



# What You Can Do With a Major in Electrical Engineering

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## **Description:**

Electrical engineers, design, develop, test and supervise the manufacture of electrical equipment, components, or systems for commercial, industrial, military, or scientific use. Some of this equipment includes power generating, controlling, and transmission devices used by electric utilities, electric motors, machinery controls, lighting, and wiring in buildings, automobiles, and aircraft; and in radar and navigation systems, computer and office equipment, and broadcast and communications systems. The University of Alabama offers Bachelor of Science, Master's and Doctorate in Electrical Engineering. Please see the undergraduate and graduate catalogs and website for more information on these programs.

## **Possible Areas of Specialization:**

### **Circuit Designer**

Designs electronic circuits for a particular purpose

### **Communications Specialist**

Designs or improves networks of telephones, radio or television

### **Power Engineer**

Designs and operates highly complex utility plants and power networks

### **Robotics or Control Specialist**

Designs automatic controls for machines, appliances and manufacturing processes

## **Skills:**

Ability to analyze, organize and interpret scientific data

Ability to make keen observations and sound judgments

Ability to operate and use information derived from computers

Ability to work well with others

Aptitude for accurate details, spatial perception and abstract reasoning

Proficiency in mathematics and physical sciences

Sensitivity to economic considerations and human needs

## **Typical Work Activities:**

Designing and modifying systems and equipment

Developing, manufacturing, testing, and servicing electrical and electronic equipment

Overseeing manufacturing and production

Supervising production line workers

Working on teams of engineers, planners and surveyors

Working with equipment ranging from radios, radar, televisions, and computer equipment to industrial and medical measuring and control equipment

.Writing technical reports

## **Employment Settings:**

### Manufacturing firms and industry including:

Aeronautical/aerospace

Automotive

Electric utilities

Electronics

Business machines  
Chemical and petrochemical  
Computers  
Construction  
Consumer products  
Defense

Environmental  
Food and beverage  
Glass, ceramics and metals  
Machine tools  
Scientific equipment

**Career Center Resources:**

Careers in Focus: Engineering, by Ferguson Publishing, 1999  
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 Garner, 2002  
Occupational Outlook Handbook, by U.S. Dept. of Labor, 1998-1999  
Opportunities in Engineering Careers, by Nicholas Basta, 1996  
Real People Working in Engineering, by Blythe Camenson, 1998  
Science and Engineering, College Careers, Vocational Biographies, 1995  
CHOICES, FOCUS - Computer Assessment programs  
INFO USSA – Computer Program to assist in job searching

**Internet Sites:**

Career Information [www.collegegrad.com/careers](http://www.collegegrad.com/careers)  
Byrne's Electrical Engineers, Hot Links [www.webspan.net/~byrne/ee.html](http://www.webspan.net/~byrne/ee.html)  
Electrical Engineers [www.electricalengineer.com](http://www.electricalengineer.com)

**Professional Organizations:**

Alabama Society of Professional Engineers [www.aspe-al.com/](http://www.aspe-al.com/)  
Institute of Electrical and Electronics Engineers [www.ieee.com](http://www.ieee.com)  
International Engineering Consortium [www.iec.org](http://www.iec.org)

For additional professional organization listings see:

The National Trade and Professional Association of the United States, 2000

**Visit UA's Department 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)

# **BEN A. HUDSON**

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## **OBJECTIVE (Optional)**

An entry-level position in industry with an emphasis on electrical systems, computer systems, or programming, and to increase my knowledge in the engineering disciplines

## **EDUCATION**

### **Bachelor of Science in Electrical Engineering**

The University of Alabama, Tuscaloosa AL  
Computer Engineering Option

December 2001

Cumulative GPA 3.4/4.0

## **COMPUTER SKILLS**

|           |         |                   |                 |
|-----------|---------|-------------------|-----------------|
| Lotus 123 | Excel   | Notes 4.5         | Word            |
| BASIC     | FORTRAN | C/C++             | Adobe Photoshop |
| Pivotal   | P-Spice | Max+plusII (ADHL) | OpenGL          |

## **EXPERIENCE**

### **Web Developer, Sanderson Mobile Homes, Fayette, AL**

Summer 2001

- Designed, tested and implemented a dynamic web site
- Provided users and developers manual to the corporation

### **System Development Team, Medalist Club, Tuscaloosa, AL**

Spring 2001

- Redesigned Access 2000 Membership Database format
- Developed standard queries for use of Medalist Board Members
- Constructed a user's and developer's manual

### **System Development Team, Lithonia Lighting, Birmingham, AL**

Fall 2000

- Made recommendations for system improvements
- Finished developer's documentation to achieve the desired system

## **HONORS AND ACTIVITIES**

University of Alabama Engineering Scholarship, 1998  
Alabama Information Management Society, 2000, 2001  
Dean's List: 1998, 1999, 2000