



Graduate Certificate in Engineering and Technology

Improve your professional-level communication and management skills so that you may more effectively manage projects. This 15-credit graduate program prepares technically trained professionals to lead multidisciplinary teams that bridge the gap between operations and management.

This incremental approach to graduate study is designed to provide flexibility. The certificate offers three tracks:

- Quality management
- Engineering and project management
- Emerging technology management

Credits earned may be applied to the Master of Science in industrial engineering (MSIE), if desired.

Who should participate:

- Engineers currently in or aspiring to a leadership role
- Industrial and manufacturing professionals who are looking for a higher degree of training in their field
- Engineers and computer scientists with a minimum of a bachelor's degree in a technical discipline
- Technical professionals who manage multidisciplinary teams for project design or management

Upon completion of this certificate, participants will be able to:

- Confidently manage a staff in a technical or scientific setting.
- Communicate with employees and colleagues to efficiently produce results.
- Apply acquired managerial skills to advance their careers.
- Pursue a master's degree in industrial engineering with advanced preparation and credits.

These competencies may be applied to positions such as manufacturing production workers, computer engineers, industrial engineers, computer scientists, workers in the pharmaceutical industry and the research and development industry, and more. See an academic advisor for more details.

Admission requirements

Admission to the certificate program does not require students to take the Graduate Record Examination (GRE). However, students should satisfy all other requirements for admission to the Master of Science in industrial engineering program. To learn more about admission, registration, and advising, call 412-624-6600.

Fees and tuition

Current tuition rates are available at www.ir.pitt.edu/tuition. Tuition rates correspond to the tuition set for the School of Engineering and change each July for the next academic year.

Payment plans

- Discover, MasterCard, and American Express are accepted for tuition payment via the Web at <http://student-info.pitt.edu>.
- If you are employed, check with your company's human resources office to see whether you qualify for company tuition benefits.
- Optional payment plans and deferrals are available for participants who wish to extend tuition payments over a longer period of time.

Curriculum: 15 credits

Required courses

all courses are three credits:

IE	2003	Engineering Management
IE	2090	Capstone Project
IE	2005	Probability and Statistics for Engineers 1 <i>(only required for the quality management track)</i>

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Electives

Choose electives based on the track you desire.

Quality management track

Select two courses:

IE	2076	Total Quality Management
IE	2073	Design of Experiments
IE	2077	Statistical Quality Control
BIOSTAT	2049	Applied Regression Analysis
IE	3075	Reliability and Maintainability

Engineering and project management track

Select three courses:

IE	2005	Probability and Statistics for Engineers
IE	2032	Cases in Systems Management
IE	2033	Board Governance and Management
IE	2037	Cost Management for Advanced Manufacturing
IE	2040	Advanced Engineering Economy
IE	2086	Decision Models
IE	3031	Project Management

Emerging technology management track

Select three courses:

IE	2005	Probability and Statistics for Engineers 1
IE	2039	Entrepreneurship for Engineers
IE	2095	Law and Engineering
IE	3034	Management of Technological Innovation

University of Pittsburgh Department of Industrial Engineering

The Department of Industrial Engineering was accredited in 1921, making it one of the five oldest industrial engineering departments in the world. The department prides itself on a progressive curriculum, modern laboratories, active and diverse faculty, and an enthusiastic student body. It continually ranks in the top 20 of the U.S. News and World Report graduate school rankings. The department cares about student learning and mentoring, and prepares students to be leaders in their fields.

School of Engineering

The University of Pittsburgh School of Engineering is on the cutting edge of engineering education and research. With its integrated curriculum, renowned faculty, substantive hands-on learning environment, and state-of-the-art facilities, the school plays a vital role in the educational research and professional advancement of the southwestern Pennsylvania region and the nation.

College of General Studies

The College of General Studies (CGS) provides adult and continuing education programs that are designed to address changing employer and student needs. The high-quality, flexible programs include courses, certificates, and degrees. CGS provides a single point of access to the University's innovative programs and services that both enrich lives and promote the economic health of the region.

Requirements subject to change. Check with an academic advisor before registering.

For more information, contact:

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