Design and implementation of a university department website

Margaret M. Rick
University of Northern Iowa

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Design and implementation of a university department website

Abstract
The website design cycle consists of four important components: (1) planning, (2) production, (3) implementation, and (4) operation. Within these components are a variety of vital tasks ranging from defining the objective and audience to conceptualizing the site, determining content, and creating, testing, and revising the site. Numerous rules or accepted principles guide the design process from color and font selection, to graphic creation, to site navigation layout. Once created, a website must be maintained: content should be updated and outside links verified on a regular basis. A site that is not maintained or kept current is of no benefit to its audience.

These principles and guidelines were balanced and followed in the creation of the website for the Division of Educational Technology within the College of Education at the University of Northern Iowa.
Design and Implementation of a University Department Website

A Graduate Project
Submitted to the
Division of Educational Technology
Department of Curriculum and Instruction
In Partial Fulfillment
Of the Requirements for the Degree
Master of Arts
UNIVERSITY OF NORTHERN IOWA

By
Margaret M. Rick
March, 2000
This Project by: Margaret M. Rick

Titled: Design and Implementation of a University Department Website

Has been approved as meeting the research requirement for the
Degree of Master of Arts.

Sharon E. Smaldino
Graduate Faculty Reader

Lisa Hansen
Graduate Faculty Reader

Rick Traw
Head, Department of Curriculum and Instruction
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Abstract

The website design cycle consists of four important components: (1) planning, (2) production, (3) implementation, and (4) operation. Within these components are a variety of vitals tasks ranging from defining the objective and audience to conceptualizing the site, determining content, and creating, testing, and revising the site. Numerous rules or accepted principles guide the design process from color and font selection, to graphic creation, to site navigation layout. Once created, a website must be maintained: content should be updated and outside links verified on a regular basis. A site that is not maintained or kept current is of no benefit to its audience.

These principles and guidelines were balanced and followed in the creation of the website for the Division of Educational Technology within the College of Education at the University of Northern Iowa.
Introduction

It is conservatively estimated that web content doubles in size every year. According to The Censorware Project (The Censorware Project, 2000) there are over 1.7 billion webpages worldwide containing 3.3 trillion bytes of text, 3.9 million images, and 6.5 trillion bytes of image data. Every twenty-four hours an additional 3.5 million new pages with 6.6 billion bytes of text, 790,000 new images and 13.2 billion bytes of image data are added. Also in every twenty-four hour span, 39.3 million web pages and 8.8 million images are changed.

A random sampling of web pages available would reveal varying designs and layouts. While the number of webpages is daunting to consider, the principles guiding the design of them are limited. Before exploring the design process, it is important to understand the psychology of the average website visitor contrasted to readers of various print materials.

Psychology of On-line Reading

With books and printed manuscripts, readers progress through the material in a generally sequential order (Sherwin, 1997). In a sense, print-based design is based on letting the eyes walk over the information. Contrasted to this sequential progression is the practice of jumping seen in newspapers and magazines. Rather than starting at page one and sequentially reading all the text until reaching the last page, readers pick and choose the articles to read in their preferred order. In addition to the random nature of the reading style, stories are continued to multiple pages. Sherwin contends that the reading of online documents mirrors the jumping style seen in newspapers.

It is important to design a website with this short-attention-span in mind. Online documents must suit the web surfer’s browsing style of jumping back and forth between pages and sites (Sherwin, 1997). Web page designers have adopted the educational concept of chunking of material. Most websites consist of more than a single page. The content and context
of the information can guide in the chunking process (Morville, 1999). The material is broken into discrete categories and within these categories the information is further sub-divided into sections or pages. Since most visitors at websites scan the material, it is important to use design elements such as headers, bolding and highlighting, bulleted and numbered lists, graphics and captions to chunk the material (Degenhart, 1998).

Another important consideration between print and web material is that a webpage is fundamentally a scrolling experience (Nielsen, 1999a) as opposed to the canvas experience of print. Because of this one-dimensional nature, it is important that vital information be visible in the first screen of a page, or above the fold. It is critical for navigation elements to be on the first screen. Nielsen (1999b) has found that 90% of users at a website will not scroll navigation pages but will simply pick from the visible options.

### Website Design Cycle

Buchanan (1997) feels there are four major phases in the cycle of a website: (a) planning, (b) production, (c) implementation, and (d) operation. Each of these phases contains steps critical to a successful website. Many companies fail to invest adequately in the first two phases of the cycle in their rush to get a website up and running.

#### Planning

The planning phase includes setting objectives, audience analysis, and selecting content. According to Buchanan (1997), one or two key objectives for a website should be determined. For an educational website a reasonable key objective would be to efficiently deliver information to potential and current students. Williams and Tollett (1998) feel audience analysis is critical. Designers must ask the questions, “Who is the target audience?” and “What do I want them to get at this site?” If the audience is not carefully defined the site loses focus. Sharply defining
the audience also helps define content selection, the third part of planning. The content mix of a site refers to the types of information provided to visitors (Buchanan, 1997).

Content mix is just as important a consideration for an educational website as a commercial site. Appropriate content mix will keep visitors coming back to the site. Sherwin (1997) recommends that the content mix be (a) oriented to the target audience, (b) informative and useful, (c) simple, and (d) consistent.

Production

Production of a website includes conceptualization of the site, creation of the site, and the testing and revision of the site. During site conceptualization the key objective or function of the site is expanded, and it is during site conceptualization that the tone of the site is determined (Niederst, 1996). Decisions made at this stage of planning will also influence decisions regarding the layout of the site and the navigation scheme used on the website. There are several approaches to website layout, including sequential, hierarchical, grid, and star (Sherwin, 1997).

By far the most common layout is the hierarchical approach. Simply stated, a hierarchical layout is one in which all the web pages do not link to each other. Rather, sub-sites of similar information are created. The pages within the individual sub-sites link together, and home pages for the sub-sites act as gateways to different sections or sites of information (Nielsen, 1996).

Design Principles. Numerous principles guide the assembling of content into created webpages. The simplest list of design principles comes from Williams and Tollett (1998). Their four principles are (a) alignment, (b) proximity, (c) repetition, and (d) contrast. Alignment refers to how the text lines up with other text. This includes both vertical and horizontal alignment. Alignments on a page, i.e., left, right, or centered, should not be mixed. One style should be chosen and used. Proximity refers to the relationships that items develop whey they are close.
together. If items are close together they share some type of relationship. It is important that items that should have relationships are located proximate to each other. Likewise, items that have no relationship should be arranged so there is distance between them. Repetition is the key to tying different elements or parts together. Another term that describes this idea is consistency. Using the same colors, fonts, layout formats, headlines, and alignment all contribute to the sense of repetition. Contrast is what guides the viewer while reading a webpage and it is contrast that allows the visitor to skim through information. The use of different fonts, serif, san serif, or decorative, and the use of light color on a dark background or dark color on a light background help create contrast on a page.

**Fonts.** Williams and Tollett (1998) have several recommendations for font choices. Generally, a serif typeface should be used for extended text. Sans serif fonts though can be easier to read in shorter amounts of text, such as several paragraphs. Arial and Geneva are two recommended sans serif fonts. The size of the font should not be smaller than 10 point or larger than 14 point for online reading. A font size less than 10 point is unreadable, and larger than 14 point for text looks amateurish.

**Graphics.** Web graphics should be no larger that 25 or 30 KB and a webpage including graphics should total no more than 60 KB (Sherwin, 1997). According to the Internet Archive (cited in Sherwin, 1997) the typical image on the web is 15 KB. An alternative to large graphics on a page is the use of a thumbnail size image. If the visitor wants to view the larger image they can then click on the thumbnail and bring up larger view of the image. This is a very good choice for displaying photographs.

**Site Navigation.** Moving around is what the web is all about. Therefore it is critical that a structure be created that allows site visitors to move around easily. Developing navigation through a site is very similar to developing the pathways through a city park. Some park
planners will layout walkways and create barriers to prevent people from straying off the paths. Others believe in putting in the grass, shrubs, and trees then adding pathways where people naturally walk.

Navigation at a website is a blend of these two approaches. You cannot force people to adhere to a navigation scheme that does not seem natural and efficient, but you can use schemes and standards users are already used to. Nielsen (1999b) also recommends using standard link colors for text links. While Internet users see a variety of link colors, many still rely on the standard blue link representing an unvisited link and a magenta link representing a visited link.

Whatever type of navigation scheme is used, the links should be clear. If links are not clear the user may never find the material they are looking for. Use link descriptors that the user can easily identify and use them consistently through your site.

Depth of a site is another consideration with regard to navigation. Niederst (1996) recommends that navigation at each level of a site be consistent both in availability and appearance. It is also recommended that a website not be more than three or four levels deep. Ideally a visitor should be able to move from a page in one section to a page in another section within four mouse clicks (Niederst, 1996). At a very large site it might be helpful to include a site map or index.

Usability Testing. Once a website has been created it must be tested. The usefulness of a site (Nielsen, 1998b) is determined by two components: (a) utility, or does the site do anything that people care about, and (b) usability, or how effectively can a visitor use the site.

Usability itself is defined by five characteristics (Nielsen, 1995):

1. Ease of learning: A first-time visitor is able to efficiently accomplish tasks.
2. Efficiency of use: Site visitors are able to find information with a minimum of searching.
3. Memorability: Previous visitors to the site can easily recall the site structure.
4. Error frequency: Site visitors are able to navigate and find information with few or no errors. Users can easily return to a previous location if they end up somewhere that they did not want to be.

5. Subjective satisfaction: The visitor should find the site pleasing to use.

Usability testing should go beyond evaluators playing with the site interface. Nielsen (1998a) offers two very simple recommendations for user testing of websites: (a) get real users who are representative of your target audience and (b) have the testers perform real tasks at the site. Sherwin (1997) recommends using a small test audience of no more than five or six persons.

Implementation

This phase entails getting the designed content loaded on a server so it is accessible to the targeted audience. For commercial ventures this can be a critical process. In the case of many educational websites locating a server is not necessary since many schools and departments already have servers with content running. Therefore the implementation phase can simply be a matter of moving the content to a folder on the server.

Operation

The operation of a website includes the maintenance and update functions. Once a website is available for public access it must be maintained. This process is critical whether the website serves a commercial purpose or provides information, as in the case of an educational site. A schedule for checking links to outside sites must be created. The content on the pages must be updated. Stagnant websites that never change do not serve their audience and lose their importance. It must also be decided who will be responsible for any re-designs of the site as well.
The Project

The project centered on the design and creation of a website for the Division of Educational Technology in the Department of Curriculum and Instruction within the College of Education at the University of Northern Iowa.

Current Status of Ed Tech Information Available Online

The first step taken was an analysis of the information and links currently available online. This step was completed prior to any planning or design work.

UNI General Links

Visitors to the University of Northern Iowa website looking for information related to either the Educational Technology or Communications and Training Technology programs will obtain different information depending on the links chosen. Most visitors will begin the search for information through the main page shown in Figure 1.

Figure 1: UNI main webpage

On this page most visitors will click on the “Colleges and Departments” button or link which takes the visitor to the colleges and departments page seen in Figure 2.
At this point the visitor has two choices, clicking on the textual link for the College of Education or on the textual link for the Graduate College.

**Graduate College Links**

If the visitor is not aware that the College of Education offers both programs they would be more likely to click on the Graduate College link and be taken to the Graduate College homepage illustrated in Figure 3. The path through the College of Education will be discussed later in this section (following Figure 13).
For visitors seeking information on a specific program of study the next link that would be clicked is the Programs (Majors) link. The visitor is taken to a page that allows them to view programs alphabetically or by degree choice shown in Figure 4.

Figure 4: Graduate College programs page
Clicking on the textual link for a degree program brings the visitor to a page that allows them to explore various masters or doctoral degrees demonstrated in Figure 5. If the visitor instead clicks on the textual link for majors (see Figure 4), a webpage listing all the available majors in alphabetical order is provided as seen in Figure 6. From here the visitor can click on a textual link for their chosen field of study. For this project only the Master of Arts program page is included, illustrated by Figure 7, since both Educational Technology and Communications and Training Technology are Master of Arts programs. The links for these two programs will be examined separately.

Figure 5: Graduate College degree programs page
List of Majors

Please read the following:
Below is an alphabetical listing of the available UNI Graduate College majors along with their degrees. If you click on a major, you will be taken to a page with a short description of that major, phone numbers and addresses of the department that houses that major as well as phone numbers and addresses of the Graduate Coordinator of that major. From that page, you will also have an opportunity (through clickable links) to visit the UNI Catalog description of the major, visit the department world wide web home page (if available) as well as having the opportunity to E-mail the Graduate Coordinator for that specific major. You have access to quite a bit of information through these pages!

A
Art (MA)
Audiology (MA)

B
Biology (MA)
Biology (MS)
Business Administration (MBA)

Figure 6: Graduate College alphabetical list of programs

Master of Arts

The Master of Arts degree is offered in the following areas. Click on the program name below to get departmental address and phone information. Click on the program name within that listing to look at the catalog description for that program. Click on the department name to look at the department home page. Use your browser's BACK button to return to this page. Click on the Graduate Coordinator's name to e-mail the program's Graduate Coordinator for information.

List of Master of Arts Programs

- Art
- Audiology
- Biology
- Chemistry
- Combined B.A./M.A. Chemistry
- Communication Studies
- Communications and Training Technology
- Computer Science Education
- Educational Technology
- Mental Health Counseling
- Music
- Physical Education
- Physics Education
- Political Science
- Psychology
- School Library Media Studies
- Science
- Science Education
- Science Education for Elementary Schools (K-6)

Figure 7: Master of Arts programs of study page

Communications and Training Technology Links via the Graduate College

If the visitor wishes to explore the Communications and Training Technology program, clicking on the corresponding textual link scrolls the page to the anchor for the program seen in Figure 8.
Figure 8: Communications and Training Technology anchor on the Master of Arts program page

Clicking on the C & I department textual link brings up the redirect page demonstrated in Figure 9. The visitor is not automatically transported to the new page; rather they must click on one of the two links provided. The two links provided are not very descriptive. Further discussion regarding the C & I links follows on page 21.

Figure 9: Communications and Training Technology redirect page
Clicking on the textual link for Communications and Training Technology (as illustrated in Figure 8) the visitor is taken to a blank UNI catalog page for the program, as illustrated in Figure 10.

Figure 10: Communications and Training Technology catalog page
Educational Technology Links via the Graduate College

The textual link for Educational Technology (Figure 7) brings the visitor to the corresponding anchor on the same page, as shown in Figure 11.

![Figure 11: Educational Technology anchor on the Master of Arts program page](image)

The visitor is given two choices, clicking on the link for the program, or for the Department of Curriculum and Instruction. Depending on the link chosen, the visitor gets different information and has a vastly different experience.

If the link for the C & I department is clicked the visitor is taken to a general splash page for Educational Technology, as illustrated in Figure 12. From this page the visitor is given multiple choices of links for faculty information, admission requirements, information for both the undergraduate and graduate degrees, and course schedules. The information in this section is at best outdated, since the last update was March 1997. Several of the links are broken, including course schedules and student pages.
The Graduate and Undergraduate Program in Educational Technology is housed in the Department of Curriculum and Instruction, College of Education, University of Northern Iowa.

If the visitor clicks on the textual Educational Technology link (Figure 11) the UNI catalog page for the program is displayed, as shown in Figure 13.

Figure 12: Educational Technology home or splash page

Figure 13: Educational Technology catalog page
College of Education Links

If the visitor to the UNI Colleges and Department page (see Figure 2) clicks on the College of Education textual link the main page for COE appears on the screen, as shown in Figure 14.

![UNI College of Education homepage](image)

Figure 14: UNI College of Education homepage

Clicking on the Departments link in the left column brings up the College of Education Departments page as illustrated in Figure 15.
If the site visitor does not know which department Communications and Training Technology or Educational Technology master's are under they would more than likely click on the Teaching Majors and Minor link. This was not specifically tested. Rather, it is an untested hypothesis. Clicking on the Teaching Majors and Minor link opens the page shown in Figure 16. At this point the visitor may click on the desired link for undergraduate programs or graduate programs.
When the visitor clicks on the Undergraduate Teaching Majors and Minors link the screen as seen in Figure 17 appears.

Figure 16: COE Teaching Majors and Minors webpage

Undergraduate Educational Technology Minor links

When the visitor clicks on the Undergraduate Teaching Majors and Minors link the screen as seen in Figure 17 appears.

Figure 17: UNI Undergraduate teaching majors and minors catalog page
The links on this webpage are active and clicking on the textual link for the Educational Technology minor scrolls the page to the appropriate section as illustrated in Figure 18.

Figure 18: Educational Technology minor catalog webpage

Master of Arts Links via Teaching Majors and Minors page

If the visitor clicks on the textual link for Master of Arts degrees (see Figure 16) a UNI catalog page appears on the screen as shown in Figure 19.
None of the majors in this long list are linked, so the visitor must scroll the page in order to find the sections for Communications and Training Technology and Educational Technology illustrated respectively in Figures 20 and 21.
Department of Curriculum and Instruction links

If the site visitor clicks on the Curriculum and Instruction link on the COE departments page (see Figure 15) they are brought to the C & I home page. This page is illustrated by Figures 22 and 23.

Figure 22: C & I homepage screen 1

Welcome to the Department of Curriculum and Instruction in the College of Education at the University of Northern Iowa.

This Department works closely with undergraduate and graduate students to help them become the best teachers possible. We're proud of Northern Iowa's strong tradition of preparing teachers for our state and beyond.

Figure 23: C & I homepage screen 2
Clicking on the Programs link in the banner at the top of the page (Figure 22) will take the visitor to a page listing areas of study within C & I as illustrated in Figure 24. The links on this page take the visitor to the same pages as the individual links at the bottom of the C & I home page (see Figure 23).

![Image of Curriculum & Instruction page](http://edtech2.coe.ui.edu/programs.html)

**Figure 24: C & I areas of study page**

**Educational Technology via COE links**

Clicking on the textual link for Educational Technology on either the C & I home page (Figure 23) or the C & I areas of study page (Figure 24) takes the visitor to the page outlining the Division of Educational Technology as shown in Figure 25. This page is a combined page for both the undergraduate minor and master’s degree. The page is also general in nature, with no indication of the two master’s degrees offered, Educational Technology and Communications and Training Technology.
Several problems were found. First, when following the Graduate College links to get information on Communications and Training Technology, the visitor either gets a blank page or a redirect page. The blank page comes on the screen when the textual link for CTT is clicked (see Figure 8). If the textual link for C & I is clicked a redirect page comes up on the screen. The visitor is not automatically re-directed, but rather has to click on a link on the page to go to the Department of Curriculum and Instruction.

A prospective student clicking on the textual link for C & I (within the Graduate College links) when seeking information on the Educational Technology program (see Figure 11) is directed to a series of outdated pages. The last update on these pages was 1997. These pages should be replaced either with the site to be designed for Educational Technology, or provided with a redirect page to the Division of Curriculum and Instruction webpages.

On the C & I pages illustrated by Figures 23 and 24 a sentence should be added stating that these are Divisions within the Department of C & I and that some of these divisions offer
several different degree choices, such as the Division of Educational Technology and the Division of Reading and Language Arts. Specifically, adding “... offers 11 programs within the following Divisions” at the end of the text in Figure 24 could clear up confusion on the part of a site visitor. Indicating the specific number of programs would help indicate that some Divisions offer more than one program of study, since there are seven listed Divisions. Another option would be to list the multiple degree options under the appropriate Division, i.e., listing both Communications and Training Technology and Educational Technology under the Division of Educational Technology. Lastly, changing the drop down box under “Programs” in the header banner from “Areas of Study Within C & I” to “Divisions of Study Within C & I” would also help clear confusions. The phrase areas of study could easily indicate these are the programs of study and not Divisions within C & I.

Regarding Figure 23, the phrase “For more information” should be changed to again indicate that the listed programs are Divisions within C & I. The header for the links could read, “Division Programs of Study”. Another option would be to include a sentence immediately preceding the “For more information” header indicating there are seven Divisions within the Department of C & I, and that a total of 11 programs of study are available within these Divisions.
Site Planning

A meeting was held during September 1999 to discuss the project and conceptualize the website.

Primary Objective

The primary objective of the site is to serve as an online resource for both potential and existing students of the Division of Educational Technology.

Target Audience

The intended audience for the website will be: (a) undergraduate students seeking information on the educational technology minor, (b) graduate students seeking information on either of the Master of Art's degrees, (c) existing students in any of the programs, and (d) UNI faculty.

Site Content

Program information, course descriptions, office contact information, faculty information, and a page of course links will be included. This will be informational in nature. To give prospective students an idea regarding the frequency of course offerings, current and previous course schedules would also be made available online.

A total of 15 current undergraduate and graduate students were informally surveyed (face-to-face) to determine the need for offering a section containing Internet resources. All expressed a perceived need to at least offer students a place where they can start to explore some of the issues related to educational technology. A majority felt that it would be a benefit for students to have access to online resources since many entering the program are not teachers and a few entering the program have minimal technology skills. It was felt that by offering a list of online links, students would at least have a place to start when researching issues related to educational technology.
Site Production

Content was gathered from a variety of sources, including the UNI catalog, UNI class schedules, existing websites, and personal resources.

Site Conceptualization

Three quantitative and three qualitative goals were established to guide the creation of the site. The quantitative goals are: (a) the download time via a 28.8 modem would be under 5 seconds for any page, (b) visitors on one page of the site would be no more than three clicks from any other page at the site, and (c) the site would support most browsers installed on existing computers. The qualitative goals established are: (a) the site would be reliable having no broken links, (b) the information provided would be useful and substantive, and (c) the site would have a consistent look and feel.

Site Creation

The website was created using Claris HomePage 3.0. Graphics were created using Microsoft PhotoDraw 2000. The pages were created with the following design ideas governing the process: (a) generally accepted and used design conventions were used, such as using the default blue to indicate links, (b) using meaningful headers and highlighting key words, (c) making the pages scannable by chunking for ease of online reading, (d) reducing the word count, (e) keeping file names short and meaningful, (f) keeping graphics small, and (g) keeping page size small.

The graphics created for this site average 7 KB, except for the initial Ed Tech header that is 12 KB. The page size is also small; most pages are less than 15 KB, with several between 30 and 40 KB. All the pages created for the site were also compressed using a software title called HTML Shrinker that removes unnecessary tags created by HTML editors. This shaved 15 – 20% off the size of each page.
It was important to ensure navigation was thoughtful and useful. Several levels of navigation were created. The primary level of navigation would be available on all pages, with the links in a vertical column on the left side of the page. In several sections of the site secondary navigation levels were created for navigation at this level. The look would be different; the navigation links would be horizontal at the top, and if necessary, at the bottom of the webpages.

Usability Testing

A convenience sample of six randomly selected users of the Technology Methods Lab was used for the initial testing of this site. All the evaluators were undergraduate students. The website was placed on a server so it could be tested online and not statically from a file. The site evaluators were asked to complete four tasks: (a) find faculty information, (b) find the page of course links, (c) locate the information page for the MA in Educational Technology, and (d) find the page for computer resources. Evaluators were asked to look for the Ed Tech MA because it was felt if that program could be located, so too Communications and Training Technology.

After completing these four tasks, the evaluators were asked to surf the site and visit all the pages. They were also asked to complete an evaluation form using scaled semantic descriptors. A seven-point scale was used, thus allowing evaluators a middle ground. Two areas of usability were evaluated: (a) contents and (b) structure. Each of these sections contained six areas of evaluation. See Appendix A for a copy of the form. Evaluators were also encouraged to write any additional comments they had about the website design or contents on the back of their evaluation form.

Of the four tasks that were completed, only one required exploring to find the information. Evaluators were able to find faculty information, program information for the MA in Educational Technology, and the computer resources page without difficulty. Trying to locate
the page for course links required clicking on several links by three testers. All three found the correct location on their second attempt. Appendix B contains printouts of all the pages of the tested site.

**Analysis of the test scoring**

The usability testing forms were tabulated and scores for each component were determined. The lower the score, the more acceptable the component was. Table 1 provides a summary of the test scoring.

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<tr>
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<td>3</td>
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<td></td>
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<td>1.5</td>
</tr>
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<td>Meaningful/meaningless</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>1.8</td>
</tr>
<tr>
<td>Relevant/irrelevant</td>
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<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>1.7</td>
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<td>6</td>
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<td></td>
<td></td>
<td></td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Useful/useless</td>
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<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<td>13</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
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<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36</td>
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<td>3</td>
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<td></td>
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<td></td>
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<td>3</td>
<td>1</td>
<td></td>
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<td></td>
<td></td>
<td>28</td>
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<td></td>
<td>9</td>
<td>1.5</td>
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<td>Readable/unreadable</td>
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<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>1.8</td>
</tr>
<tr>
<td>Varied/monotonous</td>
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<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td>5.8</td>
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</tbody>
</table>

Table 1: Summary of Usability Testing, First Design
Most categories evaluated scored solidly with 1’s and 2’s. Three evaluation categories out of twelve did not score well: (a) active/passive, (b) interesting/boring, and (c) varied/monotonous. These three components are all a part of the structure or design of the site. Since the site is informational in nature the site will have a tendency to be passive. All found the site to be monotonous, saying “each page looks the same”, “only a couple of colors were used”, “it doesn’t DO anything”, “it’s not animated”, “it’s not fancy”, and “it’s as boring as watching concrete set.”

Three of the six evaluators also made negative comments on the use of frames at the site. All the test evaluators liked having site navigation available all the time.

Site Revision

Based on the negative comments regarding the use of frames, the pages were re-designed. The frame scheme was replaced with a table. The left column was formatted to span all the rows and a background color assigned which matched the blue used in the main banners. The first column had textual links placed in it for navigation purposes. Since these pages will link from the C & I pages yellow (used on those pages) was used as the navigation header color. This helped add continuity. The second column was also formatted to span all the rows and a background color assigned which matched the burgundy color used in the main banners. This contributed to a sense of contrast and unity on the page.

The navigation links grouping was refined. Five general categories were created: (a) Programs, (b) Courses, (c) Department, (d) Student Links, and (e) University. This contrasts with the seven previously used: (a) Areas of Study, (b) Course Descriptions, (c) Course Schedules, (d) Faculty, (e) Office and Activities, and (f) Student Resources. By regrouping the navigation links the column became more visually interesting and balanced.
Removing the frames will also help when visitors at the site go to outside links. With the frame set design, a new window opened when a link for an outside site was clicked. Opening a new window prevents the use of the back button to return to the UNI Ed Tech site. With the new design the site visitor can return to the UNI pages from an outside link by clicking the back button on their browser interface.

Usability Testing of the Revised Site

The new design was tested using a convenience sample of five randomly selected users of the Technology Methods Lab. The evaluators were not the same as those used for the initial testing. The same test criteria and evaluation form was used. Table 2 contains a summary of the scores from this testing cycle.

<table>
<thead>
<tr>
<th>Semantic Descriptors</th>
<th>#1's</th>
<th>#2's</th>
<th>#3's</th>
<th>#4's</th>
<th>#5's</th>
<th>#6's</th>
<th>#7's</th>
<th>Total Score</th>
<th>Avg. Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contents</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Current/Outdated</td>
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<td></td>
<td></td>
<td></td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Informative/Uninformative</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>1.8</td>
</tr>
<tr>
<td>Meaningful/meaningless</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>1.8</td>
</tr>
<tr>
<td>Relevant/irrelevant</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>7</td>
<td>1.4</td>
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<tr>
<td>Reliable/unreliable</td>
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<td></td>
<td></td>
<td></td>
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<td>1</td>
</tr>
<tr>
<td>Useful/useless</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active/passive</td>
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<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29</td>
<td>5.8</td>
</tr>
<tr>
<td>Clear/confusing</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
<td>2.2</td>
</tr>
<tr>
<td>Interesting/boring</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>22</td>
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<tr>
<td>Organized/chaotic</td>
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<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td>Readable/unreadable</td>
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<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Table 2: Summary of Usability Testing, Revised Site

Evaluators were able to complete the four tasks without difficulty or error. The site scored comparably in all categories as the first test. Similar comments about the site lacking animation or doing anything were made.

Browser Compatibility and Download Speed

The site was tested using a variety of computer and software configurations. Table 3 summarizes the various operating systems and browsers tested compared to Internet access methods. No errors were encountered due to browser incompatibility with any of these tests. The pages appeared as designed.

<table>
<thead>
<tr>
<th>Apple Explorer</th>
<th>Apple Navigator</th>
<th>Windows Explorer</th>
<th>Windows Navigator</th>
<th>WebTV</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3.5</td>
<td>4.5</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>28.8 modem</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>56K modem</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>T 1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Cable</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Browser and Speed Testing: O/S and Version Configurations

Site Implementation

The website is ready for uploading onto the server. Space is available on the server. The website is saved on both floppy disk and computer hard drive.

Site Operation

A schedule of site maintenance will have to be followed. The university will be publishing a new catalog for students, and changes in the catalog related to the Educational Technology program will have to be made to the respective pages. The links in the resources section will have to be tested at least monthly to ensure they are still valid. Most of the sites
included are long established entities and it is anticipated that their websites will remain online into the foreseeable future. Students should also be encouraged to submit helpful URL’s for inclusion in the resources section. Students in various educational technology courses should also be referred to the site so they can utilize the information provided.

It will also be necessary to unify the information presented to students from the main UNI page. The analysis of information presented to prospective students showed dead links, inaccurate information, and outdated pages. The majority of the bad links are within the Graduate College pages. These need to be updated or accurate redirect pages should be provided.

Conclusion

From an audience perspective, a website visit is not unlike a visit to a store, sporting event, museum, theater, or any other outing. The audience will perceive the trip worthwhile if (a) they get what they came for, (b) it was easy to use, (c) there were no problems at the site, and (d) they were even a little surprised by an added benefit.

Achieving this requires that (a) the site contain the required information (site content), (b) the information is presented in a comfortable manner to the audience (site graphics and layout), and (c) the information is easily accessible (site navigation).

The website designed for the Division of Educational Technology in the Department of Curriculum and Instruction within the College of Education at the University of Northern Iowa attempts to balance and meet these divergent challenges and principles of design.
References


Appendix A

**Website Usability Testing Form**

Please indicate your answer on the scale by circling the number that best describes how you feel. Thank you for your time and assistance in evaluating this website.

<table>
<thead>
<tr>
<th>Contents</th>
<th>Current</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<td></td>
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<td>Uninformative</td>
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<td>2</td>
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<td>6</td>
<td>7</td>
</tr>
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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
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<td>Irrelevant</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
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<td>2</td>
<td>3</td>
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</tr>
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<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Interesting</td>
<td>Boring</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Organized</td>
<td>Chaotic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Readable</td>
<td>Unreadable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tr>
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<td>Unstructured</td>
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</tr>
<tr>
<td>1 2 3 4 5 6 7</td>
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<table>
<thead>
<tr>
<th>Varied</th>
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</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

On the following pages are printouts of the first version of the website.
The University of Northern Iowa offers training at both the baccalaureate and graduate levels in the field of Educational Technology. The purpose of the program is to prepare educators with the competencies required to improve the quality and effectiveness of instructional programs at all levels of education and/or business and industry. UNI's program has two general goals:

1. To help students acquire the basic knowledge and skills necessary for the systematic design, development and evaluation of instruction and training.
2. To help students acquire advanced knowledge and skills to investigate and extend our current understanding of the acquisition of human competence through instruction and training.

Last Update: December 7, 1999
Educational Technology Minor

Department of Curriculum and Instruction
College of Education
University of Northern Iowa

Students working on a bachelor's degree in education may pursue this minor. Schools are becoming more technology infused. This coursework will prepare teachers to be users of and leaders for technology in the classroom. A total of 18 credit hours are required for this minor.

Required:

240:020 Educational Media 2
OR
240:031 Educational Media & Classroom Computing 3
240:030 Classroom Computer Applications 3
240:131g Technology in Education 3
240:139g Media Planning and Production 3

Total: 11 or 12 hours

Both 240:020 and 240:031 are prerequisite courses. They are to be completed before other courses are taken. 240:020 or 240:031 can be taken concurrently with other courses listed below.

Electives:

A total of either 6 or 7 hours of electives are required from the following courses:

240:140g Databases in Education 3
240:153g Telecommunications in Education 3
240:160 Media Projects 1 - 4 hours
240:170g Principles of Publication Design 3

There are other technology related courses offered in the College of Education, as well as other Colleges on campus. Students may elect to include these courses with approval of the program's minor advisor.

Last Update: September 24, 1999
Graduate Studies

The University of Northern Iowa offers two different Master of Arts degrees that emphasize educational technology: Communications Training and Technology and Educational Technology. The links below will allow you to explore these two degree programs, and access information regarding program admission.

MA Communications Training and Technology

MA Educational Technology

Admissions Information

Last Update: November 25, 1999
Master of Arts - Communications and Training Technology
Department of Curriculum and Instruction
College of Education
University of Northern Iowa

This major is designed for persons planning to work in non-school settings. Majors in this area will complete a basic core of course work applicable to all preparing for work as media specialists, trainers in industry and business, or communications designers. Specific areas of interest will determine the supporting electives. Licensure as a teacher is not required for admission to the program. The bachelor's degree may be in any field.

The program is available in both the thesis and non-thesis option and requires a minimum of 38 semester hours. All students completing the thesis option are required to pass an oral examination prepared and administered by the thesis committee. The examination will be comprehensive in nature and will normally accompany the thesis defense. Students completing the non-thesis option are required to pass a written comprehensive examination at the end of the program of study.

Required: (16 or 20 hrs.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:139g</td>
<td>Media Planning &amp; Production</td>
<td>3</td>
</tr>
<tr>
<td>240:230</td>
<td>Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>240:235</td>
<td>Managing Educational Technology Programs</td>
<td>3</td>
</tr>
<tr>
<td>240:240</td>
<td>Instructional Development</td>
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<td>240:289</td>
<td>Seminar</td>
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<td>240:299</td>
<td>Research</td>
<td>2 or 6</td>
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Electives:

A minimum of 12 hours of electives are required from the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
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<td>Graphics</td>
<td>3</td>
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<tr>
<td>240:147g</td>
<td>Photography</td>
<td>3</td>
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<tr>
<td>240:150g</td>
<td>Educational Television Production</td>
<td>3</td>
</tr>
<tr>
<td>240:153g</td>
<td>Telecommunications in Education</td>
<td>3</td>
</tr>
<tr>
<td>240:170g</td>
<td>Principles of Publication Design</td>
<td>3</td>
</tr>
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<td>240:205</td>
<td>Instructional Computing Design</td>
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<td>240:210</td>
<td>Distance Education</td>
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</tr>
<tr>
<td>240:253</td>
<td>Interactive Video Design</td>
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</tr>
<tr>
<td>240:260</td>
<td>Advanced Media Projects</td>
<td>1-4</td>
</tr>
</tbody>
</table>

Section 1: Audio
Section 2: Computer Applications
Section 3: Film
Section 4: Graphics
Section 5: Multi-Media Communications
Communications Training and Technology

Section 6: Photography  
Section 7: Slide Production  
Section 8: Television  
May be repeated for a maximum of 4 hours in any section. Some sections have prerequisite requirements.

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>240:286</td>
<td>Studies in Media</td>
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<tr>
<td>240:286</td>
<td>Studies in Media</td>
<td>1-3</td>
</tr>
<tr>
<td>240:297</td>
<td>Practicum</td>
<td>2-3</td>
</tr>
</tbody>
</table>

Other electives as advised 6-10 hours

Graduate Studies Home | Communications Training & Technology | Educational Technology | Graduate Handbook

Last Update: December 7, 1999
Master of Arts - Educational Technology
Department of Curriculum and Instruction
College of Education
University of Northern Iowa

This major is designed to prepare educators for a variety of professional positions in educational settings, including: school building level, school district level, vocational-technical school, community college, and university. Licensure as a teacher is not required for admission to the program. The bachelor's degree may be in any field.

The program is available in both the thesis and non-thesis option and requires a minimum of 38 semester hours. All students completing the thesis option are required to pass an oral examination prepared and administered by the thesis committee. The examination will be comprehensive in nature and will normally accompany the thesis defense. Students completing the non-thesis option are required to pass a written comprehensive examination at the end of the program of study.

Required: (16 or 20 hours)

- 240:139g Media Planning & Production 3
- 240:230 Communication Theory 3
- 240:235 Managing Educational Technology Programs 3
- 240:240 Instructional Development 3
- 240:289 Seminar 2
- 240:299 Research 2 or 6

Electives:

Computer Technology (6 hrs. minimum)

- 240:140g Databases in Education 3
- 240:170g Principles of Publication Design 3
- 240:205 Instructional Computing Design 3
- 240:253 Interactive Video Design 3
- 270:289 Seminar in Educational Leadership 1
- 810:251 Computers, Computer Science, and Education 3

Technology Applications (6 hrs. minimum)

- 240:138g Graphics 3
- 240:147g Photography 3
- 240:150g Educational Television Production 3
- 240:153g Telecommunications in Education 3
- 240:232 Selection and Integration of Materials 3
- 240:260 Advanced Media Projects 1 - 4 hrs.
  Section 1: Audio
  Section 2: Computer Applications
  Section 3: Film
  Section 4: Graphics
  Section 5: Multi-Media Communications
  Section 6: Photography
  Section 7: Slide Production
Section 8: Television
May be repeated for a maximum of 4 hours in any section.
Some sections have prerequisite requirements.

Related Topics (5 hours minimum)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>200:214</td>
<td>Foundations of Instructional Psychology¹</td>
<td>3</td>
</tr>
<tr>
<td>240:210</td>
<td>Distance Education</td>
<td>3</td>
</tr>
<tr>
<td>240:230</td>
<td>Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>240:235</td>
<td>Managing Educational Technology Programs</td>
<td>3</td>
</tr>
<tr>
<td>240:285</td>
<td>Distance Education</td>
<td>3</td>
</tr>
<tr>
<td>240:285</td>
<td>Readings in Media</td>
<td>1 - 3 hrs.</td>
</tr>
<tr>
<td>240:286</td>
<td>Studies in Media</td>
<td>1 - 4 hrs.</td>
</tr>
<tr>
<td>240:297</td>
<td>Practicum</td>
<td>2 - 3 hrs.</td>
</tr>
<tr>
<td>250:205</td>
<td>Educational Research¹,²</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>¹ - recommended for K - 12 educators</td>
<td></td>
</tr>
<tr>
<td></td>
<td>² - recommended for students electing thesis option</td>
<td></td>
</tr>
</tbody>
</table>

Other electives as advised 4 - 10 hrs.
## Educational Technology Course Descriptions

### Department of Curriculum and Instruction
### College of Education
### University of Northern Iowa

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name and Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:020</td>
<td>Educational Media</td>
<td>2 hrs.</td>
</tr>
<tr>
<td></td>
<td>Selection and use of various educational technologies within a systematic educational planning framework. Includes the operation of educational media hardware and software and the design and production of media for educational use. Lab as arranged.</td>
<td></td>
</tr>
<tr>
<td>240:030</td>
<td>Classroom Computer Applications</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Use of microcomputer technology in the classroom. Emphasis on evaluating instructional software and integrating computer technology with common teaching/learning practices. Prerequisite: 240:020 or 240:031.</td>
<td></td>
</tr>
<tr>
<td>240:131g</td>
<td>Technology in Education</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Selection, utilization, implementation, and design of multimedia in the late preparation and design of messages. Prerequisite: junior standing.</td>
<td></td>
</tr>
<tr>
<td>240:138g</td>
<td>Graphics Production</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Assessment of the generation, manipulation, integration, and final formats of type, artwork, and photography applied to printed and projected media; creative applications of current technology in the development of visuals. Lab as arranged. Prerequisites: junior standing; consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>240:139g</td>
<td>Media Planning and Production</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Planning steps essential for media production; processes, equipment, techniques, and services needed for the production, duplication, and release of media. Lab as arranged. Prerequisites: 240:020 or 240:031; junior standing; consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>240:140g</td>
<td>Using Databases in Education</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Designed to introduce students to using databases and informational retrieval systems in an educational setting. Emphasis on the students learning the basic concept and skills of databasing and experiencing the ways that databases can be used in a teaching method to emphasize problem-solving. Exploration beyond personal computer databases to using and integrating Internet resources into classroom curriculum. Prerequisites: 240:020 or 240:031; junior standing, consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>240:147g</td>
<td>Photography</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Basic principles, skills, and techniques of digital photography and their application to communication. Lab as arranged. Prerequisites: junior standing; consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>240:150g</td>
<td>Educational Television Production</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Theoretical aspects and techniques of educational television production applied in the classroom and studio. Practical experiences in planning and producing educational television programs. Lab as arranged. Prerequisites: 240:020 or 240:031; junior standing;</td>
<td></td>
</tr>
</tbody>
</table>
Telecommunications in Education 3 hrs.
Study of the technologies of telecommunications applied to education. Administrative and instructional uses, teaching strategies, critical issues, case studies, and research. Prerequisite: consent of instructor.

Media Projects 1-4 hrs.
Specialized study in independent media projects. Credit to be determined at time of registration; project, credit, and evaluation criteria require advance consent of instructor.

Sec. 1. Audio
Sec. 2. Computer Applications. Prerequisite: 240:020 or 240:031.
Sec. 3. Film
Sec. 4. Graphics. Prerequisite: 240:138
Sec. 5. Multimedia Communications. Prerequisite: 240:131
Sec. 6. Photography. Prerequisite: 240:147
Sec. 7. Slide Production
Sec. 8. Television. Prerequisite: 240:150

May be repeated for credit to a maximum of 4 hours for any section.

Principles of Publication Design 3 hrs.
Focus on evaluation and design of electronically produced materials. Hands-on experiences with desktop publishing are included. Prerequisite: junior standing.

Studies in Media 1-4 hrs.
Readings in Media 1-3 hrs.

Instructional Computing Design 3 hrs.
Evaluation and design of computer-based instructional materials. Hands-on experiences with the design of computer based lessons. Prerequisite: 240:240.

Distance Education 3 hrs.
Introduction to distance education. Focus on historical perspectives, theories, research, and operational issues.

Communication Theory in Media 3 hrs.
Contemporary theory of human and mass communication, learning, perception, and propaganda as they apply to message design utilizing communication media.

Selection and Integration of Materials 3 hrs.
Evaluation of the instructional setting along with the procedures for selection and integration of materials.

Managing Educational Technology Programs 3 hrs.
Advanced course to prepare a media graduate to administer any one or all of the specific areas of media.

Instructional Development 3 hrs.
Analysis and synthesis for structuring learning environments including learner, tasks, environmental, and instructional strategy analysis.

Interactive Video Design 3 hrs.
Focus on evaluation and design of interactive videodisk instructional materials. Hands-on experiences with the development of this type of instruction are included. Prerequisites: 240:240; consent of instructor.

Advanced Media Projects 1-4 hrs.
Advanced study in independent media projects. Credit to be determined at time of registration; project, credit, and evaluation criteria require advance consent of instructor.
registration; project, credit, and evaluation criteria require advance consent of instructor.

Sec. 1. Audio
Sec. 2. Computer Applications. Prerequisite: 240:205.
Sec. 3. Film.
Sec. 5. Multimedia Communications. Prerequisite: 240:131.
Sec. 6. Photography. Prerequisite: 240:147.
Sec. 7. Slide Production.
Sec. 8. Television. Prerequisite: 240:150.

May be repeated for maximum of 4 hours for any section.

240:285  Readings in Media  1-3 hrs.

240:286  Studies in Media  1-4 hrs.

240:289  Seminar  2 hrs.

240:297  Practicum  2-3 hrs.

240:299  Research

240:340  Designing Instructional Systems  3 hrs.

Application of current research and theory to the instructional design process. Students are guided through the systematic process of translating principles of learning and instruction, employing several instructional design models.

*Please note: 100-level courses that have the "g" designation are open to both undergraduate and graduate students. 100-level courses that do not have the "g" designation may only be taken for undergraduate credit.

Top of page
Ed Tech Course Schedules

Course Schedules:

Fall 1999
Spring 2000
Summer 2000
Fall 2000

Last Updated: October 10, 1999
# Fall 1999 Course Schedule

100-level courses that contain the (g) are open to graduate students.

Classes begin Monday, August 23, 1999

<table>
<thead>
<tr>
<th>Course #</th>
<th>Sec</th>
<th>Name</th>
<th>Hours</th>
<th>Instructor</th>
<th>Class Time/Day</th>
<th>Bldg/Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:020</td>
<td>01</td>
<td>Educational Media</td>
<td>2</td>
<td>Stuve</td>
<td>10:00-11:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>01</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>Smaldino</td>
<td>8:00-10:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>02</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>Zeitz</td>
<td>12:00-2:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>03</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>Zeitz</td>
<td>2:00-4:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>04</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>L. Hansen</td>
<td>5:00-7:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>05</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>L. Hansen</td>
<td>7:00-9:50 + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:131g</td>
<td>01</td>
<td>Technology in Education</td>
<td>3</td>
<td>Stuve</td>
<td>6:00-8:50 T</td>
<td>SEC 403</td>
</tr>
<tr>
<td>240:139g</td>
<td>01</td>
<td>Educational Television Production</td>
<td>3</td>
<td>Marchesani</td>
<td>200-3:15 T Th</td>
<td>SEC 403</td>
</tr>
<tr>
<td>240:140g</td>
<td>01</td>
<td>Databases in Education</td>
<td>3</td>
<td>Zeitz</td>
<td>4:00-6:50 Th</td>
<td>SEC 206</td>
</tr>
<tr>
<td>240:153g</td>
<td>01</td>
<td>Telecommunications in Education</td>
<td>3</td>
<td>Stuve</td>
<td>6:00-8:50 M</td>
<td>SEC 127</td>
</tr>
<tr>
<td>240:160</td>
<td>02</td>
<td>Media Projects</td>
<td>1-4</td>
<td>Stuve</td>
<td>arranged</td>
<td>SEC 405</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Computer Applications</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Course Code</td>
<td>Section</td>
<td>Title</td>
<td>Instructor</td>
<td>Credit Hours</td>
<td>Time</td>
<td>Day(s)</td>
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<tr>
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<tr>
<td>240:170g</td>
<td>01</td>
<td>Principles of Publication Design</td>
<td>L. Hansen</td>
<td>3</td>
<td>Mon-Wed 4:00-6:50</td>
<td>F</td>
</tr>
<tr>
<td>240:186</td>
<td>04</td>
<td>Studies in Media</td>
<td></td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>240:189</td>
<td>04</td>
<td>Readings in Media</td>
<td></td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>240:235</td>
<td>01</td>
<td>Managing Educational Technology Programs</td>
<td>McDonald</td>
<td>3</td>
<td>Mon-Wed 4:30-7:20</td>
<td>W</td>
</tr>
<tr>
<td>240:240</td>
<td>01</td>
<td>Instructional Development</td>
<td>Smaldino</td>
<td>3</td>
<td></td>
<td>7:00-9:50</td>
</tr>
<tr>
<td>240:260</td>
<td>01</td>
<td>Advanced Media Projects</td>
<td></td>
<td>1-4</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>A total of 4 hours in each section may be earned.</td>
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<tr>
<td></td>
<td></td>
<td>Prerequisite: written consent of instructor.</td>
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<tr>
<td>240:285</td>
<td>04</td>
<td>Readings in Media</td>
<td></td>
<td>1-3</td>
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<tr>
<td>240:286</td>
<td>01</td>
<td>Studies in Media</td>
<td></td>
<td>1-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>240:289</td>
<td>02</td>
<td>Seminar: Technology in Education</td>
<td>Stuve</td>
<td>1</td>
<td></td>
<td>5:00 T</td>
</tr>
<tr>
<td>240:297</td>
<td>01</td>
<td>Practicum</td>
<td>Smaldino</td>
<td>2-3</td>
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</tr>
<tr>
<td>240:299</td>
<td>01</td>
<td>Research</td>
<td>Smaldino</td>
<td>2-6</td>
<td></td>
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</table>

Last Updated: September 15, 1999
### Spring 2000 Course Schedule

100-level courses that contain the (g) are open to graduate students.

Classes begin Monday, January 10, 2000

<table>
<thead>
<tr>
<th>Course #</th>
<th>Sec</th>
<th>Name</th>
<th>Hours</th>
<th>Instructor</th>
<th>Class Time/Day</th>
<th>Bldg/Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:020</td>
<td>01</td>
<td>Educational Media</td>
<td>2</td>
<td>L. Hansen</td>
<td>10:00-11:50 W</td>
<td>SEC 252</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+ arr lab</td>
<td></td>
</tr>
<tr>
<td>240:030</td>
<td>01</td>
<td>Classroom Computer Applications</td>
<td>3</td>
<td>L. Zeitz</td>
<td>4:00-5:25 T</td>
<td>SEC 127</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Th + arr lab</td>
<td></td>
</tr>
<tr>
<td>240:031</td>
<td>01</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>L. Hansen</td>
<td>8:00-10:50 W</td>
<td>SEC 252</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+ arr lab</td>
<td></td>
</tr>
<tr>
<td>240:031</td>
<td>02</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>J. Hansen</td>
<td>1200-2:50 W</td>
<td>SEC 252</td>
</tr>
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<td></td>
<td></td>
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<td>+ arr lab</td>
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</tr>
<tr>
<td>240:031</td>
<td>03</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>J. Hansen</td>
<td>2:00-4:50 W</td>
<td>SEC 252</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>+ arr lab</td>
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</tr>
<tr>
<td>240:031</td>
<td>04</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>J. Hansen</td>
<td>5:00-7:50 W</td>
<td>SEC 252</td>
</tr>
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<td>+ arr lab</td>
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</tr>
<tr>
<td>240:031</td>
<td>05</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>J. Hansen</td>
<td>7:00-9:50</td>
<td>SEC 252</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>+ arr lab</td>
<td></td>
</tr>
<tr>
<td>240:131g</td>
<td>01</td>
<td>Technology in Education</td>
<td>3</td>
<td>L. Hansen</td>
<td>6:00-8:50 M</td>
<td>SEC 403</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>240:138g</td>
<td>01</td>
<td>Graphics Production</td>
<td>3</td>
<td>Klink-Zeitz</td>
<td>4:30-7:20 W</td>
<td>SEC 403</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Th</td>
<td></td>
</tr>
<tr>
<td>240:139g</td>
<td>01</td>
<td>Media Planning &amp; Production</td>
<td>3</td>
<td>Marchesani</td>
<td>200-3:15 T</td>
<td>SEC 403</td>
</tr>
<tr>
<td>240:150g</td>
<td>01</td>
<td>Educational Television Production</td>
<td>3</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Course Code</td>
<td>Type</td>
<td>Credits</td>
<td>Instructor</td>
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<td>Location</td>
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<td></td>
</tr>
<tr>
<td>240:160</td>
<td>Media Projects</td>
<td>1-4</td>
<td>Zeitz</td>
<td>6:00-8:50 Th</td>
<td>SEC 012</td>
<td></td>
</tr>
<tr>
<td>240:186</td>
<td>Studies in Media</td>
<td>1-4</td>
<td>L. Hansen</td>
<td>6:00-8:50 T</td>
<td>SEC 012</td>
<td></td>
</tr>
<tr>
<td>240:205</td>
<td>Instructional Computing Design</td>
<td>3</td>
<td>Zeitz</td>
<td>6:00-8:50 Th</td>
<td>SEC 206</td>
<td></td>
</tr>
<tr>
<td>240:210</td>
<td>Distance Education</td>
<td>3</td>
<td>Smaldino</td>
<td>6:00-8:50 T</td>
<td>SEC 403</td>
<td></td>
</tr>
<tr>
<td>240:230</td>
<td>Communication Theory in Media</td>
<td>3</td>
<td>Smaldino</td>
<td>6:00-9:00 W</td>
<td>SEC 405</td>
<td></td>
</tr>
<tr>
<td>240:235</td>
<td>Managing Educational Technology Programs</td>
<td>3</td>
<td>McDonald</td>
<td>4:30-7:20 W</td>
<td>PLS 252</td>
<td></td>
</tr>
<tr>
<td>240:260</td>
<td>Advanced Media Projects</td>
<td>1-4</td>
<td>Smaldino</td>
<td>6:00-8:50 T</td>
<td>SEC 405</td>
<td></td>
</tr>
<tr>
<td>240:285</td>
<td>Readings in Media</td>
<td>1-3</td>
<td>Zeitz</td>
<td>6:00-9:00 W</td>
<td>SEC 405</td>
<td></td>
</tr>
<tr>
<td>240:286</td>
<td>Studies in Media</td>
<td>1-4</td>
<td>L. Hansen</td>
<td>6:00-9:00 W</td>
<td>SEC 405</td>
<td></td>
</tr>
<tr>
<td>240:289</td>
<td>Seminar: Technology in Education</td>
<td>1</td>
<td>L. Hansen</td>
<td>5:00 M</td>
<td>SEC 403</td>
<td></td>
</tr>
<tr>
<td>240:297</td>
<td>Practicum</td>
<td>2-3</td>
<td>Smaldino</td>
<td>6:00-9:00 W</td>
<td>SEC 614</td>
<td></td>
</tr>
<tr>
<td>240:299</td>
<td>Research</td>
<td>2-6</td>
<td>Smaldino</td>
<td>6:00-9:00 W</td>
<td>SEC 614</td>
<td></td>
</tr>
</tbody>
</table>

Prerequisites: 240:020 or 240:031; junior standing; written consent of instructor.
Last Updated: November 24, 1999
Summer 2000 Course Schedule

100-level courses that contain the (g) are open to graduate students.
Classes begin Monday, June 5, 2000

Last Update: October 10, 1999
Office and Activities:

University of Northern Iowa
Schindler Education Center
Room 614
Cedar Falls, IA 50614
Dr. Sharon Smaldino, Coordinator
phone: 319.273.3250

For program information please contact Sharon.Smaldino@uni.edu

Faculty offices are located in room 405 of the Schindler Education Center.

Last Updated: October 10, 1999
Ed Tech Resources at UNI

Student Resources:

Course Links
Current Student List
Internet Links

Last Updated: December 7, 1999
Course Links

Click a hyperlink below to access the homepage for the course.

240:031 Educational Media
In order to assist students in the program, this page of Internet resources is provided as a jumping off point. Students are encouraged to submit URL's for websites they have found helpful. Inclusion of hyperlinks does not constitute endorsement of any site by UNI.

Computers
- Cross-Platform General Information
- Macintosh/Apple Information
- Windows/PC Information
- Updates/Software

Desktop Publishing and Webpage Design

Education
- Distance
- General Information
- K-12

Educational Technology Online

Links for Fun

Miscellaneous Links

Online Communication & Storage

Reference Materials

Search Engines

Last Updated: December 7, 1999
Computer Resources on the Internet

Four general categories of computer resources available have been created. The resources provided are not all that is available, but should provide a good foundation of information.

- Cross-Platform General Information
- Macintosh/Apple Information
- Windows/PC Information
- Updates/Software

Last Updated: December 10, 1999
These sites have information which is cross-platform in nature.

Hardware

- CD Media World http://www.esware.net/empire/hardware/cdrom/cd_main.htm
  Good information resource related to CD-ROM's and DVD's.
- USB Workshop http://www.usbworkshop.com/
  Online resource site for all USB components.
- USB.org http://www.usb.org/
  This site is sponsored by USB Implementers Forum, the creators of USB technology.

Modem's

- 56k=Unreliable http://808hi.com/56k/index.htm
  Good site devoted to 56k and V.90 modem issues.

MP3 Resources

- MP3 http://www.mp3.com/
  The best site for MP3 information and downloads.

Online Reference Materials

  Search for definitions for over 1,400 different file extensions. Search by entering the 3 letter extension name.
- Indiana University Knowledge Base http://kb.indiana.edu/
  This site has a database of over 6,000 topics related to computing. Search using keywords.

Virus Information

- Computer Virus Myths Homepage http://kumite.com/myths/home.htm
  Before forwarding that latest warning you've received about a virus, check here to see if the warning is legitimate or not.
  Search for information on the over 47,000 different known computer viruses.
Apple Resources in the Internet

A plethora of sites devoted to Apple Computers exist on the internet. The hyperlinks below are regarded by many to be the more informative sites available. The site listed in the section Online Resources cover a variety of areas and issues.

Hardware

- Focus on Mac Hardware http://machardware.about.com/compute/machardware/
  This extensive and informative site is an About.com resource site. A free newsletter devoted to Mac hardware issues is available. This site is very frequently updated.

Mac Operating Systems

- Mac O/S Home Page http://macos.about.com/compute/os/macos/
  This is another well done About.com site. A free newsletter about Mac O/S is available. This site is updated on a regular basis.

Online Resources

- EveryMac.com http://www.everymac.com/
  This site boasts an extensive collection of information for every Mac product made. Very good technical and configuration sections.
- MacCentral.com http://www.machome.com/
  Variety of destinations available at this site. Also several free Mac specific newsletters available for Email delivery.
- Mac Directory http://www.macdirectory.com/
  Good comparisons of Mac's and PC's. Good reference materials.
- MacFixIt http://www.macfixit.com/
  Extensive collection of troubleshooting solutions for Macintosh.
- MacSurfer's Headline News http://www.macsurfer.com/
  Good site to find out about Mac news from around the world.
- MacWeek.com http://macweek.zdnet.com/
  Online version of the same name print magazine.
- MacWorld Online http://macworld.zdnet.com/
  Online version of the print magazine.
- Macintosh Basics http://kb.indiana.edu/menu/mac.html
  Small collection of Mac specific topics in the Indiana University Knowledge Base.
- Microsoft MacTopia http://www.microsoft.com/mac/
  Mac news, resources, links and all things Mac at Microsoft.
- PowerBook Source http://www.pbsource.com/
  Stay abreast of the latest news related to Apple laptops.
- SiteLink http://sitelink.net/
  Good site with reviews, news, e-zines, and software for Macintosh.
- 20 Steps to a Happy Mac http://www.minot.k12.nd.us/happy_mac.htm
  Good troubleshooting guide to help keep your Mac happy.

Support - Apple

- AppleCare Support http://www.apple.com/support/
  Search the Apple database for help with Macintosh problems.
Link directly to the technical information library at Apple.

Student Resources > Internet Links > Computers > Apple

Last Updated: December 11, 1999
Windows Resources on the Internet

There are enough Windows related internet sites to sink a battleship! The hyperlinks provided here are regarded the better sites available. The resource section contains those hyperlinks which cover a number of different areas relating to PC maintenance.

Hardware

- Focus on PC Support http://pcsupport.about.com/compute/pcsupport/
  Excellent About.com resource devoted to PC hardware concerns.
- Microprocessor Resources http://www.x86.org/
  Excellent online resource site for anything related to PC microprocessors.
- Naked PC http://www.thenakedpc.com/
  This site was created by and is maintained by Dan Butler, author of the book The Unofficial Guide to PC's. Subscribe to the site's Email newsletter.
  One of the internet's premier sites for detailed PC reference information.
- PC Mechanic http://www.pcmech.com/
  At this site you'll find both hardware and software information.
- Tom's Hardware Guide http://tomshardware.com/
  Very good site to find information regarding PC hardware.

Resources

- Annoyances.org http://www.annoyances.org/
  Visit this site to research the database of cataloged Windows bugs and annoyances and find out about known fixes.
- Bootdisk.com http://www.bootdisk.com/
  Wide variety of utilities, tweaks, patches, and drivers available at this site.
- Byte.com http://www.byte.com/
  Online version of the print magazine.
- InfiniSource http://www.windows-help.net/
  Good site to get help with any Windows problem.
- MyHelpDesk.com http://www.myhelpdesk.com/
  Sign-up for free and this site and have access to an extensive collection of help materials.
- WinMag.com http://www.winmag.com/
  Online version of the print magazine.
- Woody's Watch http://woodyswatch.com/
  Award winning author Woody Leonhard publishes three free Email newsletters - Woody's OFFICE Watch, Woody's ACCESS Watch, and Woody's WINDOWS Watch. Subscribe to one or all at this site, and search the archives.
- ZDNet Help and How-to http://www.zdnet.com/zdhelp/
  Very reliable site to find anything needed to keep your PC running trouble free.

Updates - Drivers

- Frank Condron's World O'Windows http://www.worldowindows.com/
  Find updates and drivers for over 880 different companies.
- Updates.com http://updates.zdnet.com/
  Find the latest software updates for PC's here.
- WinDrivers.com http://www.windrivers.com/
  Considered by many to be one of the best online resources for Windows drivers.
Windows O/S

- Focus on Windows http://windows.about.com/compute/windows/
  Excellent About.com site devoted to Windows O/S issues.
- Microsoft Online Support http://support.microsoft.com/support/default.asp
  Search the Microsoft Knowledge Base.
  Find information for all things Windows at this site.
- WinMag.com http://wintune.winmag.com/tips/
  Find tips for all Windows O/S products.
- WinMD.com http://www.winmd.com/
  Find information about Windows 95, 98, NT, and 2000 registry. This site is updated almost daily.

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Student Resources > Internet Links > Computers > Windows

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Software on the Internet

These links represent the better sites on the Internet to download freeware or shareware.

Cross Platform

- CNet Download.com http://download.cnet.com/
  Very good collection of available software downloads. You can also subscribe to a daily Email newsletter highlighting the newest software added to the site.
- File Mine http://www.filemine.com/
  Good site to find Apple and Windows free/share-ware. Subscribe to the weekly newsletter highlighting software available.
- Tucows.com http://www.tucows.com/
  Find both Apple and Windows platform free/share-ware here, as well as software for PDA's.

Windows Platform Only

- Completely Free Software http://www.completelyfreesoftware.com/
  Listings only for Windows & DOS freeware.
- Rocketdownload.com http://www.rocketdownload.com/
  Windows platform software only.

Last Updated: December 10, 1999
Desktop Publishing and Web Design

Student Resources > Internet Resources > Desktop Publishing

The hyperlinks in this section will provide a basic foundation to issues related to desktop publishing and web design.

Clip Art
- Art Today http://www.arttoday.com/
  This site provides access to 45,000 free clip art items. If you subscribe to the site for a year you can have access to over 750,000 clip art items.
- Clip Art.com http://www.clipart.com/
  This site provides listings to a variety of online resources related to clip art.
- Microsoft Clip Art Gallery http://cgl.microsoft.com/clipgallerylive/cgi/27/home.htm
  Microsoft provides access to business, healthcare, and special occasion gif's and jpeg's.

Form Production
- FormSite.com HTML Form Builder http://www.formsite.com/
  Create and store a form at their site.
  Create a form for use on your website for free.

Website Maintenance
- MSN Site Inspector http://siteinspector.linkexchange.com/
  Have your site inspected in a number of areas for free.
- Web Site Inspector http://websitesgarage.netscape.com/
  Analyzes load time, image size, traffic, and check for broken links for free.

Online Graphics Production
  Create professional looking graphics online in minutes.

Privacy Issues
- TRUSTe http://www.etrust.com/
  FAQ's for web users and publishers addressing privacy issues on the Internet.

Typography & Fonts
- FontFace.com http://www.fontface.com/
  Features new and free fonts for download.
- FontSite.com http://www.fontsite.com/
  Excellent online resource to learn the rules of typography.
- Microsoft Typography http://www.microsoft.com/typography/default.asp
  Variety of resources including FAQs, style guides, and fonts for download.
- Paul's Toolbox (2 hyperlinks)
  Monospaced Fonts http://home.bsu.edu/prn/monofont/
  Type & Typography http://home.bsu.edu/prn/type.html
  Both links have good information.
Webpage Design

  Find free CGI scripts, tutorials, essential HTML tricks and more.
- CGI Resource Index [http://www.cgi-resources.com/](http://www.cgi-resources.com/)
  Over 2,000 CGI related resources available.
  Online tutorial addressing the difference between great and good webpage design.
  Excellent site created by and maintained by Joe Burns, author of the books *HTML Goodies* and *JavaScript Goodies*.
- JavaCity 2000 [http://www.jc2k.com/javacity.html](http://www.jc2k.com/javacity.html)
  Provides over 400 Java Scripts and Java Applets for download to your site.
- Lockergnome.com [http://www.lockergnome.com](http://www.lockergnome.com)
  Chris Pirillo’s site. He’s the author of *Poor Richard’s Email Publishing* and a UNI graduate.
  Good site providing tutorials about design, as well as access to a newsletter.
  Online spreadsheet of the 216 web safe colors.
  Companion site to the book of the same name.
- Webmaster Resources [http://www.webmaster-resources.com/](http://www.webmaster-resources.com/)
  Good site featuring a variety of tutorials, book and software recommendations, and various tools for the webmaster.
  Features access to tips and tutorials about web design.

Last Updated: December 8, 1999
Three general categories of educational materials available have been created. The resources provided are not all that is available, but should provide a good foundation of information.

- Distance Education
- General Information
- K-12 Education

Last Updated: December 8, 1999
The hyperlinks provided will assist you in beginning to explore the area of distance education.

**Distance Learning Resources**

- **Adult Learning: Resources for Learners** [http://www.pbs.org/adultlearning/](http://www.pbs.org/adultlearning/)
  PBS maintains a wide selection of information related to distance education and adult education, including telecourses.

- **Distance Education Clearinghouse** [http://www.uwex.edu/disted/home.html](http://www.uwex.edu/disted/home.html)
  This site is maintained by the University of Wisconsin and provides access to a variety of resources relating to distance education.

- **Distance Learning Education** [http://www.rapides.k12.la.us/hrl/edae4750.html](http://www.rapides.k12.la.us/hrl/edae4750.html)
  This site provides a variety of information on issues of distance learning.

- **Distance Learning Resource Network** [http://www.wested.org/tie/dlrn/](http://www.wested.org/tie/dlrn/)
  Aimed mostly at K-12 education, this is the dissemination project for the U.S. Department of Education Star School Program.

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Last Updated: 12/8/1999
General Education Information

This collection of hyperlinks provide access to a variety of online education resources. Many of these sources address both K-12 and adult/distance education.

ERIC Resources
  This is the entry point for all ERIC resources.
- ERIC Clearinghouses [http://www.accesseric.org/sites/barak.html](http://www.accesseric.org/sites/barak.html)
  This link will take you directly to all the ERIC clearinghouses.
- ERIC Training Slide Show [http://www.accesseric.org/resources/eric_train.html](http://www.accesseric.org/resources/eric_train.html)
  This site is a new online training site to learn how to effectively use ERIC resources.

General Education Information
  From this hyperlink you can access a wide variety of educational resources, including Apple Learning Interchange.
  This site provides access to a variety of online educational information, including a number of tutorials for Office products.
- Technology Trainer [http://thenode.org/trainer/](http://thenode.org/trainer/)
  This link provides access to information regarding adaptive technology as well as online tutorials.

Iowa Communications Network
- About the ICN [http://www.icn.state.ia.us/](http://www.icn.state.ia.us/)

Online Resources

Last Updated: December 8, 1999
The hyperlinks on this page cover a variety of areas related to the K-12 classroom environment. In the case of the Email sites listed, they are included here because they focus on the K-12 classroom.

Classroom Resources

- Ed's Oasis [http://www.edsoasis.org/]
  This site has won a number of awards. Searchable sections on classroom issues, lesson plans, and teacher treasures.

- EDSITEment [http://edsitement.neh.gov/]
  This is a joint project with the National Endowment for the Humanities, Council of the Great City Schools, MCI WorldCom, and the National Trust for the Humanities. Features humanities websites, lesson plans, and an Email and print-based update service.

- Educational CyberPlayGround [http://www.edu-cyberpg.com/]
  Gain access to a large assortment of educational materials on the internet.

- EDUNET Educators Resource Center [http://www.mightymedia.com/ERC/]
  Connecting educators to lesson plans and other materials to facilitate the teaching of environmental issues, human rights, and to connect K-12 education with social action.

- EvaluTech [http://www.evalutech.sreb.org/]
  Searchable database of instructional materials, including software, lesson plans, and websites, for the K-12 classroom.

- Federal Resources for Educational Excellence or FREE [http://www.ed.gov/free/]
  One stop searching for educational resources supported by all agencies of the federal government. Searchable by subject area and keywords.

- Free Worksheets [http://www.freeworksheets.com/]
  Teachers can access over 2,000 different reproducible worksheets for use in the classroom.

- Global Schoolhouse Network [http://www.globalschoolhouse.com/]
  Free membership allows you access to an array of materials and services.

  Gain access to 61 different online historical collections of the National Digital Library.

- Math Goodies [http://www.mathgoodies.com/]
  Award-winning website focusing on interactive math lessons.

- PBS Teacher Source [http://www.pbs.org/teachersource/]
  Searchable subject areas section coinciding with PBS videos and contributions by several education specialists each month.

- Puzzlemaker [http://puzzlemaker.school.discovery.com/]
  At this site you can create puzzles and games for inclusion in newsletters, flyers, handouts, or classroom assignments for free.

- Surf Report [http://www.ecb.org/surf/]
  Site is maintained by the State of Wisconsin Educational Communications Board. The “Surf Report” focuses on a different subject area each month and highlights websites for use in classrooms.

- Teach With Movies [http://www.teachwithmovies.org/]
  Award-winning site whose focus is to help teachers use film’s and video’s in the classroom effectively. Site includes a database of several hundred recommended video’s for classroom use.

- Teachers First [http://www.teachersfirst.com/]
  Good site to find both classroom resources and professional resources.

  Considered by many to be the premier site for teacher information online. Includes chat boards, chat rooms, lesson plans, and mail rings.
• ThinkQuest [http://www.thinkquest.org/](http://www.thinkquest.org/)
  ThinkQuest is an international internet challenge. Students create interactive websites. Three divisions, junior, advanced, and student teachers. Searchable library of all student-authored entries.

• WNET School [http://www.wnet.org/wnetschool/index.cgi](http://www.wnet.org/wnetschool/index.cgi)
  Free registration at this site allows you access to a variety of resources, including a 9 part professional development series for teachers.

Email

• ePals.com [http://www.epals.com/](http://www.epals.com/)
  This is the world’s largest K-12 online classroom and electronic pen pal network, connecting over 1.5 million students and teachers worldwide.

• Every Mail [http://www.everymail.com/](http://www.everymail.com/)
  This is included here because it is an Internet based Email system that supports 29 different languages. The sender enters their message in their native language and it is converted to the receiver’s native language.

  This is a new free service providing controlled Email accounts to schools and students.

• Intercultural Email Classroom Connections [http://www.iecc.org/](http://www.iecc.org/)
  This is a free service to help teachers link with partners in other countries and cultures for Email classroom key pal and classroom projects.

• KeyPal’s Club [http://www.mightymedia.com/keypals/home.cfm](http://www.mightymedia.com/keypals/home.cfm)
  Free service helping teachers connect with registered users around the world to participate in Email key pal and classroom projects.

Lesson Plans

• A to Z Teacher Stuff [http://lessonplanz.com/](http://lessonplanz.com/)
  Over 1700 lesson plans at this site. They are searchable.

• Busy Teachers’ Website [http://www.ceismc.gatech.edu/busyt/](http://www.ceismc.gatech.edu/busyt/)
  Search for lesson plans by subject area. This site has been awarded the “Top 5% Website” award.

• Gateway to Educational Materials [http://www.thegateway.org/](http://www.thegateway.org/)
  This site is sponsored by the U.S. Department of Education and is a project of ERIC. Search for educational resources by subject and grade level.

• Lesson Stop [http://www.lessonstop.org/](http://www.lessonstop.org/)
  Good site for finding lesson plans. Subscribe to the twice monthly free Email newsletter to keep abreast of site updates.

State Education Standards

• Developing Educational Standards [http://putwest.boces.org/Standards.html](http://putwest.boces.org/Standards.html)
  Standards for all 50 states are available at this site. Also view federal education standards as well.

Student Resources

  Search for internet resources by asking questions.

• Chicago Public Schools StudentZone [http://zone.cps.k12.il.us/](http://zone.cps.k12.il.us/)
  Good online resource site for students.

  Great site to find information on how a variety of things work.

• Kids Web [http://kidsvista.com/](http://kidsvista.com/)
  Simple site for students to navigate and search for information targeted at the K-12 level.

• KidsClick [http://sunsite.Berkeley.edu/KidsClick/](http://sunsite.Berkeley.edu/KidsClick/)
  Web search engine created by librarians for K-12 students.

  Students can access information on a variety of areas by searching on keywords.

• StudyWeb [http://www.studyweb.com/](http://www.studyweb.com/)
  Searchable site for K-12 students to research topics. It is searchable by both keywords and categories.

Technology Integration
- ClassWeb http://landmark-project.com/classweb/
  This site provides tutorials in a number of areas related to technology. The site also hosts an email discussion group related to teacher constructed class webs.
  Online version of the aforementioned publication. It may also be downloaded as a PDF file.
- eSchool News Online http://www.eschoolnews.org/
  Considered by many to be the #1 source for K-12 technology news and information.
- Landmarks for Schools http://landmark-project.com/
  Site created by David Warlick, author of Raw Materials for the Mind. Wide variety of resources and tools available, including Class Web.
- Tapped In http://www.tappedin.org/
  This site provides access to professional development and collaborative activities.
- TeacherZone http://www.zdnet.com/zd/tv/callforhelp/teacherzone/
  Good educational resource site maintained by ZDNET. Includes information on classroom ergonomics.
- techLearning http://www.techlearning.com/
  Good site to find ideas, tools, and resources for integrating technology into the K-12 curriculum.

Student Resources > Internet Resources > Education > K-12

Last Updated: December 8, 1999
The total resources on this page reflects only a small portion of websites devoted to educational technology.

### Government Agencies

  Research available government publications, grant programs, and technology goals among other topics at this site.

### National Organizations

- **Association for Educational Communications & Technology** [http://www.aect.org/](http://www.aect.org/)
  This group focuses on educational technology and its integration in the classroom. Also publishes several journals.

- **Annenberg/CPB Projects Learner Online** [http://www.learner.org/edtech/](http://www.learner.org/edtech/)
  The Annenberg/CPB Project has focused on a variety of research projects that examine and illustrate the effective use of educational technology in the classroom.

- **Association for Educational Communications & Technology (AECT)** [http://www.aect.org/](http://www.aect.org/)
  Very active national organization. This site provides access to a wide range of materials.

- **Association for the Advancement of Computing in Education** [http://www.aace.org/](http://www.aace.org/)
  The focus of this group is the use and role of information technology in education.

  The focus of this group is distance learning in asynchronous learning environments.

- **Benton Foundation** [http://www.benton.org/](http://www.benton.org/)
  Focuses on the broad area of communications in general. Excellent subarea on Communications Policy & Practice as well as the digital divide.

- **EduCause** [http://www.educause.edu/](http://www.educause.edu/)
  Research current issues and topics, find conferences and seminars, and participate in discussion groups. Please note: EduCom is now a part of EduCause.

  This is a subgroup of the IEEE Learning Technology Task Force. Subscribe to the free Email newsletter and access the online publication Educational Technology & Society Journal.

- **International Society for Technology in Education** [http://www.iste.org/](http://www.iste.org/)
  An international organization that focuses on teachers helping other teachers use technology in the classroom.

  The Milken Exchange funds a variety of projects, including the report Technology Counts 99 which can be accessed from this homepage.

- **Re-inventing Schools** [http://www.nap.edu/readingroom/books/techgap/welcome.html](http://www.nap.edu/readingroom/books/techgap/welcome.html)
  This site is jointly funded by the National Academy of Sciences and the National Academy of Engineering. It provides access to resources related to issues of technology integration in the classroom.

- **Schwab Foundation for Learning** [http://www.schwablearning.org/](http://www.schwablearning.org/)
  A number of excellent resources can be found at this site.

  Research educational technology issues, as well as find adaptive technology resources.

### Professional Development

- **Professional Competency Continuum Online Assessment Tool** [http://www.milkenexchange.org/welcome.html](http://www.milkenexchange.org/welcome.html)
  A two-part online assessment tool that evaluates your level of technology use and integration in the classroom.

  Find information online regarding a variety of computer operating systems and productivity tools.
• Technology Coordinators Resource Center http://minot.com/~nansen/
  Good site to find a variety of materials for those responsible for technology in a school.

Regional Educational Laboratories and Technology Consortia (These are funded by the U.S. Department of Education)

• Regional Educational Laboratories http://www.nwrel.org/national/index.html
  This page found at the NorthWest Regional Educational Laboratories provides links to all 9 funded educational laboratories. Each has a different focus. Of particular technology interest are the Mid-continent Regional Educational Laboratory (McREL) http://www.mcrel.org/, North Central Regional Educational Laboratory (NCREL) http://www.ncrel.org/, and Northwest Regional Educational Laboratory (NWREL) http://www.nwrel.org/. A good subunit of NWREL is Library in the Sky http://www.nwrel.org/sky/.

• Regional Technology Consortia http://www.rtec.org/
  Access links to all 6 regional units. As with the REL’s, each unit has a different focus.

Publications, Reports & Surveys

• Communications Policy & Practice - Digital Beat http://www.benton.org/DigitalBeat/
  Online resource examining the issues surrounding digital TV and the internet.

• Education Week on the Web (Two hyperlinks)
  Special Reports http://www.edweek.org/reports/
  Access a number of surveys and evaluations conducted by and reported by the publishers of Education Week.
  This Week in Education http://www.edweek.org/
  Stay abreast of the latest news on the education front.

  The publication by the Department of Education is available as a hypertext document or as a downloadable PDF.

• ERIC Links http://ericir.syr.edu/ithome/links.htm
  A variety of publications are available in the Educational Technology section.

• Exploring Technology and School Reform http://edweb.qsn.org/
  Hyperbook exploring the worlds of educational reform and information technology.

  Interesting study conducted by Mathematica Policy Research, Inc.

• From Now On: The Educational Technology Journal http://www.fno.org/
  Online publication by Jaime McKenzie, author of the books Beyond Technology: Questioning, Research, and the Information Literate School and How Teachers Learn Technology Best.

• JALN and ALN Magazine http://www.aln.org/
  Both are published by Asynchronous Learning Network. ALN focuses on asynchronous learning environments.

• Learning & Leading With Technology http://www.iste.org/LSL/archive/
  Each month the publication focuses on a different aspect of educational technology and integration in the curriculum.

• Learning Technologies Report http://www.thenode.org/lreport/
  New issues posted quarterly focusing on different topics each time. Searchable archive of past issues.

• Plugging In: Choosing and Using Educational Technology http://www.ncrel.org/sdrs/edtalk/toc.htm
  Online version of a report published in 1995 on technology reform. Also available as a PDF download.

  An archive of publications by the Department of Education dating back to 1994.

  This 1998 survey had more than 4,000 teachers, technology coordinators, and school principals participate.

• Technology Source http://horizon.unc.edu/TS/archives.asp
  Publication by the University of North Carolina. Online archives back to 1997.

Resources

• ERIC Clearinghouse on Information & Technology http://ericir.syr.edu/ithome/
  View all materials related to information and technology that are a part of ERIC at this site.

• PBS Teacher Source (2 links)
  Teaching with Technology homepage http://www.pbs.org/teachersource/teachtech.htm
  Access a number of items related to teaching with technology.
  Teaching with Technology article archive http://www.pbs.org/teachersource/whats_new/techknow/archives.shtml
  Online archive of the monthly articles posted at the Teaching with Technology site.

• Teaching Through Technology http://www.ecb.org/tt/index.htm
  Site is run and funded by the Wisconsin Department of Education.
• Tech: Making the Grade http://www.makingthegrade.org/about.html
  Interesting online exhibit funded by the NEA examining the area of technology in the classroom.
• Technology Transfer and Economic Development Program http://www.t2ed.com/
  Joint program with the Department of Energy and Westinghouse Electric Company to make available over 500,000
  pages of materials, including grant writing materials, assessment tools, needs assessments, and training tools.
  Complete an online application and once approved you are allowed to download the materials free of charge.

Technology Standards

• National Educational Technology Standards for Students http://cnets.iste.org/splash.htm
  This initiative is supported by the U.S. Department of Education, NASA, Milken Exchange, and Apple Computer.
• State Standards http://putwest.boces.org/Standards.html
  Review educational standards by state. Links also available for Canadian standards.

Universal Access

• Center for Applied Special Technology http://www.cast.org/
  Explore the latest news in the area of universal design of websites. Includes a link to "Bobby" which is a program that
  will evaluate your website and test it for ease of access for disabled persons.
• Equal Access to Software and Information http://www.rit.edu/~easi/
  This group focuses on the need to provide students and professionals with disabilities with equal access to
  information on the internet.
These links provide access to a variety of "fun" sites, including easter eggs, electronic cards, virtual flowers, humor online, and online jigsaw puzzles.

Easter Eggs

- The Easter Egg Archive http://www.eeggs.com/
  Easter eggs are amusing tidbits hidden in products by their creators.

Electronic Cards

- Blue Mountain Arts http://www.bluemountainarts.com/
  This site provides the most comprehensive collection of online electronic cards.

Humor Online

- Darwin Awards http://www.darwinawards.com/
  The Darwin Awards commemorate the individuals who have suffered fatal misadventures.
- Not in My Backyard Online Comic Strip http://www.notinmybackyard.com/
  Daily comic strip with a humorous animal theme.

Jigsaw Puzzles

- JigZone http://www.jigzone.com/
  This site has an archive of over 200 puzzles to try.

Virtual Flowers

- 1800-FLORALS http://www.800florals.com/virtual/
  Choose from a variety of seasonal virtual floral arrangements to send to someone special.
- iFlowers http://www.iflowers.com/
  Send virtual flowers or digital postcards to that special someone in your life.

Last Updated: December 8, 1999
Miscellaneous Links

These links didn’t seem to fit into any of the other categories and so ended up here.

Media Information

  This site serves as a national resource regarding the impact of media on children and families.

Online Comparison Pricing and Product Search

  Put a book title into the search field at this site and compare 41 different bookstores at once.
  Search for the best prices for a variety of hardware and software needs.
  At this site you can comparison shop for books, music and videos.
  An Excite site which allows you to search for both products and product reviews. Results can be sorted by best price.
  Selection of products is extensive.
  Search for computer related items.
  Another site which allows you to search for the best price for computer related items.

Online Free Stuff

  This site provides access to a variety of free internet resources.
  A comprehensive resource of links for freebies on the internet.

Online Internet Research

  Create an online research instrument at this site for free.

Last Updated December 8, 1999
On-Line Communication and Storage

A variety of sites are available to meet your needs for online communication. Each site has different features and rules regarding use. Please be aware that most of these are advertising-based and so ad's will appear somewhere on the webpage or site. Some of the webhosting sites provide 25 MB of space and others provide 50 MB of storage space. Read the user information carefully.

Bookmark Storage

- Clickmarks.com http://www.clickmarks.com/
  With their software installed you can add a bookmark to your online collection.
- iKeepBookMarks.com http://www.ikeepbookmarks.com/
- My Bookmarks.com http://www.mybookmarks.com/

File Storage

- DocSpace http://www.docspace.com/
- Driveway http://www.driveway.com/
- EzBriefcase.com http://www.ezbriefcase.com/
- FilesAnywhere http://www.filesanywhere.com/
- FreeDrive http://www.freedrive.com/
- iDrive http://www.idrive.com/
  you can sideload MP3 files from MP3.com directly to iDrive.
- My Docs Online http://www.mydocsonline.com/
- NetDrive http://www.netdrive.com/
- XDrive http://www.xdrive.com/
- 50Megs.com http://www.50megs.com/

Free Web Space (for Webpages)

- Free Webpage Provider Review 4.0 http://fwpreview.ngworld.net/fwp/
  This database is subdivided by country, language, and disk space provided.
- FreeWebspace.net http://www.freewebspace.net/
  This site serves as a clearinghouse to find free webspace.
- Homepage.com http://www.homepage.com/
- Homestead Web Space http://www.homestead.com/
  No HTML knowledge is needed.

Internet Email Providers

- EMail.com http://www.email.com/
  A service of Snap.com and NBC. Upgrade to Pro and get 20 MB of storage.
- EveryMail.com http://www.everymail.com/
  A free web-based Email service that allows you to communicate in 28 different languages.
- Free Email Address Directory http://www.emailaddresses.com/
  At this site search for free faxing, web hosting, web-based Email, and voicemail services.
- Hotmail http://www.hotmail.com/
  A service of MSN.com.
- Whale Mail http://www.whalemail.com/
Free registration allows you to Email files up to 50 MB.

- Yahoo [http://mail.yahoo.com/](http://mail.yahoo.com/)

### Mailing List - Education

  Setup a course site so all your learning materials, class discussions, and even online tests are in one location.
  A place where parents, teachers, and students can connect.
  A variety of free school website builders are available.
  An on-line service that allows teachers to post classroom assignments on the internet.
- K-12 Nation.net [http://www.k12nation.net/](http://www.k12nation.net/)
  Another site where educators, parents and students can connect.
  A site to help educators organize web resources in a password-protected environment.
  A site that allows communication between schools, students, teachers, administration, and families.
  Teachers can put content on the internet without having to know HTML editing.
- SchoolLife.net [http://www.schoollife.net](http://www.schoollife.net)
  A place where schools can put their materials online for students.
  Teachers can put homework and classroom assignments on the internet.
- ThinkWave.com [http://www.ThinkWave.com/](http://www.ThinkWave.com/)
  Teachers have access to a broad range of classroom management tools.
- TrackStar [http://scrtec.org/track/](http://scrtec.org/track/)
  On-line interface that helps teachers organize and annotate internet resources and file them in the TrackStar database.

### Mailing List - General

  Start an Email list free, or join on of the existing ones.
- Email Discussion Groups Resources [http://www.webcom.com/impulse/list.html](http://www.webcom.com/impulse/list.html)
  Good one-stop information resource about Email discussion groups or "lists".
  Rather than the information being sent via Email, users log into a specific intranet site. Great for groups working on projects.
  Free service of MSN which allows you to setup and administer an Email based discussion list.
- Liszt, the mailing list directory [http://www.liszt.com/](http://www.liszt.com/)
  Liszt allows you to search their database of over 90,000 mailing lists. Mailing lists are a powerful way of receiving content in your specific interest areas.
  Free instant personal discussion space for your topic of the moment. Good place to host a discussion topic that may not fit your mailing list's main focus.
  Start a new list or join one of the existing lists for free.

### Webpage Alternatives

  Create a free message board for your existing website.
  Put information online quickly without having to create a webpage.

### Webrings

  Webrings are an efficient way of finding specific content on the internet. Websites link to other websites that are specific
to their content area.

Student Resources > Internet Resources > Online Communication and Storage

Last Updated: December 10, 1999
These links will provide access to a variety of online reference sites.

All Topics, All Experts

- AllExperts.com http://www.allexperts.com/
  A cast of thousands of experts for various areas will answer your question, or search their archive for previous answers.
- Knowledge Hound http://www.knowledgehound.com/
  Learn how to do almost anything online for free.

Census Bureau

- Census Bureau Gazetteer http://www.census.gov/cgi-bin/gazetteer/
  Search for census data by city or zip code.

Comprehensive Reference Resource

  Access an almanac, calculator, calendar, dictionary, encyclopedia, and many other tools.

Copyright and Fair Use Resources

- Crash Course in Copyright http://www.utsystem.edu/ogc/intellectualproperty/cprtindx.htm
  Good site created by the University of Texas system.
- Intellectual Property, Copyright and Fair Use Resources http://www.albany.edu/~ls973/copy.html
  This site provides a very comprehensive list of internet resources related to these areas.

Dictionary

- Merriam-Webster Online http://www.m-w.com/
  Good online dictionary.

Encyclopedia

- Britannica Online http://www.britannica.com/
  The name says it all! Good online reference.
- Encarta Online http://encarta.msn.com/
  Online version of Microsoft Encarta. The free online version isn’t as comprehensive as what’s available with a subscription.

Find the Best of the Internet

- The Internet Tourbus http://www.tourbus.com/
  Search the online archives or subscribe to the free twice weekly award winning Email newsletter highlighting the very best of the internet.

Newspapers Online

- Len-Net Entertainment Web http://www.lni.net/cowabunga/newspapers.htm
Find links to newspapers in all 50 states as well as national newspaper publications at this site.

**Online Map Services**

  One-stop travel information site. Get local tourist information, driving directions, real-time traffic reports, and print maps for world-wide locations.

**Online Product Reviews**

  Browse reviews for hundreds of electronic items from cameras to video products.

**Phone Listings**

  Search either the white or yellow pages for individuals or businesses by state.

**Research Paper Citation Styles**

- Citation Style for Research Papers [http://www.liunet.edu/cwis/cwp/library/workshop/citation.htm](http://www.liunet.edu/cwis/cwp/library/workshop/citation.htm)
  Find information for a variety of writing styles including APA, MLA, and Chicago.

**Volunteer Opportunities**

  Find a volunteer opportunity in your area online.

**World Time**

  Find out what time it is and sunrise and sunset in any part of the world.

**Worldwide Holidays and Festivals**

  Search a worldwide holiday database.
  Search for holiday’s and festival’s by country or religion.

**Zip Codes**

  Search for zip codes by city or state, or find zip codes for cities and states.

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Last Updated: December 8, 1999
This list can serve as a jumping off point for search engines and it is not an exhaustive listing of all possible search engines. The major ones have been included here.

Comparison's and Information on Search Engines

  Good online article about the secrets of search engines.
  Excellent collection of materials regarding search engines and search strategies, especially Search Engine Showdown.
  This site has a variety of information about search techniques, search engine listings, and submission tips.
  Another good site providing comparisons of search engines and meta-search engines.

Search Engine List


Search for Available Domain Names


Search for Images


Search for Rich Media


Last Updated: December 8, 1999
Appendix C

On the following pages are printouts of the revised website.
It's not about filmstrips anymore. High tech training centers and classrooms are equipped with computers, networks, projectors, cable connections, and video displays. Accountability and assessment are the watchwords for modern education.

Many trainers and teachers, however, continue to train and teach in the same way they did at the turn of the century when the primary mode of transportation was the horse and buggy and long distance communication was accomplished with the telegraph.

The faculty and students of the University of Northern Iowa's Division of Educational Technology are working to bring education into the twenty-first century.

Training at both the baccalaureate and graduate levels is offered. UNI's program has two general goals:

1. To help students acquire the basic knowledge and skills necessary for the systematic design, development and evaluation of instruction and training.
2. To help students acquire advanced knowledge and skills to investigate and extend our current understanding of the acquisition of human competence through instruction and training.

Last Update: March 10, 2000
Educational Technology Minor
Department of Curriculum and Instruction
College of Education
University of Northern Iowa

Contact Dr. Leigh Zeitz, Ph.D. Coordinator, Educational Technology Minor.

Students working on a bachelor's degree in education may pursue this minor. Schools are becoming technology infused. This coursework will prepare teachers to be users of and leaders for technology in the classroom. A total of 18 credit hours are required for this minor.

Required:
240:020  Educational Media  2
OR
240:031  Educational Media & Classroom Computing  3
240:030  Classroom Computer Applications  3
240:131g Technology in Education  3
240:139g Media Planning and Production  3
Total: 11 or 12 hours

Both 240:020 and 240:031 are prerequisite courses. They are to be completed before other courses are taken. 240:020 or 240:031 can be taken concurrently with other courses listed below.

Electives:
240:140g Databases in Education  3
240:153g Telecommunications in Education  3
240:160 Media Projects  1 - 4 hours
240:170g Principles of Publication Design  3

A total of either 6 or 7 hours of electives are required from the following courses:

There are other technology related courses offered in the College of Education, as well as other Colleges on campus. Students may elect to include these courses with approval of the program's minor advisor.

Last Update: March 10, 2000
Graduate Studies

The University of Northern Iowa offers two different Master of Arts degrees that emphasize educational technology: Communications Training and Technology and Educational Technology. The links below will allow you to explore these two degree programs, and access information regarding program admission.

MA Communications Training and Technology

MA Educational Technology

Admissions Information

Last Update: March 10, 2000
Master of Arts - Communications and Training Technology
Department of Curriculum and Instruction
College of Education
University of Northern Iowa

This major is designed for persons planning to work in non-school settings. Majors in this area will complete a basic core of course work applicable to all preparing for work as media specialists, trainers in industry and business, or communications designers. Specific areas of interest will determine the supporting electives. Licensure as a teacher is not required for admission to the program. The bachelor's degree may be in any field.

The program is available in both the thesis and non-thesis option and requires a minimum of 38 semester hours. All students completing the thesis option are required to pass an oral examination prepared and administered by the thesis committee. The examination will be comprehensive in nature and will normally accompany the thesis defense. Students completing the non-thesis option are required to pass a written comprehensive examination at the end of the program of study.

Required:
These courses are required totaling 16 or 20 hours.

- 240:139g Media Planning & Production 3
- 240:230 Communication Theory 3
- 240:235 Managing Educational Technology Programs 3
- 240:240 Instructional Development 3
- 240:289 Seminar 2
- 240:299 Research 2 or 6

Electives:
A minimum of 12 hours of electives are required from the following courses:

- 240:138g Graphics 3
- 240:147g Photography 3
- 240:150g Educational Television Production 3
- 240:153g Telecommunications in Education 3
- 240:170g Principles of Publication Design 3
- 240:205 Instructional Computing Design 3
- 240:210 Distance Education 3
- 240:253 Interactive Video Design 3
- 240:260 Advanced Media Projects 1 - 4
  - Section 1: Audio
  - Section 2: Computer Applications
  - Section 3: Film
  - Section 4: Graphics
  - Section 5: Multi-Media Communications
  - Section 6: Photography
  - Section 7: Slide Production
  - Section 8: Television
  - May be repeated for a maximum of 4 hours in any section.
Some sections have prerequisite requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:286</td>
<td>Studies in Media</td>
<td>1 - 3</td>
</tr>
<tr>
<td>240:286</td>
<td>Studies in Media</td>
<td>1 - 3</td>
</tr>
<tr>
<td>240:297</td>
<td>Practicum</td>
<td>2 - 3</td>
</tr>
</tbody>
</table>

Other electives as advised 6-10 hours

Last Update: March 10, 2000
Master of Arts - Educational Technology
Department of Curriculum and Instruction
College of Education
University of Northern Iowa

This major is designed to prepare educators for a variety of professional positions in educational settings, including: school building level, school district level, vocational-technical school, community college, and university. Licensure as a teacher is not required for admission to the program. The bachelor's degree may be in any field.

The program is available in both the thesis and non-thesis option and requires a minimum of 38 semester hours. All students completing the thesis option are required to pass an oral examination prepared and administered by the thesis committee. The examination will be comprehensive in nature and will normally accompany the thesis defense. Students completing the non-thesis option are required to pass a written comprehensive examination at the end of the program of study.

Required: (13 or 17 hours)

240:131g Technology in Education 3
240:139g Media Planning & Production 3
240:240 Instructional Development 3
240:289 Seminar 2
240:299 Research 2 or 6

Electives:

Computer Technology (6 hrs. minimum)

240:140g Databases in Education 3
240:170g Principles of Publication Design 3
240:205 Instructional Computing Design 3
240:253 Interactive Video Design 3
270:289 Seminar in Educational Leadership 3
810:251 Computers, Computer Science, and Education 3

Technology Applications (6 hrs. minimum)

240:138g Graphics 3
240:147g Photography 3
240:150g Educational Television Production 3
240:153g Telecommunications in Education 3
240:232 Selection and Integration of Materials 3
240:260 Advanced Media Projects 1 - 4

Section 1: Audio
Section 2: Computer Applications
Section 3: Film
Section 4: Graphics
Section 5: Multi-Media Communications
Section 6: Photography  
Section 7: Slide Production  
Section 8: Television  
May be repeated for a maximum of 4 hours in any section. Some sections have prerequisite requirements.

**Related Topics (5 hours minimum)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>200:214</td>
<td>Foundations of Instructional Psychology(^1)</td>
<td>3</td>
</tr>
<tr>
<td>240:210</td>
<td>Distance Education</td>
<td>3</td>
</tr>
<tr>
<td>240:230</td>
<td>Communication Theory</td>
<td>3</td>
</tr>
<tr>
<td>240:235</td>
<td>Managing Educational Technology Programs</td>
<td>3</td>
</tr>
<tr>
<td>240:285</td>
<td>Readings in Media</td>
<td>1-3</td>
</tr>
<tr>
<td>240:286</td>
<td>Studies in Media</td>
<td>1-4</td>
</tr>
<tr>
<td>240:297</td>
<td>Practicum</td>
<td>2-3</td>
</tr>
<tr>
<td>250:205</td>
<td>Educational Research(^1,2)</td>
<td>3</td>
</tr>
</tbody>
</table>

\(^1\) - recommended for K - 12 educators  
\(^2\) - recommended for students electing thesis option

**Other electives as advised**  
4 - 10

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Last Update: March 10, 2000
## Educational Technology Course Descriptions

Department of Curriculum and Instruction  
College of Education  
University of Northern Iowa  

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name and Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:020</td>
<td>Educational Media</td>
<td>2 hrs.</td>
</tr>
<tr>
<td></td>
<td>Selection and use of various educational technologies within a systematic educational planning framework. Includes the operation of educational media hardware and software and the design and production of media for educational use. Lab as arranged.</td>
<td></td>
</tr>
<tr>
<td>240:030</td>
<td>Classroom Computer Applications</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Use of microcomputer technology in the classroom. Emphasis on evaluating instructional software and integrating computer technology with common teaching/learning practices. Prerequisite: 240:020 or 240:031.</td>
<td></td>
</tr>
<tr>
<td>240:131g</td>
<td>Technology in Education</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Selection, utilization, implementation, and design of multimedia in the late preparation and design of messages. Prerequisite: junior standing.</td>
<td></td>
</tr>
<tr>
<td>240:138g</td>
<td>Graphics Production</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Assessment of the generation, manipulation, integration, and final formats of type, artwork, and photography applied to printed and projected media; creative applications of current technology in the development of visuals. Lab as arranged. Prerequisites: junior standing; consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>240:139g</td>
<td>Media Planning and Production</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Planning steps essential for media production; processes, equipment, techniques, and services needed for the production, duplication, and release of media. Lab as arranged. Prerequisites: 240:020 or 240:031; junior standing; consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>240:140g</td>
<td>Using Databases in Education</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Designed to introduce students to using databases and informational retrieval systems in an educational setting. Emphasis on the students learning the basic concept and skills of databasing and experiencing the ways that databases can be used in a teaching method to emphasize problem-solving. Exploration beyond personal computer databases to using and integrating Internet resources into classroom curriculum. Prerequisites: 240:020 or 240:031; junior standing, consent of instructor.</td>
<td></td>
</tr>
<tr>
<td>240:147g</td>
<td>Photography</td>
<td>3 hrs.</td>
</tr>
<tr>
<td></td>
<td>Basic principles, skills, and techniques of digital photography and their application to communication. Lab as arranged. Prerequisites: junior standing; consent of instructor.</td>
<td></td>
</tr>
</tbody>
</table>
standing; consent of instructor.

240:150g Educational Television Production 3 hrs.
Theoretical aspects and techniques of educational television production applied in the classroom and studio. Practical experiences in planning and producing educational television programs. Lab as arranged. Prerequisites: 240:020 or 240:031; junior standing; consent of instructor.

240:153g Telecommunications in Education 3 hrs.
Study of the technologies of telecommunications applied to education. Administrative and instructional uses, teaching strategies, critical issues, case studies, and research. Prerequisite: consent of instructor.

240:160 Media Projects 1-4 hrs.
Specialized study in independent media projects. Credit to be determined at time of registration; project, credit, and evaluation criteria require advance consent of instructor.

Sec. 1. Audio.
Sec. 2. Computer Applications. Prerequisite: 240:020 or 240:031.
Sec. 3. Film.
Sec. 5. Multimedia Communications. Prerequisite: 240:131.
Sec. 6. Photography. Prerequisite: 240:147
Sec. 7. Slide Production
Sec. 8. Television. Prerequisite: 240:150.

May be repeated for credit to a maximum of 4 hours for any section.

240:170g Principles of Publication Design 3 hrs.
Focus on evaluation and design of electronically produced materials. Hands-on experiences with desktop publishing are included. Prerequisite: junior standing.

240:186 Studies in Media 1-4 hrs.

240:189 Readings in Media 1-3 hrs.

240:205 Instructional Computing Design 3 hrs.
Evaluation and design of computer-based instructional materials. Hands-on experiences with the design of computer based lessons. Prerequisite: 240:240.

240:210 Distance Education 3 hrs.
Introduction to distance education. Focus on historical perspectives, theories, research, and operational issues.

240:230 Communication Theory in Media 3 hrs.
Contemporary theory of human and mass communication, learning, perception, and propaganda as they apply to message design utilizing communication media.

240:232 Selection and Integration of Materials 3 hrs.
Evaluation of the instructional setting along with the procedures for selection and integration of materials.

240:235 Managing Educational Technology Programs 3 hrs.
Advanced course to prepare a media graduate to administer any one or all of the specific areas of media.

240:240 Instructional Development 3 hrs.
Analysis and synthesis for structuring learning environments including learner, tasks, environmental, and instructional strategy analysis.

240:253 Interactive Video Design 3 hrs.
Focus on evaluation and design of interactive videodisk instructional materials. Hands-on experiences with the development of this type of instruction are included. Prerequisites: 240:240; consent of instructor.

240:260 Advanced Media Projects 1-4 hrs.
Advanced study in independent media projects. Credit to be determined at time of registration; project, credit, and evaluation criteria require advance consent of instructor.

Sec. 1. Audio
Sec. 2. Computer Applications. Prerequisite: 240:205.
Sec. 3. Film.
Sec. 5. Multimedia Communications. Prerequisite: 240:131.
Sec. 6. Photography. Prerequisite: 240:147.
Sec. 7. Slide Production.
Sec. 8. Television. Prerequisite: 240:150.

May be repeated for maximum of 4 hours for any section.

240:285 Readings in Media 1-3 hrs.
240:286 Studies in Media 1-4 hrs.
240:289 Seminar 2 hrs.
240:297 Practicum 2-3 hrs.
240:299 Research
240:340 Designing Instructional Systems 3 hrs.
Application of current research and theory to the instructional design process. Students are guided through the systematic process of translating principles of learning and instruction, employing several instructional design models.

*Please note: 100-level courses that have the "g" designation are open to both undergraduate and graduate students. 100-level courses that do not have the "g" designation may only be taken for undergraduate credit.

Top of page

Last Update: March 10, 2000
Ed Tech Course Schedules

Course Schedules:

Fall 1999
Spring 2000
Summer 2000
Fall 2000

Last Update: March 10, 2000
### Fall 1999 Course Schedule

- **100-level courses that contain the (g) are open to graduate students.**
- **Classes begin Monday, August 23, 1999.**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Sec</th>
<th>Name</th>
<th>Hours</th>
<th>Instructor</th>
<th>Class Time/Day</th>
<th>Bldg/Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:020</td>
<td>01</td>
<td>Educational Media</td>
<td>2</td>
<td>Stuve</td>
<td>10:00-11:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>01</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>Smaldino</td>
<td>8:00-10:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>02</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>Zeitz</td>
<td>1200-2:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>03</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>Zeitz</td>
<td>2:00-4:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>04</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>L. Hansen</td>
<td>5:00-7:50 W + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:031</td>
<td>05</td>
<td>Educational Media and Classroom Computing</td>
<td>3</td>
<td>L. Hansen</td>
<td>7:00-9:50 + arr lab</td>
<td>SEC 252</td>
</tr>
<tr>
<td>240:131g</td>
<td>01</td>
<td>Technology in Education</td>
<td>3</td>
<td>Stuve</td>
<td>6:00-8:50 T</td>
<td>SEC 403</td>
</tr>
<tr>
<td>240:139g</td>
<td>01</td>
<td>Educational Television Production</td>
<td>3</td>
<td>Marchesani</td>
<td>200-3:15 T Th</td>
<td>SEC 403</td>
</tr>
<tr>
<td>240:140g</td>
<td>01</td>
<td>Databases in Education</td>
<td>3</td>
<td>Zeitz</td>
<td>4:00-6:50</td>
<td>SEC 206</td>
</tr>
</tbody>
</table>
### Fall 1999 Course Schedule

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Section</th>
<th>Course Name</th>
<th>Instructor</th>
<th>Credits</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>240:153g</td>
<td>01</td>
<td>Telecommunications in Education</td>
<td>Stuve</td>
<td>3</td>
<td>6:00-8:50 M</td>
<td>SEC 127</td>
</tr>
<tr>
<td>240:160</td>
<td></td>
<td>Media Projects</td>
<td></td>
<td>1-4</td>
<td>M SEC 127</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Up to 4 credit hours in each section may be earned.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td></td>
<td>Computer Applications</td>
<td>Stuve</td>
<td></td>
<td></td>
<td>SEC 405</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prerequisite: 240:020 or 240:031; written consent of instructor.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td></td>
<td>Multi-Media Communications</td>
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<td>Marchesani</td>
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<td>L. Hansen</td>
<td>3</td>
<td>4:00-6:50 F</td>
<td>SEC 206</td>
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<tr>
<td>240:186</td>
<td>04</td>
<td>Studies in Media</td>
<td></td>
<td>1-4</td>
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<td>SEC 618</td>
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<td>240:189</td>
<td>04</td>
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Prerequisite: written consent of instructor.

Last Update: March 10, 2000
### Spring 2000 Course Schedule

100-level courses that contain the (g) are open to graduate students.

Classes begin Monday, January 10, 2000

<table>
<thead>
<tr>
<th>Course #</th>
<th>Sec</th>
<th>Name</th>
<th>Hours</th>
<th>Instructor</th>
<th>Class Time/Day</th>
<th>Bldg/Room</th>
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<td>+ arr lab</td>
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<td>Classroom Computer Applications</td>
<td>3</td>
<td>L. Zeitz</td>
<td>4:00-5:25 T</td>
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<td>Th + arr lab</td>
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<td>L. Hansen</td>
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<td>+ arr lab</td>
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<td>3</td>
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<td></td>
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<td>Prerequisite: junior standing; written consent of instructor</td>
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<td>On-line</td>
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<td>Prerequisite: junior standing. Register through Continuing Education. 1-800-772-1746.</td>
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<td>Course Code</td>
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<td>Location</td>
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<td>Media Planning &amp; Production</td>
<td>Klink-Zeitz</td>
<td>3</td>
<td>4:30-7:20 W</td>
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<td>Marchesani</td>
<td>3</td>
<td>200-3:15 T Th</td>
<td>SEC 403</td>
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<td>1-4</td>
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<td>Zeitz</td>
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<td>arranged</td>
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<td>05</td>
<td>Multi-Media Communications</td>
<td>L Hansen</td>
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<td>arranged</td>
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<td>Television</td>
<td>Marchesani</td>
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<td>arranged</td>
<td>SEC 012</td>
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<td>L Hansen</td>
<td>1-4</td>
<td>arranged</td>
<td>SEC 405</td>
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<td>240:189</td>
<td>04</td>
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<td>Zeitz</td>
<td>1-4</td>
<td>arranged</td>
<td>SEC 405</td>
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<tr>
<td>240:205</td>
<td>01</td>
<td>Instructional Computing Design</td>
<td>Zeitz</td>
<td>3</td>
<td>6:00-8:50 Th</td>
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<td>240:210</td>
<td>01</td>
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<td>Smaldino</td>
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<td>6:00-8:50 T</td>
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<td>240:235</td>
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<td>McDonald</td>
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<td>4:30-7:20 W</td>
<td>PLS 252</td>
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<td>240:260</td>
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<td>Advanced Media Projects</td>
<td></td>
<td>1-4</td>
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<td><strong>A total of 4 hours in each section may be earned. Prerequisite: written consent of instructor.</strong></td>
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<td>Computer Applications</td>
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|             |         | **Prerequisite:** 240:205.**
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<th>Time</th>
<th>Course</th>
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<th>Instructor</th>
<th>Class Schedule</th>
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<td><strong>Multi-Media Communications</strong></td>
<td>240:131</td>
<td>L. Hansen</td>
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<td><strong>Television</strong></td>
<td>240:150</td>
<td>Marchesani</td>
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<td><strong>Readings in Media</strong></td>
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<td>1-3 Zeitz</td>
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<td>1-4 L. Hansen</td>
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<tr>
<td>02</td>
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<td></td>
<td>1 L. Hansen</td>
<td>5:00 M SEC 403</td>
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<td><strong>Practicum</strong></td>
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<td>2-3 Smaldino</td>
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<td><strong>Research</strong></td>
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<td>2-6 Smaldino</td>
<td>SEC 614</td>
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**Fall 1999 | Spring 2000 | Summer 2000 | Fall 2000**

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Last Update: March 10, 2000
### Summer 2000 Course Schedule

100-level courses that contain the (g) are open to graduate students.

Classes have variable start dates. Please observe specified dates.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Sec</th>
<th>Name</th>
<th>Hours</th>
<th>Instructor</th>
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<td>Photography</td>
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<td>240:170g</td>
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<td>Principles of Publication Design</td>
<td>3</td>
<td>Hansen</td>
<td>Online independent study begins May 8. Class meetings: May 20 8-5 May 21 10-5 May 27 8-5 May 28 10-5</td>
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<td>01</td>
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<td>3</td>
<td>Zeitz</td>
<td>May 12 6-9 PM May 21 9-5 June 3 9-5 June 4 10-5 Remainder of class work will be performed</td>
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### 8-Week Session June 5 - July 28

<table>
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<th>Course Title</th>
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<th>Instructor</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>240:150g</td>
<td>Educational Television Production</td>
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<td>Marchesani</td>
<td>12:45-3:15 Th</td>
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<tr>
<td>240:160</td>
<td>Media Projects</td>
<td>1-4</td>
<td>Smaldino</td>
<td>安排</td>
<td>SEC 614</td>
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<td></td>
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<td>Hansen</td>
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<td>Hansen</td>
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<td>Marchesani</td>
<td>安排</td>
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<tr>
<td>240:260</td>
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<td>1-4</td>
<td>Smaldino</td>
<td>安排</td>
<td>SEC 614</td>
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<td>Hansen</td>
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Prerequisites and requirements are indicated in the schedule.
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<th>Credits</th>
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<td>6:30-8:30 M</td>
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<td>2-6</td>
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**First 4-Week Session: June 5 - June 30**

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<th>Credits</th>
<th>Time</th>
<th>Days</th>
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<tr>
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<td>80</td>
<td>Zeitz</td>
<td>3</td>
<td>12:10-2:20</td>
<td>Daily</td>
<td>SEC 127</td>
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<td>240:139g</td>
<td>80</td>
<td>Velders</td>
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**Second 4-Week Session: July 3 - July 28**

<table>
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<th>Time</th>
<th>Days</th>
<th>Location</th>
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<tr>
<td>240:031</td>
<td>90</td>
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<td>3</td>
<td>9:50-12:00</td>
<td>Daily</td>
<td>SEC 127</td>
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**Fall 1999 | Spring 2000 | Summer 2000 | Fall 2000**

Last Update: March 10, 2000
Fall 2000 Course Schedule

100-level courses that contain the (g) are open to graduate students.

Classes begin Monday, August 21, 2000

Last Update: March 10, 2000
Program Faculty:

- Sharon Smaldino, Ph.D., Professor and Graduate Coordinator, Sharon.Smaldino@UNI.edu, 319.273.3250
- Lisa Hansen, Instructor, Lisa.Hansen@UNI.edu, 319.273.2368
- Leigh Zeitz, Ph.D., Associate Professor, Leigh.Zeitz@UNI.edu, 319.273.5890

Last Update: March 10, 2000
Office and Activities:
University of Northern Iowa
Schindler Education Center
Room 614
Cedar Falls, IA 50614
Dr. Sharon Smaldino, Coordinator
phone: 319.273.3250

Click here to view a campus map. Use the internet browser Back button to return to this page.

For program information please contact Sharon.Smaldino@uni.edu

Faculty offices are located in room 405 of the Schindler Education Center.

Last Update: March 10, 2000
Click a hyperlink below to access the homepage for the course.

240:031 Educational Media

Last Update: March 10, 2000
In order to assist students in the program, this page of Internet resources is provided as a jumping off point. Students are encouraged to submit URL’s for websites they have found helpful. Inclusion of hyperlinks does not constitute endorsement of any site by UNI.

### Computers
- Apple Computer Information
- Cross-Platform General Information
- Updates/Software
- Windows/PC Information

### Desktop Publishing and Webpage Design

### Education
- Distance
- General Information
- K-12

### Educational Technology Online

### Links for Fun

### Miscellaneous Links

### Online Communication & Storage

### Reference Materials

### Search Engines

Last Update: March 10, 2000
Computer Resources on the Internet

Student Resources > Computers

Four general categories of computer resources available have been created. The resources provided are not all that is available, but should provide a good foundation of information.

- Apple Computer Information
- Cross Platform Computer Information
- Software/Updates
- Windows Computer Information

Last Update: March 10, 2000
Apple Resources in the Internet

A plethora of sites devoted to Apple Computers exist on the internet. The hyperlinks below are regarded by many to be the more informative sites available. The site listed in the section Online Resources cover a variety of areas and issues.

Hardware

- Focus on Mac Hardware [http://machardware.about.com/compute/machardware/](http://machardware.about.com/compute/machardware/)
  This extensive and informative site is an About.com resource site. A free newsletter devoted to Mac hardware issues is available. This site is very frequently updated.

Mac Operating Systems

  This is another well done About.com site. A free newsletter about Mac O/S is available. This site is updated on a regular basis.

Online Resources

  This site boasts an extensive collection of information for every Mac product made. Very good technical and configuration sections.
  Variety of destinations available at this site. Also several free Mac specific newsletters available for Email delivery.
  Good comparisons of Mac's and PC's. Good reference materials.
  Extensive collection of troubleshooting solutions for Macintosh.
  Good site to find out about Mac news from around the world.
  Online version of the same name print magazine.
  Online version of the print magazine.
- Macintosh Basics [http://kb.indiana.edu/menu/mac.html](http://kb.indiana.edu/menu/mac.html)
  Small collection of Mac specific topics in the Indiana University Knowledge Base.
  Mac news, resources, links and all things Mac at Microsoft.
  Stay abreast of the latest news related to Apple laptops.
- SiteLink [http://sitelink.net/](http://sitelink.net/)
  Good site with reviews, news, e-zines, and software for Macintosh.
- 20 Steps to a Happy Mac [http://www.minot.k12.nd.us/happy_mac.htm](http://www.minot.k12.nd.us/happy_mac.htm)
  Good troubleshooting guide to help keep your Mac happy.

Support - Apple

  Search the Apple database for help with Macintosh problems.
  Link directly to the technical information library at Apple.

Student Resources > Computers > Apple

Last Update: March 10, 2000
Cross Platform Computer Information

These sites have information which is cross-platform in nature.

Hardware

- CD Media World http://www.esware.net/empire/hardware/cdrom/cd_main.htm
  Good information resource related to CD-ROM's and DVD's.
- USB Workshop http://www.usbworkshop.com/
  Online resource site for all USB components.
- USB.org http://www.usb.org/
  This site is sponsored by USB Implementers Forum, the creators of USB technology.

Modem’s

- 56k=Unreliable http://808hi.com/56k/index.htm
  Good site devoted to 56k and V.90 modem issues.

MP3 Resources

- MP3 http://www.mp3.com/
  The best site for MP3 information and downloads.

Online Reference Materials

  Search for definitions for over 1,400 different file extensions. Search by entering the 3 letter
  extension name.
- Indiana University Knowledge Base http://kb.indiana.edu/
  This site has a database of over 6,000 topics related to computing. Search using keywords.

Virus Information

- Computer Virus Myths Homepage http://kumite.com/myths/home.htm
  Before forwarding that latest warning you’ve received about a virus, check here to see if the
  warning is legitimate or not.
  Search for information on the over 47,000 different known computer viruses.

Last Update: March 10, 2000
Software on the Internet

Student Resources > Computers > Software

These links represent the better sites on the Internet to download freeware or shareware.

Cross Platform

- CNet Download.com http://download.cnet.com/
  Very good collection of available software downloads. You can also subscribe to a daily Email newsletter highlighting the newest software added to the site.
- File Mine http://www.filemine.com/
  Good site to find Apple and Windows free/share-ware. Subscribe to the weekly newsletter highlighting software available.
- Tucows.com http://www.tucows.com/
  Find both Apple and Windows platform free/share-ware here, as well as software for PDA's.

Windows Platform Only

- Completely Free Software http://www.completelyfreesoftware.com/
  Listings only for Windows & DOS freeware.
- Rocketdownload.com http://www.rocketdownload.com/
  Windows platform software only.

Last Update: March 10, 2000
Windows Resources on the Internet

There are enough Windows related internet sites to sink a battleship! The hyperlinks provided here are regarded the better sites available. The resource section contains those hyperlinks which cover a number of different areas relating to PC maintenance.

Hardware

- Focus on PC Support http://pcsupport.about.com/compute/pcsupport/
  Excellent About.com resource devoted to PC hardware concerns.
- Microprocessor Resources http://www.x86.org/
  Excellent online resource site for anything related to PC microprocessors.
- Naked PC http://www.thenakedpc.com/
  This site was created by and is maintained by Dan Butler, author of the book The Unofficial Guide to PC's. Subscribe to the site's Email newsletter.
  One of the internet's premier sites for detailed PC reference information.
- PC Mechanic http://www.pcmech.com/
  At this site you'll find both hardware and software information.
- Tom's Hardware Guide http://tomshardware.com/
  Very good site to find information regarding PC hardware.

Resources

- Annoyances.org http://www.annoyances.org/
  Visit this site to research the database of cataloged Windows bugs and annoyances and find out about known fixes.
- Bootdisk.com http://www.bootdisk.com/
  Wide variety of utilities, tweaks, patches, and drivers available at this site.
- Byte.com http://www.byte.com/
  Online version of the print magazine.
- InfiniSource http://www.windows-help.net/
  Good site to get help with any Windows problem.
- MyHelpDesk.com http://www.myhelpdesk.com/
  Sign-up for free and this site and have access to an extensive collection of help materials.
- WinMag.com http://www.winmag.com/
  Online version of the print magazine.
- Woody's Watch http://woodyswatch.com/
  Award winning author Woody Leonhard publishes three free Email newsletters - Woody's OFFICE Watch, Woody's ACCESS Watch, and Woody's WINDOWS Watch. Subscribe to one or all at this site, and search the archives.
- ZDNet Help and How-to http://www.zdnet.com/zdhelp/
  Very reliable site to find anything needed to keep your PC running trouble free.

Updates - Drivers

- Frank Condron's World O'Windows http://www.worldowindows.com/
  Find updates and drivers for over 880 different companies.
- Updates.com http://updates.zdnet.com/
  Find the latest software updates for PC's here.
- WinDrivers.com http://www.windrivers.com/
Considered by many to be one of the best online resources for Windows drivers.

Windows O/S

- Focus on Windows http://windows.about.com/compute/windows/
  Excellent About.com site devoted to Windows O/S issues.
- Microsoft Online Support http://support.microsoft.com/support/default.asp
  Search the Microsoft Knowledge Base.
  Find information for all things Windows at this site.
- WinMag.com http://wintune.winmag.com/tips/
  Find tips for all Windows O/S products.
- WinMD.com http://www.winmd.com/
  Find information about Windows 95, 98, NT, and 2000 registry. This site is updated almost daily.

Last Update: March 10, 2000
Desktop Publishing and Web Design

The hyperlinks in this section will provide a basic foundation to issues related to desktop publishing and web design.

Clip Art

  This site provides access to 45,000 free clip art items. If you subscribe to the site for a year you can have access to over 750,000 clip art items.
  This site provides listings to a variety of online resources related to clip art.
  Microsoft provides access to business, healthcare, and special occasion gifs and jpeg's.

Form Production

- FormSite.com HTML Form Builder [http://www.formsites.com](http://www.formsites.com)
  Create and store a form at their site.
  Create a form for use on your website for free.

Website Maintenance

  Have your site inspected in a number of areas for free.
  Analyzes load time, image size, traffic, and check for broken links for free.

Online Graphics Production

  Create professional looking graphics online in minutes.

Privacy Issues

  FAQ's for web users and publishers addressing privacy issues on the Internet.

Typography & Fonts

  Features new and free fonts for download.
  Excellent online resource to learn the rules of typography.
  Variety of resources including FAQs, style guides, and fonts for download.
- Paul's Toolbox (2 hyperlinks)
  - Monospaced Fonts [http://home.bsu.edu/prn/monofont/](http://home.bsu.edu/prn/monofont/)
  - Type & Typography [http://home.bsu.edu/prn/type.html](http://home.bsu.edu/prn/type.html)
  Both links have good information.
Webpage Design

- BigNoseBird.com [http://www.bignosebird.com/]
  Find free CGI scripts, tutorials, essential HTML tricks and more.
- CGI Resource Index [http://www.cgi-resources.com/]
  Over 2,000 CGI related resources available.
- Fine Points [http://projects.edtech.sandi.net/staffdev/tpss99/finepoints/index.htm]
  Online tutorial addressing the difference between great and good webpage design.
- HTMLGoodies [http://www.htmlgoodies.com/]
  Excellent site created by and maintained by Joe Burns, author of the books HTML Goodies and JavaScript Goodies.
- JavaCity 2000 [http://www.ic2k.com/javacity.html]
  Provides over 400 Java Scripts and Java Applets for download to your site.
- Lockergnome.com [http://www.lockergnome.com]
  Chris Pirillo's site. He's the author of Poor Richard's Email Publishing and a UNI graduate.
- NeatNetTricks [http://www.neatnettricks.com/]
  Good site providing tutorials about design, as well as access to a newsletter.
  Online spreadsheet of the 216 web safe colors.
- Web Pages That Suck [http://www.webpagethatsuck.com/]
  Companion site to the book of the same name.
- Webmaster Resources [http://www.webmaster-resources.com/]
  Good site featuring a variety of tutorials, book and software recommendations, and various tools for the webmaster.
- Webmaster's Reference Library [http://www.webreference.com/]
  Features access to tips and tutorials about web design.

Student Resources > Desktop Publishing

Last Update: March 10, 2000
Three general categories of educational materials available have been created. The resources provided are not all that is available, but should provide a good foundation of information.

- Distance Education
- General Information
- K-12 Education

Last Update: March 10, 2000
Distance Education Resources

Student Resources > Education > Distance Education

These hyperlinks will assist you in exploring the area of distance education.

Distance Learning Resources

PBS maintains a wide selection of information related to distance education and adult education, including telecourses.

- Distance Education Clearinghouse [http://www.uwex.edu/disted/home.html](http://www.uwex.edu/disted/home.html)
This site is maintained by the University of Wisconsin and provides access to a variety of resources relating to distance education.

- Distance Learning Education [http://www.rapides.k12.la.us/hrl/edae4750.html](http://www.rapides.k12.la.us/hrl/edae4750.html)
This site provides a variety of information on issues of distance learning.

- Distance Learning Resource Network [http://www.wested.org/tie/dlrn/](http://www.wested.org/tie/dlrn/)
Aimed mostly at K-12 education, this is the dissemination project for the U.S. Department of Education Star Schools Program.

Last Update: March 10, 2000
General Education Information

This collection of hyperlinks provide access to a variety of online education resources. Many of these sources address both K-12 and adult/distance education.

ERIC Resources

- Ask ERIC http://www.askeric.org/
  This is the entry point for all ERIC resources.
- ERIC Clearinghouses http://www.accesseric.org/sites/barak.html
  This link will take you directly to all the ERIC clearinghouses.
- ERIC Training Slide Show http://www.accesseric.org/resources/eric_train.html
  This site is a new online training site to learn how to effectively use ERIC resources.

General Education Information

- Apple Education site http://www.apple.com/education/
  From this hyperlink you can access a wide variety of educational resources, including Apple Learning Interchange.
- Microsoft Education site http://www.microsoft.com/education/
  This site provides access to a variety of online educational information, including a number of tutorials for Office products.
- Technology Trainer http://thenode.org/trainer/
  This link provides access to information regarding adaptive technology as well as online tutorials.

Iowa Communications Network

- About the ICN http://www.icn.state.ia.us/

Online Resources

- National Center for Education Statistics http://nces.ed.gov/
- National Education Association http://www.nea.org/

Student Resources > Education Resources > General Information

Last Update: March 10, 2000
The hyperlinks on this page cover a variety of areas related to the K-12 classroom environment. In the case of the Email sites listed, they are included here because they focus on the K-12 classroom.

### Classroom Resources

- **Ed's Oasis** [http://www.edsoasis.org/](http://www.edsoasis.org/)
  This site has won a number of awards. Searchable sections on classroom issues, lesson plans, and teacher treasures.
- **EDSITEment** [http://edsitement.neh.gov/](http://edsitement.neh.gov/)
  This is a joint project with the National Endowment for the Humanities, Council of the Great City Schools, MCI WorldCom, and the National Trust for the Humanities. Features humanities websites, lesson plans, and an Email and print-based update service.
  Gain access to a large assortment of educational materials on the internet.
  Connecting educators to lesson plans and other materials to facilitate the teaching of environmental issues, human rights, and to connect K-12 education with social action.
  Searchable database of instructional materials, including software, lesson plans, and websites, for the K-12 classroom.
  One stop searching for educational resources supported by all agencies of the federal government. Searchable by subject area and keywords.
- **Free Worksheets** [http://www.freeworksheets.com/](http://www.freeworksheets.com/)
  Teachers can access over 2,000 different reproducible worksheets for use in the classroom.
- **Global Schoolhouse Network** [http://www.globalschoolhouse.com/](http://www.globalschoolhouse.com/)
  Free membership allows you access to an array of materials and services.
- **Library of Congress American Memory Collection** [http://memory.loc.gov/ammem/amhome.html](http://memory.loc.gov/ammem/amhome.html)
  Gain access to 61 different online historical collections of the National Digital Library.
  Award-winning website focusing on interactive math lessons.
- **PBS Teacher Source** [http://www.pbs.org/teachersource/](http://www.pbs.org/teachersource/)
  Searchable subject areas section coinciding with PBS videos and contributions by several education specialists each month.
- **Puzzlemaker** [http://puzzlemaker.school.discovery.com/](http://puzzlemaker.school.discovery.com/)
  At this site you can create puzzles and games for inclusion in newsletters, flyers, handouts, or classroom assignments for free.
  Site is maintained by the State of Wisconsin Educational Communications Board. The “Surf Report” focuses on a different subject area each month and highlights websites for use in classrooms.
- **Teach With Movies** [http://www.teachwithmovies.org/](http://www.teachwithmovies.org/)
  Award-winning site whose focus is to help teachers use film’s and video’s in the classroom effectively. Site includes a database of several hundred recommended video’s for classroom use.
- **Teachers First** [http://www.teachersfirst.com/](http://www.teachersfirst.com/)
  Good site to find both classroom resources and professional resources.
  Considered by many to be the premier site for teacher information online. Includes chat boards, chat rooms, lesson plans, and mail rings.
- ThinkQuest [http://www.thinkquest.org/]
  ThinkQuest is an international internet challenge. Students create interactive websites. Three divisions, junior, advanced, and student teachers. Searchable library of all student-authored entries.
- WNET School [http://www.wnet.org/wnetschool/index.cgi]
  Free registration at this site allows you access to a variety of resources, including a 9 part professional development series for teachers.

Email
- ePals.com [http://www.epals.com/]
  This is the world’s largest K-12 online classroom and electronic pen pal network, connecting over 1.5 million students and teachers worldwide.
- Every Mail [http://www.everymail.com/]
  This is included here because it is an Internet based Email system that supports 29 different languages. The sender enters their message in their native language and it is converted to the receiver’s native language.
  This is a new free service providing controlled Email accounts to schools and students.
- intercultural Email Classroom Connections [http://www.iecc.org/]
  This is a free service to help teachers link with partners in other countries and cultures for Email classroom key pal and classroom projects.
- KeyPal’s Club [http://www.mightymedia.com/keypals/home.cfm]
  Free service helping teachers connect with registered users around the world to participate in Email key pal and classroom projects.

Lesson Plans
- A to Z Teacher Stuff [http://lessonplanz.com/]
  Over 1700 lesson plans at this site. They are searchable.
- Busy Teachers’ Website [http://www.ceismc.gatech.edu/busyt/]
  Search for lesson plans by subject area. This site has been awarded the “Top 5% Website” award.
- Gateway to Educational Materials [http://www.thegateway.org/]
  This site is sponsored by the U.S. Department of Education and is a project of ERIC. Search for educational resources by subject and grade level.
- Lesson Stop [http://www.lessonstop.org/]
  Good site for finding lesson plans. Subscribe to the twice monthly free Email newsletter to keep abreast of site updates.

State Education Standards
- Developing Educational Standards [http://putwest.boces.org/Standards.html]
  Standards for all 50 states are available at this site. Also view federal education standards as well.

Student Resources
- Ask Jeeves for Kids [http://www.ajforkids.com/]
  Search for internet resources by asking questions.
- Chicago Public Schools StudentZone [http://zone.cps.k12.il.us/]
  Good online resource site for students.
- How Stuff Works [http://www.howstuffworks.com/]
  Great site to find information on how a variety of things work.
- Kids Web [http://kidsvista.com/]
  Simple site for students to navigate and search of information targeted at the K-12 level.
- KidsClick [http://sunsite.Berkeley.edu/KidsClick/]
  Web search engine created by librarians for K-12 students.
- Letsfindout Kids Encyclopedia http://letsfindout.com/
  Students can access information on a variety of areas by searching on keywords.
- StudyWeb http://www.studyweb.com/
  Searchable site for K-12 students to research topics. It is searchable by both keywords and categories.

Technology Integration

- ClassWeb http://landmark-project.com/classweb/
  This site provides tutorials in a number of areas related to technology. The site also hosts an email discussion group related to teacher constructed class webs.
  Online version of the aforementioned publication. It may also be downloaded as a PDF file.
- eSchool News Online http://www.eschoolnews.org/
  Considered by many to be the #1 source for K-12 technology news and information.
- Landmarks for Schools http://landmark-project.com/
  Site created by David Warlick, author of Raw Materials for the Mind. Wide variety of resources and tools available, including Class Web.
- Tapped In http://www.tappedin.org/
  This site provides access to professional development and collaborative activities.
- TeacherZone http://www.zdnet.com/zdtv/callforhelp/teacherzone/
  Good educational resource site maintained by ZDNET. Includes information on classroom ergonomics.
- techLearning http://www.techlearning.com/
  Good site to find ideas, tools, and resources for integrating technology into the K-12 curriculum.

Student Resources > Education > K-12

Last Update: March 10, 2000
Educational Technology Resources on the Internet

Student Resources > Educational Technology Online

The resources on this page reflect only a small portion of websites devoted to educational technology.

Government Agencies

  Research available government publications, grant programs, and technology goals among other topics at this site.

National Organizations

- Association for Educational Communications & Technology http://www.aect.org/
  This group focuses on educational technology and its integration in the classroom. Also publishes several journals.
- Annenberg/CPB Projects Learner Online http://www.learner.org/edtech/
  The Annenberg/CPB Project has focused on a variety of research projects that examine and illustrate the effective use of educational technology in the classroom.
- Association for Educational Communications & Technology (AECT) http://www.aect.org/
  Very active national organization. This site provides access to a wide range of materials.
- Association for the Advancement of Computing in Education http://www.aace.org/
  The focus of this group is the use and role of information technology in education.
- Asynchronous Learning Networks (ALN) http://www.aln.org/
  The focus of this group is distance learning in asynchronous learning environments.
- Benton Foundation http://www.benton.org/
  Focuses on the broad area of communications in general. Excellent subarea on Communications Policy & Practice as well as the digital divide.
- EduCause http://www.educause.edu/
  Research current issues and topics, find conferences and seminars, and participate in discussion groups. Please note: EduCom is now a part of EduCause.
- International Forum of Educational Technology & Society (IFETS) http://ifets.ieee.org/
  This is a subgroup of the IEEE Learning Technology Task Force. Subscribe to the free Email newsletter and access the online publication Educational Technology & Society Journal.
- International Society for Technology in Education http://www.iste.org/
  An international organization that focuses on teachers helping other teachers use technology in the classroom.
- Milken Exchange on Educational Technology http://www.milkenexchange.org/
  The Milken Exchange funds a variety of projects, including the report Technology Counts 99 which can be accessed from this homepage.
- Re-inventing Schools http://www.nap.edu/readingroom/books/techgap/welcome.html
  This site is jointly funded by the National Academy of Sciences and the National Academy of Engineering. It provides access to resources related to issues of technology integration in the classroom.
- Schwab Foundation for Learning http://www.schwablearning.org/
  A number of excellent resources can be found at this site.
  Research educational technology issues, as well as find adaptive technology resources.

Professional Development
• Professional Competency Continuum Online Assessment Tool http://www.milkenexchange.org/welcome.html
  A two-part online assessment tool that evaluates your level of technology use and integration in the classroom.
• Region 20 Education Service Center Workshop Materials http://www.esc20.net/techserv/materials/
  Find information online regarding a variety of computer operating systems and productivity tools.
• Technology Coordinators Resource Center http://minot.com/~nansen/
  Good site to find a variety of materials for those responsible for technology in a school.

Regional Educational Laboratories and Technology Consortia (These are funded by the U.S. Department of Education)

• Regional Educational Laboratories http://www.nwrel.org/national/index.html
  This page found at the NorthWest Regional Educational Laboratories provides links to all 9 funded educational laboratories. Each has a different focus. Of particular technology interest are the Mid-continent Regional Educational Laboratory (McREL) http://www.mcrel.org/, North Central Regional Educational Laboratory (NCREL) http://www.ncrel.org/, and Northwest Regional Educational Laboratory (NWREL) http://www.nwrel.org/. A good subunit of NWREL is Library in the Sky http://www.nwrel.org/sky/.
• Regional Technology Consortial http://www.rtec.org/
  Access links to all 6 regional units. As with the REL's, each unit has a different focus.

Publications, Reports & Surveys

• Communications Policy & Practice - Digital Beat http://www.benton.org/DigitalBeat/
  Online resource examining the issues surrounding digital TV and the internet.
• Education Week on the Web (Two hyperlinks)
  Special Reports http://www.edweek.org/sreports/
  Access a number of surveys and evaluations conducted by and reported by the publishers of Education Week.
  This Week in Education http://www.edweek.org/
  Stay abreast of the latest news on the education front.
  The publication by the Department of Education is available as a hypertext document or as a downloadable PDF.
• ERIC Links http://ericir.syr.edu/ithome/links.htm
  A variety of publications are available in the Educational Technology section.
• Exploring Technology and School Reform http://edweb.qsn.org/
  Hyperbook exploring the worlds of educational reform and information technology.
  Interesting study conducted by Mathematica Policy Research, Inc.
• From Now On: The Educational Technology Journal http://www.fno.org/
  Online publication by Jaime McKenzie, author of the books Beyond Technology: Questioning, Research, and the Information Literate School and How Teachers Learn Technology Best.
• JALN and ALN Magazine http://www.aln.org/
  Both are published by Asynchronous Learning Network. ALN focuses on asynchronous learning environments.
• Learning & Leading With Technology http://www.iste.org/L&L/archive/
  Each month the publication focuses on a different aspect of educational technology and integration in the curriculum.
• Learning Technologies Report http://www.thenode.org/ltreport/
  New issues posted quarterly focusing on different topics each time. Searchable archive of past issues.
• Plugging In: Choosing and Using Educational Technology http://www.ncrel.org/sdrs/edtalk/loc.htm
  Online version of a report published in 1995 on technology reform. Also available as a PDF download.
  An archive of publications by the Department of Education dating back to 1994.
  This 1998 survey had more than 4,000 teachers, technology coordinators, and school principals participate.
• Technology Source http://horizon.unc.edu/TS/archives.asp
  Publication by the University of North Carolina. Online archives back to 1997.

Resources

• ERIC Clearinghouse on Information & Technology http://ericir.syr.edu/ithome/
  View all materials related to information and technology that are a part of ERIC at this site.
• PBS Teacher Source (2 links)
  Teaching with Technology homepage http://www.pbs.org/teachersource/teachtech.htm
  Access a number of items related to teaching with technology.
  Teaching with Technology article archive http://www.pbs.org/teachersource/whats_new/techknow/archives.shtm
  Online archive of the monthly articles posted at the Teaching with Technology site.
• Teaching Through Technology http://www.ecb.org/ttt/index.htm
  Site is run and funded by the Wisconsin Department of Education.
• Tech: Making the Grade http://www.makingthegrade.org/about.html
  Interesting online exhibit funded by the NEA examining the area of technology in the classroom.
• Technology Transfer and Economic Development Program http://www.t2ed.com/
  Joint program with the Department of Energy and Westinghouse Electric Company to make available over 500,000 pages of materials, including grant writing materials, assessment tools, needs assessments, and training tools. Complete an online application and once approved you are allowed to download the materials free of charge.

Technology Standards

• National Educational Technology Standards for Students http://cnets.iste.org/splash.htm
  This initiative is supported by the U.S. Department of Education, NASA, Milken Exchange, and Apple Computer.
• State Standards http://putwest.boces.org/Standards.html
  Review educational standards by state. Links also available for Canadian standards.

Universal Access

• Center for Applied Special Technology http://www.cast.org/
  Explore the latest news in the area of universal design of websites. Includes a link to “Bobby” which is a program that will evaluate your website and test it for ease of access for disabled persons.
• Equal Access to Software and Information http://www.rit.edu/~easi/
  This group focuses on the need to provide students and professionals with disabilities with equal access to information on the internet.

Student Resources > Educational Technology Online

Last Update: March 10, 2000
These links provide access to a variety of "fun" sites, including Easter eggs, electronic cards, virtual flowers, humor online, and online jigsaw puzzles.

**Easter Eggs**
  Easter eggs are amusing tidbits hidden in products by their creators.

**Electronic Cards**
  This site provides the most comprehensive collection of online electronic cards.

**Humor Online**
  The Darwin Awards commemorate the individuals who have suffered fatal misadventures.
  Daily comic strip with a humorous animal theme.

**Jigsaw Puzzles**
  This site has an archive of over 200 puzzles to try.

**Virtual Flowers**
  Choose from a variety of seasonal virtual floral arrangements to send to someone special.
  Send virtual flowers or digital postcards to that special someone in your life.

Last Update: March 24, 2000
Miscellaneous Links

Student Resources > Miscellaneous Links

These links didn't seem to fit into any of the other categories and so ended up here.

Media Information

  This site serves as a national resource regarding the impact of media on children and families.

Online Comparison Pricing and Product Search

  Put a book title into the search field at this site and compare 41 different bookstores at once.
  Search for the best prices for a variety of hardware and software needs.
  At this site you can comparison shop for books, music and videos.
  An Excite site which allows you to search for both products and product reviews. Results can be sorted by best price. Selection of products is extensive.
  Search for computer related items.
  Another site which allows you to search for the best price for computer related items.

Online Free Stuff

  This site provides access to a variety of free internet resources.
  A comprehensive resource of links for freebies on the internet.

Online Internet Research

  Create an online research instrument at this site for free.

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A variety of sites are available to meet your needs for online communication. Each site has different features and rules regarding use. Please be aware that most of these are advertising-based and so ad's will appear somewhere on the webpage or site. Some of the webhosting sites provide 25 MB of space and others provide 50 MB of storage space. Read the user information carefully.

**Bookmark Storage**

  With their software installed you can add a bookmark to your online collection.

**File Storage**

- Driveway [http://www.driveway.com/](http://www.driveway.com/)
- iDrive [http://www.idrive.com/](http://www.idrive.com/)
  you can sideload MP3 files from MP3.com directly to iDrive.

**Free Web Space (for Webpages)**

- Free Webpage Provider Review 4.0 [http://fwpreview.ngworld.net/fwp/](http://fwpreview.ngworld.net/fwp/)
  This database is subdivided by country, language, and disk space provided.
- FreeWebspace.net [http://www.freewebspace.net/](http://www.freewebspace.net/)
  This site serves as a clearinghouse to find free webspace.
  No HTML knowledge is needed.

**Internet Email Providers**

  A service of Snap.com and NBC. Upgrade to Pro and get 20 MB of storage.
  A free web-based Email service that allows you to communicate in 28 different languages.
  At this site search for free faxing, web hosting, web-based Email, and voicemail services.
  A service of MSN.com.
  Free registration allows you to Email files up to 50 MB.
• Yahoo [http://mail.yahoo.com/]

Mailing List - Education

• Blackboard.com [http://www.blackboard.com/]
  Setup a course site so all your learning materials, class discussions, and even online tests are in one location.

• Electric Schoolhouse [http://www.eschoolhouse.com/]
  A place where parents, teachers, and students can connect.

• High Wired.com [http://highwired.net/]
  A variety of free school website builders are available.

• Homework Now [http://www.homeworknow.com/]
  An on-line service that allows teachers to post classroom assignments on the internet.

• K-12 Nation.net [http://www.k12nation.net/]
  Another site where educators, parents and students can connect.

• Lightspan PageOne [http://www.lightspan.com/]
  A site to help educators organize web resources in a password-protected environment.

• nSchool.com [http://www.nschool.com/]
  A site that allows communication between schools, students, teachers, administration, and families.

• SchoolCity.com [http://www.schoolcity.com/]
  Teachers can put content on the internet without having to know HTML editing.

• SchoolLife.net [http://www.schoollife.net]
  A place where schools can put their materials online for students.

• Schoolnotes.com [http://www.schoolnotes.com/]
  Teachers can put homework and classroom assignments on the internet.

• ThinkWave.com [http://www.ThinkWave.com/]
  Teachers have access to a broad range of classroom management tools.

• TrackStar [http://scrtec.org/track/]
  On-line interface that helps teachers organize and annotate internet resources and file them in the TrackStar database.

Mailing List - General

• eGroups.com [http://www.egroups.com/]
  Start an Email list free, or join on of the existing ones.

• Email Discussion Groups Resources [http://www.webcom.com/impulse/list.html]
  Good one-stop information resource about Email discussion groups or "lists".

• Intranets.com [http://www.intranets.com/]
  Rather than the information being sent via Email, users log into a specific intranet site. Great for groups working on projects.

• ListBot [http://www.listbot.com/]
  Free service of MSN which allows you to setup and administer an Email based discussion list.

• Liszt, the mailing list directory [http://www liszt.com/]
  Liszt allows you to search their database of over 90,000 mailing lists. Mailing lists are a powerful way of receiving content in your specific interest areas.

• Take It Offline [http://www.takeitoffline.com/]
  Free instant personal discussion space for your topic of the moment. Good place to host a discussion topic that may not fit your mailing list's main focus.

• Topica.com [http://www.topica.com/]
  Start a new list or join one of the existing lists for free.

Webpage Alternatives

• CoolBoard.com [http://www.coolboard.com/]
  Create a free message board for your existing website.

• eBoard.com [http://www.eboard.com/]
  Put information online quickly without having to create a webpage.

Webrings
  Webrings are an efficient way of finding specific content on the internet. Websites link to other websites that are specific to their content area.

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Reference Links

These links will provide access to a variety of online reference sites.

All Topics, All Experts

- AllExperts.com http://www.allexperts.com/
  A cast of thousands of experts for various areas will answer your question, or search their archive for previous answers.
- Knowledge Hound http://www.knowledgehound.com/
  Learn how to do almost anything online for free.

Census Bureau

- Census Bureau Gazetteer http://www.census.gov/cgi-bin/gazetteer/
  Search for census data by city or zip code.

Comprehensive Reference Resource

  Access an almanac, calculator, calendar, dictionary, encyclopedia, and many other tools.

Copyright and Fair Use Resources

- Crash Course in Copyright http://www.utsystem.edu/ogc/intellectualproperty/cpritindex.htm
  Good site created by the University of Texas system.
- Intellectual Property, Copyright and Fair Use Resources http://www.albany.edu/~ls973/copy.html
  This site provides a very comprehensive list of internet resources related to these areas.

Dictionary

- Merriam-Webster Online http://www.m-w.com/
  Good online dictionary.

Encyclopedia

- Britannica Online http://www.britannica.com/
  The name says it all! Good online reference.
- Encarta Online http://encarta.msn.com/
  Online version of Microsoft Encarta. The free online version isn't as comprehensive as what's available with a subscription.

Find the Best of the Internet

- The Internet Tourbus http://www.tourbus.com/
  Search the online archives or subscribe to the free twice weekly award winning Email newsletter highlighting the very best of the internet.

Newspapers Online
- Len-Net Entertainment Web http://www.lni.net/cowabunga/newspapers.htm
  Find links to newspapers in all 50 states as well as national newspaper publications at this site.

Online Map Services

- MapQuest.com http://www.mapquest.com/
  One-stop travel information site. Get local tourist information, driving directions, real-time traffic reports, and print maps for world-wide locations.

Online Product Reviews

- Review Finder http://www.reviewfinder.com/
  Browse reviews for hundreds of electronic items from cameras to video products.

Phone Listings

- US West Dex Phone System http://www.uswestdex.com/
  Search either the white or yellow pages for individuals or businesses by state.

Research Paper Citation Styles

- Citation Style for Research Papers http://www.liunet.edu/cwis/cwp/library/workshop/citation.htm
  Find information for a variety of writing styles including APA, MLA, and Chicago.

Volunteer Opportunities

  Find a volunteer opportunity in your area online.

World Time

  Find out what time it is and sunrise and sunset in any part of the world.

Worldwide Holidays and Festivals

- Multi-Cultural Calendar http://www.kidlink.org.80/KIDPROJ/MCC/
  Search a worldwide holiday database.
- Worldwide Holiday and Festival Site http://www.holidayfestival.com/
  Search for holiday's and festival's by country or religion.

Zip Codes

- Zipinfo.com http://www.zipinfo.com/
  Search for zip codes by city or state, or find zip codes for cities and states.

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Search Engines

This list can serve as a jumping off point for search engines and it is not an exhaustive listing of all possible search engines. The major ones have been included here.

Comparison's and Information on Search Engines

  Good online article about the secrets of search engines.
- Search Engine Showdown http://www.notess.com/  
  Excellent collection of materials regarding search engines and search strategies, especially Search Engine Showdown.
- Search Engine Watch http://www.searchenginewatch.com/  
  This site has a variety of information about search techniques, search engine listings, and submission tips.
- Search IQ http://www.searchiq.com/  
  Another good site providing comparisons of search engines and meta-search engines.

Search Engine List

- About.com http://www.about.com/  
- AltaVista http://www.altavista.com/  
- Ask Jeeves http://www.askjeeves.com/  
- Deja.com http://www.deja.com/  
- Dogpile http://www.dogpile.com/  
- Fast Search http://www.alltheweb.com/  
- Go Network http://www.go.com/  
- Google http://www.google.com/  
- GoTo.com http://www.goto.com/  
- HotBot http://www.hotbot.com/  
- Northern Light http://www.northernlight.com/  
- Yahoo http://www.yahoo.com/  

Search for Available Domain Names

- Network Solutions http://www.networksolutions.com/  

Search for Images

- Ditto.com http://www.ditto.com/  

Search for Rich Media

- Lycos Rich Media Search http://www.richmedia.lycos.com/  
- MP3.com http://www.mp3.com/  

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