

# EDTC 645 Instructional Applications of Computer Technologies I

## Fall 2006

Delivery: Web Based (on-line group activities to be scheduled)  
Orientation: Sept 2, 10:00 - 12:00 Room 603 & by internet streamed video

Note: We will be coordinating internet-based activities during the semester, rather than meeting as a group. Web-based resources will be made available and students will work according to the assignment schedule and their individual pace and daily work schedule. Class times will be designated for help sessions for those students who require help on the topics as presented in the calendar of topics

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**Course Description:** This course is designed to familiarize participants with issues (social, educational, etc.) and techniques associated with educational applications of computers and related materials (graphics, Multimedia, etc.). Participants will relate the course content to their individual educational/instructional philosophies, activities, and goals. The online resources for this course may be accessed at the following web site (URL): <http://edtc645.tamu.edu>

**Topics and Activities:** this course provides for the classroom integration of instructional software with a focus on educational applications of computer tools for both teachers and students (word processing, databases, etc.). The full range of educational computer developmental environments will be explored. Telecommunications resources and techniques will be studied and utilized as a major form of interaction and communication throughout the course. MultiMedia and HyperText environments will be introduced for the development of instructional materials and student projects.

On-line demonstrations will be utilized in conjunction with applied assignments and hands-on activities. The assignments will be coordinated throughout the semester in an applied theme related to participant's teaching or training interests, culminating in a Hypertext project in which students will combine appropriate theory and techniques to develop classroom presentation/interactive material.

### Required Text:

Computers in Education 04/05. (11th ed.) 2004. Hirschbuhl & Wilkinson. Eds. Dushkin Pub. Group

**Recommended Text:** (technical support and tutorial for software use- these are suggested for students who feel a need for extra individual instructional resources for learning the utility software. There are many such resources, including many on the internet. We won't use them directly, they are just for individuals that want extra learning resources.)

Examples Essential Microsoft Office Poole & Hendry, McGraw Hill College  
or Essential AppleWorks Poole, McGraw Hill College

There are many books similar to these which could be substituted. These are good basic resources. Rather than requiring a specific supplemental tutorial resource and completion of its exercises, this course relies on individual students to make the decision to purchase and use such supplemental materials where they see a need. There are also many internet sites with tutorial resources. The utilities you will use in this course come with very good documentation in the form of manuals and internal electronic help resources. There are tutorial resources as well. You may be able to rely solely on the resources provided with your software, or you may need to acquire supplemental resources. You should decide what resources and help materials you will need to master the software utilities.

## Required Resources:

All students will need regular, reliable access throughout the course to the Internet for e-mail and web-based activities. This access may be obtained through the university student accounts (lab and/or modem connect from home), a school district network connection, or a private internet provider. These computer and telecommunications functions will not only comprise an important part of the course content, but will also be necessary for regular communications, assignment completion, materials access, etc. Students need to acquire these resources and abilities before start of the course to function successfully. As with most of the topics, you will find that this knowledge and skills will benefit you long after this course is completed.

## Software:

You will need to have regular access to various software utilities and related equipment. If you not have access to the software at home or work you may need to come to campus periodically to attend open labs for certain applications. The main productivity utilities to be used are:

**AppleWorks** or **MS Word/Excel** for word processor and spreadsheet.

**AppleWorks**, **MS Access** or **FileMaker Pro** may be used for the data base assignment. Either AppleWorks or FileMaker Pro is recommended for those with no prior data base experience.

**HyperStudio** or **PowerPoint** will be used for the hypertext Instruction assignment..

**Dreamweaver** is the preferred and recommended web page editor. If you are an EDTC major we recommend you purchase this software as you will need it is several classes. DreamWeaver has an FTP utility built in so it will also take care of that requirement.

### Communication-

E-Mail- You will need communications software that can handle e-mail functions including sending and receiving large file attachments. All official class correspondence will use student neo addresses. You can access your neo account through e-mail client software or through web browsers. Accessing your e-mail in labs may be a little more difficult than from your own computer.

In addition, most assignments require participation in the EDTC 645 on-line forum where you will submit questions and or respond to others' input. These activities can be accomplished via standard internet browsers; this forum and some related resources will require passwords for access. You will receive the password information later.

FTP- You will also need FTP software for the transfer of web page files to the server. The FTP function in **Dreamweaver** or the **WS-FTP LE** (not the PRO version) utility available from the tamu site are preferred. (Download the free version here: [ftp://ftp.ipswitch.com/Ipswitch/Product\\_Downloads/ws\\_ftple.exe](ftp://ftp.ipswitch.com/Ipswitch/Product_Downloads/ws_ftple.exe))

If you are transferring files via a school network or internet provider that has restrictions (filters, proxy server, etc.) you may have difficulty with FTP. Practice this transfer process early so you can discover and solve any problems early so they do not affect assignment due dates. You will need to practice on the software and assignment materials in advance and send any questions that you need help with. Since this is a computer applications course, delivering the assignment materials by the specified methods is part of the course requirements rather than just a means of turning in materials. The necessary server access information is provided in the group project assignment section.

**EDTC645 Workbook**, and **Immaculate Conceptualization** are software utilities developed for use in this course and can be downloaded from the course web site for use throughout the semester. Download and expand these utilities in preparation for these assignments. Place these utilities in appropriate locations on your hard drive. If you work on public (lab) computers, place each utility on a zip disk or Flash Drive so you will have access to them when needed. Let me know if you have any problems with these utilities running in lab settings which have restrictions on running such files.

## Suggestions

Classes such as this require time and activity considerations which differ from those of many other classes.

You cannot afford to let yourself get behind since many topics and assignments are based in the skills and products of previous assignments. Plan your computer materials before going to the keyboard. Contact the instructor if you experience any problems with assignments or concepts. Assignments will be reduced 10% for each class they are late. This is a complex course with assignments that overlap in time and functions so you need to plan and manage your time well.

Always maintain **backups** of your files throughout the semester; save every 10 -15 minutes while working on a file and make/update a backup file on a different disk each time you make significant changes. Save backups using modified file names when you have made significant changes but may want to retrieve the original format. Choose file names that are meaningful to help determine which is which later on. Also, name and label your disks with meaningful names. Keep backups on alternate storage locations.

While today's storage media are relatively reliable, disks & files can get damaged, even with careful handling. It is your responsibility to maintain a most recent backup in case such damage occurs.

Several activities require the ability to unstuff or unzip files. You can use the Aladdin Stuffit Expander (<http://www.aladdinsys.com/> for Mac or PC version) utility or one of the many zip utilities available. You will find that you will soon have many additional opportunities to use these utilities as this format is widely used in internet resources. You will need to be able to both expand/unzip files as well as compress/zip files for assignment delivery later in the course. Place these utilities in appropriate locations on your hard drive. If you are on public (lab) computers, place each utility on a floppy or zip disk so you will have access to them when needed.

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## Assignment Descriptions

The following assignments are complex and represent the full set of course activities. These descriptions are only an initial overview. Print a copy of this document for daily planning and review, but see the [Assignment Component Section](#) on the main course web pages for **more detailed descriptions and requirements, objectives, support materials, and examples for each assignment**.

There is also a short tutorial that describes the functions of this Assignment Component section- [Assignment Component Tutorial](#). Ask questions where you are not sure of any aspect of an assignment. Due dates indicate the date to be turned in or postmarked. If you are using mail delivery, use regular mail, you do not need to use overnight or express mail. Even if your files contain color text or graphics, it is not necessary to print in color; you may print the assignments in black & white. There will be overlap in the due dates for various assignments; some assignments are spread out in a sequence of sub-assignments. Check the assignment schedule chart on page 8 for the specific due dates for each assignment.

All assignment files are to be submitted according to directions in the individual assignment descriptions on the course web site. These procedures may change as new techniques are developed for the course resources.

All files **must** be named according to the directions in the assignment description so that they can be identified and added to the appropriate record in the grade book so you can get credit for your work. Remember, file names which may make sense to you in your directory, may not make sense when sent to my server (for example: "data base assignment", "My Word Processor", "homework", "Unit 1", etc. all look alike when they are in the group folder and I cannot credit them to you.

## Utilities

We will cover the use of a number of production utilities in this course. Most of the assignments in the course can be directed to your individual teaching/interest areas; you should assume a role as teacher, administrator, or trainer in developing the materials. The software techniques and operations are intended as a means of developing desired classroom materials and results. Focus on what you feel you need to teach/manage effectively, rather than on the operation of the software. The assignments form a series of coordinated activities, in some cases the product of one forms the basis of the next.

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### A. Data/Grade Management & Reporting

On the following Data/Grade Management assignments (spread sheet & Data Base), assume your role as teacher, administrator, or trainer in developing relevant materials.

#### **Part 1- Data/Grade Management: Spread Sheet (Managing and Reporting) (30 pts)**

Obtain a copy of the spread sheet file (Claris/AppleWorks, or Excel) for grade management which is provided for this assignment in the Spread Sheet assignment portion of the web site.

**1 A. (10 pts)** Prepare a paper which presents your answers to the series of questions provided for the spread sheet example. The paper must be formatted according to the criterion provided to demonstrate word processor mastery. The required formatting components will include both text (margins, columns, spacing, etc.) and the range of graphics integration options.

**1 B. (20 pts)** Design a spread sheet file for similar data management which includes student/trainee performance in your interest area. The structure and content should be different from the sample file supplied. Include at least five score/performance categories and ten names, categories which are automatically calculated from the entered data, and summary data calculations. You will also create a charts which presents appropriate data from your file.

**Final report components:** (See the Spread Sheet part of the Assignment Components section for detailed instructions) Since part of the usefulness of utilities such as a spread sheet is for reporting, this assignment requires creating multiple print outs which present the data in various ways. Consult the assignment component section details for printing and delivering criteria.

You should also participate in the EDTC 645 on-line forum, adding questions and or responses to the section on Spread sheets during this assignment period.

#### **Part 2- Data/Grade Management: Data Base- (Developing & Merging) (25 pts)**

##### **2 A- Data Base development (20 pts)**

Obtain a copy of the data base file (Claris/AppleWorks, Access or FileMaker Pro) for grade management which is provided for this assignment.

Write a one page paper comparing the format and functions of this file to those of the Spread sheet example from the last assignment. (5 pts)

Design a data base file (15 pts) which contains the same components and data as your spread sheet. Include standard personal fields (name, address, etc.) and at least 5 data entry fields, and at least two calculated fields. Fill in information for 5 records. Design the fields and layouts to access the power of data base functions.

##### **2 B- Merge/Integration: (5 pts)**

Develop a word processing document which would accept the integration of the data from your data base in some **meaningful** way to produce a series of documents (e.g. individualized strength/weakness reports, study guides. See the Assignment Components section of the class web site for details on the criteria for the final materials to submit

Also Participate in the EDTC 645 on-line forum adding questions and or responses to the database section.

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## **B. Group Topic Web Site - Final Web Pages (30 pts)**

This assignment will focus on small group class web presentations on a series of applied topics. It is intended to (1) provide practice in conceptualizing and developing such a presentation in a small group and (2) acquaint the rest of the class with the content researched and developed by the individuals. It is also intended to develop skills related to the preparation and integration of appropriate web page resources. The materials will introduce the topic and organize/describe the concepts covered. Groups will be formed based on the topic selections made on the initial class survey. The final web materials must contain:

- an introductory page which presents the intent of your site; including objectives and/or thought questions for viewers to consider while interacting with your pages. This should be developed jointly by all members of the group. This page should have a link to, or contain:
  - a Main menu page which presents the topic and introductory information, members' names, and links to individual pages which present the content of each subtopic.
- Web page(s) from each member presenting his/her subtopic content, containing at least two links (URL) to web sites that are related to the content. Be sure to provide information so the viewer knows what to expect when selecting each link.

**Outline:** Each group should turn in a basic outline of the material and subtopics to be covered by each member.

**Content Map:** An expanded content outline and content map for the presentation materials should be done for the final planning of the integrated web materials.

The resulting set of pages (HTML files) must be turned in as a collection of files in one folder. (Folder should be named according to the topic). You will need to ftp the folders to the class server. All internal links must assume that all the files will all be located in the same folder; all links should be relative, as absolute links will not function properly. The site should be tested once uploaded and any necessary adjustments made. There will be a group participation component as part of the individual scores for this assignment.

Each group member should participate in the EDTC 645 on-line forum adding questions and or responses to the section on the internet.

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## **C. HyperText Instruction: Planning**

### **Content Map & Resource Documentation- (20 pts)**

This material will be used for the planning and development of the Hypertext Instruction Presentation Materials assignment (last assignment below) and for summarizing the resources created for that assignment.. You should select an academic topic that you would like to use for the content of your presentation. Prepare a content map that represents the various components and subcomponents to be included in your topic. A special software utility will be used for this activity. These materials will be assembled and presented on a special class web site.

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### **• HyperText Instruction: Presentation Project: - (55 pts)**

Develop content for a 50 -60 minutes of instruction or training. (Lecture, discussion, interaction) relating to the instructional topic you have selected.

Develop of a set of graphics and text screens which would be used to mediate or facilitate the classroom activities (in place of overheads and posters, etc.) This is for teacher or instructor use, not as a CAI package for individual students (it could be used that way for review)

This should be an **interactive, nonlinear** presentation using HyperStudio, Keynote, or PowerPoint (this should **NOT** be a web page). Incorporate both embedded graphics and text. Use components such as branching menus, graphical menus, knowledge structures, etc. to enhance ease of presentation and student comprehension. Include an organizational location icon on each screen to aid in navigation. Be sure navigational links are functional and conceptually related to the topic.

**The following additional components should be included in your final project.**

**Notes:** The slides have a resource for teacher/instructor notes for each slide. Your notes should serve as a guide for the content you will present verbally while the slide is being viewed. Notes may have definitions/descriptions, outlines, thought questions, elaborations, etc.)

**Graphics:** Create and integrate in a meaningful way at least one scanned graphic and one screen capture.

**Animation:** Include an animation which is related to the instructional content in a meaningful way (actually contributes to learning).

**Audio Digitizing** Create (record) at least two audio samples (voice, sound, music) that supports the content being presented. You should have at least one audio that plays automatically when a slide opens and at least one that plays when an object is clicked (do not use the speaker icon, use a button, word, or graphic)

**Digitized Movie** Create and integrate an original digital movie from a video clip, live video, or live screen capture.

**Handout:** Create a handout for your students to use during your presentation of the instruction. This is NOT to be a simple source of information, but interactive material to maximize the students' comprehension of the content by facilitating **understanding** and **active processing** of the content being taught (do Not print out miniatures of the slides as a handout)

Participate in the EDTC 645 on-line forum adding questions and or responses to the section on HyperText & HyperMedia

**D. Readings: Computers in Education** (40 points)

The readings assignment will utilize an electronic workbook utility designed to provide a means for you to input and edit your answers to a series of short-answer questions associated with each of the eight reading units. This workbook will be downloaded from the course web site. There will be a demonstration of the workbook functions in the class orientation.



One of the workbook functions will present the list of questions to be answered for previewing and printing. You will type your unit answers into designated fields in the workbook. When a unit is due and your answers are complete you will submit them via the internet (there is a function for this built into the workbook) to a data base where I will score them and you can subsequently check your score. The **due dates** for each unit are listed in the activity schedule on page 8 and also in appropriate positions in your workbook. (Due on days indicated in the assignment schedule on page 8). (5 pts each, 40 pts total).

# Assignment and Point Summary

<u>ASSIGNMENTS</u>	<u>Points</u>
<b><u>A. Part 1- Data/Grade Management:</u></b>	
Spread Sheet (Managing & Reporting)	<b>30</b>
Paper	10
Spread Sheet File	10
Printouts & Chart	10
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<b><u>A. Part 2- Data/Grade Management:</u></b>	
Data base, (Developing & Merging)	<b>25</b>
Paper	5
Data Base File	15
Merge/Integration	5
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<b><u>B. Group Presentation- Web Pages</u></b>	
Structure/integration of Components	15
Content/Conceptualization	15
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<b><u>C. HyperText Instruction Planning</u></b>	
Content Map	10
Resource Summary	10
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<b><u>C. HyperText Instruction Presentation Materials</u></b>	
Content/conceptualization/notes	30
Structure/navigation/resources	20
Handout (function/content)	5
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<b><u>D. Readings; Electronic Delivery</u></b> (8 units, 5 pts each)	<b>40</b>
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<b>Assignments Total:</b>	<b>200</b>
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Approximate point cut-offs:	A - 180 (90%)      B - 160 (80%)      C - 140 (70%)      D - 120 (60%)

## Activity Sequence & Assignment Schedule

Date (week of)	Topic Sequence	Due Dates	
		*Unit Questions	Assignments
Aug 28 (week 1)	Course overview. Computer and Internet components & procedures. Orientation Sept 2, 10:00 - 12:00 am in Harrington Tower Room 603		Explore the EDTC 645 site, review various tutorials including the browser tutorial; complete the class survey prior to orientation.
Computer as Tool: Utilities to Produce, Maintain, Organize, Disseminate, Communicate. Word Processing, Data Base, Spread Sheet, Draw & Paint			
Sept 4 (week 2)	Utilities; Introduction to integrated software, word processor, outlining, Desktop publishing,.	Unit 0 Sept 8	Establish e-mail account. Identify & solve any communications problems. a picture will be taken at the orientation, if you are not there or prefer to send a picture then send it by Sept 4
Sept 11 (week 3)	Utilities, Spread Sheet applications & extensions;	Unit 1 Sept 15	
Sept 18 (week 4)	Utilities, Data Base applications & extensions;		Spread Sheet (Reporting & File transfer) (Sept 22)
Sept 25 (week 5)	Utilities, Graphic resources & techniques; Telecommunications, Web Page editing	Unit 2 Sept 29	Group Web Site: Basic outline and subtopics. (Sept 29)
Oct 2 (week 6)	File Conversion/Resource creation. Content map resources, Web Page editing		Grade Data base, Merge/Integration (Oct 6)
Oct 9 (week 7)	Scanning: Graphics & OCR, Clip art - Conversion & Integration into instructional materials. File compatibility (translation & transfer) The role of text & graphics. HyperStudio introduction	Unit 3 Oct 13	No specific assignments are due, these topics and skills are to be utilized in the preparation of the final project contents. Plan your materials as you learn the techniques.
Computer as TUTOR (CAI, CMI) and as TUTEE: Presentation, hypertext, MultiMedia. Conceptualization, development and utilization.			
Oct 16 (week 8)	On-line discussion- instructional software, resource creation.	Unit 4 Oct 20	Individual Content Map for Group Web Site (Oct 20)
Oct 23 (week 9)	Principles of interactivity; CAI, CMI; MultiMedia, Development/Presentation Utilities Linear/NonLinear formats; PowerPoint	Unit 5 Oct 27	Content Map- HyperText Instruction Presentation (Oct 27)
Oct 30 (week 10)	Interactivity, presentation materials (PowerPoint/HyperStudio); Telecomm access & integration		
Nov 6 (week 11)	HyperMedia; Graphics scanning, audio digitizing	Unit 6 Nov 10	Group Web Site: Final integrated materials (Nov 10)
Nov 13 (week 12)	Synthesizing, music & voice	Unit 7 Nov 17	Group Web Site peer review on forum
Nov 20 (week 13)	MultiMedia Development; Telecommunications; Project development, review and feedback		Group Web Site peer review on forum
Nov 27 (week 14)	Project development, review and feedback	Unit 8 Dec 1	Group Web Site peer review on forum HyperText Instruction Presentation Resource summary Dec 1
Dec 4 (week 15)			Final Materials: HyperText Instruction Presentation & final Content Map (Dec 7)
Dec 8 -13	Final Exam Period		Caution: objects in calendar are closer than they appear

\* Unit Questions: Computers in Education. Hirschbuhl/Wilkinson. -Unit question answers are to be submitted by the indicated dates using the electronic workbook utility.

## Integrity Statements

Experience has shown that sensitive issues relating to integrity are best handled by clearly defining expectations and guidelines in advance so that all participants understand the issues and do not accidentally or intentionally violate them. The following are offered to ensure open communication on potential issues to maximize understanding between student and instructor.

Students should consult the Texas A&M University Regulations for guidelines for scholastic integrity regarding originality, plagiarism, etc. The publication manual for the American Psychological Association should be consulted regarding appropriate methods for citing the works of others and the style and format for presenting literature references.

Course products and evaluations: the guiding principle of academic integrity is that a student's submitted work must be his/her own. Since the course objectives focus on the processes of developing course related materials, as well as the materials themselves, it is expected that all course products will consist of work done specifically for this course. Products completed for previous or concurrent course credit cannot be used for assignments for this course. If you wish to continue a theme or content area used in another course, inform the instructor and supply any requested existing materials at the start of this course. Any intended projects relating to other courses should be approved at the start by all instructors and should reflect unique elements and sufficient development effort for all courses involved.

Group projects are intended to allow several students to work as team members on projects that benefit from this format. All team members should provide their share of the effort and not benefit from, or jeopardize the work of, the other members. Any problems in working with teams should be brought to the attention of the instructor

immediately so that solutions may be enacted to ensure that all members benefit from the experience.

## Technology Related Issues

Courses such as this require time and activity considerations which differ from those of many other classes. You cannot afford to get behind, since many topics and assignments are based on the skills and products of previous assignments; there is no meaningful way to "cram" with computer related exercises and still experience the benefits of the sequence of activities. Plan your computer materials before coming to the lab/class so you are ready to develop or present your materials when you arrive. Contact the instructor if you are having any problems with assignments or concepts.

There is a reliance on technologies in this course. Consequently, there are opportunities for technical difficulties (network down, system crash, damaged file and backup is not available, computer already in use when needed, etc.) which greatly impact the need to have assignments done on time. Waiting until the last minute and not having the opportunity to complete an assignment will be the responsibility of the student. This is especially important when relying on "community" resources or networks which might experience an overload if several individuals are rushing at the last minute.

If problems are incurred, it is the student's responsibility to find solutions with sufficient time to complete the required task. Do not wait until a due date is near to discover/report the lack of software, inability to connect to a network, etc. While the instructor will help wherever possible, it is the students' responsibility to maintain individual resources (modems, phone lines, Internet access, network software, TENET accounts, software compatibility, etc.)

**Aggie Honor Code.** All students must familiarize themselves with the Aggie Honor Code: "An Aggie does not lie, cheat, or steal or tolerate those who do." and the Honor Council Rules and Procedures at <http://www.tamu.edu/aggiehonor>

## University Recommended Statements:

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 a reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Support Services for Students with Disabilities in Room 126 of the Koldus Building. The phone number is 845-1637

As commonly defined, plagiarism consists of passing off as one's own the ideas, words, writings, etc., which belong to another. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turn it in as your own, even if you should have the permission of that person. Plagiarism is one of the worst academic sins, for the plagiarist destroys the trust among colleagues without which research cannot be safely communicated.

The handouts used in this course are copyrighted. By "handouts" I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, lab problems, in-class materials, and review sheets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.