



# INDUSTRIAL ENGINEERING Graduate Programs

## PROGRAM OVERVIEW

The path to a graduate degree in industrial engineering takes many shapes and forms. Students with backgrounds in engineering, math and other undergraduate degrees can successfully achieve their career goals. The graduate programs in industrial engineering develop skills to tackle immediate challenges across multiple industries and provide a basis for graduates to advance professionally. While building wide knowledge of industrial engineering, students can focus on several areas including ergonomics and human factors, healthcare, supply chain systems, and information technology engineering. Graduates have the ability to identify, design, and execute industrial engineering projects and research, and they pursue careers in academia, research, industry, and government.

## DEGREES OFFERED

### Master of Science in Industrial Engineering

The Master of Science in Industrial Engineering program offers both thesis and non-thesis (project) options. In the thesis option, students complete substantial coursework (at least 24 hours) and a thesis. For the non-thesis, or project option, students focus more on coursework (at least 33 hours) and complete a three-hour independent study master's project. The MSIE is also offered with a concentration in information technology engineering.

### PhD in Industrial Engineering

Students develop an individualized program of study in consultation with the faculty advisor and approved by the dissertation research committee. The program consists of a minimum of 42 credit hours of non-research coursework, which includes two required and four elective 7000 level IE courses and eight other elective courses.

These other elective courses may be additional IE courses or courses from other university programs to satisfy the needs of research goals or career objectives.

The dissertation requires meeting several milestones: at least 12 credit hours of dissertation research, a general exam to be taken after the majority of coursework is complete, a dissertation defense, and a written dissertation.

## GRADUATE ADVISOR

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## **FACULTY RESEARCH AREAS**

### **Fereydoun Aghazadeh**

aghazadeh@lsu.edu — safety engineering, work physiology, workplace design, ergonomics/human factors engineering

### **Craig Harvey**

harvey@lsu.edu — usability engineering, human computer interaction, safety engineering, human factors engineering

### **Laura Ikuma**

likuma@lsu.edu — ergonomics/human factors, safety, work measurement and design, healthcare, and psychosocial factors

### **Hyun Jeon**

hwjeon@lsu.edu — manufacturing systems, energy consumption, service systems, production scheduling

### **Gerald Knapp**

gknapp@lsu.edu — reliability engineering, maintenance management, information systems and technology

### **Warren Liao**

ieliao@lsu.edu — quality control, manufacturing engineering, resource engineering, developing intelligent systems

### **Isabelina Nahmens**

nahmens@lsu.edu — quality engineering and management, lean and six sigma, project management, healthcare systems engineering, offsite homebuilding industry

### **Bhaba Sarker**

bsarker@lsu.edu — operations research, production and manufacturing systems, supply chain management, military logistics