upgrade
your
future

A Women
Employed
Initiative

Introduction to

Information Technology Careers

Your Guide to Computer-Related Careers

What is IT?

resourceful and creative

solutions

a good job!

personal computer technician

training

Opportunities

programmer

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network administrator

CAREERS

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What is IT?

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Information technology involves the use of computer hardware (computer equipment and related devices) and software (the various programs used to operate computers and related devices). Information technology professionals use, share and store information that supports everyday business functions.

Entry-level information technology workers typically help people to use computer equipment and software and install and repair computer equipment. Information technology workers are employed in important areas of business like banking, finance, health care, retail and manufacturing.

Did you know…

- A starting technical support analyst earns an average of nearly $40,000 a year, a computer programmer earns an average of $45,000 a year and a Web designer earns an average of $53,000 a year WITH benefits such as health insurance.

- Studies show that workers with computer skills are more likely to have a better career path in terms of pay, job security and long-term learning.

- Ninety-two percent of information technology jobs are in industries such as banking, education, health care, transportation, retail, entertainment, hospitality and fashion.

- Information technology employees like their jobs and report high levels of job satisfaction. Computerworld's 2002 Job Satisfaction Survey indicates that 89 percent of information technology workers are satisfied with their career choice.

flexible
resourceful and creative
IT and You challenges
learning
problem solver

IT and You

In addition to having good communication and interpersonal skills, successful information technology professionals are flexible, creative and interested in learning new things.

To find out if an information technology career is right for you, start by answering the following questions.

- Do you enjoy learning new things and tackling new challenges?

- Are you a problem solver?

- Are you an office troubleshooter?

- Are you flexible, resourceful and creative in developing solutions?

- Would you be willing to complete additional education or training to obtain a better career with better wages?

If you answered "yes" to the above questions, you should consider a career in information technology.

Careers

network administrator
entry-level jobs
Web professional
programmer
help desk technician

Why are information technology careers good for women?

- A recent survey indicates that many Chicago-area employers want to increase the number of women and minority information technology employees.

- Many employers pay for training so information technology workers can continually upgrade their skills.

- After completing an information technology education or training program, students can pursue a wide range of career opportunities, including Web site design, technical support and programming.

- Information technology offers women opportunities to use technology to make a difference in fields like education, health care and art.

- The City of Chicago and its surrounding suburbs offer a wide range of low-cost, convenient information technology education and training opportunities, including weekend and evening courses, job placement services and online courses that offer students flexibility.

information technology

Entry-level jobs

There are both entry-level and advanced positions in information technology. Entry-level jobs are available at technology companies, but most are at non-technology companies, such as banks, hospitals and manufacturers, that have information technology departments.

An entry-level information technology job can lead to a new career. In fact, many women currently working in information technology say they like the opportunity to develop new skills and advance quickly from entry-level to more advanced positions.

Want to know how to get started? Read more about some common entry-level jobs in information technology:

- **Help Desk Technician**

- **Personal Computer Technician**

- **Web Professional**

- **Network Administrator**

- **Programmer**

The descriptions are from the Bureau of Labor Statistics' Occupational Outlook Handbook, which is available online at **www.bls.gov/oco/home.htm**.

Help Desk Technician

Job description

In the last decade, computers have become an integral part of everyday life, used for a variety of reasons at home, in the workplace and at schools. Almost every computer user occasionally encounters a problem, from a forgotten password to a hard drive that crashes. The increase in computer use has created a high demand for specialists to assist users.

Help desk technicians interpret problems and provide technical support for computer hardware, software and systems. They answer phone calls, analyze problems and resolve difficulties.

Help desk technicians assist computer users with hardware and software questions. They answer telephone calls and e-mail messages from customers seeking guidance on technical problems. In responding to these requests for guidance, help desk technicians must listen carefully to the customer, ask questions to diagnose the nature of the problem, and then patiently walk the customer through the problem-solving steps.

Help desk technicians normally work in well-lit, comfortable offices or computer laboratories. They usually work about 40 hours a week, but that may include evening or weekend work if the employer requires computer support over extended hours.

Help desk technicians work in a wide range of industries. About one-third of all help desk technicians are employed in business services industries, principally computer and data processing services. Other industries that employ substantial numbers of these workers include banks, government agencies, insurance companies, educational institutions and wholesale and retail vendors of computers, office equipment, appliances and home electronic equipment. Many help desk technicians also work for manufacturers of computers and other office equipment and for firms making electronic components and other accessories.

Training, Other Qualifications and Advancement

Due to the wide range of skills required, there are many ways workers can become a help desk technician. While there is no universally accepted way to prepare for a job as a help desk technician, many employers prefer to hire candidates with the following education or training:

- An **associate's degree** may be required for some jobs, but other jobs may require a **bachelor's degree** in computer science or computer information systems.

- Completion of a **certificate** program may help some people to qualify for entry-level positions if they already have strong computer skills.

Individuals interested in becoming a help desk technician must have:

- Strong problem-solving, analytical and communication skills because trouble-shooting and helping others are a vital part of the job.

- Good communication skills in person, on paper and via email because of the constant interaction with other computer personnel, customers and employees.

- Strong writing skills, which are useful when preparing manuals for employees and customers.

Beginning help desk technicians start out by dealing directly with customers or in-house users. They may move into more advanced positions in which they use what they learn on the job to improve the design and efficiency of future products. Job promotions usually depend on performance and continuous learning of new programs and applications. Eventually, some help desk technicians advance to jobs where they design products rather than assist users. Help desk technicians at hardware and software companies often enjoy great upward mobility, sometimes advancing within months of initial employment.

Earnings

According to Robert Half International, an expert in the specialized staffing services industry, starting salaries in 2001 began at $30,500 for help desk technicians, and ranged from $48,000 to $61,000 for more senior help desk specialists.

Outlook

Help desk technicians are projected to be among the fastest growing occupations through 2010. Demand for help desk technicians is expected to increase because of the rapid pace of improved technology. As computers and software become more complex, help desk technicians will be needed to provide assistance to customers and other users.

Personal Computer Technician

Job description

Personal computer technicians perform hands-on repair, maintenance and installation of computers and related equipment.

Personal computer technicians sometimes replace defective hardware components rather than repair them. They may use

software programs to identify problems and apply solutions.

Technicians usually work in clean, comfortable surroundings, either in repair shops or travelling to various locations to install, maintain or repair customer equipment.

Training, Other Qualifications and Advancement

- Knowledge of electronics is necessary for employment as a personal computer technician.

- Employers prefer workers with a recognized **certificate** or an **associate's degree**. Certificate programs for personal computer technicians include A+, Net+, and Server+, administered through the Computing Technology Industry Association (CompTIA) and taught by various education and training providers. To receive these certifications, candidates must pass several tests that assess their computer repair skills.

- Workers are expected to arrive on the job with a basic understanding of equipment repair. Employers generally provide some training on specific equipment.

Entry-level personal computer technicians may work on personal computers or equipment. With experience, they can advance to positions maintaining more sophisticated systems, such as networking equipment and servers.

Earnings

In 2000, median earnings for personal computer technicians were $15.08 per hour.

Outlook

As with help desk technicians, personal computer technicians are expected to be among the fastest growing occupations through 2010. The growth in these jobs is attributed to the fact that the computer and data processing industry is projected to be the fastest growing industry in the U. S. economy. As a result, computer equipment becomes more advanced and technicians are needed to support users.

Web Professional

Job description

The growth of the Internet and expansion of the World Wide Web has generated a variety of occupations (Web professionals) related to the design, development and maintenance of Web sites. One such occupation, Webmaster, manages all technical aspects of a Web site and its content. Other occupations, like Web developers and Web designers, are responsible for site design and creation. Each of these jobs can be an entry-level information technology position.

Web professionals normally work in offices in comfortable surroundings. They usually work about 40 hours a week, the same as many other professional or office workers. Evening or weekend work is sometimes necessary to meet deadlines or solve specific problems. Given the technology available today, working from home using the Internet, e-mail and other tools is common for Web professionals.

Training, Other Qualifications and Advancement

While there is no universally accepted way to prepare for a job as a Web professional, most employers look for candidates with:

- **Relevant work experience** as well as some **formal college education.**

- For some jobs, such as Webmaster, an **associate's degree or certificate** is generally sufficient.

- **Technical or professional certification** is another way to demonstrate a level of competency with Web site maintenance.

- **Art or graphic design skills** may also be desirable for designing Web sites.

Earnings

According to Robert Half International, starting salaries for Webmaster began at $58,000 and $56,250 for Web developers.

Outlook

The expanding use of the Internet for day-to-day operations as well as the growing use of the Internet to buy and sell consumer products translates into a need for individuals that can support Internet applications and help companies use the Internet and other computer technology to communicate with their customers and employees. Because of the above factors, these jobs (along with other computer specialists) are expected to grow faster than the average occupation.

Network Administrator

Job Description

Network administrators design, install and support an organization's computer network (an organization's system of computers that can communicate with each other), Internet or Intranet (collection of computer networks within an organization) system. They provide on-site support for software users in a variety of work environments, including professional offices, small businesses, government and large corporations. They maintain network hardware and software, analyze problems and monitor the network to ensure availability to system users. Network administrators also may plan, coordinate and implement network security measures.

Network administrators are responsible for the efficient use of networks by organizations. They ensure that the design of an organization's computer system allows all the components, including computers, the network, and software, to fit together and work properly. They also monitor and adjust performance of existing networks and continually survey the current computer system to determine future network needs. Additionally, network administrators also troubleshoot problems reported by users and make recommendations for improving future networks.

Network administrators normally work in well-lit, comfortable offices or computer laboratories. They usually work about 40 hours a week, but that may include evening or weekend work. Due to the heavy emphasis on helping all types of computer users, network administrators constantly interact with their fellow employees to answer questions and give valuable advice.

information
technology

As computer networks expand, more network administrators may be able to connect to computers remotely using modems, laptops, e-mail, and the Web to provide technical support to computer users. This capability may reduce or eliminate travel to the workplace.

Training, Other Qualifications and Advancement

Due to the wide range of skills required, there are many ways workers can become a network administrator.

- Many employers seek applicants with **bachelor's degrees**, though not necessarily in a computer-related field.

- Individuals interested in becoming a network administrator must have strong problem-solving, analytical and communication skills because troubleshooting and helping others are vital parts of the job.

- The constant interaction with other computer personnel, customers and employees require network administrators to communicate effectively on paper, via e-mail and in person.

Entry-level network administrators are involved in routine maintenance and monitoring of computer systems, typically working behind-the-scenes in an organization. After gaining experience and expertise, they often are able to advance into more senior-level positions in which they take on more responsibilities.

Earnings

According to Robert Half International, starting salaries in 2001 began at $50,250 for network administrators.

Outlook

Network administrators are projected to be among the fastest growing occupations through 2010. Demand for network administrators will grow as a result of growth in electronic commerce and as computer applications continue to expand. With the continued development of the Internet, telecommunications and e-mail, industries not typically associated with computers — such as construction — increasingly need network administrators. Companies are looking for workers knowledgeable in the function and administration of computer networks.

Programmer

Job description

Computer programmers write, test and maintain the detailed instructions, called programs, which computers must follow to perform their functions. In most cases, programmers work together as a team under a senior programmer's supervision.

It is the job of the programmer to code computer instructions in a conventional programming language. Many programmers update, repair, modify and expand existing programs.

Programmers generally work in offices in comfortable surroundings. Some programmers

may work extra hours or weekends to meet deadlines or fix critical problems that occur during off-hours. Given the technology available, working from home is becoming common for a wide range of computer professionals — including computer programmers.

Programmers are employed in almost every industry. Large numbers of programmers can also be found working for firms that provide engineering and management services, tele-communications companies, manufacturers of computer and office equipment, financial institutions, insurance carriers, educational institutions and government agencies.

Training, Other Qualifications and Advancement

While there are many training paths available for programmers, the level of education and experience employers seek has been rising.

- **Bachelor's degrees** are commonly required, although programmers may qualify for certain jobs with a two-year **associate's degree** or **certificates**.

- When hiring programmers, employers look for candidate with **specific programming skills who think logically and pay close attention to detail**.

- Programming requires **patience, persistence and the ability to work on exacting analytical work**.

- **Ingenuity and imagination** also are important when programmers design solutions and test their work for potential failures.

- Because programmers are expected to work in teams and interact directly with users, employers want programmers who are able to **communicate with non-technical personnel**.

Because technology changes so rapidly, programmers must continuously update their training by taking courses sponsored by their employer or software vendors. For skilled workers who keep up-to-date with the latest technology, the prospects for advancement are good.

Earnings

In 2000, median annual earnings of computer programmers were $57,590.

According to the National Association of Colleges and Employers, starting salary offers for graduates with a bachelor's degree in computer programming averaged $48,602 in 2001.

Outlook

Programming jobs are expected to grow at an average pace when compared to all occupations. The best prospects for programmers will come from employers and organizations that are part of the computer and data processing services industry, projected to be the fastest growing industry in the U. S. economy. Also, employers will need to hire programmers who might leave the workforce, for example, older workers who might retire or change careers.

How do you get started in an information technology career? Education and training are an important step, but you might already have some of the skills you need to get started. Your current job might be a pathway to an information technology career.

Here are some examples of pathways to an information technology career:

Sales/Customer service

If you work in sales or customer service and have experience with computers, your interpersonal and communications skills allow you to help troubleshoot problems and develop solutions for co-workers and customers in a technical support environment. **Help desk technician** and **personal computer technician** are typical technical support jobs. Many help desk or technical support positions require you to document problems or read from a script of solutions. In other positions, employers may provide training on the computer hardware or software you will troubleshoot. Help desk positions often provide opportunities to transition to other information technology jobs.

Writers

Information technology employers are always looking for good communicators who can explain complex ideas. If you are a strong writer, you can gain technical skills and transition to a technical writer or support job. Technical writers can produce instructional content for Web sites and other electronic formats and make training information and documentation understandable and easy to read for users.

Artists and graphic designers

Many Web sites are built and maintained using packaged computer software that enables the user to make changes without complicated programming knowledge. If you have graphic design or other artistic experience, you can use this skill to develop or maintain Web sites as a Webmaster or other **Web professional**. Web professionals are similar to help desk positions in that they are IT entry points for individuals with some work experience and a certificate or associate's degree. Also, the environment in which these workers operate provides an opportunity to acquire specialized skills that enable them to advance to more technical positions.

IT Education and Training Programs

accelerated classes
computer science
electronics
networking
weekend classes

Getting additional education or training can open doors to better jobs with more benefits. There are many things to consider when deciding to enroll in an education or training program like types of schools and trainers, program offerings, types of financial aid available and other supports that can help you complete a program.

Types of Schools and Trainers

There are many education and training providers that offer IT-related education, but they are not all the same. Different types of schools award different credentials, usually a certificate or a degree.

Four-Year Colleges and Universities

Colleges and universities provide students who have a high school diploma or GED longer-term academic training, usually over the course of four years, resulting in a formal credential or degree. There are two types of four-year colleges and universities, public and private. The University of Illinois at Chicago (UIC) is an example of a public university. Loyola University and DeVry University are examples of private universities. Generally speaking, public institutions have larger student bodies and lower tuition costs compared to private colleges and universities, which usually have smaller enrollments and higher tuition costs.

Graduates of four-year colleges and universities most often obtain bachelor's degrees to certify their achievement of certain skills in an area of expertise. For example, students interested in a career in information technology might attain a Bachelor of Science degree in a specific area like computer science.

Community Colleges (Two-Year Colleges)

Community colleges offer a variety of programs that prepare individuals to enter or advance in the workforce. These educational institutions are public colleges and are more affordable when compared to their four-year counterparts.

Students can obtain an associate's degree, which takes about two years to complete and certifies one's skills in a specified area. Associate's degrees allow students to continue their studies in a four-year bachelor's degree program or to pursue good paying jobs in various occupations. For example, students interested in pursuing information technology careers may attain an Associate's of Applied Science in a specific area
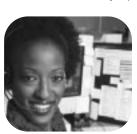
like computer information systems. Students with associate's degrees may choose to work in their field for a period of time before entering a four-year institution. In some instances students may receive two years of credit from their community college courses toward a four-year degree.

Many community colleges offer certificate programs that are shorter-term programs (usually anywhere from six to 18 months) that can help individuals to enter specialized careers and return to school at a later time to complete an associate's degree. This is one way to get trained quickly, start work in a field and save money to return to school for a more advanced degree. This is not possible for all programs, so if you think this might be a good plan for you, ask the education or training provider you select if this is an option.

Community Trainers

Community trainers provide short-term, industry-specific training that usually

leads to a recognized industry certification verifying that students have mastered specific skills related to information technology jobs. Common training provided by community groups allows individuals to build skills that can help them obtain common certifications like the **CompTIA A+ certification** for computer hardware or **Microsoft Certified Software Engineer (MCSE) certificate** for computer software. Community technology centers, like the Charles A. Hayes Family Investment Center in Chicago, offer access and convenience to local residents who are interested in learning more about computers.

While industry certifications are very popular, they may not be enough to successfully enter and advance in an information technology career. In order to achieve the greatest success, you will probably need to combine an associate's or bachelor's degree with the certification.

IT Certificates and Degrees

A+ Certification

The CompTIA A+ Certification is the accepted standard for entry-level personal computer technicians. The Certification (or certificate) validates that individuals have acquired a set of required skills and is awarded on the basis of passing a series of tests. Students enrolled in A+ training know how to assemble, install, configure, upgrade, troubleshoot, perform preventative maintenance, and repair computer hardware and personal computer operating systems.

Professionals earning the A+ certification have a broad base of knowledge and competency in core hardware and operating system technologies.

The A+ certification is appropriate to pursue the following jobs:

- **Help desk technician**

- **Personal computer technician**

Microsoft Certified Systems Engineer

Microsoft Certified Systems Engineer (MCSE) certification is a credential for professionals who manage computers using the Microsoft Windows operating system and Microsoft servers. MCSE certification is one of the most widely recognized technical certifications in the information technology industry. By earning the MCSE credential, students demonstrate that they have the skills necessary to lead

organizations in the successful design, implementation and administration of the most advanced Windows operating system and Microsoft .NET Enterprise Servers, including installing, configuring and troubleshooting network systems.

The MCSE certification is appropriate to pursue the following jobs:

- **Network administrator**
- **Systems engineers**
- **Technical support engineers**
- **Systems analysts**
- **Technical consultants**

To earn MCSE certification, it is recommended that students have at least one year of experience implementing and managing a network operating system.

Associate of Applied Science

The Associate of Applied Science (A.A.S.) degree is a two-year degree offered primarily at community colleges for students interested in acquiring technical-occupational skills to enter the job market immediately upon graduation. Although the A.A.S. is not considered a transfer degree program, it can permit students to continue advanced career preparation at some four-year educational institutions offering programs compatible with their studies at the community college.

Bachelor of Science

The Bachelor of Science (B.S.) degree is a more comprehensive, four-year degree that generally includes course work to develop communication, writing and critical thinking skills, in addition to technical education. The

Bachelor of Science degree takes longer to complete because it includes courses in topics such as history, literature, math and science. Employers often prefer employees with bachelor's degrees because they know these graduates have practiced communications and writing. These are very important workplace skills for information technology jobs, which may involve teamwork.

Types of Programs

Educators and trainers offer many different programs to prepare students for a variety of careers in information technology. Below are examples of educational programs that can be found at colleges and universities.

Computer Information Systems

Coursework in computer information systems (CIS) teaches students how to develop "programs," which are the instructions that direct computers to store and manage information to meet user needs. Students in these educational programs learn communication, critical thinking and general business skills that are essential to a successful career. A typical CIS bachelor's or associate's degree program might include classes in programming, systems development, business, math, and social sciences. CIS graduates work in a wide variety of industries, such as banking, financial management, communications, entertainment, government, law, manufacturing, health care and retail.

Electronics and Computer Technology

Coursework in electronics and computer technology (ECT) teaches students the basic components of computers and how they work. It focuses on the electronic circuits that make

computers work. An understanding of electronic circuits is used in building, installing, testing and maintaining computer equipment. A typical ECT associate's degree program might include classes in electronic circuits and systems, computer applications, math, science and communications. ECT graduates work in a wide variety of industries, including: biomedical equipment, computer products, consumer electronics, manufacturing, sales, telecommunications and wireless communications.

Computer Science

Coursework in computer science teaches students computer principles and processes to develop new ways of using the computer and improve the effectiveness of current computer operating systems. Students may focus their studies on software, which refers to the various programs used to operate computers and related devices, or hardware, the computer equipment itself and related devices. A typical computer science bachelor's degree program might include classes in computer hardware, computer software, computer-related math, and programming. Computer science graduates work in all industries, for example, financial services, government, health care and social service.

Networking

Coursework in computer networking prepares students to install, administer and maintain computer networks. Networks link computers, information and users. Because nearly all businesses and organizations now run on computer networks, networking graduates work in a wide variety of industries. A typical networking associate degree program might include classes that demonstrate how to

manage multiple network operating systems and equipment, such as network servers and routers; install, configure, support, and upgrade workstation software and set up and support network operating system software on servers. Network administrator is a typical job upon completion of related coursework.

Lengths of Programs

Today, many students must balance education and training with their everyday responsibilities like work and family. Because of this, educators and trainers offer courses in many different ways that are convenient for the modern student.

As described in the **types of IT certificates and degrees** section, different education and training programs require different time commitments. The length of time it takes to complete the certificate, associate's or bachelor's degree program you choose will depend on your schedule and how much time you have available to take classes. If you enroll as a part-time student (because you work or have family responsibilities), it will probably take longer to complete your degree or certificate.

Program Schedules

Program schedules vary by school or training provider. Most colleges operate on a semester system, with classes starting in January and August. Other education and training providers start new classes several times throughout the year. The compatibility of the program schedule with your personal schedule will be important in selecting a program. Most schools have daytime classes but some schools and trainers offer

other options for parents and working students. If you need flexibility in the hours that you can attend classes, consider the following options:

Evening and Weekend classes

If you plan on working while you attend a program, it is important to determine when classes are offered. Some providers only have daytime classes. Others also have evening and/or weekend classes.

Accelerated Programs

Some students are well prepared to enter IT education and training programs because of previous courses taken through other education and training programs or because they have gained relevant experience through their jobs. To accommodate these types of students, some schools offer accelerated, full-time formats that allow you to complete degree require- ments more quickly.

Distance Learning Programs

If you have access to a computer and the Internet, you might consider a distance learn- ing program, that is, taking courses online. Distance learning programs offer students flexibility by allowing you to complete course requirements at YOUR convenience as opposed to a set class schedule. Taking courses online require a great deal of discipline. Key qualities of a successful online learner are discipline and self-motivation. You will be responsible for completing reading assignments, learning exercises, reviewing lectures and participating in class discussions on your own time.

Your learning style and personality are good indicators of whether or not you will succeed as an online student. To determine if online education is right for you, ask yourself the following questions:

- Are you someone who often gets things done ahead of time?

- Do you rarely need your instructor to remind you of due dates and assignments?

- Considering your work schedule and personal obligations, would you have difficulty getting to campus, even during the evenings and on weekends?

- When you are asked to use e-mail, computers or other technology, do you look forward to learning new skills?

If your answered "yes" to these questions and possess a strong self-motivation and preference for a more independent learning environment, you may be an ideal candidate for an online course or degree program.

Credit for Prior Learning

If you have experience related to an educational program, you might be able to obtain course credit for the knowledge and expertise that you have gained at work or through volunteer activities. Some educational organizations have a process for assessing your experience and providing credit. This offers an opportunity to take more advanced courses initially or to shorten the time required to obtain a degree.

Financial Aid

For many women, the biggest barriers to returning to school are time and money. Once you decide that training for an information technology career is the right thing for you, don't let anything keep you from achieving your goal. Financial aid can help you.

Most education and training providers offer a variety of financial aid programs. Sometimes the process of applying for aid can be lengthy, but it is worth the time and effort. Education and training providers usually have staff that can assist you with this process. Financial aid is usually based on a formula that calculates financial need by considering need — the school decides how much money a student can contribute to her education. A financial aid award can make up the difference between total cost and what the student can pay.

Common types of student financial aid include:

- **Grants**

  Grants are financial aid awards that do not need to be paid back. They are usually supplied by the state or federal government through a school's financial aid office. Scholarships are a type of grant that may be awarded based on financial need or on merit (skills that a student demonstrates in a written essay or good grades).

- **Loans**

  Loans are funds that a student borrows to pay for school. Loans must be repaid with interest within a specified number of years.

Students usually do not need to make loan payments while still in school. Loan repayment usually begins approximately six months after leaving school (whether you have graduated or not) or dropping below half-time enrollment. Remember, if a student takes out a loan and starts a degree program, but stops taking classes before earning a degree or certificate, they must pay back the loan anyway. Student loan programs administered by training providers often have special low interest rates that are available only to students borrowing for their education. Stafford and Perkins loans are two types of loans designated for students and usually carry lower interest rates.

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- **Work-study**

  The federal government helps some
  employers hire part-time student workers by
  paying part of the student's wages, while
  the employer pays the rest. Students work
  in exchange for this type of financial aid.
  Work-study jobs are reserved for students
  who qualify based on their financial need.
  Even if you do not have enough financial
  need to qualify for a work-study job, you
  may still get help finding a part-time job from
  the Career Services department at your
  school. Large colleges hire many part-time
  student workers for campus jobs.

  For more information on federal
  financial aid, visit the U.S.
  Department of Education's
  financial aid Web site at
  www.fafsa.ed.gov and
  complete and submit the

Free Application for Federal Student Aid
(FAFSA) online. Completing the FAFSA opens
the door to the financial aid process. Students
must complete a FAFSA to apply for federal
student financial aid and for many state
student aid programs.

For information on state financial aid programs
visit the Illinois Student Assistance Commission
Web site at **www.isac-online.org** or call
1-800-899-ISAC. Illinois administers the
Monetary Award Program, which awards need-
based grants to full- and part-time students.

You should also call or visit the financial aid
office at the school in which you are interested.
**See tips on calling or visiting an education
or training provider** for more information.

Student Support Services

services student education child care
placement and job search assistance

Many schools offer support services to help women complete their education. These can be important in helping you to successfully complete your studies.

- **Child Care**

  Some education and training providers offer on-site child care and some offer discounted rates for students. If you need child care, make sure you ask if there is a waiting list and how long the wait is before you register for classes. Currently, you may qualify to receive state or federal financial assistance for your child care expenses while you are in school. Call 1-877-20-CHILD or visit **www.ccrrn.com** for more information.

- **Student Services**

  Some schools have student service programs that provide support to students in a variety of ways, including tutoring, support groups and mentoring programs. Ask about these services when you are selecting an education or training provider.

- **Placement and Job Search Assistance**

  Most schools offer some kind of job search assistance as you near the end of your program, but the level of help is very different at each school. Some schools have a Placement or Career Services department to help students find jobs upon completion. When investigating a school, ask for information on the job placement (success) rate for the specific program in which you are interested. This is a figure that tells you how many graduates find jobs in their field. The City of Chicago One-Stop Career Center or Illinois Employment and Training Center near you should also have information on a school's placement rates.

Tips services **costs** **considerations**
contact
programs and courses

Tips on Selecting an IT Education or Training Provider

So, you've decided to get more education or training as a start to pursuing an information technology career. But how do you select an education and training program?

The two most important considerations when selecting a program or course are:

• **Is the program or course appropriate for your education and training background, work experience, skills, interests and lifestyle?**

• **Does it offer opportunities to apply what you have learned through hands-on class projects or internships?**

Below are some questions to help you select a high quality program or course that is suited to your needs.

Programs and Courses

• Does the course or program offer credit toward a degree or certificate?

• Do the instructors have recent experience in the field?

• Do the courses allow students to apply what they have learned, including projects taken from the real world and internships?

• Does the computer lab have the capacity to serve all students?

• Are there professional development activities to help you learn "non-technical" aspects of information technology jobs, such as making presentations, working in teams and conducting meetings?

• What are the job placement rates, the types of positions obtained by graduates and the percentage and type of further education completed by alumni?

• How do current and former students rate the program or course? (This information can be found in student satisfaction surveys and by talking with former students).

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- Are there opportunities for students to improve math, writing and communication skills and learn about business principles?

- Do they provide credit for prior learning?

Cost

- What is the total cost of the program or course, including tuition, fees, books and supplies?

- How does the cost of this program compare with costs at other institutions offering similar programs?

- If choosing a community college, do you live in that school's district? (Tuition costs are lower for students attending a community college in their district.)

- Does the school provide help in obtaining financial assistance for your studies, such as grants, tuition waivers and work-study arrangements?

- Is the program or course eligible for tuition assistance from your employer?

Student Support Services

- Are counseling or advising services available to help you select the right courses and develop a learning/career plan?

- Are job placement services or assistance available?

- Are formal or informal supports available during the course such as convenient office hours, study groups and mentors?

- Are there formal or informal activities to meet and talk to other women students, graduates and professionals currently working in information technology?

Individual Considerations

- Does the school or trainer offer classes at times that are convenient for you?

- Is the location of the school or trainer accessible by public transportation?

- Can the education or training provider connect you with services to help you deal with any problems attending class or meeting course requirements, such as child care and transportation?

Calling and Visiting an Education and Training Provider

Calling or visiting a school is an important step to learn information about technology education and training opportunities. Here are some tips to help you get the most information from your call or visit.
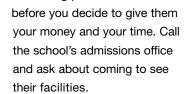
Calling…

- Speak clearly. Make sure the person on the other end can understand you. It also helps to sound confident when asking for information.

- Be specific about what you want to know. Prepare a list of questions to ask.

- Keep trying! Getting information from smaller schools is generally fairly easy. However, when calling a larger school with many departments and offices, you may be transferred several times before you find someone who can assist you.

- When you find someone who can assist you, ask for his/her name and phone extension, so you can call back if you have more questions.

- If you call someone back, remind that person that you called before. He/she may not remember you, but knowing that you called before gives you a little connection and makes it easier to get assistance.

Visiting…

- The most important tip about visiting is that you should visit! You will want to evaluate education and training providers first hand

  before you decide to give them your money and your time. Call the school's admissions office and ask about coming to see their facilities.

- Visit when classes are in session, if possible. That way you can see how students interact in classes and get an idea of what your experience there will be like.

- Try to arrange to talk with one or two faculty members who teach classes you would be taking. These people can answer your questions about the workload, the difficulty of the material and even placement rates of graduates in some cases. Talking to them will also give you an idea of how they will treat you as a student.

- Talk to women students in the programs if you can. Ask them what their experiences have been like. Would they choose the same education or training provider again? How do they feel about their chances of finding employment after graduation? If you don't feel comfortable asking questions of students while they are in class, ask if you can call one or two of them at home.

Frequently Asked Questions

I have no experience with technology. Can I still pursue an information technology career?

Yes. Familiarity with computers is helpful, but not necessary. The basic skills you have acquired in administrative, service, sales or retail jobs can transfer to entry-level opportunities in information technology.

How do I know if an information technology career is right for me?

There are lots of different technology-related career paths that provide a professional work environment and opportunities for advancement. If you like to solve problems, work in an interactive setting and learn while you are working, information technology might be the right career for you!

How long does it take to complete an information technology education/training program?

Information technology trainers provide short-term, industry specific training that usually leads to a recognized industry certification. This type of training in which students earn certificates recognized by area employers can be completed from within three to six months up to 18 months.

Information technology educators offer more comprehensive academic coursework that results in a degree. The length of an education program depends on the type of program and your current level of education. If you have completed some college courses, be sure to ask a potential education or training provider if your previous coursework can transfer to their information technology program. Without any previous college education, **associate's degree** programs generally take an average of two years to complete, while **bachelor's degree** programs generally take an average of four years.

I work full-time. How can I pursue additional education or training?

You are not alone. Technology education and training opportunities are diverse. Many schools offer part-time and evening courses, as well as short-term training to accommodate students like you with busy work schedules. Short-term training is often a good way to get started in a new field for students who cannot afford not to work. Online and distance learning courses offer additional flexibility for returning adult students.

Aren't companies laying off information technology workers?

Studies show workers with computer skills are more likely to have a better career path in terms of pay, job security and long-term learning. Eight of the ten fastest growing careers through 2010 identified by the U.S. Department of Labor are computer-related. They are: computer applications software engineers; help desk technicians; computer systems software engineers; network administrators; network systems and data communications analysts; desktop publishers; database administrators; and computer systems analysts. If you think an information technology career is right for you, it is important to get the skills now to prepare for the growth of information technology jobs in the near future.

What are information technology jobs like?

Many information technology jobs involve a great deal of communication and teamwork. Problem-solving, creative thinking and organizational skills are among the skills information technology workers use everyday. Information technology jobs can also offer opportunities for flex-time, telecommuting and other innovative workplace practices. Many employers pay for training so that information technology workers can continually upgrade their skills.

Where are information technology jobs in the Chicago-area?

A recent survey indicates that many Chicago-area employers are actively seeking to increase the number of women and minority information technology employees. Traditional industries such as banking, education, health care, transportation, retail, entertainment and hospitality hire technology workers at a much greater rate than companies whose sole business is technology. Information technology jobs are found in every sector of the economy. In fact, 95 percent of the technology jobs in the Midwest are at non-technology companies. Information technology also offers women opportunities to develop technology-based solutions to make a difference in fields like education, health care and art.

Visit an Internet job board like **monster.com** or review the Help Wanted section of your local newspaper to see computer-related jobs available in the Chicago-area. Your local library is another place to find out more about the types of jobs available in information technology.

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What type of salary and benefits would I get at an information technology job?

A starting technical support analyst earns an average salary of nearly $40,000 a year, a computer programmer earns an average of $45,000 a year, and a Web designer earns an average of $53,000 a year. These salaries are in addition to benefits such as health insurance, on-the-job training, ongoing education and training to continually upgrade skills, and flexible work hours.

According to the U.S. Department of Commerce, technology fields pay up to 78 percent more in salary than other career fields. And information technology is one of the few fields in which women compete fairly with their male counterparts for comparable pay. Visit **www.salary.com** for more information about average salaries in information technology jobs.

Do companies offer on-the-job training for information technology jobs?

There are many opportunities for entry-level information technology jobs that require a minimal amount of computer training; particularly jobs like help desk and Web page assistant positions. Many workers increase their technology skills while in these positions and then move on to more technologically advanced jobs.

How do I advance in information technology careers?

Advancement in IT careers depends on your willingness to learn and use new programs, resourcefulness, communication skills, and increasing knowledge of the business that you that you have selected.

By reading this brochure, you've taken the first step to upgrading your future. You can learn more about information technology careers at your local library. The U.S. Department of Labor's Occupational Outlook Hand-book is a great resource. You can find it at the library or view it online at **www.bls.gov/oco/home.htm**. For more information about financial aid, visit the Illinois Student Assistance Commission Web site at **www.isac-online.org** or call them at **1-800-899-ISAC**. Learn more about the "Upgrade Your Future" campaign by visiting our Web site at **www.upgradeyourfuture.org**.

About Women Employed

Women Employed, founded in 1973, is the nation's foremost advocate for effective equal opportunity programs, a leading promoter of state and local workforce development and welfare policies leading to women's self-sufficiency, and an innovator in developing programs to alleviate female poverty.

Women Employed, in conjunction with a diverse group of partners, launched "Upgrade Your Future" to educate lower-income, underemployed women about opportunities and careers in information technology so that they may pursue good jobs that pay family-supporting wages.

For more information about Women Employed, visit our Web site at **www.womenemployed.org**.

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