Industrial and systems engineering is an engineering discipline devoted to the design, installation, improvement and control of integrated systems of people, materials, and facilities in a wide range of organizations that produce goods or render services. Like other engineering fields, industrial engineering is concerned with solving problems through the application of specialized knowledge in mathematics and science, as well as the principles of engineering. Two major distinctions of our discipline, among the engineering disciplines, is the unique focus of industrial and systems engineering on human factors and the quantification and systematic removal of uncertainty from production systems. Industrial and systems engineering has five major focus areas: advanced manufacturing, operations research, data sciences and machine learning, health and human systems, and systems engineering.

An important characteristic of industrial and systems engineering is its systems approach to integrate the basic resources of production and service systems and other relevant resources, such as information and energy, in such a way as to create a smooth, efficient and competitive operation within an enterprise. Industrial and systems engineers are needed in virtually all types of enterprises, ranging from industries such as manufacturing, distribution, logistics, transportation, and construction; service sectors such as health care, telecommunications, retail, banking, and engineering consulting to government agencies, military, and non-profit organizations.

The mission of the Industrial and Systems Engineering program is to serve the state, nation, and global community by educating industrial engineering students to be well founded in engineering fundamentals and to have the knowledge and skills required to design, develop, improve, implement and control sophisticated production and service systems in an environment characterized by complex technical and social challenges. Throughout this educational process, students will be instilled with the highest standards of professional and ethical behavior. It is the intent of the undergraduate industrial engineering program to equip its graduates to achieve the following accomplishments a few years after graduation:

1. Graduates will be successful in improving operations by solving complex industrial and systems engineering problems.
2. Graduates will demonstrate professional leadership.
3. Graduates will be instilled with the motivation and ability to accomplish professional life-long learning.

The undergraduate program in Industrial Engineering at Texas A&M University is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

Industrial and Systems Engineering students may participate in the Undergraduate Minor Program offered by Texas A&M. This program is usually comprised of 15 to 18 hours, some of which may be substituted as technical electives. The most common minors are math, business and economics. The department also has a Fast Track Program for academically qualified students who want to take selected graduate courses and receive both graduate and undergraduate credit by meeting specific requirements. The department encourages students to participate in industrial internships or the Cooperative Education Program to acquire practical experience to complement their industrial engineering education. Internships are generally encouraged during the summer months only. Students who participate in the Co-op program during three academic semesters may count the three credit hours as a technical elective in their curriculum.

Graduate degrees including the Master of Science (MS), Master of Engineering (M.Eng.), and Doctor of Philosophy (PhD) are also offered by the department in addition to the Bachelor of Science in Industrial Engineering. For graduate degree information, please see the Texas A&M University Graduate Catalog.

Before commencing course work in the major, students must be admitted to the major or have the approval of the department.

**Faculty**

Aprahamian, Hrayer, Assistant Professor  
Industrial & Systems Eng  
PHD, Virginia Tech, 2018

Banerjee, Amarnath P, Professor  
Industrial & Systems Eng  
PHD, University of Illinois at Chicago, 1999

Benden, Mark E, Associate Professor  
Industrial & Systems Eng  
PHD, Texas A&M University, 2006

Bennett Jr, George K, Senior Professor  
Industrial & Systems Eng  
PHD, Texas Tech University, 1970

Bukkapatnam, Satish T, Professor  
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PHD, Pennsylvania State University, 1997

Butenko, Sergiy I, Professor  
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PHD, University of Florida, 2003

Currie-Gregg, Nancy J, Professor of the Practice  
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PHD, University of Arkansas, 1971

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PHD, University of Michigan, 2001

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PHD, Texas A&M University, 1996
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PHD, University of Michigan - Ann Arbor, 2010

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Kianfar, Kiavash, Associate Professor
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PHD, North Carolina State University, 2007

Koppa, Rodger J, Senior Associate Professor
Industrial & Systems Eng
PHD, Texas A&M University, 1979

Kum, Hye Chung, Associate Professor
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PHD, University of North Carolina - Chapel Hill, 2004

Kumar, Panganamala R, Professor
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PHD, Washington University in St. Louis, 1977

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PHD, University of Illinois at Urbana-Champaign, 1995

Leon, Victor J, Professor
Industrial & Systems Eng
PHD, Lehigh University, 1991

Malave, Ceasar, Professor
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PHD, University of South Florida, 1987

Mayer, Richard John, Adjunct Professor
Industrial & Systems Eng
PHD, Texas A&M University, 1998

McDonald, Anthony D, Assistant Professor
Industrial & Systems Eng
PHD, University of Wisconsin - Madison, 2014

Mehta, Ranjana K, Associate Professor
Industrial & Systems Eng
PHD, Virginia Tech, 2011

Momcilovic, Petar, Associate Professor
Industrial & Systems Eng
PHD, Columbia University, 2003

Moreno Centeno, Erick, Associate Professor
Industrial & Systems Eng
PHD, University of California, Berkeley, 2010

Ntaiimo, Lewis, Professor
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Pei, Zhijian, Professor
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PHD, University of Illinois, 1995

Peres, S Camille, Assistant Professor
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PHD, University of Toronto, 2015

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Smith, Donald R, Senior Associate Professor
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PHD, University of Arkansas, 1973

Tuo, Rui, Assistant Professor
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PHD, Chinese Academy of Sciences, 2013

Valdez Flores, Ciria, Professor of the Practice
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PHD, Texas A&M University, 1987

Vazquez, Jose A, Senior Lecturer
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MA, University of Iowa, 1986

Wang, Shiren, Associate Professor
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PHD, Florida State University, 2006
Wang, Yen J, Instructional Assistant Professor
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DEN, Northwestern University, 1991

Wortman, Martin A, Senior Professor
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PHD, Virginia Tech, 1988

Zahabi, Maryam, Assistant Professor
Industrial & Systems Eng
PHD, North Carolina State University, 2017

Zeng, Li, Assistant Professor
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PHD, University of Wisconsin, Madison, 2009

Zhang, Xudong, Professor
Industrial & Systems Eng
PHD, University of Michigan Ann Arbor, 1997

Zou, Na, Instructional Assistant Professor
Industrial & Systems Eng
PHD, Arizona State University, 2015

**Majors**

- Bachelor of Science in Industrial Engineering (http://catalog.tamu.edu/undergraduate/engineering/industrial-systems/industrial-bs/)
- Bachelor of Science in Industrial Engineering and Master of Public Health in Occupational Safety and Health, 5-Year Degree Program (http://catalog.tamu.edu/undergraduate/engineering/industrial-systems/industrial-bs-occupational-safety-and-health-mph/)
- Bachelor of Science in Industrial Engineering and Master of Science in Finance, 5-Year Degree Program (http://catalog.tamu.edu/undergraduate/engineering/industrial-systems/industrial-bs-finance-ms/)

**Minors**

- Industrial Engineering Minor (http://catalog.tamu.edu/undergraduate/engineering/industrial-systems/industrial-minor/)

**Certificates**

- Data Center Operations Engineering Certificate (http://catalog.tamu.edu/undergraduate/engineering/industrial-systems/data-center-operations-certificate/)
- Engineering Systems Management Certificate (http://catalog.tamu.edu/undergraduate/engineering/industrial-systems/engineering-systems-management-certificate/)