Industrial Systems Engineering

Major Overview:
We live in a complex society, but in the Department of Systems Science and Industrial Engineering, we are doing our best to make it less complicated. In fact, that's exactly what we do -- we study complex systems and look for simplifying solutions.

We work across all environments and fields of study including manufacturing, management, service industries, healthcare systems and others. So, our time could be spent at a hospital developing ways to decrease wait times in emergency rooms, or you might find us in a manufacturing facility working on quality assurance issues or consulting.

Research Areas:
Watson students learn from and work with an outstanding and experienced faculty working in leading research areas. Students who participate in undergraduate research have the opportunity to delve into a focused area of interest, while gaining meaningful hands-on experience applying technical skills and putting their analytical and critical-thinking abilities into practice.

Research conducted in the Department of Systems Science and Industrial Engineering focuses on:

- Applied statistics and design of experiments, artificial intelligence and expert systems, computer integrated manufacturing, data mining
- Electronics packaging and manufacturing, manufacturing, supply chain modeling and management, quality, reliability, system optimization
- Healthcare systems, human factors and ergonomics

Watson School students are encouraged to speak with their individual department when seeking out opportunities in research.

Explore more research opportunities in the Department of Systems Science and Industrial Engineering. [http://www.binghamton.edu/ssie/research]

For more information about research in the Watson School, please visit the link. [http://binghamton.edu/watson/research]
Post-Graduation:
Earning a degree in industrial and systems engineering provides students the opportunity to integrate engineering, business and communication skills into the professional world. ISE graduates, unlike other engineers, have the ability to apply their skills to work across all environments and fields of study including health systems, production/manufacturing, ergonomics, management, operations research, quality control or information technologies.

Students who graduate from the Industrial and Systems Engineering program may elect to continue on to earn a graduate degree or PhD in industrial engineering, systems engineering, business or other engineering discipline to gain further skills to apply to the professional world.

Industrial systems helpful links
[http://www.binghamton.edu/ssie/]

Courses:
First-year courses to consider:
Calculus I & Calculus II
Chemistry 111 Chemical Principles
Physics 131 Calculus Based General Physics I
WTSN 103 Engineering Communications I
WTSN 111 Introduction to Engineering Design
WTSN 104 Engineering Communications II
WTSN 112 Introduction to Engineering Analysis

Click here to access the University Bulletin for an in-depth description of each course. [http://bulletin.binghamton.edu/]

Thank you.
For more information contact Watson School Advising:
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(607-777-6203)