

ALTERNATIVE CAREER PATHS FOR STEM STUDENTS

So, you're getting a degree in engineering, but you've realized that you don't want to be an engineer. What do you do? Maybe you enjoy the work of engineering, but don't want a job in the for-profit sector. Perhaps you have discovered a love of helping others to better understand the concepts being taught in your courses.

Perhaps you are not even enrolled in an engineering or traditional engineering program. If you are majoring in the social sciences or humanities, especially Liberal Arts and Engineering, you may find the alternative careers mentioned here to be exciting options for possible career paths.

No matter what your major is, if you are interested in exploring your options outside of what is seen as the "typical" career path for a student at WPI, you may want to consider some of the alternative careers discussed below.

Technical Sales

If you are an outgoing, self-motivated person who enjoys having a lot of interactions with others and meeting new people, then technical sales might be a good career path for you. Technical sales is the sale of equipment to engineering firms, manufacturers, and research and development companies. Unlike traditional sales jobs, positions in technical sales require that the employee have comprehensive technical knowledge of the product and its application. People with engineering degrees and backgrounds are often much better equipped to communicate to customers how the product works and how it can benefit them.

Sample job titles

- Technical Sales Engineer
- Business Development Engineer
- Solutions Engineer
- Account Engineer
- Sales Application Engineer
- Senior Sales Engineer
- Regional Sales Director

Learn more

- Sales Engineer profile:
truity.com/career-profile/sales-engineer
- Bureau of Labor Statistics—
Occupational Outlook Handbook:
bls.gov/ooh/sales/sales-engineers.htm
- The Sales Engineer: thesalesengineer.com

Consulting

For those who enjoy engineering, but want more variety, a position as an engineering consultant might be the right fit. Engineering consultants use their expertise and services to help both public and private sector organizations find innovative solutions to technical problems. Many engineering consultants work in consulting engineering companies, especially if they are new to the field and are working on building their reputation and network, but they may also be sole practitioners.

Sample job titles:

- Engineer Consultant
- Senior Consulting Engineer
- Consulting Project Engineer
- Consulting Systems Engineer
- Consulting Electrical Engineer

Learn more:

- American Council of Engineering Companies: acec.org
- Association of Consulting Engineering Companies: acec.ca
- Black & Veatch: bv.com
- Stanley Consultants: stanleyconsultants.com/index.php

Teaching/Training

Teaching can be a great option for those who enjoy the classroom environment and are excited by the idea of helping others expand their knowledge in STEM areas. The options for those who are interested in teaching are wide and varied, depending on education and experience. If you are interested in working with youth, then a teaching certificate will allow you to work at the middle or high school level. If you have a master's degree or PhD, you can look for teaching jobs at the college level. If you prefer to teach within the industry, many companies hire instructors for training programs in new technologies for employees in technical positions.

Sample job titles:

- Assistant/Associate Professor
- Physics Teacher
- Science Teacher
- Math Teacher
- Specialist-Training and Development
- Technical Trainer

Learn more:

- WPI Teacher Preparation Program: wpi.edu/academics/teacherprep.html
- Teach For America: teachforamerica.org
- Center for Career Changers to the Classroom: ccteach.org
- Training Industry: trainingindustry.com



Patent Law

Not everyone who works in patent law is a lawyer or has to have a law degree. Patent agents are people who prepare, file, and prosecute patent applications on behalf of their clients. Patent agents might work at a law firm, a legal department within a corporation, or at the U.S. Patent and Trademark Office (USPTO), or may practice as an individual.

While you don't have to have a law degree to become a patent agent, you do have to pass the USPTO's Patent Bar and register with the USPTO. Because most patent applications involve products that are based in some aspect of science or engineering, patent agents must possess a background in these fields before taking the Patent Bar.

Sample job titles:

- Patent Engineer
- Patent Analyst
- Patent Agent
- Patent Examiner
- IP Engineer

Learn more:

- United States Patent and Trademark Office: [uspto.gov](https://www.uspto.gov)
- IEEE article: theinstitute.ieee.org/ieee-roundup/members/achievements/become-a-patent-agent
- Science article: sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2001_10_26/nodoi.6194848891700289985

Community/International Development

If you have an engineering degree and an interest in working with organizations that seek to better the planet and/or communities, then NGOs, nonprofits, and certain government organizations might be the right fit for you. The analytical and organizational skills gained through your education are well suited to working with communities in crisis and can make it easier to spot simple solutions to common problems, such as accessing clean water.

Sample job titles

- Construction Operations Manager
- Mechanical Engineer
- Program Manager
- Water and Sanitation Advisor
- Software Engineer

Learn more

- Engineers Without Borders USA: [ewb-usa.org](https://www.ewb-usa.org)
- Engineering For Change: engineeringforchange.org/who-we-are
- Centers for Disease Control and Prevention: [cdc.gov/employment/recruitment/](https://www.cdc.gov/employment/recruitment/)
- Water for People: [waterforpeople.org](https://www.waterforpeople.org)
- Peace Corps: [peacecorps.gov](https://www.peacecorps.gov)
- Schwab Foundation: [schwabfound.org](https://www.schwabfound.org)
- Ashoka: [ashoka.org](https://www.ashoka.org)
- Idealist—nonprofit job search site: [idealist.org](https://www.idealist.org)
- aidBoard—International aid jobs: [aidboard.com](https://www.aidboard.com)



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- United Nations Careers:
careers.un.org/lbw/Home.aspx
- Massachusetts Clean Energy Center:
masscec.com/jobs

Federal Government Careers

Please read the CDC Tip Sheet on **Finding A Federal Job** to learn more about internships, co-ops, and full time jobs with federal, state, and city government. These are great opportunities for US and Permanent Residents looking for a variety of career paths.

Learn more

- Go Government: gogovernment.org
- Mass Careers: mass.gov/anf/employment-equal-access-disability/masscareers/masscareers.html

Considerations for International Students

Did you know that International Students who are petitioned for or are employed at an institution of higher education, a nonprofit research organization, or a government research organization are not subject to the H-1B visa lottery system. Included in these exemptions are academic incubators at not-for-profit intuitions of higher education and hospitals.

Learn more

- Hospital Jobs in Massachusetts:
mahospitalcareers.com
- Massachusetts Global Entrepreneur in Residence Program (GEIR): masstech.org/innovation-institute/projects-and-initiatives/global-entrepreneur-residence-pilot-program
- Gensler posts on academic incubators:
gensleron.com/cities/tag/academic-incubators

Other Helpful Resources:

- Career Shift (access through the home page of your Job Finder account)
- O*NET OnLine: onetonline.org
- Glassdoor: glassdoor.com
- Sloan Career Cornerstone: careercornerstone.org

Career Development Center
Project Center
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wpi.edu/+cdc

 facebook.com/cdcatwpi

 youtube.com/cdcatwpi

 linkd.in/wpicdc

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 wp.wpi.edu/cdc

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