Tecnológico de Monterrey

IRS

B.S. in Robotics and Intelligent Systems

Push the limits of Robotics

Why study this program at Tec?

You'll enter an ecosystem where you design and program robotic devices that interact with their environment, learn, and make autonomous decisions.

- **You'll combine artificial intelligence, electronics, digital perception, and embedded systems to solve real-world challenges.**
- **At Tec, IRS empowers you to lead the technological revolution that is redefining industries and improving lives.**

Is this your path?

If you're passionate about math, physics, computing, and dream of creating technology that thinks, moves, and transforms the world...

IRS at Tec is your platform to make it happen!

Imagine this:

Developing robots that assist older adults, working on autonomous systems for smart vehicles, or innovating with Industry 4.0 technologies in global companies.

At Tec, that future begins today.



What makes this program unique at Tec

- A one-of-a-kind program in Mexico with strong national and international projection.
- Cutting-edge technologies: AI, computer vision, cybersecurity, embedded systems.
- Double-degree options and international stays at Carnegie Mellon, Toronto, Paris École, TU Dresden, among others.
- Interdisciplinary training in collaboration with partners such as Intel, Continental, John Deere, and the MIT Media Lab.

A world of career possibilities

You can work in intelligent robot development, cyber-physical systems, autonomous vehicles, embedded hardware and software design, artificial intelligence, industrial automation, medical technology, tech consulting, R&D centers, or tech-based startups.





Skills you'll develop:

- Design and program digital and embedded systems with safety criteria.
- Create autonomous robots that make decisions using sensors and AI.
- Solve complex problems with algorithms and data models.
- Communicate ideas effectively and collaborate in multidisciplinary teams.
- Develop technological solutions with an ethical, entrepreneurial, and sustainable vision.

Be part of something bigger

Ranked # **51-100** worldwide in Data Science & Artificial Intelligence (QS by Subject 2026)

Exchange opportunities in Japan, Germany, France, Canada, Australia, and more

Concentrations such as Cybersecurity, Advanced AI, Industry 4.0 Systems, or Automotive

Check which campuses offer this program at tec.mx

The voices of those already making an impact

Victoria de León, IRS student, became the first Mexican to win an award at the International Astronautical Congress for her lunar biomaterials project. Her research will be tested on the International Space Station and she was recognized by 3M as one of the 25 Women in Science 2025 in Latin America.

A glimpse of how our community creates impact with its talent.

Master the language of machines. Here, you learn how to give them intelligence.

Take the first step toward technology that transforms.

Tecnológico de Monterrey

Curriculum
B.S. in Robotics and Intelligent Systems

1ST SEMESTER
- Elective Course Mathematics and Science
- Differential and Integral Calculus
- Programming Fundamentals
- Innovative Perspectives in Engineering
- The Laws of Motion and Conservation
- Tec Week: Induction to the Social Service
- Tec Week Elective I

2ND SEMESTER
- Elective Course Humanities and Fine Arts
- Multivariable Calculus
- Discrete Mathematics
- Object Oriented Programming
- Exploration Topic
- Statistics and Data Handling
- Matrix Algebra and Numerical Methods
- Foreign Language
- Tec Week Elective II
- Tec Week Elective III

3RD SEMESTER
- Elective Course Social and Behavioral Sciences
- Data Structures
- Computational Structure
- Differential Equations
- Electricity and Magnetism
- Applied Electrical Circuits
- Digital Systems
- Tec Week Elective IV
- Tec Week Elective V

4TH SEMESTER
- Elective Course Leadership, Entrepreneurship and Innovation
- Principles of Operating Systems
- Networks Fundamentals
- Linear Algebra and Dynamical Systems
- Analysis and Design of Algorithms
- Design with Programmable Logic
- System-on-Chip Design
- Disciplinary Tec week
- Tec Week Elective VI

5TH SEMESTER
- Elective Course Ethics and Citizenship
- Control Systems Design
- Algorithms for Artificial Intelligence
- Electronics for Instrumentation
- Advanced Embedded Systems
- Tec Week: Professional Life Planning
- Tec Week Elective VII

6TH SEMESTER
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

7TH SEMESTER
- Signal Analysis
- Robotics Fundamentals
- Computer Vision in Robots
- Cybersecure Environments in IIoT
- Tec Week Elective X
- Tec Week Elective XI

8TH SEMESTER
- Elective Multidisciplinary Professional
- Robotics and Intelligent Systems
- Tec Week: 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.

Want more info?

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

Your future in ROBOTICS AND INTELLIGENT SYSTEMS starts here.

WHY NOT?

RVOE: DEC-520912