Industrial and systems engineering (ISE) is concerned with the design, operation, and improvement of integrated systems of people, material, information, equipment, and energy. Industrial engineers (IEs) address the overall performance of systems, responsiveness of systems to customer and user needs, and the quality of products or services produced. IEs also carefully evaluate and design the roles people play within work systems to ensure people can safely, effectively, and efficiently perform their tasks while maximizing work quality. In sum, industrial engineers are systems integrators and productivity enhancers.i

**Career Areas/Job Titles:**

- **Management and Industry**
  - Hospital Administrator
  - Manufacturing Engineer
  - Consulting
  - Medical Doctor
  - Information Specialist
  - Entrepreneur
  - Veterinarian
  - Government/Politics
  - Efficiency Expert
  - Pharmacist
  - Education
  - Strategic Planner
  - Science and Technology
  - Sales Representative
  - Research and Design Specialist
  - Workplace Designer
  - Product Designer
  - K-12 Teacher
  - Production Supervisor
  - Quality Engineer
  - Professor

*i Some careers may require licensure, certification, or further education. Talk to an advisor about specific requirements.*

**Transferable Skills:**

- Basic Computer Skills
- Defining Needs
- Organization Skills
- Engineering Fundamentals
- Forecasting/Predicting
- Planning
- Expressing Ideas
- Identifying Problems
- Prioritizing Tasks
- Persuasion
- Setting Goals
- Strategic Planning/Visioning
- Provide/Respond to Feedback
- Adaptability/Flexibility
- Creating Innovative Solutions
- Use Technology Effectively
- Attention to Detail
- Data Analysis
- Written Communication
- Judgment & Decision Making
- Analytical/Critical Thinking
- Teaching/Instructing Others
- Implementing Decisions
- Problem Solving
- Teamwork
- Administrative Skills

*This is not an extensive list of transferable skills. See larger list of skills you might develop here: [http://ccss.osu.edu](http://ccss.osu.edu)*

**Professional Links:**

- Institute of Industrial Engineers: [http://www.iienet2.org/](http://www.iienet2.org/)