

INFORMATION SCIENCES AND TECHNOLOGY, A.S. (INFORMATION SCIENCES AND TECHNOLOGY)

Seven Penn State campuses are scheduled for closure after Spring 2027: DuBois, Fayette, New Kensington, Mont Alto, Shenango, Wilkes-Barre, and York. New students are not being admitted at these campuses.

Begin Campus: World Campus

End Campus: World Campus

Program Learning Objectives

- **Knowledge/Application:** Understand and apply the use of information systems, through extensive practice using contemporary technologies in the creation, organization, storage, analysis, evaluation, communication, and transmission of information
 - Define and explain the core concepts, principles, processes, and theories within the information technology domain
 - Apply the core concepts of the academic coursework of IST and translate practical problems, through domain analysis into software applications usable in a human or organizational context via application creations that use high-level programming languages, combining original code with existing code libraries and application programming interfaces (APIs), to real-world problems
 - Formulate a solid understanding of the fundamental knowledge of the design and management of ""data"" via the utilization of database concepts and practical skills to analyze and implement a well-defined database design
 - Demonstrate a basic understanding of the working of digital networks
- **Problem-Solving:** Demonstrate, apply and adapt various problem-solving strategies, using appropriate technology and methods
 - Identify, analyze, and define information problems and/or opportunities through effective customer/client communication in terms of the human, information, and technology dimensions; and determine the right information technology requirements that are appropriate to their business scenarios
 - 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) that emphasizes customer requirements at all stages of the process and address business constraints, and react to the existing designs as new needs arise
 - Deploy up-to-date, relevant 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)
- **Use Communication Skills:** Apply written, oral, and graphic communication and work effectively (both individually and in teams) in both technical and non-technical environments 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
 - Demonstrate 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)
- **Professional Responsibilities:** Understand professional responsibilities in terms of the ethical, legal, security and social aspects of any given problem and its solution
 - Demonstrate an understanding of the cognitive, social, legal, ethical, diversity, and security perspectives surrounding a given problem
 - Assess the impact of information, computing and technology on individuals, groups, organizations, society, and the world for the purpose of making informed decisions from a sociological, governmental, legal, and/or security perspective
 - Understand the rules, regulations and issues related to compliance with applicable laws and regulations related to Information Security and Privacy