Choosing a Major

A Guide for Transfer Students

PITTSWANSON ENGINNEERING
Bioengineering

Bioengineering or biomedical engineering involves combining knowledge from the biology, medical, and engineering fields to improve healthcare systems and the quality of life.

Helpful Links:

⇒ [http://www.bmes.org/content.asp?contentid=140](http://www.bmes.org/content.asp?contentid=140)
⇒ [https://www.youtube.com/watch?v=KQm-gfobUm8](https://www.youtube.com/watch?v=KQm-gfobUm8)

Chemical Engineering

Chemical engineering uses principles from chemistry, biology, physics, and math to solve problems involving the production or use of chemicals, fuel, drugs, and other products.

Helpful Links:

⇒ [https://www.aiche.org/community/students/career-resources-k-12-students-parents/what-do-chemical-engineers-do](https://www.aiche.org/community/students/career-resources-k-12-students-parents/what-do-chemical-engineers-do)
⇒ [https://collegegrad.com/careers/chemical-engineers](https://collegegrad.com/careers/chemical-engineers)
⇒ [https://www.youtube.com/watch?v=i9HeSS7xuas](https://www.youtube.com/watch?v=i9HeSS7xuas)

Civil Engineering

Civil engineering focuses on designing, building, and maintain aspects of infrastructure such as roads, bridges, and energy and water systems.

Helpful Links:

⇒ [https://www.asce.org/about_civil_engineering/](https://www.asce.org/about_civil_engineering/)
⇒ [https://collegegrad.com/careers/civil-engineers](https://collegegrad.com/careers/civil-engineers)
⇒ [https://www.youtube.com/watch?v=cJaRji7K-Lw](https://www.youtube.com/watch?v=cJaRji7K-Lw)

Environmental Engineering

Environmental engineering combines the ideas of engineering, biology, and chemistry to solve environmental problems such as waste disposal and pollution.

Helpful Links:

⇒ [https://www.allaboutcareers.com/careers/career-path/environmental-engineering](https://www.allaboutcareers.com/careers/career-path/environmental-engineering)
⇒ [https://www.youtube.com/watch?v=WyZw4ni1DE0](https://www.youtube.com/watch?v=WyZw4ni1DE0)
Computer Engineering

Computer engineering combines information from computer science and electrical engineering to design and create effective computer networks and systems.

Helpful Links:
⇒ http://www.learnhowtobecome.org/computer-engineer/
⇒ https://www.worldwidelearn.com/online-education-guide/engineering/computer-engineering-major.htm
⇒ https://www.youtube.com/watch?v=eGX_42qSofc

Electrical Engineering

Electrical engineers design and develop electronic equipment and electronic systems; they can be responsible for supervising the manufacturing and implementation of such components.

Helpful Links:
⇒ http://www.owlguru.com/career/electrical-engineers/job-description/
⇒ https://www.livescience.com/47571-electrical-engineering.html
⇒ https://www.youtube.com/watch?v=6cEkZ-0uFPw

Industrial Engineering

Industrial engineering focuses on eliminating wastefulness in processes by creating systems that integrate workers, machines, and other information efficiently.

Helpful Links:
⇒ https://collegegrad.com/careers/industrial-engineers
⇒ https://www.youtube.com/watch?v=3K3-stVK0IM

Mechanical Engineering

Mechanical engineers design and develop mechanical equipment while also overseeing the installation of this equipment and other devices.

Helpful Links:
⇒ http://www.owlguru.com/career/mechanical-engineers/job-description/
⇒ https://www.bls.gov/ooh/architecture-and-engineering/mobile/mechanical-engineers.htm
⇒ https://www.youtube.com/watch?v=gHSZ1S9996U
Materials Science & Engineering

Materials engineers use their knowledge of material properties and structures to design new materials or identify new uses for current materials.

Helpful Links:
- [https://study.com/articles/Materials_Engineer_Job_Description_Duties_and_Requirements.html](https://study.com/articles/Materials_Engineer_Job_Description_Duties_and_Requirements.html)
- [https://www.youtube.com/watch?v=RAOHLGa4psk](https://www.youtube.com/watch?v=RAOHLGa4psk)

Additional Helpful Links
- For more information about Pitt’s departments, faculty, research areas, and course requirements, visit [http://www.engineering.pitt.edu/](http://www.engineering.pitt.edu/)
- For more information about the different engineering disciplines search this site: [http://www.discovere.org/discover-engineering/engineering-careers](http://www.discovere.org/discover-engineering/engineering-careers)
- Search this site for any engineering discipline to understand job outlook and salary for that discipline: [https://www.bls.gov/ooh/](https://www.bls.gov/ooh/)

Engineering Science

Engineering Science is an interdisciplinary field combining the knowledge of engineering, mathematics, and science to solve problems and implement solutions.

Helpful Links:

Questions about the transfer process?

Contact

Chris Kirchhof, Coordinator for Transfer Services
First-Year Programming Office, Swanson School of Engineering
chk63@pitt.edu 412-624-9825