INFORMATION TECHNOLOGY, B.S. (UNIVERSITY COLLEGE)

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: Any Penn State Campus

End Campus: Beaver, Brandywine, DuBois, Greater Allegheny, Hazleton, Lehigh Valley, Mont Alto, New Kensington, Schuylkill, Scranton, Shenango, Wilkes-Barre, York

Program Learning Objectives

Beaver Campus

- **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 problems
- **Problem Solving Strategies:** Understand, apply and adapt various problem solving strategies, using appropriate technology and methods.
- **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
  - 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.
- **Lifelong Learning:** Commit to the continuous acquisition of relevant knowledge for professional development by self-teaching and/or on-going education and learning

Brandywine, Hazleton, Lehigh Valley, Mont Alto, Schuylkill, Scranton, Shenango, York Campuses

- **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 problems
- **Problem-Solving:** Demonstrate, 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, 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)
- **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
  - 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.
- **Lifelong Learning:** Commit to the continuous acquisition of relevant knowledge for professional development by self-teaching and/or on-going education and learning
  - Employ information-seeking strategies and self-directed learning in pursuit of current knowledge
  - Enroll and participate in professional development and tutoring opportunities

DuBois Campus

- **Knowledge/Application:** Demonstrate the interdisciplinary knowledge, theoretical knowledge of Information Technology (IT).
  - Define and explain the core concepts, principles, processes, and theories within the academic major.
  - Apply the core concepts of IT to real-world problems.
- **Problem-Solving:** Understand, apply and adapt various problem-solving strategies, using appropriate technology and methods.
  - Identify information system 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).
- **Evaluation and 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.
  - Synthesize data from multiple sources to help make informed decisions.
  - Communicate effectively to a variety of audiences through writing and the spoken word.
- **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.
- **Lifelong Learning:** Commit to the continuous acquisition of relevant knowledge for professional development by self-teaching and/or on-going education and learning.
  - Employ information-seeking strategies and self-directed learning in pursuit of current knowledge.
  - Enroll and participate in professional development and tutoring opportunities.

Greater Allegheny Campus

- **Critical Thinking and Problem Solving within the Information Technology Disciplines.** Understand, apply and adapt various problem-solving strategies, using appropriate technology and methods. 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
- **Teamwork and Collaboration in Group Work Dynamics.** All of our students do group projects. Working with and completing projects by groups is a soft skill that all our IST college students must develop as they will participate in group work in their future professional endeavors. Working in group build both leadership and cooperation trait to the students. These students will learn to take advantage for these traits to be able to build timely and quality projects.
- **Demonstration of Professionalism and Work Ethic in the IT Classroom.** Understand professional responsibilities in terms of the ethical, legal, security and social aspects of any given problem and its solution. Demonstrate accountability with individual and group projects. Demonstrate a professional image in all classroom and outside the classroom activities.
- **Oral and written communications in the IT classroom.** Communicate and work effectively (both individually and in teams) in team projects. Articulate functional and non-functional requirements and how these requirements are met through technology particularly to stakeholders unfamiliar with the technology used to address problems while meeting all requirements.

New Kensington Campus

- **Knowledge/Application:** Understand and apply the interdisciplinary, theoretical knowledge of the information sciences
- **Problem-Solving:** Understand, apply and adapt various problem-solving strategies, using appropriate technology and methods.
  - Identify information system 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.
- **Communication:** Communicate and work effectively(both individually and in teams) with a range of perspectives and audiences through a variety of media.
- **Professional Responsibilities:** Understand professional responsibilities.
- **Lifelong Learning:** Commitment to lifelong learning.

Wilkes-Barre Campus

- **Knowledge:** Define and explain the core concepts, principles, processes, and theories within the academic majors of IST
- **Application:** Apply the core concepts of the academic majors of IST to real-world problems.
- **Research:** 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.

- **Synthesis:** 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).