

Posgrados



MIP

Master in Engineering with specialization
in Quality Systems and Productivity

Online Program



Tecnológico de Monterrey
Escuela de Ingeniería y Ciencias



MASTER IN ENGINEERING WITH SPECIALIZATION IN QUALITY SYSTEMS AND PRODUCTIVITY

Among the challenges offered by organizations, they are currently focused on creating strategic partners, increasing competitiveness, impacting on costs and market demands, as well as responding to complex and unexpected problems.

Therefore, the Master of Engineering program with specialization in Quality and Productivity Systems is justified, responding to the needs of the environment, contributing to efficiency in the areas of supply chain, quality, continuous improvement and engineering management.

In addition, this program trains professionals to find more optimal systems with increased productivity, considering the aspects of sustainability from a global, integrated and collaborative perspective.

AIMED TO

Professionals in engineering or graduate areas, with knowledge of probability, statistics and operations research.

OBJECTIVE

The Master in Engineering with a specialty in Quality and Productivity Systems aims at training, at an excellence level, those professionals who have the responsibility of designing and implementing systems that integrate human, administrative and technological elements; based on the principles of total quality, productivity and optimization, engineering and statistics.

KEY PROGRAM BENEFITS

- Flexibility to study while working.
- Personalized follow-up of the teaching team.
- Multicultural environment and use of state-of-the-art technology.
- Tecnológico de Monterrey holds accreditations such as: SACS*, CIEES, SEP, and CONACYT**.

PMP is a trademark from the Project Management Institute, Inc.

* Tecnológico de Monterrey is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award bachelor's, master's, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call (+1) 404-679-4500 for questions about the accreditation of Tecnológico de Monterrey.

** See the accreditation's validity of our programs and their benefits in accordance with CONACYT's provisions, at Mexico's National Quality Graduate Programs official website.

COURSE PLAN

The time the student completes the postgraduate course will depend on the number of courses taken per academic period. In a semester master's degree, it is recommended to take 2 subjects per period and one subject in the summer.

Each subject represents 12 hours of academic work per week. Since this master's program is interdisciplinary, previous knowledge and skills in probability, statistics and operations management are necessary.

In addition, this master's program offers the option of pursuing the Black Belt Six Sigma Certification, offered in conjunction with Arizona State University.

Period	Start Date	Summer	No. of Courses	Duration
Semestral	February and August	Yes	10	2 years*

* Suggested duration according to the academic curriculum

Core Courses (choose 1)

- Leadership for business innovation
- Leadership for sustainable development

Basic Courses (choose 2)

- Statistical methods
- Optimization Methods for decision making
- Process control systems

Fundamentals Courses

- Production engineering
- Supply Chain Management
- Quality and competitiveness

Specialty Courses

- Elective I
- Elective II
- Elective III

Research Course

- Research and innovation methods

Subjects accrediting the elective courses

- Quality in product, process and service innovation
- Strategic planning of technological innovation

- Quality of service
- Participative processes for decision making
- Lean system analysis and design
- Supply chain design
- Project engineering
- Modeling and analysis of manufacturing systems
- Design for Six Sigma Productivity Engineering
- ISO: 9000 Quality Management Systems
- Measuring competitiveness and sustainability
- Management for lean operation

Subjects for certification Black Belt Six Sigma

- Process control systems
- Design and analysis of experiments
- Forecasting and regression analysis
- Six Sigma Methods Seminar
- Six Sigma Project Application

ADMISSION REQUIREMENTS

- Have a professional degree.
- Have obtained an average of 80/100 or higher or its equivalent in their professional studies.
- Submit the Tecnológico de Monterrey Graduate Studies Admission Test (PAEP test) and obtain a score equal to or higher than 500 points.
- Submit the application for admission together with all the required documents.



GRADUATE PROFILE

At the end of the program, the graduate will be able to:

- Design, administer, evaluate and improve management systems for service and production areas based on principles and philosophies of quality, innovation and competitiveness.
- Design, manage, execute and evaluate experimental processes that generate real solutions for the optimization of operations.
- Lead in an integral way the process of continuous improvement and innovation in productive systems of a company that allows it to be more competitive.
- Design, manage, evaluate and improve production systems based on contemporary production and manufacturing principles and philosophies, supported by the use of statistical and process optimization tools.
- Integrate the participation of human resources as a key element in the operation of organizational processes of management and production, as well as the efficient administration of organizational and technological resources.



TECNOLÓGICO DE MONTERREY MORE THAN 70 YEARS OF ACADEMIC EXCELLENCE

OUR STRENGTHS

Tecnológico de Monterrey is a Mexican institution of higher education that has a new vision towards 2030:

**Leadership, innovation, and entrepreneurship
for human flourishing.**

DATA AND FIGURES



20% of the directors of Mexico's most important companies graduated from Tecnológico de Monterrey.



42% of EXATEC's are or have been partners or business owners 5 years after graduation.



18% of EXATEC's hold at least one international experience within 5 years after graduation.



28% of EXATEC's hold a leading position within 5 years after graduation.

RANKINGS



**Mexico's best
private university.**

QS University Rankings, 2020

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**Ranked as Latin America's
top 3 best universities.**

QS University Rankings, 2020



CONTACT US

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