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

Begin Campus: DuBois, Greater Allegheny, Hazleton, Mont Alto, Wilkes-Barre, Scranton, York

End Campus: DuBois, Greater Allegheny, Hazleton, Mont Alto, Scranton, Wilkes-Barre, York

Program Learning Objectives

DuBois Campus

- **Know the System Development Lifecycle (SDLC):** Demonstrate knowledge of the SDLC by applying its methods to information systems projects and lab exercises.
- **Know Information Systems and Industry Methods:** Demonstrate ability to apply various industry standards in system development, system maintenance, and ISO/IEC/IEEE standards.
- **Use Information Sciences Theory/Practice:** Use management theory and information technology processes in managing information systems, which include best practices for system design, development, and implementation.
- **Manage Information Systems:** Demonstrate knowledge and execution of designing and managing various information systems.
- **Know Security Risk Factors:** Demonstrate knowledge of security risk factors impacting on various system components; understand the impact of those risk factors on the larger information system; and demonstrate the ability to design, develop, and implement secure information systems, using the latest industry standards and best practices, (i.e., securing hardware, software compliance, etc.).
- **Use Communication Skills:** Apply written, oral, and graphic communication effectively in both technical and nontechnical environments, and use appropriate technical literature.
- **Use Team Membership Skills:** Function effectively as a member of a technical team.

Greater Allegheny Campus

- **Design and Manage Network- and Information-based systems:** Demonstrate knowledge and execution of designing and managing various information systems.

Hazleton and York Campuses

- **Knowledge/Application:** Understand and apply the interdisciplinary, theoretical knowledge of the information sciences or security science
  - 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:** 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)
- **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)
- **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 in professional development and tutoring opportunities

Mont Alto 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:** 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

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- **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 in professional development and tutoring opportunities

Scranton Campus

- **Communication:** Communicate and work effectively (both individually and in teams) with a range of perspectives and audiences through a variety of media.
- **Knowledge/Application:** Understand and apply the interdisciplinary, theoretical knowledge of the information sciences or security sciences
- **Lifelong Learning:** Commit to the continuous acquisition of relevant knowledge for professional development by self-teaching and/or on-going education and learning.
- **Problem-solving:** Understand, apply and adapt various problem solving strategies, using appropriate technology and methods.
- **Professional Responsibilities:** Understand professional responsibilities in terms of the ethical, legal, security and social aspects of any given problem and its solution.

Wilkes-Barre Campus

- 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).