Advance Your IT Career With an Online IT Degree

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The field of information technology has been expanding for the past decade, due to increasing tech developments and capabilities such as cloud computing, mobile apps, and open-source languages and platforms. According to the Computing Technology Industry Association's IT Industry Outlook 2018 report:

- The global tech sector is poised to experience 5% growth in 2018.
- Global IT spending will top $4.8 trillion in 2018, with spending in the U.S. accounting for nearly one-third of market spending.
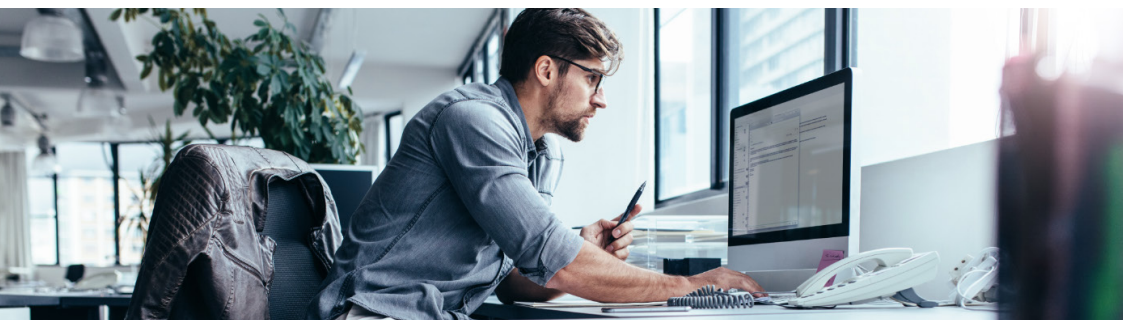- Nearly 5.4 million people worked in tech professions in the U.S. in 2017.

The U.S. Bureau of Labor Statistics predicts that computer and IT jobs will grow 13% from 2016 to 2026, faster than average for all occupations.[1] About 557,100 new jobs in the field are expected to be added during this time.

An IT degree or certificate can help you gain new credentials, increase job opportunities, and move up in the field—and an online IT education program enables you to continue working and meeting your family and life obligations while you study.

In this ebook, you'll learn about several growing IT careers and the typical education required to work in those roles. If you want to develop your career, an online IT degree can help you get there.[2]

It's important to note that in addition to education, industry certifications may be beneficial and/or required by some employers to demonstrate expertise.

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1. Careers in Data and Information Analysis

Database administrators help administer, test, and implement computer databases. Database administrators work for a wide variety of industries, wherever there are large databases to be managed, including:

- Telecommunications
- Colleges and universities
- Financial services
- Software publishers
- Computer systems design services
- Health care
- Retail
- Government

According to the BLS, the job outlook for database administrators from 2016 to 2026 is expected to grow 11%, with 13,700 new jobs expected to be added.

The BLS reports typical entry-level education for database administrators is a bachelor's degree, usually in an IT or computer science-related subject. Some firms with large databases may prefer candidates with a master's degree or higher in database management.

To become a database administrator, you'll need the following skills:

- Knowledge of database languages, including Structured Query Language (SQL)
- Analytical and problem-solving skills, to evaluate complex information and identify and correct problems
- Communication skills, to convey database issues to other team members
- Ability to focus on details, and to identify and fix errors that may affect a whole database

Some companies may also require certain certifications for database products, which demonstrates expertise in that product. These IT degrees and certificate programs from Purdue University Global are designed to help you pursue a career in data and information analysis.

2. Careers in Information Systems

Computer and information systems managers are the people who spearhead computer-related activities for a business or organization. They are sometimes also called IT managers or may fall into leadership roles including:

- IT directors
- IT security managers

Typical duties of these professionals can include:

- Determining technology goals of an organization
- Strategizing ways to reach those goals
- Coordinating and managing those who work on computer-related activities

Computer and information systems managers work across most industries. Some large firms will have multiple professionals in multiple roles related to computer and information systems, while smaller businesses may have a single person in charge of these duties.

The BLS expects employment of computer and information systems managers to grow 12% between 2016 and 2026, adding 44,200 new jobs. To become a computer and information systems manager, you typically need a bachelor's degree and at least 5 years of experience.

In addition to technical skills, you'll also need the following:

- Management skills, to manage large and/or multiple teams of IT professionals

- Business skills, to ensure IT efforts align with the company's business goals

- Problem-solving skills, to identify, analyze, and solve problems

- Communication skills, to communicate your vision with a variety of business leaders and stakeholders

- Teambuilding skills, to help foster collaboration and trust between team members

If you're an IT professional who wants to advance into a management role, a Master of Science in Information Technology from Purdue Global may help you get there. Many employers require this degree to even be considered.

3. Careers in Networks and Computer Systems

A wide variety of professional roles fall under the networks and computer systems umbrella. Here are four common ones with career growth potential.

I. Computer Support Specialist

Computer support specialists offer technical assistance to computer users and organizations. They may provide network system support as computer network support specialists or provide computer support as computer user support specialists, sometimes called help desk technicians. In some cases, both computer network support specialists and computer user support specialists work in a separate location from users, and help organizations and individuals via phone or email. They may also perform in-person visits, either routinely or when necessary.

The BLS anticipates an 11% growth in employment of computer support specialists between 2016 and 2026, with 88,500 jobs added during this time. There isn't a typical required education level for entry-level workers, but the BLS does report that technical positions and positions at larger companies that sell products or services often require a bachelor's degree or higher.

If you're interested in becoming a computer support specialist, in addition to the relevant technical skills, you should have:

- Listening skills, to clearly understand the issues that users and organizations are having

- Customer service skills, so that your client feels heard and understood

- Communication skills, to effectively update users about your progress

- Problem-solving skills, to help users and organizations fix issues as quickly and accurately

You may also need additional training or certifications in the products used by the company.

II. Computer Systems Analyst

Computer systems analysts analyze an organization's computer systems and procedures and design solutions that improve the systems. They may also fill roles such as systems architects, software quality assurance analysts, and programmer analysts. They may work in-house for large companies in industries like finance and government, or work as contractors, usually for IT firms.

The BLS projects a 9% growth in roles for computer systems analysts from 2016 to 2026, with 54,400 new jobs. Usually a bachelor's degree or higher is required to be considered for such a position.

If you're considering a career as a computer systems analyst, in addition to a strong educational background, you should possess:

- Communication skills, to successfully convey complex issues to a variety of stakeholders

- Analytical skills, to strategize ways to make systems more efficient and productive

- Creativity, to figure out ways an existing computer system can be improved upon

- Business skills, to recognize how computer systems affect an organization's bottom line

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Depending on the type of system being used, you may find it valuable to earn an online IT certificate. For example, Purdue Global offers a Microsoft Operating Systems Postbaccalaureate Certificate, designed to equip computer systems analysts with knowledge about one of the most widely used systems in the world.

III. Network and Computer Systems Administrator

Network and computer systems administrators manage the daily operations of computer networks. They may work on an organization's in-house computer network or on remote networks.

The BLS predicts employment of network and computer systems administrators will grow 6% between 2016 and 2026, with 24,000 new jobs added. A bachelor's degree or higher in computer network and system administration is typically required for this role.

- Analytical skills, to identify big-picture goals and operations as well as pinpoint details that impact them

- Communication skills, to effectively convey the work to nontechnical coworkers

- Organizational skills, to keep track of the many moving parts

- Problem-solving skills, to quickly identify and solve network problems

In addition to higher education, you may need to be certified in the products you use. For example, Purdue Global offers the Cisco Networks Postbaccalaureate Certificate that may help you prepare for the CCNA exam.[3]

Computer network architects, also known as network engineers, create plans and designs for data communications networks. They research the latest networking technologies to determine the best design for an organization. They often work in computer systems design firms and work for a variety of businesses. Some larger corporations, such as telecommunications firms, may hire them in-house.

Between 2016 and 2026, the BLS projects that employment of computer network architects will grow by 6%, adding 10,500 new jobs. Most of these positions require a bachelor's degree and at least 5 years of work experience to be considered, but as the BLS notes, employers sometimes prefer candidates who have a master's degree.

In addition to the education requirements, you should possess the following skills if you are interested in becoming a computer network architect:

- Management skills, because computer network architects often lead teams

- Communication skills, to effectively communicate tasks and big picture ideas

- Analytical skills, to examine and understand data networks and business goals

- Organizational skills, to stay on top of network projects and coordinate various types of communication networks

If you're interested in computer network architecture, a Bachelor of Science in Information Technology or a Master of Science in Information Technology from Purdue Global can help you pursue your career goals.

4. Careers in Education and Research

IT professionals who work in education and research help the world prepare for the next evolution of IT. Educators can inspire students who go on to create new IT products or methods, while researchers may discover and develop these advancements themselves.

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5. Careers in Information Security

Information security analysts help keep networks and systems secure and protected against cyberthreats. They create security protocol, monitor networks and systems for attacks, and work to mitigate risks and damage. Security analysts can work in-house for an organization that handles a large amount of data, like an insurance or financial company, or with a cybersecurity firm that contracts services.

With constantly emerging global security mandates (such as the EU General Data Protection Regulation), these types of professionals are expected to be in greater demand. The BLS predicts information security analysts positions will grow 28% between 2016 and 2026, with 28,500 new jobs added.

The BLS reports that a bachelor's degree in computer science or a related field is required, and some employers may require a master's degree.

You need the following skills to thrive as an information security analyst:

- Technical skills, that allow you to detect, assess, and remediate network intrusions. You should also be familiar with software like EnCase.

- Organizational skills, since attacks can come from a variety of sources and entire networks must be monitored

- Problem-solving skills, to identify cyberattacks and find solutions to them quickly

- Forward-thinking skills, to adjust security measures according to the latest trends and threats

- Communication skills, to effectively communicate threats and attacks to key business stakeholders, who may have to convey those to customers or partners

If cybersecurity and information security analyst roles appeal to you, Purdue Global offers several relevant degrees and certificates, including:

- Bachelor of Science in Cybersecurity

- Master of Science in Cybersecurity Management

- Graduate Certificate in Information Security

- Information Security Postbaccalaureate Certificate

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6. Careers in Software Development

Software developers for applications and systems create the software and apps that people use in the course of their professional and personal lives. They also create the apps, systems, and networks that IT professionals work with. Software developers may work for computer systems services firms, in manufacturing, and in software publishing environments, among others.

The BLS projects employment of software developers will grow 24% between 2016 and 2026, with 302,500 new jobs added, much faster than the average for all occupations. Software developers typically need a bachelor's degree in a related field to be hired.

For a software development role, you typically need to possess the following skills in addition to computer programming and technical skills:

- Analytical skills, to identify areas that need to be improved

- Creativity, to build innovative solutions

- Communication skills, to explain how your product works and its benefits

If you're interested in software development, Purdue Global offers a Bachelor of Science in Information Technology and a Programming and Software Development Postbaccalaureate Certificate that can help you achieve your goals.

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Grow Your IT Career How You Want To

As the IT industry continues to evolve, the demand for knowledgeable and educated IT professionals will continue to grow. Purdue Global's online IT degrees prepare students to excel in the field and build a more fulfilling career path. With online associate's, bachelor's, and master's degrees offered, as well as specialized certificates, you can gain the knowledge and skills to pursue a career you'll love, and the online format enables you to continue to work and meet other obligations while you go to school.

Learn more about Purdue Global's online information technology degrees and certificates or request more information today.

HOW WILL YOU GROW YOUR IT CAREER?

Important Information: Please Read

1 National long-term projections may not reflect local and/or short-term economic or job conditions, and do not guarantee actual job growth.

2 Purdue Global cannot guarantee employment or career advancement.

3 Students are responsible for understanding the requirements of optional certification exams. The University cannot guarantee students will be eligible to sit for or pass exams. In some cases, work experience, additional coursework beyond the Purdue Global program, fieldwork, and/or background checks may be necessary to be eligible to take or to successfully pass the exams.

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