Welcome from the department head

Thank you for considering graduate studies in the industrial and manufacturing systems engineering (IMSE) department at Kansas State University. Each IMSE faculty member is dedicated to helping you succeed. At K-State, you will have regular interaction with your major professor as well as the rest of the IMSE faculty. Our “family” atmosphere facilitates the development of lifelong friendships and professional networks.

IMSE faculty members publish, on average, three journal papers and two papers in refereed conference proceedings each year. They will challenge you to publish your work and the department will help you to travel to professional conferences to present your work.

Feel free to contact us at imse@ksu.edu. We will be happy to answer your questions and discuss in-person how our program can help you attain your career goals.

Sincerely,
Bradley A. Kramer
Ike and Letty Evans Engineering Chair
Professor and Department Head

Manhattan, Kansas and K-State campus

K-State rankings
Our engineering graduate program is currently 59th in the U.S. News and World Report Public School rankings. K-State is recognized by the Princeton Review as one of America’s best colleges.

Manhattan community
Manhattan, nicknamed “The Little Apple,” is a great environment to start a new chapter of your life. The city ranks among the best classic college towns in the country.

Aggieville
Aggieville, an entertainment district close to campus, features more than 100 restaurants, bars and shops, many of which are locally owned. It has been a popular attraction for more than 125 years.

Helpful websites
Cost-of-living and tuition information:
k-state.edu/sfa/costofattendance/gtc.html
Graduate student life information:
k-state.edu/grad/students/graduatestudentlife/GraduateStudentLife.html
Engineering graduate programs information:
engg.ksu.edu/egrp/grad-program

Industrial and Manufacturing Systems Engineering
Graduate Program
Kansas State University
A guide for interested students

Kansas State University
College of Engineering
imse.ksu.edu • imse@ksu.edu
785-532-5606
Advanced manufacturing

IMSE faculty members work to develop and improve advanced manufacturing processes and systems. Key manufacturing research topics focus on processing advanced, difficult-to-machine materials, additive manufacturing and energy manufacturing. Research strengths are in laser micromachining, ultrasonic machining, machining of semiconductor wafers and 3D printing of advanced materials. Key manufacturing systems research focuses on multivariate statistical process control.

Operations research

IMSE faculty members work to develop both theoretical foundations of operations research as well as modern applications of operations research. Key fundamental research is conducted in discrete optimization, mathematical programming, dynamic systems modeling and optimization. Key applications research strengths are health systems modeling, humanitarian logistics, pattern recognition and scheduling.

Systems engineering

IMSE faculty members are working to optimize a variety of complex systems. A system is generally defined as a regularly interacting, interrelated or interdependent group of items or elements that forms a complex whole. Our world is made up of increasingly complex systems. K-State has concentrated systems engineering efforts in humanitarian logistics, healthcare operations, transportation engineering, quality production systems and product and technology development.

M.S. in industrial engineering (MSIE)

This program teaches students the mathematical, scientific and analysis skills to solve complex business problems in manufacturing, healthcare, transportation, financial organizations, communications, government, military and many other organizations.

M.S. in operations research (MSOR)

The operations research (OR) program teaches students to model problems mathematically and develop analytic solutions using methods derived from mathematical programming, statistics, probability theory, simulation, computer science and graph theory. The MSOR is offered both on campus and via distance education.

Ph.D. degree

The Doctor of Philosophy (Ph.D.) degree program in industrial engineering is a research-oriented curriculum designed to prepare students for advanced industrial research and university positions in industrial and manufacturing systems engineering. Graduates of our program are leading major industrial and academic institutions around the world.

Financial assistance

Research and teaching assistantships are available on a competitive basis, and provide stipend and tuition support. Extramurally funded research grants and contracts support research assistantships, and the College of Engineering supports teaching assistantships. New Ph.D. students are also eligible for a fellowship that provides an additional $8,000 to selected applicants.

Minimum admission

- Degree in engineering, mathematics or statistics with a strong background in applied mathematics required.
- Calculus-based probability/statistics course, an introductory operations research course (available as part of the program curriculum) and some knowledge of computer programming required.
- Undergraduate GPA of 3.0 or above for the last 60 hours of courses required.
- Must take the Graduate Record Exam (GRE).
- International students must meet university English requirements for admission.

Application deadlines

Applicants with a U.S. degree:
- Summer (June) admission - April 1
- Fall (August) admission - June 1
- Spring (January) admission - November 1

Applicants with an international degree:
- Summer (June) admission - December 1
- Fall (August) admission - December 1
- Spring (January) admission - August 1

English language program (ELP)

Kansas State University offers English language graduate support courses. ELP academic advisers help students who are admitted to study in a degree program make the transition from the ELP into their academic departments.

Visit k-state.edu/elp for more information.