

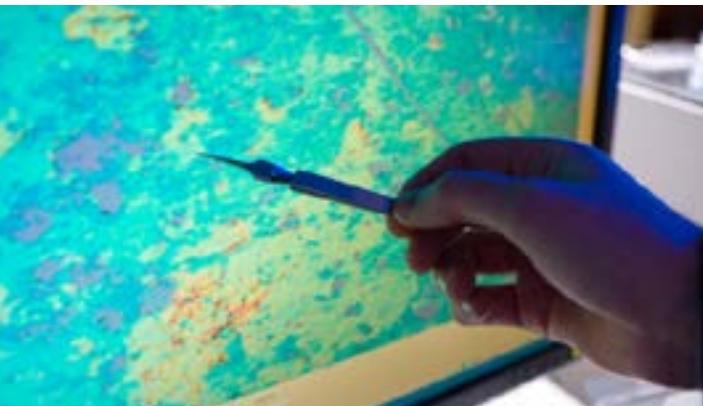
Enhance Your

# Employment

Opportunities

Regardless of the major you choose, your experiences outside the classroom will help you to develop marketable skills to increase your future employability anywhere.

- Internships, volunteering, part-time or summer employment  
[buffalo.edu/career](http://buffalo.edu/career)
- Research opportunities  
[curca.buffalo.edu](http://curca.buffalo.edu)
- Student clubs and organizations  
[buffalo.collegiatelink.net](http://buffalo.collegiatelink.net)
- Writing skills  
[www.buffalo.edu/cas/writing](http://www.buffalo.edu/cas/writing)
- Public speaking and community involvement  
[leadership.buffalo.edu](http://leadership.buffalo.edu)
- Other workshops  
[workshops.buffalo.edu](http://workshops.buffalo.edu)



# Resources

## UB Resources

Changing Your Major (Major Transitions)

[advising.buffalo.edu/change](http://advising.buffalo.edu/change)

Choosing a Major

[advising.buffalo.edu/choose](http://advising.buffalo.edu/choose)

Career Services

[buffalo.edu/career](http://buffalo.edu/career)

College of Arts and Sciences

[casadvising.buffalo.edu](http://casadvising.buffalo.edu)

Counseling Services

[ub-counseling.buffalo.edu](http://ub-counseling.buffalo.edu)

School of Engineering and Applied Sciences

[engineering.buffalo.edu](http://engineering.buffalo.edu)

Undergraduate Advising

[advising.buffalo.edu](http://advising.buffalo.edu)

Undergraduate Degree & Course Catalog

[undergrad-catalog.buffalo.edu](http://undergrad-catalog.buffalo.edu)

Student Success and Retention  
Office of Student Advising Services

109 Norton Hall

716-645-6013

[sas-advisor@buffalo.edu](mailto:sas-advisor@buffalo.edu)

[sas.buffalo.edu](http://sas.buffalo.edu)

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# Exploring Alternative Majors to Engineering

Are you struggling toward an engineering degree? Is engineering not what you thought it would be — or just not right for you?

If so, then it may be time for you to revise your academic plans. Perhaps you chose engineering because you like problem-solving, did well in high school math and science classes, or have a knack for creativity and innovation. But did you know that there are a number of other fields that will allow you to use and develop these same skills?

Here are some options within engineering that you might not have considered, as well as a few alternative majors to investigate. Speak with an academic advisor for guidance in the decision-making process and to see if you're able to stay on track to Finish in 4 years.



University at Buffalo

Student Advising Services

Student Success and Retention

## Should I Stay or Should I Go?

Since choosing an engineering major is essentially a career decision, many students who experience difficulty with engineering might realize that they simply have not made an informed choice. You may think you have an idea of what an electrical engineer does versus a mechanical engineer or a civil engineer, but have you researched the specifics of these job descriptions? Consider speaking with practicing engineers in various fields or even shadowing someone for a day. This will give you a good idea of the extent to which your interests and abilities apply to the field and help you decide if you belong in engineering.

## What Is Industrial Engineering?

A surprising number of engineering students transfer into industrial engineering each year. For many, the draw of this major is its people-oriented approach to productivity and problem-solving, as well as its ties to management. If you think this field may interest you, speak to faculty and students in the department.

## Other Engineering Careers

Keep in mind that an engineering background is very useful in the business world, especially in engineering sales, technical writing and consulting. And yes, you can still make that big engineering salary in those fields!

## Career Services

259 Capen Hall • 716-645-2231

[buffalo.edu/career](http://buffalo.edu/career)

If it's time for a re-evaluation of your interests and goals, UB's Office of Career Services is an excellent resource, providing career counseling, self-assessment, the UB Mentor Program on LinkedIn, the UBE 202 Career Planning course and more.

## Alternative Majors

### Architecture

114 Diefendorf Hall • 716-829-5900

[ap.buffalo.edu/architecture](http://ap.buffalo.edu/architecture)

In addition to technical skills that relate to constructed and natural environments, architects must have knowledge of human behavior and needs. In this major, students focus on architectural communications, model-making and other visual skills, as well as issues and methods of design and construction. The BS in architecture is useful as a foundation for the architectural field as preparation for a professional degree program or for employment in related areas, such as urban planning, facilities management, real estate or architectural preservation.

### Art

202 Center for the Arts • 716-645-6878

[art.buffalo.edu](http://art.buffalo.edu)

Yes, art! If you like using your creativity and visual abilities, you may enjoy graphic design (BFA or BA). An increasingly wide range of careers value imaging skills and creative problem-solving, including commercial and freelance graphic design, Web and CD-ROM design, and arts management.

### Computer Science

338 Davis Hall • 716-645-3180

[www.cse.buffalo.edu](http://www.cse.buffalo.edu)

Computer science is a suitable alternative to computer engineering. Computer science is the systematic study of algorithmic methods of representing and transforming information, including theory, design, application and efficiency. In addition to algorithms and computation theory, this major focuses on software systems and engineering, artificial intelligence, graphics, networks and databases. Both the BA and the BS programs are excellent preparation for graduate study or professional positions in the computing field.

### Environmental Design

114 Diefendorf Hall • 716-829-5900

[ap.buffalo.edu/planning](http://ap.buffalo.edu/planning)

The BA in Environmental Design, offered by Urban and Regional Planning, prepares students for careers that shape our natural and built environments. Through methods of design inquiry, students learn the planning and development of healthy and sustainable communities and acquire skills to improve physical places in which people live, work, and play. Environmental Design encompasses natural landscapes,

neighborhood design, buildings, historic assets, ecological features, land development, transportation, and infrastructure systems. Environmental designers help communities make decisions concerning physical development, preservation, safety, mobility, and environmental protection, utilizing the bi-national Buffalo Niagara region as our design workshop.

### Geography - Geographic Information Science

105 Wilkeson Quad • 645-2722

[buffalo.edu/cas/geography](http://buffalo.edu/cas/geography)

The GIS (BS) degree teaches how to address social, economic, and environmental problems through the use of geographic information technology. Core concepts, principles, and techniques of geographic information systems and other geospatial information technologies are used to visualize information in ways that reveal relationships, patterns, and trends. This degree allows training in cartography (the art and science of map making), remote sensing (digital information about the earth through electronic sensors), and GIS (a set of theories and tools for analyzing spatial data) as well as sub-disciplines in geography such as physical (e.g., environment) or human (e.g., health) geography.

### Mathematics

244 Mathematics Building • 716-645-6284

[buffalo.edu/cas/math](http://buffalo.edu/cas/math)

A mathematics degree has diverse applications in the social, managerial and physical sciences, and can lead to a career in business and industry, government agencies, teaching or research. The department offers both a BA and a BS as well as a variety of program tracks for students preparing for graduate study in either pure or applied mathematics.

### Natural Sciences & Other Majors

[undergrad-catalog.buffalo.edu](http://undergrad-catalog.buffalo.edu)

Majoring in one of the sciences is a logical option, due to easily transferable course requirements and similar interests. Whether you choose biology, chemistry, biochemistry, medicinal chemistry, geology or physics, a BA or BS degree can lead to a variety of careers, from ecology to patent law, teaching to public health, meteorology to genetic research.

You can also consider the BS degree in accounting or business administration, with a possible concentration in financial analysis or management information systems. Majors such as psychology, English, history, sociology or any other liberal arts field can also be equally attractive to potential employers as a degree in business.