readings, assignments, and presentations. Computer technology must be utilized for all assignments. The grade for the course will be based upon the quality of assignments, the extent of attendance and participation, and the caliber of the presentations.

Food and drinks are allowed ONLY if kept and consumed at the font of the class on the counter-tops.

XI. Textbook:
The textbooks adopted for this course is:

XII. Bibliography:


XIII. COURSE POLICIES

**Academic Integrity/Plagiarism**
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in failure.

**Dropping a Class**
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping
the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. **April 1, 2011** is the last day to drop a class with an automatic grade of "W" this term.

**Preferred methods of scholarly citations**
Publication Manual of the American Psychological Association, Sixth Edition is the preferred method for citations within papers.

**Classroom/professional behavior**
All students are expected to act in a responsible manner with consideration of fellow students and toward TAMU-CC faculty and staff members. Specific rules and information is available in the TAMU-CC Student Handbook and available through the website [http://studentaffairs.tamucc.edu/StudentCodeofConduct.pdf](http://studentaffairs.tamucc.edu/StudentCodeofConduct.pdf).

**Grade Appeals***
As stated in University Rule 13.02.99.C2, Student Grade Appeals, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Rule13.02.99.C2, Student Grade Appeals, and University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules Web site at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

**Disabilities Accommodations***
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Driftwood 101.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

*Required by SACS