Interdisciplinary engineers are uniquely prepared for interesting and challenging careers that provide opportunities for addressing challenges that cross different engineering disciplines.
INTERDISCIPLINARY ENGINEERING AT SLU

Students choose Parks for Interdisciplinary Engineering because they want both the flexibility to design their own educational track and the guidance from experienced faculty to ensure that they can achieve their unique career goals. The degree lets students combine multiple areas of interest to form a major. For instance, if they want to combine electrical engineering, psychology and women's studies, that can be done. No traditional major combines all of those topics, but interdisciplinary engineering can.

The program broadens the focus and removes departmental boundaries, offering a new option and a different approach to the study of engineering. It is based in science, engineering and liberal arts, and is tailored to the individual's goals. The program was created for students whose interests and abilities lie at the interface of multiple engineering disciplines or of engineering and other disciplines.

Students in the program are highly motivated, excited by working in interdisciplinary teams and are academically accomplished.

INDUSTRY INTERACTION

Students are prepared to make significant contributions to society, addressing pressing, multi-faceted issues. In an increasingly global business and academic environment, hiring managers and faculty in graduate programs are looking for candidates with a diverse knowledge of multiple fields.

To be as competitive as possible during the internship interview process and after graduation, it is important that undergraduates get real-world opportunities. Parks students get valuable experience conducting research with faculty members and experimenting in high-tech laboratories with state-of-the-art equipment.

Students can work in any number of fields, due to the cross-industry nature of the degree. The major is tailored to fit the student’s career goals, so they finish their undergraduate degree prepared to enter the workforce.

PROGRAM FEATURES

Interdisciplinary Engineering (IDE) at SLU is recognized for its flexibility and unique program features:

- Well-qualified students can earn both their bachelor’s and master's degrees in five years.
- The program is maintained at an honors-level and will accept only highly qualified applicants. Students in the program must maintain a GPA of at least 3.0.
- Unlike many IDE programs, students are not limited to pre-defined tracks, but instead have the freedom to customize their track with their faculty mentor.
- Undergraduate students conduct research with faculty members and even have the opportunity to publish their research findings in journals.
- A low student-to-faculty ratio ensures undergraduates the opportunity for meaningful interaction with their professors.
- Each student will have a faculty mentor, who they will work closely with throughout their years at SLU—from registration to graduation and beyond.
- The Summer Undergraduate Research Experience (SURE) allows students to study specific topics of interest under the direction of a faculty member, while receiving a stipend.
- Students can define their own Study Plan, which will identify the disciplines that they will take courses in, based on their career goals and interests. After they have completed core introductory classes, they will define a Focus Area, which will be the basis for their senior thesis.
- Prior to graduation, students will complete an in-depth research project for the Senior Design course. Professionals from a multitude of industries visit with student teams, as they present their findings. Some teams even receive funding to continue working on their inventions.
- Students can take advantage of mentorship opportunities, pairing with local industry leaders through the St. Louis Regional Business Council or networking with successful alumni at the Parks Leadership Academy series.
- Students can minor in theater engineering, which is offered at only a few schools nationwide.
FEATURED MINOR

The faculty members of the Interdisciplinary Engineering program are teaming up with the Theater Department to offer a unique minor--Theater Engineering. This minor allows engineers interested in careers in theater, film or music to learn the specific skills that will prepare them to enter the field at a level that will be competitive with experienced professionals.

The curriculum includes courses from CAD to audio engineering, from theater history to stagecraft. Traditional engineering courses provide students with a strong foundation and industry specific courses provide cutting-edge technological training. This new program is one of only a few in the country, giving graduates a competitive advantage.

WHY STUDENTS COME TO PARKS

“Do you have interests that cross disciplines and majors? Do you want a degree that combines several areas such as biomedical, electrical, computer, mechanical, civil or aerospace engineering? Or, are you perhaps considering majoring in chemistry, physics, biology, psychology or math instead of engineering? If you want to customize your undergraduate education without sacrificing any of your interests and goals, take a look at Interdisciplinary Engineering.

The IDE option was created for exceptional students who want to tailor their education to fit their specific personal career goals. The program includes basic courses in science, math and engineering, supplemented with liberal arts instruction. In that sense, it’s like most other engineering majors, but then it gets more interesting.

Beyond the basics, each student defines their curriculum, within certain guidelines. Suppose you are interested in energy in an urban environment. You probably want to learn about energy (physics, mechanical engineering, chemistry) and also about an urban environment (civil engineering, psychology, economics, sociology).

Students choose Parks because of our strong academic reputation and our strong belief in integrating the Jesuit mission into our teaching, so that our students will be more than just great thinkers--they will also be great people.”

-David Barnett, Chair and Professor of Biomedical Engineering

FEATURED STUDENT GROUP

The Society of Women Engineers (SWE), a service organization founded in 1950, encourages women to pursue careers in engineering, empowers them to succeed and recognizes female leaders for their achievements. The SWE chapter at Parks College encourages engineers to meet and network with each other and the greater SWE community. They host many local events and take advantage of the opportunities that the SWE national and regional organizations offer for educational and career advancement.

During National Engineers Week the group teaches girls from area high schools about engineering, leading them through activities that demonstrate the different disciplines that the students can later major in. This is rewarding for the high school students and the SWE members, who are able to encourage women to pursue engineering careers.
ABOUT PARKS COLLEGE

Several global challenges have emerged as opportunities for engineering and aviation students of Saint Louis University to make a difference, to apply their education in a context that is technically brilliant, socially responsible and uniquely enterprising, and to ultimately make the world a better, more inclusive place.

As technology alters every facet of our lives, aviation scientists, computer specialists and engineers are more in demand than ever. SLU’s Parks College of Engineering, Aviation and Technology has a worldwide reputation for its aviation and engineering programs. Our alumni have touched every NASA mission, developed patented technology for wind energy and won national and international awards.

“I invite you to make an appointment for a personal tour. Our faculty, staff and students will be delighted to show you around and answer your questions.”

K. Ravindra, Ph.D., Interim Dean