SAINT LOUIS UNIVERSITY
GRADUATE EDUCATION

Engineering
+ Parks College of Engineering, Aviation and Technology

Saint Louis University is a Catholic, Jesuit institution that values academic excellence, life-changing research, compassionate health care, and a strong commitment to faith and service.

Founded in 1818, the University fosters the intellectual and character development of nearly 14,000 students on two campuses in St. Louis, Missouri, and Madrid, Spain. Building on a legacy of nearly 200 years, Saint Louis University continues to move forward with an unwavering commitment to a higher purpose, a greater good.

OVERVIEW

The graduate program in engineering at Saint Louis University's Parks College of Engineering, Aviation and Technology provides students with the depth of knowledge necessary to pursue advanced academic or industrial work in a modern, ever-changing world. Students learn enhanced analytical skills through an in-depth understanding of major theoretical and practical concepts, written and oral communication skills as applied to technical areas, and the critical and creative thinking skills required to conduct state-of-the-art research.

Parks College offers several graduate engineering programs:
- Aerospace engineering
- Biomedical engineering
- Civil engineering
- Computer engineering
- Electrical engineering
- Engineering physics (M.S. only)
- Mechanical engineering

M.S.:
The Master of Science degree requires a minimum of 30 credit hours beyond a bachelor's degree. For students pursuing the research option, six of the total credit hours must be in thesis research. For students pursuing the project option, three of the total credit hours must be devoted to carrying out a project. Up to 12 credit hours may be transfer credits. Each graduate student is expected to maintain a cumulative GPA of 3.0. A lower GPA may result in probationary status and/or dismissal from the program due to unsatisfactory academic performance. Lastly, all graduate students are required to enroll each semester until a degree is received.

Each master's student prepares a program of study that must be approved by their faculty advisor, the department chair and the associate dean for graduate education and research for Parks College. This program of study is developed within the context of the student's background and career goals, allowing students to customize their graduate program to suit their professional goals.

Ph.D.:
The doctorate in engineering requires a total of 60 credit hours beyond a bachelor's degree with a minimum of 12 credit hours of dissertation research. Of the 60 credit hours, only a limited number may be comprised of coursework at the 4000-level; all other course credits must be at the 5000 or 6000 level. Those students who earn a Master of Science degree may include the a maximum of 24 credit hours — but not the thesis or project credits — in the 60 credit hours that are needed for the Ph.D. degree.

Research Areas:
The expert faculty of Parks College collaborate with graduate students in ground-breaking research in the following areas:
- Aircraft engine aerodynamics
- Cardiovascular and assist devices
- Energy, sustainability and environmental engineering
- Engineering education
- Haptic and human-machine interfaces
- Innovation and entrepreneurship
- Medical robotics
- Neuro/outgrowth and injury
- Orthopedic biomechanics
- Reparative medicine
- Sensors and systems
- Signal processing
- Space systems
- Structures and bridges
- Thermal-fluid sciences
- Tissue engineering
- Transportation
- Unmanned aerial systems
- Water quality and treatment, environmental chemistry
- Water resources and hydraulics

Additional areas can be found online at parks.slu.edu/research.

CONTACT INFORMATION

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WEB | parks.slu.edu/grad

APPLICATION DEADLINE

M.S. | Ph.D.

FALL | Rolling | Rolling
SPRING | Rolling | Rolling
SUMMER | Rolling | Rolling

Deadlines for assistantships are listed online.

DEGREES AND PROGRAMS OFFERED

- Master of Science (M.S.) in Engineering
- Doctor of Philosophy (Ph.D.) in Engineering

COURSES AVAILABLE

DAYS | NIGHTS | WEEKENDS | ONLINE

APPLICATION REQUIREMENTS

- Online application form and fee
- Official transcript(s) of all previous degrees
- Three letters of recommendation
- GRE scores
- CV or résumé
- Professional goal statement

ADMISSION CRITERIA

International students whose native language is not English must provide evidence of English language proficiency by submitting their TOEFL or IELTS results.

Minimum scores required:
- TOEFL PBT 550
- TOEFL IBT 80
- IELTS 6.5
FA C U LT Y ///

Craig Adams, Ph.D., P.E.: Water quality and treatment, environmental chemistry


Gary Bledsoe, Ph.D.: Orthopedic tissue engineering and biomechanics, trauma biomechanics

Larry Boyer, M.S.: Flight simulation, computer graphics

J. Chris Carroll, Ph.D.: Structural and material engineering and engineering education

Natasha Case, Ph.D.: Musculoskeletal tissue engineering, biomechanics

Sridhar Condoor, Ph.D.: Design theory/methodology, technology entrepreneurship, sustainability

Amanda Cox, Ph.D., PE: Water resources and hydraulics

William Ebel, Ph.D.: Digital signal processing, sensors and sensor technologies

Yan Gai, Ph.D.: Function of auditory and other sensory systems, neurophysiology and neuroscience

Koyal Garg, Ph.D.: Skeletal muscle tissue engineering and regenerative medicine

Roobik Gharabagi, Ph.D.: Thermal effects on semiconductor devices

Jenna Gorlewicz, Ph.D.: Electromechanical design, haptic and human-machine interfaces, modeling

Srikanth Gururajan, Ph.D.: Fault tolerant flight control, unmanned aerial vehicles (UAVs)

Andrew Hall, Ph.D.: Interventional cardiology and radiology, cardiac electrophysiology

Riyadh Hindi, Ph.D., P.Eng.: Structural mechanics and design, reinforced concrete

Sanjay Jayaram, Ph.D.: Space systems and components, small spacecraft design

Jail Kianfar, Ph.D.: Traffic and transportation safety and engineering

Armineh Khalili, M.S.: Digital systems, computer programming

Ray LaBeau, Ph.D.: Thermal-fluid sciences, planetary atmosphere, fluid dynamics

Ronaldo Luna, Ph.D., PE: Geotechnical engineering, GIS, earthquakes

Jeff Ma, Ph.D.: Structural mechanics/design, computational solid mechanics, manufacturing

Huliyar Mallikarjuna, Ph.D.: Modeling and analysis of electric machinery

Mark McQuilling, Ph.D.: Thermal-fluid sciences, experimental fluid mechanics

Kyle Mitchell, Ph.D.: Power computer modeling and design, aircraft flight monitoring

Habib Rahman, Ph.D.: Electromagnetic theory and applications and radar systems

K. Ravindra, Ph.D., PE: Thermal-fluid sciences, experimental fluid dynamics, design

Michelle Sabik, Ph.D.: Biomedical engineering

Scott Sell, Ph.D.: Tissue engineering and regenerative medicine

Michael Swartwout, Ph.D.: Spacecraft design, mission operations, navigation

Silviya Zustiak, Ph.D.: Hydrogel biomaterials and tissue engineering

FINANCIAL SUPPORT ///

Parks College offers graduate fellowship awards and assistantships each year. Assistantships provide tuition, stipend and health insurance. The deadline to apply is March 1 for consideration for the following fall semester.

There are also many opportunities for students to receive funding through external research grants that are managed directly by individual faculty.

More information can be found online at parks.slu.edu. Information on other financial aid opportunities can be found by visiting the student financial aid office at finaid.slu.edu.