



# What You Can Do With a Major in Industrial Engineering

---

## **Description:**

Industrial engineers are concerned with production processes and seek the most efficient and effective utilization of personnel, materials and machines. They are the bridge between management goals and operational performance. They carefully study the product and its requirements, use mathematical methods to meet those requirements and design manufacturing and information systems. They develop management control systems to aid in financial planning and cost analysis, design production planning and control systems to coordinate activities and control product quality and design. They develop wage and salary administration systems and job evaluation programs. The University of Alabama offers a Bachelor of Science, and a Master's Degree in Industrial Engineering. Please see the undergraduate and graduate catalogs for more information on these programs. Professional work experience before graduation, either through internships, is strongly recommended.

## **Possible Areas of Specialization:**

- As a management engineer in a hospital
- As an ergonomist in a television manufacturing plant
- As an operations analyst for an airline
- As a quality engineer for a public as and electric utility company

## **Skills:**

- Ability to make keen observations and sound judgments.
- Proficiency in mathematics and science
- Ability to synthesize and integrate various factors of production
- Proficiency in written and/oral communication
- Ability to conduct and clearly communicate scientific research

## **Typical Work Activities:**

- |  |                                    |
|--|------------------------------------|
| Getting information needed to do the job       | Processing information             |
| Monitoring processes, material or surroundings | Estimating needed characteristics  |
| Identifying objects, actions and events        | Analyzing data or information      |
| Judging qualities of things, services, people  | Making decisions, solving problems |
| Developing objectives and strategies           | Scheduling work and activities     |
| Coordinating work and activities of others     | Provide consultation and advice    |

## **Possible Employment Settings:**

- Most engineers work in office buildings, laboratories or industrial plants
- Some travel to construction sites, mines and oil and gas exploration sites.

## **Career Center Resources**

Careers in Engineering, by Geraldine O. Garner, 1993  
Careers in Science, by Thomas A. Easton, 1996  
College Majors Handbook, by Neeta Fogg, Paul and Thomas Harrington, 1999  
Great Jobs for Engineering Majors, by Geraldine O. Garner, 1996  
Majoring in Engineering, by John Garcia, 1995  
Occupational Outlook Handbook, by US Dept. of labor, 1998-99  
Opportunities in Engineering Careers, by Nicholas Basta, 1996  
CHOICES, FOCUS - Computer Assessment Programs  
INFO USA – Computer Program to assist in job searching

## **Internet Sites:**

Career Information	<a href="http://www.collegegrad.com/careers">www.collegegrad.com/careers</a> <a href="http://www.monster.com/">www.monster.com/</a> <a href="http://www.acinet.org/acinet">www.acinet.org/acinet</a>
Occupational Outlook Handbook	<a href="http://www.bls.gov/oco">www.bls.gov/oco</a>
O*NET Dictionary of Occupational Titles	<a href="http://online.onetcenter.org/">http://online.onetcenter.org/</a>
The Accreditation Board of Engineering	<a href="http://www.abet.org">www.abet.org</a>

## **Professional Organizations:**

The National Society of Professional Engineers	<a href="http://www.nspe.org">www.nspe.org</a>
Institute of Industrial Engineers	<a href="http://www.iienet.org">www.iienet.org</a>
Society of Women Engineers	<a href="http://www.swe.org">www.swe.org</a>

For additional professional organization listings see:

The National Trade and Professional Associations of the United States, 2000  
State and Regional Associations of the United States, 1999

**Visit UA's Dept. of Engineering**

[www.eng.ua.edu](http://www.eng.ua.edu)

**Visit UA's Career Center**

[www.career.ua.edu](http://www.career.ua.edu)

**HAROLD P. ANDERSEN**  
*hpa@hotmail.com*

**Current Address**  
P.O. Box 8069  
Tuscaloosa, AL 34506  
(205) 555-2234

**Permanent Address**  
160 Buckhead Drive  
Dothan, AL 35466  
(334) 555-9986

**Objective (Optional)** To obtain a position as a Project Engineer in Industrial Engineering

**Education** **Bachelor of Science in Industrial Engineering** May 2001  
University of Alabama, Tuscaloosa, AL  
GPA: 3.1/4.0

**Qualifications** Experienced in quality control assurance and inspection  
Skilled in initiating new methods for process and product improvement  
Cooperative team player, also effective working independently

**Computer Skills** Programming: Fortran, Pascal, Unix, C++, AutoCad  
Software: MS Word, PowerPoint, Excel, Corel Word, Desktop Publisher

**Engineering Experience** **Robert Bork Corporation** Birmingham, AL  
*Manufacturing Intern* Summers 1998-99

- Monitored scrap productions rate targeted sources of scrap and recommended recycling method
- Developed a procedural checklist for preventive maintenance on the automated assembly line
- Designed and ordered new test equipment for assembly line to aid detecting defective parts

**R.J. Coleman, Inc.** New Orleans, LA  
*Co-op Assistant Project Engineer* Spring, 1997

- Conducted study to reduce manufacturing labor while maintaining product quality
- Modified plastic test specimens and mounting, polishing and microscopic analysis

**Leadership Experience** **UA Housing Department** Tuscaloosa, AL  
*Resident Assistant* August 1999 – Present

- Advise freshmen on academic and transitional issues
- Plan and implement passive and active programs to cover a range of topics
- Serve on the Residential Life Planning and Advising Committee

**Professional Affiliation** Industrial Engineering Society of America (2000-present)