

# INFORMATION SCIENCES AND TECHNOLOGY, CERTIFICATE

Requirements for an undergraduate certificate may be completed at any campus location offering the specified courses for the certificate.

## You Might Like This Program If...

- You want to develop new software and web applications, help businesses operate more effectively by creating and implementing technological solutions, or understand how technology is connected to broader social issues.
- You are interested in technology but also want to work with people.
- You enjoy coming up with creative solutions to difficult challenges.

## Program Requirements

To earn an undergraduate certificate in Information Sciences and Technology, a minimum of 12 credits is required.

A grade of "C" or higher is required in all courses for the certificate; no course substitutions are permitted. Courses taken more than 10 years ago will not apply automatically towards completion of the certificate but instead will require review by the academic unit.

Code	Title	Credits
<b>Prescribed Courses</b>		
<i>Prescribed Courses: Require a grade of C or better</i>		
IST 110	Information, People and Technology	3
IST 210	Organization of Data	3
IST 220	Networking and Telecommunications	3
IST 250	Introduction to Web Design and Development	3

No Prerequisites Required.

## Certificate Learning Objectives

- **Communication (Individual and Team):** Communicate and work effectively (both individually and in teams) with a range of perspectives and audiences through a variety of media
  - Participate effectively on teams in order to accomplish a common goal
  - Communicate effectively with a range of audiences, formally or informally, through writing and the spoken word
  - Seek out, analyze, and incorporate diverse ideas and broader perspectives represented in the diversity of people
  - Make respectful and inclusive choices in interacting with customers, peers, supervisors, and/or subordinates with a diversity of identity characteristics (e.g., age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, gender identify, or veteran status).
- **Knowledge/Application:** Understand and apply the interdisciplinary, theoretical knowledge of the information sciences or security sciences
  - Define and explain the core concepts, principles, processes, and theories within the academic majors of IST and/or SRA
  - Apply the core concepts of the academic majors of IST and/or SRA to real-world problem

- **Problem-Solving:** Understand, apply and adapt various problem solving strategies, using appropriate technology and methods
  - Identify information problems and/or opportunities in terms of the human, informational and technology dimensions
  - Analyze issues surrounding the problem and/or opportunity in terms of the human, informational, and technology dimensions; and determine the requirements appropriate to understanding the situation
  - Design systems, architectures, processes, components, or programs to meet desired needs of the human context at varying levels of analysis (e.g., individual, group, organization, society, and/or world)
  - Deploy up-to-date and appropriate techniques, methodologies, and/or tools necessary for understanding opportunities and constraints and/or the optimal design, implementation and continuance of an information based solution
  - Evaluate the success of systems, architecture, processes, components, or programs intended to meet desired needs of the human context at varying levels of analysis (e.g., individual, group, organization, society, and/or world)

## Academic Advising

The objectives of the university's academic advising program are to help advisees identify and achieve their academic goals, to promote their intellectual discovery, and to encourage students to take advantage of both in-and out-of class educational opportunities in order that they become self-directed learners and decision makers.

Both advisers and advisees share responsibility for making the advising relationship succeed. By encouraging their advisees to become engaged in their education, to meet their educational goals, and to develop the habit of learning, advisers assume a significant educational role. The advisee's unit of enrollment will provide each advisee with a primary academic adviser, the information needed to plan the chosen program of study, and referrals to other specialized resources.

READ SENATE POLICY 32-00: ADVISING POLICY (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/32-00-advising-policy/>)

## University Park

### Undergraduate Academic Advising Center

E103 Westgate Building  
University Park, PA 16802  
814-865-8947  
advising@ist.psu.edu

## Hazleton

### Debra Conway

Director of Continuing Education  
202 Slusser Bayzick  
Hazleton, PA 18202  
570-450-3136  
dxk40@psu.edu

## World Campus

### Undergraduate Academic Advising

301 Outreach Building  
University Park, PA 16802  
814-863-3283  
advising@outreach.psu.edu

## York

### William Cantor

Assistant Teaching Professor in IST  
226 Grumbacher Building (GISTC)  
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wpc2@psu.edu

<https://www.york.psu.edu/academics/certificates/information-sciences-and-technology> (<https://www.york.psu.edu/academics/certificates/information-sciences-and-technology/>)

## Career Paths

IST allows you to explore some of the biggest challenges facing society and work to solve them by leveraging information and using technology. It blends skills from a number of fields – computer science, psychology, math, business, sociology, political science – so you can help people and organizations thrive. IST's Office of Career Solutions helps students navigate their internship and career development in the field through coaching, workshops, interview preparation, resume reviews, career fairs, job postings, and networking opportunities.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES WITH A CERTIFICATE IN INFORMATION SCIENCES AND TECHNOLOGY (<https://ist.psu.edu/current/careers/development/process/path/>)

## Opportunities for Graduate Studies

Because our courses blend technical knowledge with skills in communication and business, an IST degree allows for careers in nearly every industry including government, defense, consulting, business, entertainment, and medicine.

## Contact

### University Park

COLLEGE OF INFORMATION SCIENCES AND TECHNOLOGY  
411 Eric J. Barron Innovation Hub Building  
State College, PA 16801  
814-865-3528

### Hazleton

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<https://hazleton.psu.edu/ce> (<https://hazleton.psu.edu/ce/>)

### World Campus

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<https://www.worldcampus.psu.edu/degrees-and-certificates/penn-state-online-information-sciences-and-technology-undergraduate-certificate> (<https://www.worldcampus.psu.edu/degrees-and-certificates/penn-state-online-information-sciences-and-technology-undergraduate-certificate/>)

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