Industrial Engineering

The graduate faculty of the Edward P. Fitts Department of Industrial and Systems Engineering supports academic and research interests in four areas:

1. manufacturing systems (manufacturing processes, medical device manufacturing systems, CAM, CIM, robotics, automation, rapid prototyping and concurrent engineering);
2. production systems (logistics systems, supply chain management, scheduling, inventory control, materials handling, facility design, furniture manufacturing and management, quality control, and engineering economics);
3. systems analysis and optimization (health systems, stochastic processes, simulation, mathematical programming, and soft computing); and
4. ergonomics (human performance, occupational safety, and biomechanics). The department faculty actively supports independent graduate degree programs in operations research, integrated manufacturing systems engineering, textile technology and management, and financial mathematics.

Admission Requirements

Applications are accepted from undergraduate majors in engineering and in the behavioral, physical and mathematical sciences who meet prerequisites in calculus and linear algebra, computer science, and statistics.

Master's Degree Requirements

The M.S. degree requires 30 credit hours and involves depth of study in a specified area of concentration, nine hours in a minor, and six hours of research credit. The Master of Industrial Engineering (M.IE.) degree may be obtained by course work only; project work is optional. A minimum of 33 credit hours is required for the M.IE.

Doctoral Degree Requirements

This degree requires 72 credit hours of course and research work beyond the Bachelor's degree. Undergraduate students with superior credentials may apply directly to the doctoral program and bypass the master's degree. For students who have completed the Master's degree, typically 30 to 36 hours of additional course work are required. A departmental written qualifying examination is required.

Student Financial Support

Research and teaching assistantships are available on a competitive basis to early applicants. Fellowships that supplement assistantship stipends are available to U.S. applicants with superior credentials. Award priority is given to Ph.D. and then to M.S. applicants.

Degrees

• Industrial Engineering (MR) (http://catalog.ncsu.edu/graduate/engineering/industrial-engineering/industrial-engineering-mr/)
• Industrial Engineering (MS) (http://catalog.ncsu.edu/graduate/engineering/industrial-engineering/industrial-engineering-ms/)
• Industrial Engineering (PhD) (http://catalog.ncsu.edu/graduate/engineering/industrial-engineering/industrial-engineering-phd/)

Faculty

Full Professors

Jingyan Dong
Shu-Cherng Fang
Yahya Fathi
Ola Lars Anders Harrysson
Julie Simmons Ivy
Russell E. King
Yuan-Shin Lee
Maria Esther Mayorga
Chan S. Nam
Rohan Ajit Shirwaiker
Julie Swann
Reha Uzsoy

Associate professors

Adolfo Escobedo
Michael G. Kay
Yunan Liu
Osman Yalin Ozaltin
Hong Wan
Xu Xu

Assistant Professors

Karen Boru Chen
Xiaolei Fang
Leila Hajibabai Dizaji
Jordan Kern
Benjamin A. Rachunok
Sara Shashaani
Zhuoting Yu
Practice/Research/Teaching Professors
Semra Sebnem Ahiska King
Fred Livingston
Brandon Mark McConnell
Nur Ozaltin
Kanton Tyrone Reynolds
Christopher Rock
Michael Spano
Harvey A. West II

Adjunct Professor
Amy Diane Wilson

Emeritus Faculty
Mahmoud A. Ayoub
Richard Harold Bernhard
Paul Cohen
Charles Thomas Culbreth Jr.
Thom Joel Hodgson
Henry Nuttle
Richard G. Pearson
Stephen Dean Roberts
Ezat Sanli
Clarence Smith Jr.
James Reed Wilson
Richard Wysk
Robert E. Young