



**EDUU 451/551: Educational Applications of Computers – Level One, 3 Credits**  
**Term: Spring/Summer 2010 / Hanford**

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Course Website: [www.ed551.com](http://www.ed551.com)

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On-line Course Support at: <http://www.chapman.edu/univcoll/faculty/piper>

### **BULLETIN COURSE DESCRIPTION**

This course provides an overview of current computer-based technologies used in a variety of educational settings within and across all curriculum content areas. Emphasis is on making significant changes in teaching and learning through technology by providing a match between instructional strategies and relevant technologies. Focus is on information and communication technologies as a means of gathering, processing, and communicating information. Critical issues include access, equity, privacy, safety, and ethical situations surrounding technology. Hardware and software applications will be evaluated as effective tools of instruction for a constructivist learning environment.

### **PREREQUISITES**

Passing scores on CBEST; 2.75 GPA

### **ESSENTIAL EQUIPMENT**

Internet Access and Chapman ID

Removable USB Flash ROM drive

Personal multimedia headset (headphones and microphone)

### **COURSE LEARNING OBJECTIVES**

*Through the class experiences, readings, assignments, and case studies, candidates will be able to:*

- Develop an awareness of the impact of computers on the individual, society and education.
- Demonstrate knowledge of ethical and social issues related to technology, including issues of access, equity, privacy, the protection of children, and ownership of intellectual property.
- Demonstrate competence in the use of on-line research resources and develop awareness of issues concerning authenticity, reliability, and bias of the data gathered.
- Demonstrate knowledge of APA standard documentation format for citations and electronic references.
- Select criteria to evaluate technologies for relevance and effectiveness in teaching and learning in the diverse classroom.

- Based on content to be taught, select appropriate technological resources to support, manage, and enhance student learning in relation to prior experiences and level of academic accomplishment.
- Demonstrate knowledge and understanding of the appropriate use of computer-based technology for information collection, analysis and management in the instructional setting.
- Analyze best practices and research findings on the use of technology and design lessons based on state-adopted curriculum.
- Apply knowledge of learning theory to design, plan, and deliver instruction utilizing technology.
- Examine multiple intelligences and other learning theories that support the use of multimedia instructional tools for teaching diverse populations (including racial, ethnic, linguistic, gender, cultural, and socio-economic, and special needs).
- Design, adapt, and use lessons which address the students' needs to develop information literacy and problem solving skills as tools for lifelong learning.
- Select software for its relevance, effectiveness, alignment with content standards, and value added to student learning.
- Communicate and collaborate using online portals (Blackboard or eCollege), e-mail, discussion groups, chat, list servers, audio/video conferencing.
- Demonstrate competency in the operation and maintenance of computer systems, including peripheral hardware and software.
- Demonstrate knowledge and skills in the use of technology for teacher productivity and management of records (e.g. word processing, database, spreadsheet, charts, tables, forms, grade books, and performance assessments).
- Communicate through printed media and desktop publishing (incorporating charts, graphic design, graphic organizers, flow charts, lay-out, newsletters, signs, student reports, drawing, scanning, painting).
- Author interactive multimedia and hypertext presentations for use in classroom instruction using text, graphics, sound, animation, video (web authoring, presentation programs, and hypertext authoring).
- Create an electronic assessment portfolio providing evidence of meeting technology standards and Teacher Performance Expectations (TPEs).
- Utilize case studies to examine technology integration strategies in real-life classroom environments.

**The major purposes of this course are as follows:**

- to gain proficiency in the use of technology for productivity, communication, and research.
- to examine instructional strategies that integrate technology into the educational experience and facilitate learning for ALL students.
- to use software and related media to access and evaluate information, analyze and solve problems, collaborate and communicate ideas, and promote student learning.

- to select, evaluate, and use relevant and effective technologies for learning and teaching aligned with state-adopted academic curriculum, to develop in candidates an understanding of the legal and ethical aspects of teaching with technology

### **Crafting the Art of Teaching through Cases**

To assist candidates as they develop their ability to think like teachers and to help them prepare for the Teacher Performance Assessment (TPA) candidates will read, respond to and discuss teaching cases that address the use of technology in classroom instruction. Candidates will examine technological tools and integration strategies that help make subject matter comprehensible to students (TPE 1), assess student learning (TPE2-3), engage and support student learning (TPE4-5), and provide developmentally appropriate instruction for diverse learners (TPE6-7). Candidates will examine cases concerning instructional planning, selection of materials, differentiated instruction, classroom management, and effective social environments involving the use of technology to promote student learning (TPE9-11). Students will examine cases related to the professional, legal, and ethical obligations involved with technology and explore electronic resources that promote professional growth (TPE12-13).

### **MAJOR STUDY UNITS**

#### **I. Introduction to the computer**

- A. Hardware, software, and peripherals
- B. Communication and information technologies for productivity and research
- C. Basic utilities: file management, edit functions, data storage and retrieval, software installation, etc.
- D. Computer maintenance and troubleshooting

#### **II. Impact on the individual and society**

- A. Impact of computers on society and education
- B. History and philosophy of technology in education
- C. Access, equity, privacy, safety and ethical issues
- D. Acceptable use policies and user management
- E. Educational technology planning

#### **III. Instructional uses of the computer**

- A. Tutor (computer assisted and computer managed instruction)
- B. Exploration and Simulation
- C. Application tools (productivity, publication, collaboration)
- D. Communication (E-mail, discussion, chat, list-servers, bulletin boards, video conferencing, social networking)

#### **IV. Technology and Education Reform**

- A. Constructivist learning environments: active learning, authentic tasks, cooperative grouping, problem-solving, scaffolding
- B. Standards and performance assessment

C. Professional development and lifelong learning

**REQUIRED TEXTS:** None. Course Website: [www.ed551.com](http://www.ed551.com)

**RECOMMENDED TEXTS:** See course website

### **STUDENT PERFORMANCE REQUIREMENTS**

Graduate students are expected to maintain a 3.0 (B) average; students who earn a C+ or below in the course will be required to repeat the course in order to receive credit.

### **METHODS OF EVALUATION FOR DETERMINING GRADES**

Assignments:

1. Productivity Documents/Writing Assignments (APA format)
2. Class participation/group presentation
3. Computer /Internet Basics Quizzes
4. Internet Search Skills Exercise
5. Software Review/Presentation (w/Evaluation for Effectiveness with Instruction)
6. Web Site Review/Presentation (w/Evaluation for Effectiveness with Instruction)
7. PowerPoint Presentation
8. Multimedia Project
9. Web publishing
10. Philosophy of Technology in Education Paper

Grading will be based upon the quality and/or completion of all assignments. The specific grading method and value of each of the above assignments will be discussed in class.

### **ATTENDANCE AND OTHER CLASS POLICIES**

Attendance at all classes is important. The earned grade will drop by one full letter for every absence (excused or not) beyond one. If you are absent, it is your responsibility to obtain missed information from other students or the class website. In class activities missed due to absence may not be made-up unless prior arrangement with the instructor is made. You will have one week to make up any missed assignments due to an excused absence. No assignments will be accepted after the final exam date.

### **UNIVERSITY-LEVEL EXPOSITORY WRITING STANDARDS**

Specific writing standards differ from discipline to discipline, and learning to write persuasively in any genre is a complex process, both individual and social, that takes place over time with continued practice and guidance. Nonetheless, Chapman University has identified some common assumptions and practices that apply to most academic writing done at the university level. These generally understood elements are articulated here to help students see how they can best express their ideas effectively, regardless of their discipline or any particular writing assignment.

Venues for writing include the widespread use of e-mail, electronic chat spaces and interactive blackboards. Chapman University is committed to guaranteeing that students can expect all electronic communication to meet Federal and State regulations concerning harassment or other

“hate” speech. Individual integrity and social decency require common courtesies and a mutual understanding that writing--in all its educational configurations--is an attempt to share information, knowledge, opinions and insights in fruitful ways.

Academic writing (as commonly understood in the university) *always* aims at correct Standard English grammar, punctuation, and spelling.

The following details are meant to give students accurate, useful, and practical assistance for writing across the curriculum of Chapman University College.

Students can assume that successful collegiate writing will generally:

- Delineate the relationships among writer, purpose and audience by means of a clear focus (thesis statements, hypotheses or instructor-posed questions are examples of such focusing methods, but are by no means the only ones) and a topic that’s managed and developed appropriately for the specific task.
- Display a familiarity with and understanding of the particular discourse styles of the discipline and/or particular assignment.
- Demonstrate the analytical skills of the writer rather than just repeating what others have said by summarizing or paraphrasing
- Substantiate abstractions, judgments, and assertions with evidence specifically applicable for the occasion whether illustrations, quotations, or relevant data.
- Draw upon contextualized research whenever necessary, properly acknowledging the explicit work or intellectual property of others.
- Require more than one carefully proofread and *documented* draft, typed or computer printed unless otherwise specified.

## **DOCUMENTATION**

Any material not original to the student must be cited in a recognized documentation format (APA, ASA, MLA or Chicago-style) appropriate to the particular academic discipline. For quick reference to documentation standards for various fields you may refer to: <http://www.chapman.edu/library/reference/styles>. Deliberate use of information or material from outside sources without proper citation is considered plagiarism and can be grounds for disciplinary action. See the explanation of Academic Integrity below.

## **ACADEMIC INTEGRITY**

As a learning community of scholars, Chapman University emphasizes the ethical responsibility of all its members to seek knowledge honestly and in good faith. Students are responsible for doing their own work, and academic dishonesty of any kind will not be tolerated. "Violations of academic integrity include, but are not limited to, cheating, plagiarism, or misrepresentation of information in oral or written form. Such violations will be dealt with severely by the instructor,

the dean/center director, and the standards committee. Plagiarism means presenting someone else's idea or writing as if it were your own. If you use someone else's idea or writing, be sure the source is clearly documented." Other guidelines for acceptable student behavior are specified in the *Chapman University College Catalog*.

#### **AMERICANS WITH DISABILITIES ACT STATEMENT**

Any personal learning accommodations that may be needed by a student covered by the "Americans with Disabilities Act" must be made known to the instructor as soon as possible. **This is the student's responsibility.** Information about services, academic modifications and documentation requirements can be obtained from the director of the Center for Academic Success at the Orange Campus at 714-997-6828 or from the director of a Chapman regional campus.