

# COMPUTER & INFORMATION LITERACY

## INFORMATION LAW & ETHICS TUTORIAL

The development of this document was a collaborative effort among the following authors: Dr. Thomas Hilton, Cathy Bell, Lucille Brizzee, Penny Christensen, Becky Kendall, Keven Kendall, Naloni Marriott, Jolene Morris, Toni Simmons, and Stacie Gomm. It is important to note that ethics are inherently culturally biased, and that those presented here are based on the ethics of American culture.

*True computer literacy is not just knowing how to make use of computers and computational ideas. It is knowing when it is appropriate to do so. -Seymore Paperts, Mindstorm*

You know computers have changed civilization. However, there are a couple of things you may not know yet -- things you need to understand, in order to appropriately use computers and to access information. The things you'll read about in this document have to do with the ethical use of computers. The reason ethics are important in computing isn't the computers; it is the information stored in the computers. Information is awfully intimate stuff. It comes from human brains, and we covet it -- lust after it, even. We work to generate it, buy it, sell it, and sometimes misuse it. The reason computers enter into this discussion is because they are such great information processing tools. In many ways, this presentation is about information ethics.

In general, ethics are the rules of right and wrong behavior. The *Merriam-Webster Collegiate Dictionary* defines ethics as "the principles of conduct governing an individual or a group" (Merriam-Webster, Inc. <http://www.m-w.com/cgi-bin/dictionary/ethic>, 2001).

Information ethics are the rules that define right and wrong behavior in the computing professions. They are the basis for trust and cooperation among workers and organizations. For this reason, and because of some much-publicized ethics problems in the computer field, ethical computing has gotten a lot of attention lately. This means that now more than ever all people who use a computer, including you, need to know what's expected of them -- what's OK to do with a computer and what's not OK. In most cases the owner of a given computer defines the ethics and/or rules required to use that computer.

It is important to realize ethics and laws are not the same. Laws are established to protect software developers (copyright and licensing) and users (privacy issues). Laws have penalties associated with them. If you don't obey the law, you are punished. Ethics, however, are based on principles and values. In reality, there is no global punishment for ethics violation, although individual companies, schools, etc. may have rules that, if violated, have punishments associated with them.

It is not illegal for a person to go to buy a fancy dress or suit, wear it for a special occasion with the tags tucked in, then return it the next day; however, it is unethical. Sometimes laws are based on ethical principles, meaning ethics can be the predecessor of laws. Computer use escalated much faster than the development of laws and policies which protected the users, programmers, and developers. We relied on ethics to control people's behavior. With so many values, it was hard to decipher who was right and who was wrong. Laws have finally defined the parameters for everyone to follow, but laws do not exist in every realm of the information industry, so we still rely on ethics to control many situations.

Ethics usually fall into three categories -- professional, social and individual. An employer or company usually defines professional ethics and employees are required to follow them. The

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general principles underlying most of the ethical dilemmas you will confront in your career are addressed in the professional code of ethics defined by the company. Professional codes of ethics may not provide detailed guidance in all possible situations. You must have an inner sense of what is moral to be able to apply ethics in specific situations. This is where social and individual ethics play an important role. Social ethics are usually defined by society or a group and the primary values existing in that group. Individual ethics are usually defined by personal heritage and integral family values.

Many professional organizations have developed codes of ethics, which have been widely adopted as the basic code for many companies and universities. While the professional codes of ethics have slight differences in emphasis, they are in agreement on general principles.

It is important to note that not only professional organizations have Code of Ethics. Many higher institutions of learning also maintain a code of ethics. Usually, one of the sections deals specifically to plagiarism of Intellectual Property at the college or university. To view an example of a university's Code of Ethics, see the following:

**Utah State University:** <http://www.usu.edu/~stuserv/SCode/>. Article 5 Section 3 lists the violations of University standards.

**University of Utah:** <http://www.admin.utah.edu/ppmanual/8/8-10.html>. Section V defines "Academic Dishonesty" including plagiarism.

**Weber State University:** <http://weber.edu/ppm/6-22.htm> Article IV Section D part 7 mandates appropriate use of computer systems.

We cannot count on the legal system to be a complete and correct guide to moral behavior, either for us as individuals in society or as members of a profession. Nor can we expect the professional codes of ethics to be complete, consistent and correct for all situations. There is no formal monitoring for compliance and little penalty that can be assessed against violators. Goodness cannot be defined through a legalistic enumeration of dos and don'ts. People must be able to use their internal sense of ethics to fill the holes and resolve the conflicts that inevitably occur when following any code of ethics (Bowyer, *Ethics & Computing*, Computer Society Press, 1996).

### Copyright

Copyright is defined as the rights possessed by the author of a work. These rights include copying, reselling, leasing, lending, renting and/or distributing the material, publicly displaying or performing the work, and transferring the copyright. Having a copyright prohibits others from exercising these rights without permission. Copyright not only covers works by an author, artist, or composer, but also a computer programmer. When software was first being developed, copyright law did not protect these programs.

Before software fell under copyright laws, the contents of copyrighted works were apparent either directly (like a book) or indirectly (like sound recordings when played). Software hides the contents of the program and users only see the execution of the program. Revealing the program requires reverse-engineering (decompiling) which is not necessary

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for other copyrighted material. New laws have been enforced to protect software programmers.

The copyright law currently in effect is the federal Digital Millennium Copyright Act (DMCA), passed in 2000. While some provisions of this law are controversial and may be changed after being tested in court, most of the law has been solidly accepted by the legal community. The statements in this section are based on the accepted parts of the DMCA.

Any software or data created with a computer is owned by its creator and is automatically copyrighted as soon as it's in any tangible form. "Tangible" means it's recorded somehow. That is, you can't copyright a thought, but if you write it down the writing is automatically copyrighted without doing anything else. It is important to note that when a corporate employer hires someone to develop a program for the company, this is known as "work made for hire." Under this legal doctrine the employer (the corporation) owns the copyright and the employee forfeits all rights. This is not controversial in the corporate sector, but in the education sector it is possible to have a shared copyright between the school, instructors and developers. (Of course, this is up to the school.)

Many software developers have adopted the convention of showing copyright ownership by including the copyright symbol, ©, with the first year of publication and author's name on the **1)** packaging, **2)** disk or CD-ROM on which the software is distributed, **3)** source and object code, and **4)** execution of program. Developers usually file with the Copyright Office making ownership easier to prove. It is important to repeat that neither of these is required to "own" the copyright. Some people think it's legal to copy software that doesn't have a copyright notice or © symbol or otherwise, but that's not true. It's OK to copy software only with the owner's explicit permission. This means that, unless there's notice specifically granting permission to copy, software cannot be legally copied. Software owners generally make their wishes known in documents called license agreements.

**SCENARIO:** Jill just purchased a new game for her computer. Bill loves the game and wants a copy, but he cannot afford it. Bill asks Jill if he can borrow the CD and load the game on his computer. Is this all right under current copyright laws?

**SOLUTION:** Copyright allows the owner of the copyright to "distribute or lend" the program. Jill does not own the copyright; she owns a copy of the program, or a license to use the program, sold to her by the copyright owner. She cannot lend it to Bill to load on his machine. If Jill would read her "License Agreement," she would know exactly what is right and wrong regarding copying the software. This is not to say that you cannot lend or sell a book or a music CD that you have purchased to a friend or used book store. The First Sale Doctrine allows the purchaser of copyrighted material to resell the original purchased item. Software is often a gray area where software companies claim that their software is licensed, not sold.

### Software Licensing

Most license agreements include limitations on copying disks, installing software, and transferring programs to other users. License agreements are contracts between the user and copyright owner. Many software companies offer site licenses or special licenses for companies, schools or government institutions. Most commercially marketed software is

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copyrighted, so it can't be legally duplicated for distribution to others. (Beekman, *Computer Confluence*, Prentice Hall, 2001)

Here's an interesting but little-known fact: when you buy software, you're not buying the software itself. You're buying permission to use the software. The copyright holder still owns the software (that's right, the stuff you copy onto your hard drive isn't yours). The permission you buy is called a license (like a hunting license or a driver's license) and is defined by a license agreement that comes with the software. Usually the license agreement is printed in tiny type on the back of the box or on a piece of paper shrink-wrapped with the box. Most people never read it, since it's full of legalese that usually takes a magnifying glass to see clearly. Most of us have seen the sticker on the box, however, that says something like, "Breaking this seal means you agree to the terms of the license."

Although licenses vary widely in content, there are five general kinds as far as copyright protection goes: public domain, freeware, shareware, open source, and "all rights reserved." Whenever you read the word "software" you should understand that really means "software and data"; all the copyright protection that applies to software applies to computer data and information as well.

**Public domain.** Public domain software is not protected by copyright law; it is software that was either created with public funds (and is therefore already owned by the public) or the creator has forfeited these rights to the public. Since content is automatically copyrighted when put in tangible form, a creator must make special arrangements to add it to the public domain. The copyright on content can also expire and become public domain. No software is old enough for that to have happened, but it is very common in books and music. Disney recently successfully lobbied Congress to change the time a copyrighted work retains its copyright from 75 years to 95 years since its copyright on Mickey Mouse was about to expire, so Mickey would have become public domain.

**Freeware license.** Freeware is copyrighted software that is licensed to be copied and distributed without charge. Some freeware (Mozilla Firefox, PGP, AVG, Internet Explorer, etc.) is really good stuff, but it's not in the public domain. That is, freeware is free to use, but the software is still under the owner's control. Thus, most freeware licenses prohibit the sale or modification of the software without the owner's permission, and they often limit the groups that are able to get the software without paying. Often the software will be free for individual or educational use, but requires payment for use in a commercial environment.

**Shareware license.** Shareware is similar to freeware, in terms of distribution and installation of the software, except that the owner stipulates a purchase fee for permanent use. That is, the software is licensed for copying and sharing without charge, but only for evaluation purposes. Anyone who decides to use the software long-term is to pay a specified fee to the owner. There is usually no official system for collecting these fees; users are expected to pay on their own (honor system) in exchange for documentation, a more powerful version of the software, no more registration reminders, or some other enticement. More and more shareware is programmed to turn itself off after a certain period of time (30 or 90 days are typical) unless the owner buys a special activation code from the copyright owner. Much of the "free" software in the world is actually shareware.

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**Open Source or Free Software.** Free and Open Source software refers to the availability of source code. The software may be sold, so it may or may not be available at no cost. By providing the source code and stipulating that it remain open, programmers can add functionality and features to the software they purchase and even resell it, but they must provide the source code with their changes so that others may have the same access they did to change the source code. Some examples of Open Source software include Apache, Linux, OpenOffice, and PHP.

**Software license with all rights reserved.** Software with all rights reserved is licensed only for use by purchasers. Almost all the really good stuff (Word, Oracle, PhotoShop, Windows XP, etc.) is licensed this way, and its owners typically reserve all the rights given them under copyright law; you can't legally use it or even possess it without the owner's permission. This permission is usually defined very carefully in the license agreement. Although license agreements vary widely in content, a typical license agreement for software with all rights reserved has items like these in it:

- You can install and operate the software on only one PC at a time.
- You can make only one back-up copy of the software.
- If you give the software to anyone, you also give up permission to use the software.
- You are not to modify the software in any way.
- The software is not represented as fit for any particular purpose. (Yep—even if the box says "Do your taxes faster than ever," you cannot legally assume the software is fit for doing your taxes). This is to keep you from suing the company if their software wrecks your life.

Note that various state laws invalidate some of these provisions under certain circumstances, but usually they're binding. Do any of them pique your interest? You might find it worthwhile to read a license agreement sometime just to see what you actually bought.

Software piracy is simply the illegal copying of software. The estimated loss due to piracy is approximately \$39 billion per year globally. Conviction on the first offense can result in a fine of up to \$250,000 and a jail sentence of up to five years. (Bowyer, *Ethics & Computing*, 1996)

**SCENARIO:** A student is working on a class assignment. The student doesn't have the specific software used at school, so she asks her teacher to let her take of the copy of the software home. Is this ethical?

**SOLUTION:** Since the software is licensed to the school, this is not legal or ethical.

Not only can software be misused, but also ethics and laws can be breeched when the information made available to us because of the invention of the computer is used in ways that are in violation of those ethics and laws attached to it.

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### Citing Information

Technology has made information readily available. Thus, the issue of misusing information becomes a concern particularly when you use something and claim it as your own. Ethically and legally, society should recognize that individuals creating "intellectual property" have the right to receive credit and be protected from the incorrect use of their creations. Intellectual property is the result of intellectual activities in the arts, science and industry (Beekman, *Computer Confluence*, Prentice Hall, 2001) and as such is the property of the creator.

The DMCA and other copyright laws all have "fair use" provisions that let you paraphrase or quote small portions of someone else's work, provided that you give proper credit to the author for the material you use. For example, if you're writing a paper for a class and you want to show some great person's idea that everyone should use, you can summarize the idea in your paper—and then you must indicate whose idea it is and where you got it. This is generally done by adding a pair of things to your paper. **1)** Add an in-text reference to the author and publication year of the work used right after the borrowed material in the paper. **2)** Add a full citation of the work (author, title, publisher, publication year, etc.) at the end of your paper. If you don't do these two things, you will probably give at least some of your readers the impression that the material you borrowed originated with you. That's bad. It's so bad, it has a name, plagiarism, and it's a form of fraud (more on fraud below).

More and more information is available via CD-ROMs, the Worldwide Web, online databases, and other electronic communication channels. Such electronically published information is protected by copyright laws just as it was when it was distributed on paper. Generally speaking, then, we're not to access, use, create, or destroy electronically published information without the owner's permission. Current legal doctrine says that publishing information freely on the Web implies the owner's permission to access it (why else would it have been put out there?). However, permission to copy or incorporate the information elsewhere is *not* assumed; for that you need explicit permission from the information owner.

Quoting and citing information is just as important with computer sources as with traditional written works. Even though computers and the Internet allow easy access for cutting and pasting items, it is considered plagiarism when the creator has not given permission and/or been given credit for his/her work. To be legally and ethically correct, it is imperative to cite where the information was found and give the creator credit even when no copyright is evident. On many campuses, plagiarism, such as cutting and pasting from Internet sources without attribution, can result in severe consequences, ranging from failure of class to suspension or expulsion from the institution.

When using intellectual property, it should be used in the context originally intended and presented correctly so the meaning is not changed from the original intent. Otherwise, this is considered misusing information and also becomes an ethical issue. It is important to note that there is such a thing as "public" information, stuff like the phone book and government publications; public information is not protected by copyright law and can be accessed and used freely.

Blatant misuse of information in which the user knows he/she is plagiarizing but chooses to use the information anyway is an example of fraud. The *Merriam-Webster's Collegiate*

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*Dictionary* defines fraud as "the act of deceiving or misrepresenting" (Merriam-Webster, Inc. <http://www.m-w.com/cgi-bin/dictionary/fraud>, 2001). Accidental plagiarism is a form of negligence. Negligence occurs when an individual is unaware or ignorant that he/she has misused intellectual property. Both fraud and negligence are ethically wrong and illegal.

**SCENARIO:** Ralph Williams wrote a paper for his Geography class about the Grand Teton Mountains. He found some information on the web that worked well into his paper. He did not intend to claim the information as his own but he did not mention in his paper where he got the information. Is this okay?

**SOLUTION:** He should have quoted the material and then reference the site from which the material was taken. This is true even when the material used is found on the World Wide Web.

To avoid misusing information, individuals need to become educated about how to cite and use intellectual property. Properly citing works can often cover the legal issues when done correctly. Web documents share many of the same elements found in a print document (e.g., authors, titles, dates). Therefore, the citation for a Web document often follows a format similar to that for print, with some information omitted and some added. Courses vary in their style guides for documenting sources. Two popular ones are MLA (usually used in English) and APA (usually used in psychology, social sciences, and education).

### Modern Language Association (MLA)

See <http://www.mla.org/> for a complete description.

Example:

Jones, John. Home Page. 1 May 1997 America Online 1 September 2001  
<<http://www.aol.com/members/jjones/index.html>>.

### American Psychological Association (APA)

See <http://www.apastyle.org/eleceref.html> for a complete description.

Example:

American Psychological Association. (1995, September 15). APA public policy action alert: Legislation would affect grant recipients [Announcement]. Washington, DC: Author. Retrieved January 25, 1996, from the World Wide Web:  
<http://www.apa.org/ppo/istook.html>

Plagiarizing is extremely unethical, usually illegal, and always a serious violation of school policy that can get you thrown out of a class or worse. Don't plagiarize. Always give credit where credit is due by properly citing information sources, whether they are electronic or hardcopy.

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### Acceptable Use Policy

Most educational institutions have a document that governs the use of the computers and networks owned by the institution. This document, commonly called an Acceptable Use Policy or AUP, outlines what types of uses are acceptable and which are prohibited. Although a particular institution's AUP will be unique, most have the following three categories defining rights and responsibilities in using equipment in a legal and ethical manner:

- Personal computer files (documents):
  - Storage location
  - Storage space allocation
  - Types of files allowed
  - Printable items and quantity
- Personal and private information:
  - Sharable information
  - E-mail and personal file privacy
  - Monitoring on-line activities
- Ethical conduct:
  - Care and consideration of equipment
  - Consideration for the rights of other users
  - Policies concerning games, personal Web browsing, chat, and instant messaging
  - System security
  - Software and plug-in installation
  - Unacceptable topics, words, and graphics for papers, e-mail, and Web-page viewing such as pornography, profanity, terrorism, illegal substances, etc.

AUPs are legal documents that should be understood and followed.

Because of the way Utah State University is structured, there is not one official AUP that covers all campus resources, rather each entity providing computing services is responsible for maintaining an AUP for those resources they offer. The IT office has provided an Appropriate Use document [[http://www.usu.edu/ncs/appropriate\\_use.php](http://www.usu.edu/ncs/appropriate_use.php)], which is a good place to start. In addition, they have provided a Facilities Access document [[http://www.usu.edu/ncs/facility\\_access\\_policy.php](http://www.usu.edu/ncs/facility_access_policy.php)], which covers gaining access to computing facilities that are funded by student fees.

If you want to have a look at a good example of an effective AUP, read Oklahoma State University's AUP and Appropriate E-mail Use Policy.

[<http://home.okstate.edu/WebHome2.nsf/pages/AppropriateComputerUse?OpenDocument>]

[<http://home.okstate.edu/WebHome2.nsf/pages/EmailAppropriateUse?OpenDocument>]

**SCENARIO:** Ben Flying Eagle is finished with his assignment for the day so he wants to get on Yahoo to chat with his friend in another class. The school's AUP states that chat is not allowed on school computers because too many unsafe situations occur in chat rooms. Ben isn't planning to use a public chat room. He just wants to have a private conversation with his friend. Is he breaking the school's AUP if he chats with his friend? Is he breaking the school's AUP if he uses Instant Messaging instead of Yahoo Chat?

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**SOLUTION:** If the AUP does not differentiate between public and private chat, chatting is not allowed.

### Privacy

*Congress shall make no law ... abridging the freedom of speech, or of the press... -First Amendment*

*The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated... -Fourth Amendment*

Information can be categorized as that which is public and that which is private. Public information is assumed to be available for use without permission. Private information cannot be legally used without permission from its owner. Information is owned by the person it describes, not by the organization that gathers the information. Thus, my name and phone number are owned by me, not the phone company. Likewise, I am part-owner of my credit records and institutions with which I did business are also part-owners of those records. However, even though we think some of this information should be private, that is not always the case.

The balance between public and private information has never been easy to keep, and in recent decades it has swung decidedly toward publication rather than privacy. Many items of information about you that you might not want generally known are defined as public and can be published without your permission. Some of these are your full name, your home address, your phone number, debts you owe, court judgments against you, courses you've taken, and police actions relating to you. In some cases, you can petition to have public information made private, but generally speaking, people who know where to look can find out a lot about you. Interestingly, laws and court cases over the years have made your medical records private; that is, they cannot be shared without your permission. Also, even though courses you've taken are public information, the grades you earned in those courses are private (talk about splitting hairs...).

### Harassment

E-mail can be used as a productive tool for communicating and sharing information. However, all tools can be misused or abused, and email is no exception. Several examples of inappropriate e-mail uses are as follows:

**Spamming:** Sending nearly identical messages to thousands (or millions) of recipients by e-mail...without the permission of the recipients. (Wikipedia, [http://en.wikipedia.org/wiki/Spam\\_\(email\)](http://en.wikipedia.org/wiki/Spam_(email)), 2006 )

**Flaming:** A public post or email message that expresses a strong opinion or criticism. Flames can be fun when they allow people to vent their feelings, and then return to the topic at hand. Others are simply insulting and can lead to flame wars. (Albion.com, Netdictionary, <http://www.netdictionary.com/html/index.html>, "flame", 2000)

**Trolling:** (also known as flame bait) an inflammatory post that is designed to provoke a flame war or flame responses. (Albion.com, Netdictionary,

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<http://www.netdictionary.com/html/index.html>, "flame bait", 2000) Trolling is basically sending messages that contain statements intending to bait an argument or confrontation.

**Phishing:** A form of criminal activity using social engineering techniques to fraudulently acquire sensitive information, such as passwords and credit card details, by masquerading as a trustworthy person or business in an electronic communication. (Wikipedia, <http://en.wikipedia.org/wiki/Phishing>, 2006)

Some of the above types of messages may be legal, even if they're a bother. Others may be illegal. Messages that continue after the recipient asks that they stop are defined as a nuisance and are illegal. Nuisance messages that are threatening or intimidating are termed harassment and are even more severe. It is interesting to note that nuisances and harassment are defined by the receiver of a message, not by the sender. That is, if you ask me to stop sending you messages, I have to even if I don't think there's anything wrong with my messages.

### The Test

The competencies for the Ethics Test are as follows:

1. Correctly identify the definitions of the relationship between ethics and laws.
2. Demonstrate a general understanding of copyright and license law regarding software, database contents, Internet publications, and other published materials.
3. Demonstrate understanding of ethics related to citing Internet information resources (i.e. plagiarism).
4. Correctly identify the appropriate role and typical contents of an acceptable use policy (AUP) for the computers in an organization.
5. Demonstrate understanding of computer users' rights and duty regarding of privacy, accuracy, property, and accessibility, specifically including the following issues: harassment, fraud, negligence, plagiarism, spamming, trolling and flaming.

The Ethics exam is a multiple choice, multiple answer, true/false, and fill-in-the-blank test and is graded immediately after it is taken. The Ethics exam is somewhat difficult and not easily passed without reviewing the Ethics Tutorial.

When you are ready to take the Ethics exam, please let the consultant know and he/she will unlock the test for you after you have shown your USU ID. One question is displayed at a time. Select the correct answer and click NEXT to proceed to the next question.

When you are finished answering all the questions, click EXIT TEST. Your score will be displayed immediately. You will need to score 70% or higher to pass this exam. If you passed, congratulations! If not, you may want to study the tutorial and try again.