Instructional Computing in Secondary Schools

Day/Time: Daily, 4:10 – 9:00 PM (times flexible, see schedule below)
Classroom: BH 218
Instructors: Dr. Brian Beatty
Office: Department of Instructional Technologies (BH 163)
Email: bjbeatty@sfsu.edu
Internet: http://sfsu.blackboard.com (SFSU Blackboard site)

I. Course Description
Prerequisite: none

This course focuses on basic computer skills, computer applications and the integration of both into classroom curriculum. Students will discuss and implement learning theories both in and out of class, covering legal, ethical, age-related, and subject area-specific issues as well as determining appropriate uses of technology.

From the course catalog: “Practice with computers in laboratory classroom; software applications in the secondary school classroom. Integrating computing in teaching and determining appropriate use of technology.”

The main focus for this course is to help teachers prepare an original instructional unit that integrates technology effectively to teach academic content; to their own students, in their own teaching contexts.

II. Knowledge Base Theme
Preparing reflective and innovative instructors as teachers who apply appropriate strategies based on student learning needs in diverse educational settings.

Goals and Objectives (the “laundry” list!)
The student will be able to:

- demonstrate competency in operation and care of computer related hardware
- implement basic troubleshooting techniques
- demonstrate knowledge and/or understanding of current basic computer hardware and software terminology
- demonstrate knowledge and/or understanding of legal and ethical issues related to the use of computer-based technology
- demonstrate knowledge and/or understanding of appropriate uses of computer-based technology in teaching and learning
- demonstrate knowledge and/or understanding of copyright, privacy, security and safety issues related to the use of computer-based technology in the classroom
- use established selection criteria to evaluate education technology materials
- use computers to communicate through printed media
- use computers to communicate through electronic presentation media
- interact with others using e-mail
- use computer applications to manage records
• describe/define appropriate uses for computer-based collaborative tools
• interact with others using computer-based collaborative tools
• demonstrate competence in the use of electronic research tools
• demonstrate the ability to assess the authenticity, reliability and bias of data gathered using electronic research tools
• use a database application to manipulate and analyze data
• use a spreadsheet application to manipulate and analyze data
• identify student learning styles and determine appropriate technological resources to improve learning
• include appropriate technological resources in classroom lesson plans
• create and maintain effective learning environments using computer-based technology
• design lessons based on analysis of best practices and research findings on the use of technology
• choose software for its relevance, effectiveness, alignment with content standards and value added to student learning
• determine outcomes and evaluate the success or effectiveness of the process used
• optimize lessons based upon the technological resources available in the classroom, school library media centers, computer labs, district and county facilities, and other locations
• design, adapt and use lessons that address the students’ needs to develop information literacy and problem solving skills as tools for lifelong learning
• create or make use of learning environments inside the classroom, as well as in library media centers or computer labs, that promote effective use of technology in the curriculum
• use technology in lessons to increase each student’s ability to plan, locate, evaluate, select, and use information to solve problems and draw conclusions
• use technology as a tool for assessing student learning and for providing feedback to students and their parents
• create and adapt lessons according to results of using technology in instruction
• collaborate with other teachers, mentors, librarians, resource specialists, and other experts to support technology-enhanced curriculum
• contribute to site-based planning or local decision making regarding the use of technology and acquisition of technological resources

Knowledge Base Descriptions
• Research and Experience-Based Principles of Effective Teaching and Learning Practices
• Educational Technology
### III. Course Calendar

<table>
<thead>
<tr>
<th>Meet Date</th>
<th>Class Meeting Topics</th>
<th>Assignments</th>
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<tbody>
<tr>
<td><strong>Session 1</strong>&lt;br&gt; 1/5/04&lt;br&gt; 4:10-9:00*</td>
<td>Introductions/Course Overview&lt;br&gt;SFSU user accounts&lt;br&gt;Getting Started in Blackboard&lt;br&gt;Getting Started in Taskstream&lt;br&gt;Standards – NETS and content</td>
<td>Reflection posting in Bb&lt;br&gt;Form content (collaboration) groups</td>
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<td><strong>Session 2</strong>&lt;br&gt; 1/6/04&lt;br&gt; 6:00-9:00*</td>
<td>Using the Web in Education&lt;br&gt;Find content - Search Engines&lt;br&gt;Create content – Dreamweaver&lt;br&gt;Publish content – SFSU website</td>
<td>Reflection posting in Bb&lt;br&gt;Choose instructional topic</td>
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<td><strong>Session 3</strong>&lt;br&gt; 1/7/04&lt;br&gt; 5:00-9:00*</td>
<td>Using graphics to teach.&lt;br&gt;Basic digital photography&lt;br&gt;Image manipulation (Photoshop)&lt;br&gt;Drawing software&lt;br&gt;Finding and using existing images</td>
<td>Reflection posting in Bb</td>
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<td><strong>Session 4</strong>&lt;br&gt; 1/8/04&lt;br&gt; 6:00-9:00*</td>
<td>Introduction to Multimedia&lt;br&gt;Online course management systems&lt;br&gt;Online Communication Systems</td>
<td>Reflection posting in Bb</td>
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<td><strong>Session 5</strong>&lt;br&gt; 1/9/04&lt;br&gt; 4:10-9:00*</td>
<td>Video and Audio&lt;br&gt;Using movie and sound clips&lt;br&gt;Capturing movie and sound clips</td>
<td>Reflection posting in Bb</td>
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<tr>
<td><strong>Session 6</strong>&lt;br&gt; 1/12/04&lt;br&gt; 4:10-9:00*</td>
<td>Presentation software&lt;br&gt;PowerPoint Uses and Abuses&lt;br&gt;Resources for presentations&lt;br&gt;Preparing a group presentation&lt;br&gt;Using rubrics to assess learning</td>
<td>Reflection posting in Bb&lt;br&gt;Prepare group presentation of content-focused resources.</td>
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<tr>
<td><strong>Session 7</strong>&lt;br&gt; 1/13/04&lt;br&gt; 6:00-9:00*</td>
<td>Productivity software (MS Office)&lt;br&gt;Content area software and technology (group presentations)</td>
<td>Reflection posting in Bb&lt;br&gt;Present content resources (group)&lt;br&gt;Turn in group presentation</td>
</tr>
<tr>
<td><strong>Session 8</strong>&lt;br&gt; 1/14/04&lt;br&gt; 5:00-7:00**</td>
<td>Lab time for project work.</td>
<td>Reflection posting in Bb&lt;br&gt;Independent and Group work on instructional units.</td>
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<tr>
<td><strong>Session 9</strong>&lt;br&gt; 1/15/04&lt;br&gt; 6:00-9:00</td>
<td>Individual presentations of final instructional units to class.</td>
<td>Present Instructional Unit to Class&lt;br&gt;Turn in instructional unit</td>
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* additional lab time 9:00 – 10:00 PM

** optional attendance – instructor consultation and lab time
IV. Text/Materials

- **Required reading:** Online or provided readings will be assigned in class.

V. Course Requirements

- **Participation - Classroom Meetings** ........................................................   10 %
  Each student is responsible for participating in classroom activities and assisting fellow students when appropriate. Since this is a compressed timeline course, attendance is crucial. After missing 2 class meetings, a student may be dropped from course.

- **Assessment 1 – Professional growth reflections** ........................................ 20 %
  Each student is responsible for posting daily reflections to the Blackboard discussion forum. These reflections will help you track your ideas and development over this two week span. These thoughts should focus on the content of this course in some way, such as developing ideas about lesson plans that include the relevant and appropriate use of technology, considerations of the learning environment and standards of his/her own subject area and grade level, etc.

- **Assessment 2 – Content Resource Group Presentation** ............................. 20 %
  Each student is responsible for participating with a small group of peers to locate, evaluate, and present a selected group of content-focused technology resources to the class. Students will present this resource bundle to the class during the 7th class session on January 13.

- **Assessment 3 – Instructional Unit Development and Presentation** .... 50 %
  Each student is responsible for creating an original instructional unit that includes the relevant and appropriate use of technology and which considers the specific learning environment and technology and content standards of his/her own subject area and grade level. More detail about this project will be provided in class during class session 2.

Total 100 %

VI. Grading Criteria

Students will be graded in the following manner:

- **A- to A = 90-100 %**
- **B- to B+ = 80-89 %**
- **C- to C+ = 70-79 %**
- **Credit/No Credit cutoff = 75 %**
VII. Changes to the Syllabus
This syllabus is subject to change throughout the course due to emergent student needs, important new learning opportunities, or other unforeseen situations. In the event a change must be made, the instructor will notify the students as soon as practically possible, and provide an updated syllabus on the course website.

VIII. Accommodation Statement
If you are a disabled student requiring special accommodation in this course, you must be registered with the Office of Disabled Student Services (DSS). Your counselor will give you a letter that you must deliver to the instructor in person, at which time an appointment will be arranged to discuss appropriate accommodation. This must be accomplished during the first three weeks of the semester.