

Engineering Career Preparation

Electrical and electronics engineers have made remarkable contributions to our world. Engineers are people who solve problems. Engineers focus on making things work more efficiently and effectively. IEEE members helped invent the computer, DSL, cellular phones, microchips, and solar panels - to name a few! So, how can students prepare for a career in engineering?



Within the classroom, students ages 11-18, should consider courses in algebra, geometry, trigonometry,

physics, chemistry, calculus, computers, electronics, engineering design, writing, and public speaking. Many of these topics constitute the core of first year university studies, so early exposure to these courses will give students good preparation for university engineering coursework.

Outside the classroom, networking is the key. Students who participate in engineering or robotics competitions, math programs, science fairs, or design quests gain practical experience in teamwork, problem solving, and networking. Plus, students will meet interesting engineers currently working on exciting projects who can offer advice, and explain how their education, job selection, and personal choices affected their career paths.



Identifying Career Interests and Skills

Students who explore career paths prior to enrolling in a university will have a better understanding of the relationship between school performance and future choices. By building an awareness of the diversity of potential career paths, students can make informed decisions about pre-college courses and extracurricular activities. Students can also get a jumpstart on their own careers by exploring career interests early.



For more information, visit:
www.ieee.org/precollegecareers



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IEEE

PRE-COLLEGE
CAREER EDUCATION

Getting Ready: Exploring Electrical and Electronics Engineering Careers



**Information for students,
ages 11-18, who are considering
career paths in electrical and
electronics engineering.**

EXPLORING ENGINEERING CAREER PATHS

Careers In Electrical and Electronics Engineering

DVD players, cellular phones, radio, television, computers, airplanes, space vehicles, cars, motorcycles, home appliances, life-saving medical equipment, computer games, and Martian battles fought with joysticks represent a mere sampling of the now familiar facets of life made possible through engineering. With today's technological advancements, engineering careers offer even more exciting possibilities.



About IEEE

The Institute of Electrical and Electronics Engineers, Inc. (IEEE) is the non-profit, international professional society for electrical, electronics, computer, and other electrotechnology and information technology professionals. IEEE is made up of more than 380,000 members in 150 countries, working in dozens of technical areas. IEEE provides a variety of resources on its website (www.ieee.org) to encourage students' natural interest in science, technology, mathematics, and engineering.

IEEE Pre-College Website

IEEE's Pre-College Career Planning website offers many resources, including:

- tips on high school preparation
- the diversity of engineering career paths
- programs and projects

The following are just a few examples of the many sites available at www.ieee.org/precollegcareers.

Career Path Resources

- **Discover Engineering** (www.discoverengineering.org)
- **Engineering: Your Future** (www.asee.org/precollege)
- **How Stuff Works** (www.howstuffworks.com)
- **Internet Guide to Engineering, Mathematics, and Computing** (www.eevl.ac.uk)
- **IEEE Virtual Museum** (www.ieee-virtual-museum.org)
- **IEE Circuit** (www.iee.org/OnComms/Circuit)
- **IEE Doctorjob.com** (iee.doctorjob.com)
- **PreK-12 Engineering - Tufts University** (www.prek-12engineering.org)
- **Science and Engineering Net** (www.science-engineering.net)
- **Sloan Career Cornerstone Center** (www.careercornerstone.org)

Printed Resources

- "Is There an Engineer Inside You?" (www.engineeringedu.com)
- "Studying Engineering A Road Map to a Rewarding Career" and "Studying Engineering Technology" (www.discovery-press.com)



Programs and Projects

- **Botball** (www.botball.org)
- **Classroom Connect** (www.classroomconnect.com)
- **FIRST Robotics Competition** (www.usfirst.org)
- **Jason Project** (www.jasonproject.org)
- **Junior Engineering Technical Society** (www.jets.org)
- **MATHCOUNTS** (www.mathcounts.org)
- **National Engineers Week** (www.eweek.org)
- **Odyssey of the Mind** (www.odysseyofthemind.com)
- **Science Service** (www.sciserv.org) (Intel International Science and Engineering Fair; Discovery Young Scientist Challenge)
- **ThinkQuest Programs** (www.thinkquest.org)

Professional Societies

- **American Indian Science and Engineering Society** (www.aises.org)
- **American Society for Engineering Education** (www.asee.org)
- **European Young Engineers** (www.e-y-e.org)
- **Eurel - Convention of National Societies of Electrical Engineers of Europe** (www.eurel.org)
- **European Federation of National Engineering Associations** (www.feani.org)
- **IEE** (www.iee.org)
- **IEEE** (www.ieee.org)
- **National Society of Black Engineers** (www.nsbe.org)
- **National Society of Professional Engineers** (www.nspe.org)
- **Society of Hispanic Professional Engineers** (www.shpe.org)
- **Society of Women Engineers** (www.swe.org)



For more resources, visit www.ieee.org/precollegcareers.