Did you know?

- Penn State credits and degrees earned online are identical to those earned on campus.
- Penn State World Campus has attracted students from all fifty states and twelve countries.
- Our online courses involve frequent interactions among students and with instructors.
Information Sciences and Technology (IST) Programs
The need for information technology (IT) professionals has never been greater, and occupations in the field of information sciences and technology (IST) continue to be some of the fastest growing in the nation. In fact, recent research indicates that by the year 2014, there will be a need for an estimated 640,000 IST workers with bachelor’s degrees to fill new and existing jobs.

To meet that growing need, Penn State World Campus, in partnership with Penn State’s highly regarded College of Information Sciences and Technology, developed a portfolio of online IT programs. Each degree or certificate offers you the flexibility of online learning—studying where and when it’s most convenient for you—plus ongoing interaction with faculty and fellow students. You will also have the benefit of exceptional student support services and resources developed with the online learner in mind.

At Penn State World Campus, we realize that working professionals require maximum flexibility when pursuing education—so you can continue your professional pursuits and strike a better balance between work, family, and education.
Penn State’s Online Information Sciences and Technology Programs

Penn State’s online IST programs combine IT and management knowledge that can be applied to any industry. You get the high-quality education Penn State is known for, delivered conveniently online so that you can take courses anytime, anywhere—allowing you to continue to meet your personal and professional commitments while gaining knowledge that can be immediately applied to your current job.

➤ Master of Professional Studies in Information Sciences
➤ Bachelor of Science in Information Sciences and Technology
➤ Associate in Science in Information Sciences and Technology
➤ Certificate in Information Sciences and Technology

The IST portfolio is designed so that most of the credits you earn in the certificate program in IST or the associate degree program in IST can be applied toward the bachelor’s degree program, if you choose to continue your education. Entry into the bachelor’s or associate degree programs, however, is not contingent on completing the certificate. The same holds true for the bachelor’s degree; you are not required to complete the associate degree before enrolling in the bachelor’s degree program.

Penn State on Your Résumé

No matter which program you choose, your courses will be taught by Penn State faculty. You will receive the same support as students in our traditional IST programs, and the credentials you earn will be the same as those earned from one of Penn State’s other colleges or campuses.
Choose from Two Tracks

Information Assurance and Decision Support (IADS) or Software Development (SD)

Information Assurance and Decision Support

This option is for persons who want to focus on information analysis, cyber security, information assurance, and decision support. Graduates with this option can work in various occupations, including intel analysis, information assurance engineering, catastrophe risk analysis, computer systems security analysis, information security/digital forensics, and systems integration.

Software Development

This option is best suited for persons who want to focus on software analysis, development, and implementation. It prepares IT professionals to develop software products and services for industry and government through software analysis, design, and architecture; system verification; data storage and retrieval; and managing globally distributed development.

Both tracks in the MPS in IS can provide students with a well-rounded background in the foundations of IS, network management and security, and data and knowledge management. In addition to getting your MPS degree, your completion of the IADS track can also qualify you to be awarded two certificates in information systems security and data mining.
Curriculum—Master of Professional Studies in Information Sciences

This 33-credit degree program can be completed in 24 months, or less, on a part-time basis. The online courses are highly interactive and collaborative, allowing you to build strong ties with other students and gain perspectives from other disciplines and industries.

**Course Work**

In addition to the core courses, there are 12 required credits and 9 elective credits from the track of your choice (IADS or SD) needed to satisfy the requirements for the degree.

For the **Information Assurance and Decision Support Option**, courses include:

- IST 515 Information Security and Assurance (3 credits)
- IST 555 Intelligent Agents and Distributed Decision Making (3 credits)
- IST/STAT 557 Data Mining I (3 credits)
- IST 885 Introduction to Multisensor Data Fusion (3 credits)

Electives for the IADS track include courses in geospatial intelligence, Web security and privacy, computer and cyber forensics, and applied statistics.

For the **Software Development Option**, courses include:

- IST 411 Distributed-Object Computing (3 credits)
- IST 412 The Engineering of Complex Software Systems (3 credits)
- SWENG 568 Enterprise Integration (3 credits)
- SWENG 586 Requirements Engineering (3 credits)

Electives for the SD track include courses in Web security and privacy, project management, systems engineering, systems optimization, and problem solving.
Bachelor of Science in Information Sciences and Technology—Integration and Application

As the IT field continues to change and evolve, it takes more than just experience to open doors to new opportunities; it takes a respected education from an accredited university. If you’re serious about moving ahead in your current position, changing fields altogether, and improving your earning potential, getting a bachelor of science degree in IST is a great way to prepare for that next step. And with Penn State on your résumé, you can be confident that employers will give you a second look.

Apply What You Are Learning—Today

The bachelor of science degree program in IST is designed to provide you with the skill set you need for a successful career in the global marketplace. The program can help you enhance your knowledge of core information technologies and prepare you to apply that knowledge in a practical setting. Through a combination of independent study and team projects with fellow students, you can build an understanding of how information technologies are used and how they support organizational functions, project management, teamwork, problem solving, and presentation skills.
Curriculum—B.S. in IST—Integration and Application

Penn State’s 125-credit bachelor of science degree program in IST is designed to prepare you to use information technology to realize a variety of system-based goals (e.g., reliability, accessibility, and efficiency). The degree focuses on helping you to develop the skill set needed for integrating information technology into different systems to maximize and enhance system performance.

**Course Work**

The emphasis is on providing you with the frameworks needed to use information technology as a system attribute as well as a set of application-oriented experiences and skills. The Integration and Application option is more of a balanced blend of technology and people skills.

In addition to program-specific general education and elective courses, you must complete the following courses to satisfy the requirements for the degree:

- CMPSC 101  Introduction to C++ Programming (3 credits)
- IST 110   Information, People, and Technology (3 credits)
- IST 111S  Seminar in Information Sciences and Technology (1 credit)
- IST 210   Organization of Data (4 credits)
- IST 220   Networking and Telecommunications (3 credits)
- IST 230   Language, Logic, and Discrete Mathematics (3 credits)
- IST 240   Introduction to Computer Languages (3 credits)
- IST 301   Information and Organizations (3 credits)
- IST 302   IT Project Management (3 credits)
- IST 331   Organization and Design of Information Systems: User and System Principles (3 credits)
- IST 402   Emerging Issues and Technologies (3 credits)
- IST 420   Fundamentals of Systems and Enterprise Integration (3 credits)
- IST 421   Advanced Enterprise Integration: Technologies and Applications (3 credits)
- IST 440W  Information Sciences and Technology Integration and Problem Solving (3 credits)
- IST 495   Internship (1 credit)
- STAT 200  Elementary Statistics (4 credits)
Associate in Science in Information Sciences and Technology

The 60-credit, online associate degree program in IST, designed for working professionals with little or no formal background in IT, can prepare you for positions ranging from computer support specialist and network administrator to application programmer and information systems support specialist. You can also learn to manage others and gain experience in the nontechnical aspects of organizations.

**Course Work**

The major is designed to help you gain a thorough knowledge of information systems, and includes extensive practice using contemporary technologies in the creation, organization, storage, analysis, evaluation, communication, and transmission of information.

Most of the credits you earn in the associate degree program in IST will also apply to the bachelor’s degree program in IST. Contact an adviser if you have any questions.

**Generalized Business Option**

This option, requiring 15 credits to complete, allows students to specialize in the general business areas of accounting, marketing, and management. It is designed to provide the foundational aspects of the business environment and to prepare graduates for immediate and ongoing employment opportunities or reentry into the workplace.

**Individualized Option**

The 15-credit individualized option was developed as a way for students to use a variety of courses to meet the degree requirements while providing more specific specialization to meet their professional objectives. Students must work with their academic advisers to make sure the courses they want will apply to the degree.
Certificate in Information Sciences and Technology

This 13-credit online certificate program is designed to prepare you for an entry-level position in IT. You will cover a variety of relevant subjects, including data organization, the networking and telecommunications industries, and new media, and how the World Wide Web uses emerging technologies. You can also learn how IT issues relate to broader business strategies.

Course Work

The courses in the certificate program in IST can also be applied toward the requirements for an associate degree in IST.

The following courses are common to all three undergraduate IST programs (for a complete list of course requirements, please check the specific program on the Web site):

- IST 110  Information, People, and Technology (3 credits)
- IST 210  Organization of Data (4 credits)
- IST 220  Networking and Telecommunications (3 credits)
Why Penn State?

Penn State has been serving students for more than 100 years through distance education and more than 10 years through online learning. We’ve used this experience to develop a nationally recognized support system for students who are geographically removed from campus.

➤ A High-Quality, Renowned Education
Since its founding in 1855, Penn State has established itself as one of the most trusted and respected universities in the nation. Through education, research, and outreach, Penn State continues to respond to the Commonwealth, the nation, and the world’s changing economic and social needs. Our faculty and course designers develop our degrees and certificates specifically for the online adult learner, and you can expect our high-quality courses to fit into your busy schedule, providing immediate value to your career.

➤ A Reputation of Excellence
Penn State is regionally accredited by The Middle States Association of Colleges and Schools, with an outstanding reputation in research and teaching. The credits, transcripts, and diploma that you receive from Penn State’s online programs will be identical to those received from any Penn State campus.

➤ Learner and Technical Support Services
Without having to set foot on campus, you will have access to many of the same support services that residential students enjoy. Course scheduling and registration are available through the World Campus Student Services, and World Campus HelpDesk personnel are available to offer technical support.

➤ Library Services
You will be able to access one of the leading university research libraries in North America—Penn State’s University Libraries system, which holds 4.7 million volumes and 56,000 serials. You can search the online catalog and review databases as if you were sitting at a terminal in any Penn State library.
Frequently Asked Questions

How do I know if distance learning is right for me?
Learning via distance education requires a significant amount of self-motivation and commitment. Having the flexibility to study at the time that is most convenient for you means you won’t have a firm schedule as you would in many on-campus courses. You will need to establish and maintain a fixed study schedule to successfully complete your coursework. Because most of our students are juggling numerous life commitments at the same time they’re taking courses, it’s essential that you find a balance between your life responsibilities and course work to remain motivated.

Remember—we’re here for you! With our amazing team of academic advisers, technical support experts, customer service representatives, and Penn State instructors, we’ll help you get where you want to go—successfully—through distance education.

Is this the real Penn State?
Yes. Penn State World Campus was launched in 1998. It has since grown into one of the most respected and highly regarded online campuses in the world—extending Penn State’s long-standing reputation as a leader in distance education into the 21st century.

Can I obtain financial aid for my courses?
Penn State realizes that one of the biggest challenges of returning to school is the cost. That’s why our advisers have been trained to help you make the most of the financial aid options and opportunities available to you.

Will the courses in the certificate or associate degree programs apply to the bachelor’s degree in IST?
Most of the credits you earn in the associate degree or certificate programs in IST can be applied toward the bachelor’s degree program in IST. Contact an adviser if you have any questions.
There are a few ways to get started on one of our degrees or a certificate. We recommend that you contact an adviser to help you plan a curriculum that best meets your goals.

Our student services and program specialists are available to answer any questions you have about the IST programs.

**Contact Us**
psuwd@psu.edu • www.worldcampus.psu.edu
800-252-3592 (toll free within the United States)
814-865-5403 (local and international)
814-865-0741 TTY • 814-865-3290 Fax

**Student Services Hours** (inquiries and registration)
8:00 a.m.–9:30 p.m. Monday–Thursday
8:00 a.m.–5:00 p.m. Friday
Closed Saturday and Sunday

**Admissions Hours**
8:00 a.m.–8:00 p.m. Monday–Thursday
8:00 a.m.–5:00 p.m. Friday
Closed Saturday and Sunday

**Academic Advising Hours**
8:00 a.m.–9:00 p.m. Monday–Thursday
8:00 a.m.–5:00 p.m. Friday
Closed Saturday and Sunday

Penn State World Campus
The Pennsylvania State University
128 Outreach Building
University Park PA 16802