Industrial and Systems Engineering

Industrial and Systems Engineers plan, design, implement, and analyze systems. This engineering discipline is where technology, people, business and information intersect. The degree provides graduates with broad, flexible career opportunities with manufacturing, consulting, service or governmental organizations. The degree can also provide the foundation and background for further studies in engineering and business as well as professions such as law or medicine. The curriculum builds on a solid engineering mathematics and science core and adds courses in production and manufacturing, ergonomics and safety, engineering management, operations research, statistics, quality control, and information technologies. The curriculum graduates students who have:

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to design and conduct experiments, as well as to analyze and interpret data.
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- An ability to function on multidisciplinary teams.
- An ability to identify, formulate, and solve engineering problems.
- An understanding of professional and ethical responsibility.
- An ability to communicate effectively.
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- A recognition of the need for, and an ability to engage in, life-long learning.
- A knowledge of contemporary issues.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy.
- An ability to integrate systems using appropriate analytical, computational, and experimental practices.

Major

- Industrial and Systems Engineering (http://bulletin.auburn.edu/undergraduate/samuelginncollegeofengineering/departmentofindustrialandsystemsengineering/industrialandsystemsengineering_major)

Minor

- Automotive Engineering and Manufacturing (http://bulletin.auburn.edu/undergraduate/samuelginncollegeofengineering/departmentofindustrialandsystemsengineering/automotiveeng_manufacturing_minor)
- Business-Engineering-Technology (http://bulletin.auburn.edu/undergraduate/samuelginncollegeofengineering/departmentofindustrialandsystemsengineering/buseng_tech_minor)