

# Management Science and Engineering

---

The Management Science and Engineering program is directed toward integrating scientific methods with the functional aspects of organizations by investigating the application of quantitative methodology and systems analysis in the context of decision making, risk analysis, economics and cost analysis, production management, and supply chain logistics. This integration provides the students with a broader perspective toward managerial decision-making in both private enterprise and public administration.

Midcareer professionals and recent graduates with a background in engineering, mathematics, and physical sciences who intend to seek managerial, consulting or systems analyst positions are appropriate candidates. In particular, those candidates who intend to seek positions demanding both technical and management skills find the management science background advantageous in dealing with the complex problems of industrial, commercial, and public service organizations.

The Industrial and Systems Engineering Department administers the Management Science and Engineering program. To be admitted to the program a candidate must demonstrate basic competence in calculus, statistics, linear algebra, introductory operations research, accounting, production and economics. A candidate lacking appropriate background may be required to take background courses. The minimum program consists of 30 credit hours of course work, of which at least 18 credit hours must be in the 400-level. The ISE graduate faculty coordinator must approve all course work. No more than 9 credit hours may be taken from the College of Business.

## **M.S. IN MANAGEMENT SCIENCE AND ENGINEERING**

The minimum program for the master of science degree in Management Science & Engineering consists of 24 credit-hours of approved courses and completion of a satisfactory 6 credit thesis. A faculty member must supervise the thesis. Courses from outside the ISE department usually include other engineering disciplines, mathematics, computer science, and business and economics.

## **M.ENG. IN MANAGEMENT SCIENCE AND ENGINEERING**

The minimum program for the master of engineering degree in Management Science & Engineering consists of 30 credit-hours of coursework (which can include a 3 credit-hour project). This program of study is for those students whose interests are geared toward engineering design rather than research. A faculty member must supervise the project.

## **MANAGEMENT SCIENCE AND ENGINEERING CORE COURSES**

Details on course requirements for the Management Science and Engineering master's degree can be found at Master's Program web page (<https://ise.lehigh.edu/content/masters-programs-courses/#Management>) or at the Industrial and Systems Engineering office.