



AGRICULTURAL  
MECHANICS

# Electrical Engineer

An Electrical Engineer is responsible for utilizing sophisticated technology to service, install, repair, and design electrical systems.



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# career profile

Name: Thomas Heathman  
Job Title: Electrical Engineer

Employer: Anderson Electric Corporation

Education: BS, University of Illinois: Champaign-Urbana

 I have always liked solving problems and building things out of Legos®. I guess that sparked my interest in engineering. It didn't hurt that my best subjects in school were math and science. I majored in electrical engineering in college and had a job lined up before I graduated.

 I perform a number of different tasks in my current position. I'm responsible for preparing electrical drawings, specifications, calculations, charts, and graphs. I determine cost estimates and manpower requirements for proposals. I oversee the installation, maintenance, and repair of new and existing electrical systems. I make sure electrical systems meet design specifications. I use computers and other technologies to create and test electrical equipment. I also ensure that our work is in compliance with local, state, and national electrical codes.



 I am asked in many other ways to contribute to the goals of the company. For example, I assist in developing and reviewing electrical programs and procedures for the company. I provide technical direction and on-the-job training to drafters, designers, and less experienced engineers. Furthermore, I cooperate with supply management, sales, marketing, manufacturing, and quality assurance to optimize designs for cost, quality, and manufacturability.

 I really enjoy what I do. In addition to finding my job challenging, I take pride in knowing that I'm competent.

# Electrical Engineer

## overview



An **electrical engineer** is responsible for utilizing sophisticated technology to service, install, repair, and design electrical systems.

## suggested high school courses



[agricultural mechanics](#), physical science, and mathematics

## experience needed



Participate in a school-sponsored competition related to engineering. Plan and implement a related Supervised Agricultural Experience (SAE) Program.

## degree(s) required



A bachelor's degree in electrical, industrial, mechanical, or agricultural engineering is required. An MS degree in an engineering or scientific discipline provides opportunity for further advancement.

## potential employers



farm equipment manufacturers, grain milling operations, meat processing companies, research firms, some state and government agencies

## salary range



\$51,875 to \$102,616

## employment outlook and trends



The future outlook for electrical engineers is projected to be **good** to **excellent** depending on skills, specialties, and location.

## professional organizations



Farm Equipment Manufacturers Association [www.farmequip.org/](http://www.farmequip.org/)  
Institute of Electrical and Electronics Engineers [www.ieee.org/index.html](http://www.ieee.org/index.html)  
National Society of Professional Engineers [www.nspe.org/index.html](http://www.nspe.org/index.html)



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