



RESEARCH Opportunities

Hands-on learning opportunities start at enrollment with **well-funded faculty** within the Department of Chemical and Life Science Engineering who are at the **top of their research fields**.

This includes **\$14.7 million in annual research expenditures**, placing us in the **top five chemical engineering programs within the United States**, as well as more than \$1 million per faculty member in research expenditures.

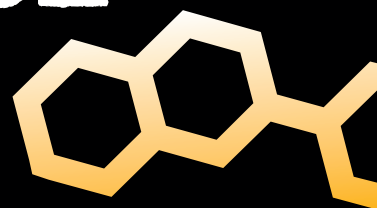
Students have opportunities to work on projects funded by:

- National Aeronautics and Space Administration (NASA)
- Department of Energy (DOE)
- Defense Advanced Research Projects Agency (DARPA)
- Food and Drug Administration (FDA)
- National Science Foundation (NSF)
- Department of Defense (DoD)






VCU College of Engineering

CHEMICAL & LIFE SCIENCE Engineering



In the heart of RICHMOND

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CHEMICAL & LIFE SCIENCE Engineering

Chemistry is essential to modern life. From home and personal care products to clothing and sports equipment to automobiles and electronics, chemistry helps make thousands of products we rely on every day. **Chemical engineers are the bridge between molecular science and consumer products.**

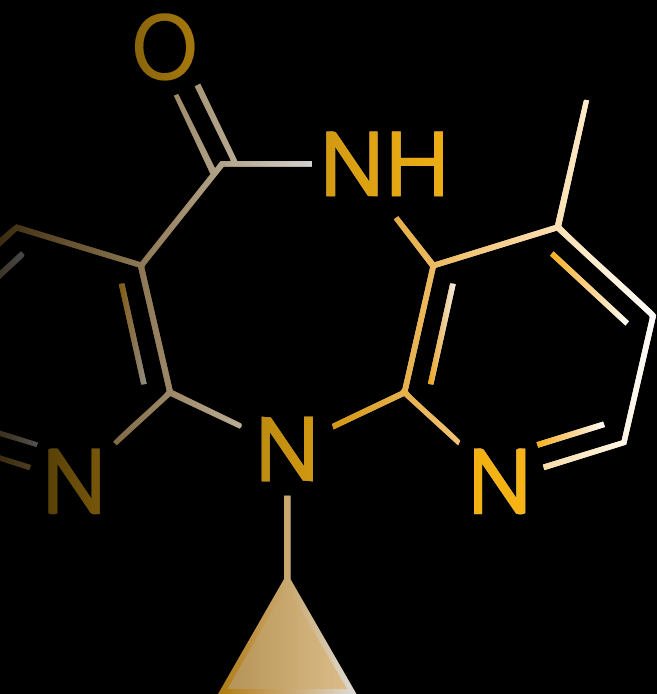
Learn real-world applications in classes and labs that teach:

- Biomaterials
- Biomanufacturing
- Drug Delivery
- Energy technology
- Materials science
- Sustainability
- Pharmaceutical Process Development





RAM ENGINEERS are shaping the future



This chemical chain represents that of the drug nevirapine, an HIV drug that VCU developed. This effort won the Presidential Green Chemistry Award and was led by Frank Gupton, Ph.D. through his work at Medicines for All.

Chemical engineering concentration

The Bachelor of Science in Chemical and Life Science Engineering with a concentration in chemical engineering allows you to specialize your education in key areas of energy technology, development of chemicals and biologics, and materials science.

Life science engineering concentration

The Bachelor of Science in Chemical and Life Science Engineering with a concentration in life science engineering allows you to specialize your education in key areas of nanotechnology, stem cell engineering and systems biology.

Develop skills in college you can use to solve real-world engineering challenges. Access to learning spaces equipped with **industry-strength tools** allow you to apply the theoretical knowledge from lectures in practical, real-world lab environments.

Tools available at the state-of-the-art Unit Operations Lab include:

- Continuous reaction engineering
- Distillation
- Reverse osmosis
- Fermentation technologies
- Advanced analytical characterization methods

Your first job won't be your first job

Your journey at the College of Engineering moves you toward an engineering career. With internships, co-op experiences, lab opportunities and more, you'll have many opportunities to work with employers before graduation, developing an understanding for the kind of work you enjoy and building a network of relationships for the foundation of your career.

These opportunities include:

Cooperative Education

Work a full-time engineering job while maintaining student status. Get paid, learn valuable industry knowledge and grow your professional network.

Internships

Apply what you learn in the classroom in a professional setting to gain valuable practical experience.

Student Organizations

Find like-minded students with a passion for chemical and life science engineering.

Vertically Integrated Projects (VIP)

Get school credit while leading and contributing to large-scale, multi-year research.



Looking to the future

Chemical and Life Science Engineering students find many opportunities while enrolled at the College of Engineering and when they graduate.

Our graduates work in companies like:

- GlaxoSmithKline
- DuPont
- Suez
- Proctor & Gamble
- Deloitte
- Merck
- ChemTreat
- Dow
- IBM
- Estée Lauder