

Pre-Professional Program

Pre-Engineering

Engineering is a profession that uses basic knowledge from the mathematical and natural sciences and utilizes the materials and forces of nature to develop systems that will perform optimally and economically for the benefit of mankind. Nowhere is this more evident than in the latter part of the twentieth century where such technological advancements as nuclear power, the electronic digital computer, microelectronics and interplanetary space navigation have made profound changes in our way of life. The engineer has been a principal developer of this technology.

What to expect from Pre-Engineering

Pre-engineering is a two-year non-degree program offered by the Department of Physics & Engineering Physics. Students will transfer to another university for an additional two years of study from which they will receive their engineering degree.

- The engineering curriculum is closely articulated with programs at the Missouri University of Science & Technology (formerly University of Missouri-Rolla). Rolla's General Engineering Transfer Guide can be viewed on-line at, <https://futurestudents.mst.edu/admissions/transfer/transfer-guides/>
- For programs at the University of Missouri (formerly University of Missouri-Columbia), students must first refer to the on-line undergraduate catalog for the curriculum of a particular program and then read the course descriptions to find the equivalent courses at Southeast Missouri State University. <http://catalog.missouri.edu/undergraduategraduate/collegeofengineering/#undergraduate/text>

Students should expect to complete from 64 to 68 credit hours of course work prior to transferring. Several transfer scholarships are available each year to students who maintain a high academic standing.

Becoming Career Ready...

/ Faculty-mentored guidance will help you develop the professional skills needed for success in a competitive job market and/or advanced study in graduate and professional programs.

/ Upon completion of the pre-engineering curriculum students are prepared to transfer to another university to complete an engineering program because of the foundation of science and math they receive while at Southeast.

/ The path to a successful career starts with you! You can maximize your career development by working closely with Career Services and Southeast faculty – they are here to help you connect your passions, interests and skills to jobs and opportunities in the field. Career Services provides professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities and more.

Career Opportunities

- Research Engineer
- Development Engineer
- Design Engineer
- Production Engineer
- Construction Engineer
- Plant Engineer
- Operations Engineer
- Environmental Engineer
- Instrumentation Engineer
- Systems Engineer
- Product Engineer
- Engineering Manager

Employment Outlook

The wide variety of job opportunities and the attractive salaries that the profession commands combine to make engineering a worthwhile career. Engineering applications range from the microscopic world of integrated circuits to mammoth construction projects such as bridges and dams. Job opportunities are available in private industry and with state and federal government agencies in such areas as applied research, development, design, production and construction, operations, sales and management.

High School Preparation

Students should have completed four years of mathematics, which includes trigonometry and an introduction to calculus. Four years of science, which includes chemistry and physics, is highly recommended. A strong background in English and a speech course are desirable since an engineer's job requires effective written and verbal communication.

Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.