

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.I.E.) degree may be obtained by course work only; project work is optional. A minimum of 33 credit hours is required for the M.I.E.

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/>)

- Industrial Engineering (Minor) (<http://catalog.ncsu.edu/graduate/engineering/industrial-engineering/industrial-engineering-minor/>)

Faculty

Full Professors

Paul Cohen
 Shu-Cherng Fang
 Yahya Fathi
 Ola Lars Anders Harrysson
 Julie Simmons Ivy
 Russell E. King
 Yuan-Shin Lee
 Maria Esther Mayorga
 Chan S. Nam
 Binil Starly
 Julie Swann
 Reha Uzsoy

Associate professors

Jingyan Dong
 Michael G. Kay
 Yunan Liu
 Osman Yalin Ozaltin
 Rohan Ajit Shirwaiker
 Hong Wan

Assistant Professors

Karen Boru Chen
 Xiaolei Fang
 Leila Hajibabai Dizaji
 Irem Sengul Orgut
 Sara Shashaani
 Xu Xu

Practice/Research/Teaching Professors

Steven D. Jackson
 Semra Senem Ahiska King
 Brandon Mark McConnell

Kanton Tyrone Reynolds

Javad Taheri

Harvey A. West II

Emeritus Faculty

Mahmoud A. Ayoub

Richard Harold Bernhard

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