Tecnológico de Monterrey

IIS/BIE

B.S. in Industrial and Systems Engineering

Transform the systems that move the world.

Why study this program at Tec de Monterrey?

In a digital, global, and competitive world, this is where you prepare to transform organizations from within.

You'll learn to lead projects that integrate people, processes, and technology, combining strategic vision, data analytics, and tools that create real value.

Is this your path?

If you want to create high-value solutions, optimize resources, and lead change through data, technology, and systems thinking...

BIE is your platform to make it happen!



What makes this program unique at Tec:

- Specializations such as Digital Supply Chains, Industry 4.0, and Data Science.
- High employability and strong connections with companies like FEMSA, Ford, and Unilever.
- Certifications and exchange programs with universities like DHIK, EADA, Rennes, Essex, and Pforzheim.
- Global experiences at institutions such as the University of British Columbia, Pforzheim, and Fudan.



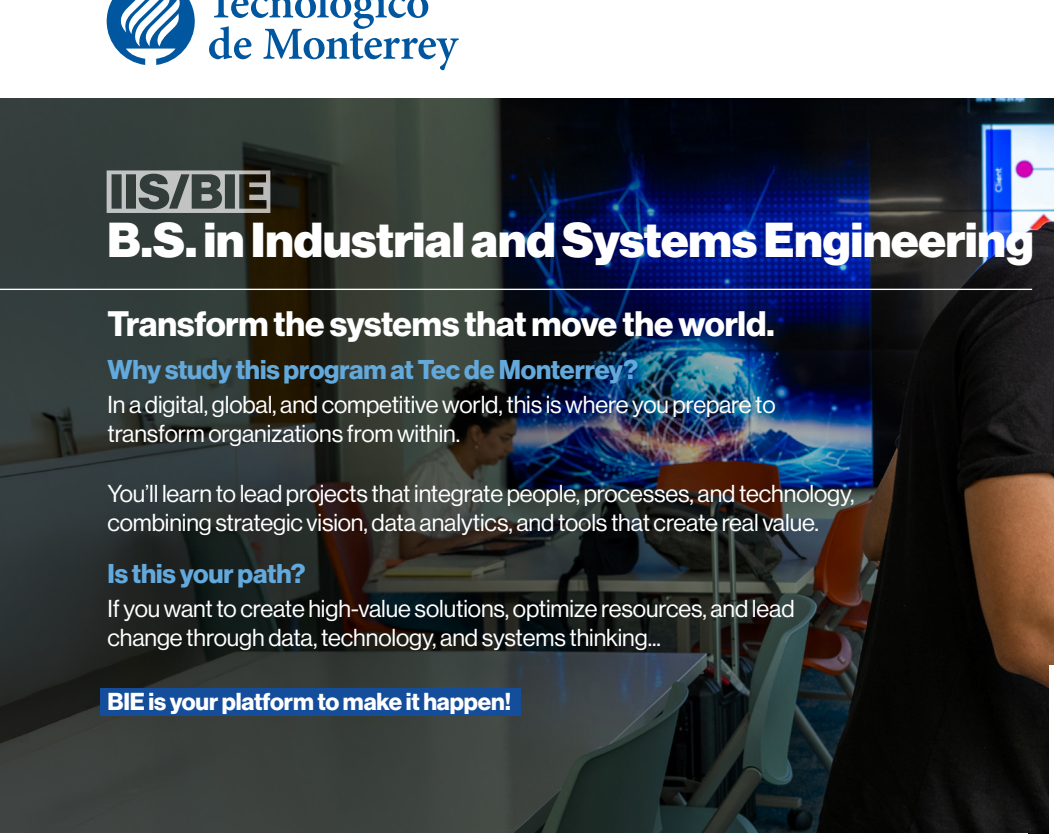
Your career opportunities include:

Supply chain, logistics, process improvement, manufacturing, consulting, quality and productivity, digital transformation, financial and healthcare services, project management, industrial entrepreneurship.



Skills you'll develop:

- You will improve supply chains and their operations using technological tools.
- Make data-driven decisions using analytics, simulation, mathematical modeling, and AI.
- Design efficient and sustainable systems with a strategic and technological approach.
- You will manage projects with economic, social, and environmental impact.



Picture this:

Optimizing a global supply chain, redesigning healthcare systems to improve patient care, or applying AI to streamline operations in a startup.

At Tec, that future starts today.

Here, you're part of something bigger

- International programs in 20+ countries
- Over 75% of students gain global experience
- Strong industry connections: automotive, healthcare, manufacturing, consulting
- Check which campuses offer this program at tec.mx

The voices of those already making an impact

- **Gabriel Alejandro Garza Ortega -** one of the student winners of the 2025 MIT Supply Chain Excellence Award.
- **Adriana Rojo** - interim team lead in logistics management at Mercedes-Benz, Sindelfingen plant.
- **Denise Enkerlin** - analyst at Fitch Ratings (NY).

A glimpse of how our community is driving real change with their talent.

Your ideas already design systems. Here, you learn to transform them.

Take the first step toward engineering that improves the world.

Tecnológico de Monterrey

Curriculum
B.S. in Industrial and Systems Engineering

SEMESTER 1
- Mathematics and Science
- Differential and Integral Calculus
- Biology and Sustainability
- Algorithmic Thinking
- Innovative Perspectives in Engineering
- The Laws of Motion and Conservation
- Tec week: Induction to the Social Service
- Tec Week Elective I

SEMESTER 2
- Humanities and Fine Arts
- Multivariable Calculus
- Linear Algebra
- Chemistry Fundamentals
- Exploration Topic
- Statistics and Data Handling
- Fundamentals of Thermodynamics
- Foreign language
- Tec Week Elective II
- Tec Week Elective III

SEMESTER 3
- Social and Behavioral Sciences
- Fundamentals of Discrete Mathematics
- Applied Engineering Economics
- Fundamentals of Differential Equations
- Operations Optimization
- Work and Process Design
- Manufacture Process
- Probability and Descriptive Statistics
- Tec Week Elective IV
- Tec Week Elective V

SEMESTER 4
- Leadership, Entrepreneurship and Innovation
- Inferential and Predictive Statistics
- Operations and Inventory Planning
- Systemic Methods for Problem-Solving
- Project Feasibility Analysis
- Disciplinary Tec week: Artificial Intelligence for Technical and Scientific Writing
- Tec Week Elective VI

SEMESTER 5
- Ethics and Citizenship
- Data Science Tools
- Project Management
- Discrete Event Simulation
- Quality Management Systems
- Operational Excellence
- Tec week: Professional Life Planning
- Tec Week Elective VII

SEMESTER 6
TEC SEMESTER

You'll be able to customize your career through:
- Concentrations
- Internships
- International experience
- Elective training units

- Tec Week Elective VIII
- Tec Week Elective IX

SEMESTER 7
- Stochastic and Combinatorial Algorithms
- Solutions of Data Science
- System Dynamics
- Agent Based Simulation
- Supply Chain Optimization
- Process Innovation with an Agile Approach
- Tec Week Elective X
- Tec Week Elective XI

SEMESTER 8
- Elective Multidisciplinary Professional
- Industrial and Systems Engineering Project
- Strategies and Guides for the Final Degree Exam
- Tec Week Elective XII

● You'll be able to customize your learning experience by choosing from the different available options.

*The curriculum may vary. Contact an admissions advisor or visit **tec.mx** for more information.

BACHELOR

This program is also offered in English as:
B.S. in Industrial & Systems Engineering

Your future in INDUSTRIAL AND SYSTEMS ENGINEERING starts here.

Want more info?

WHY NOT?

RVOE: DEC-520912

Scan this QR to know more about this program.
tec.mx/bie