Biochemical engineering is a **specialty area of chemical engineering** that deals with changing the composition, energy content and state of aggregation of materials. As a biochemical engineer you will consider the fundamental properties and nature of matter, the forces that act on matter, and the precise expressions of the relationships between them.

You may study ways in which pure water can be obtained from the sea; design processes to provide fertilizers, rubber, fibers and fuels; or team up with other engineers and scientists in biomedical engineering to develop specialized polymeric materials for use in artificial limbs and other human organs. You may be instrumental in finding supplemental food sources. You might help develop new processes for the application of biochemistry, energy conservation or environmental controls.

With a chemical engineering degree you will have the opportunity to pursue a broad range of job fields such as manager, research engineer, and a consultant. Employment is available in a wide variety of fields such as health, food, agriculture, and petroleum. Each year 1 in 5 graduates continue their studies in graduate or professional schools. Few fields offer more fascinating or diverse career opportunities.

Missouri S&T’s ABET-accredited program combines basic science and engineering principles with a strong emphasis in design and a solid technical knowledge.

If you’re interested in...  
- Problem solving: chemical engineers have the opportunity to work on complex problems and develop new products  
- Helping people: chemical engineers have the opportunity to discover ways to produce new products  
- Management: chemical engineers have the chance to manage production processes

**Research Opportunities**

Undergraduate research opportunities are available through the OURE program as well as many faculty-sponsored projects. The chemical engineering, biological sciences and chemistry departments are located in the same building. Many current research projects involve faculty members from multiple disciplines. This provides undergraduates with interdisciplinary interests an excellent opportunity to do research in these areas while working on a degree in chemical/biochemical engineering.

**Student Organizations**

There is a very active student chapter of the American Institute of Chemical Engineers. Students in the department are also involved in Omega Chi Epsilon, the chemical engineering honor society. Many students also participate in Tau Beta Pi—the engineering honor society—and Alpha Chi Sigma—a service society for students in chemical related fields.

**Cooperative and Internship Education Program**

Co-op and summer intern programs are available to students. These programs provide students with the opportunity to integrate their classroom studies with learning through productive work experiences in a field related to their academic or career goals. Work for a semester or during the summer and build your resume.

**Top Hiring Employers**

- ExxonMobil  
- Anheuser Busch  
- Cargill  
- DuPont  
- 3M  
- Dow Chemical  
- Proctor & Gamble  
- The Solaé Companies  
- BASF  
- Government & Military Employers

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**James E. Bertelsmeyer Hall**

In the fall of 2014 a new $22.3mil chemical and biochemical engineering building will open at Missouri S&T.
Bachelor of Science

Chemical Engineering w/ Biochemical

Coursework, grade requirements and prerequisites is available from S&T’s Course catalog, available online at registrar.mst.edu. Related degree programs and minors at S&T:

- Bachelor of Science, Chemical Engineering (without Biochemical Engineering emphasis)
- Bachelor of Science, Chemistry w/ Biochemistry emphasis
- Bachelor of Science, Chemistry w/ Pre-Med emphasis
- Bachelor of Science, Chemistry w/ Polymers & Coatings Science emphasis
- Bachelor of Arts, Chemistry
- Bachelor of Science, Biological Sciences
- Bachelor of Arts, Biological Sciences
- Minor, Chemical Engineering
- Minor, Chemistry
- Minor, Bioinformatics
- Minor, Pre-Med

Scholarship Information

Freshman scholarships are available through the department. Scholarships ranging from $500 to $6,000 for sophomores, juniors and seniors typically require an application and are based on academic record, service activities and extracurricular activities. Approximately 33% of chemical engineering students receive departmental scholarship support.

Minor Programs and Emphasis Areas

A minor in chemical engineering is available. Requirements are outlined in Missouri S&T’s course catalog, available online at registrar.mst.edu. Related degree programs and minors at S&T:

- Bachelor of Science, Chemical Engineering (without Biochemical Engineering emphasis)
- Bachelor of Science, Chemistry w/ Biochemistry emphasis
- Bachelor of Science, Chemistry w/ Pre-Med emphasis
- Bachelor of Science, Chemistry w/ Polymers & Coatings Science emphasis
- Bachelor of Arts, Chemistry
- Bachelor of Science, Biological Sciences
- Bachelor of Arts, Biological Sciences
- Minor, Chemical Engineering
- Minor, Chemistry
- Minor, Bioinformatics
- Minor, Pre-Med

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Notes

Detailed information on course equivalencies, acceptable credits for elective coursework, grade requirements and prerequisites is available from S&T’s Registrar’s Office at registrar.mst.edu.

All chemical engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade is not required, however, this is the first step to becoming a registered professional engineer.