



TECNOLÓGICO
DE MONTERREY



It is a non-profit institution **of society and for society**, with the purpose of transforming Mexico and beyond through education.

Only private University
nationwide



~90,000
students

54,762 Undergraduate

6,992 Graduate

27,832 Highschool

6 Schools

- Architecture, Art and Design
- Social Sciences and Government
- Humanities and Education
- Engineering and Sciences
- Medicine and Health Sciences
- Business



+460,000 Alumni



+11,000 Professors

721 Researchers



+158,000

Participants in lifelong learning
courses



Tecnológico de Monterrey
Escuela de Ingeniería y Ciencias

School of **Engineering and Sciences**



Our numbers

Students

Undergraduate

21,101

41% of the total of
students at Tec

Graduate

3,237

47% of the total of
students at Tec

Professors

Full Time

901

43% of the total of
professors at Tec

Part Time

1,891

28% of the total of
professors at Tec

Programs

Undegraduate

18

Masters

12

PM 7 MS 5

PhD's

4



30.9%

Women Undergraduate
Students

31.6%

Women Graduate
Students



25%

Women
Professors



10%

Foreing
Professors

Complete
degrees on 20
campus



Presence in 22 campus



Only core subjects



Undergrad complete programs





Our latest rankings from the 2024



67
University Impact
Rankings 2024

#1

Engineering &
Technology in
México

#1

Engineering - Mechanical &
Manufacturing

#1

Computer Science &
Information Systems

#1

Electrical & Electronic
Engineering

#2

Engineering &
Technology in
LATAM

#1

Engineering - Mechanical &
Manufacturing

#2

Computer Science &
Information Systems

#3

Electrical & Electronic
Engineering

#61

Engineering &
Technology in the
world

#68

Engineering - Mechanical &
Manufacturing

#84

Computer Science &
Information Systems

#97

Electrical & Electronic
Engineering



Undergraduate Programs

Bioengineering and Chemical Process



- Biotechnology Engineering
- Food Engineering
- Agricultural Biosystems Engineering
- Chemical Engineering
- Sustainable Development Engineering

Computer Science and Information Technologies



- Robotics and Digital Systems
- Computer Science and Technology
- Business Digital Transformation

Applied Science



- Data Science and Mathematics Engineering
- Engineering Physics
- Nanotechnology Engineering

Innovation and Transformation



- Civil Engineering
- Electronics Engineering
- Innovation and Development Engineering
- Industrial Engineering
- Mechanical Engineering
- Biomedical Engineering
- Mechatronics Engineering

Double Degrees for undergraduate programs Tecnológico de Monterrey

AUSTRALIA

- Macquarie University
- University of Queensland

Schemes

Study Abroad
Study Abroad

Type

Bachelor + Master
Advanced Master Placement

FRANCE

- ESC Rennes School of Business
- ECE Paris Ecole D'Ingenieurs

Study Abroad
Study Abroad

Bachelor + Master
Bachelor + Master

GERMANY

- DHIK – German Consortium for Int. Cooperations
- Pforzheim University of Applied Sciences
- RWTH Aachen University
- Ulm University

Reciprocal
Reciprocal
Study Abroad
Exchange

Bachelor + Bachelor
Bachelor + Bachelor
Advanced Master Placement
Advanced Master Placement

SPAIN

- Universidad de Oviedo
- EADA Business School Barcelona

Exchange
Study Abroad

Bachelor + Bachelor
Bachelor + Master

THE NETHERLANDS

- University of Twente

Exchange

Advanced Master Placement

UNITED KINGDOM

- University of Hull
- University of Essex

Study Abroad
Study Abroad

Bachelor + Bachelor
Bachelor + Master

200 students
participating in
double degrees in
a 2-year period

Graduate Programs

M.Sc. And Ph.D.

- Biotechnology
- Nanotechnology
- Engineering Sciences
- Computer Sciences

Professional Masters (Non-thesis option)

- Engineering Management
- Cibersecurity
- Applied Artificial Intelligence
- Innovation for Enterprise Development
- Energy Management and Renewable Sources
- Quality Systems and Productivity
- Information Technology Management

Postgraduate Program	Total Students	Collaboration
Ph. D. in Biotechnology	197	RWTH, Aachen University / Universidad Nacional de Quilmes / Twente University / Rice University / UC de Chile
PH. D. in Computer Sciences	65	UC de Chile / University of Texas at San Antonio / University of Twente / Rice University
Ph. D. in Engineering Sciences	159	RWTH, Aachen University / Twente University / Rice University /
Ph. D. in Nanotechnology	56	RWTH, Aachen University / Twente University / Rice University / University of Ottawa
Master of Science in Biotechnology	61	UNIANDES / UC de Chile / Universidad de Oviedo / DTU
Master of Science in Computer Science	76	Universidad Politécnica de Madrid / University of Texas
Master of Science in Engineering	81	DTU / Universidad Politécnica de Madrid / Hochschule Offenburg
Master in Nanotechnology	41	Twente University / Rice University
Master of Science in Manufacturing Systems	59	RWTH, Aachen University

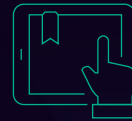
Postgraduate Program	Total Students	Collaboration
Master in Cibersecurity (MCY)	94	UTSA (double degree) / INCIBE
Master in Engineering Mananagement (MEM)	174	Rice University (double degree) / UPM / UC de Chile / Northwestern
Master in Applied Artificial Intelligence (MNA)	957	Tshingua / UC de Chile
Master in Information Technology Management (MTI)	180	Stanford
Master in Innovation for Enterprise Development (MID)	258	UC de Chile / Stanford
Master in Energy Management and Renewable Sources (MER)	182	Stanford
Master in Engineering with specialization in Quality Systems and Productivity (MIP)	448	Georgia Tech / UC de Chile / ASU



ACADEMIC OFFER

5 international campuses:

- Guadalajara
- Querétaro
- Mexico City
- Monterrey
- Santa Fe (Mexico City)



Academic offer taught in English:

2 full bachelor programs:

- Industrial Engineering
- Mechatronics Engineering.

969 Formation units (courses) – Tec21 Model.

17% of all formation units (courses).



Faculty

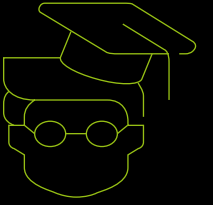
- **900** full-time professors
- **12%** international professors
- **79%** have a PhD



International students

- **5%** undergraduate students
- **13%** graduate students

Impact of our alumni in 80 years



Created **3.2 million** **jobs worldwide** which represents almost 4 years of new jobs created by the Mexican economy

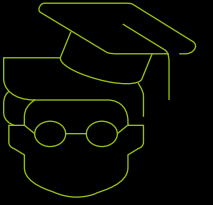
Started **220,000** **business**
(41% of EXATEC has created a company)

Generated **revenue** for **\$260** billion USD
equivalent to **19%** of Mexico's economy of a year

Contributed with **1.3** millions of hours of **volunteering** a month

Started **32,000** **non-profit organisations**

Impact of our alumni in 80 years



Around **32%**
are business owners or in **CEO**
positions

1 in **4**
have an impact on **education**

97% consider that TEC has had a
positive impact
in their lives.

49% makes donations to
different **social**
organizations

Research collaborations with more than 70 countries

NORTH AMERICA

- ★ **Arizona State University**
- Carnegie Mellon University
- ★ **Georgia Tech**
- Harvard University
- ★ **MIT**
- Ottawa University
- Purdue University
- Rice University
- ★ **Stanford University**
- ★ **Texas A & M**
- University of Alberta
- University of Illinois

EUROPE

- Chalmers University of Technology
- DHIK Consorcio
- ★ **ETH Zürich**
- Instituto Superior Técnico de Lisboa
- Oxford University
- Politécnico di Milano
- Politécnico di Torino
- RWTH Aachen
- ★ **Technical University of Denmark**
- ★ **Technische Universität München**
- University of Manchester
- Universidad de Girona
- Universidad de Oviedo
- Universidad Politécnica de Madrid
- University College London
- ★ **University of Cambridge**

CENTRAL AMERICA

- IPN
- UANL
- UNAM

SOUTH AMERICA

- ★ **Pontificia Católica**
- ★ **Universidad de Chile**
- ★ **Universidad de los Andes**
- **Universidad de São Paulo**

ASIA

- Indian Institute of Technology
- Nanyang Technological University
- NTU
- Tsinghua University

AFRICA

- University of Witwatersrand

OCEANÍA

- University of Technology Sydney
- Macquarie University

+others



Aspirational



INTERNATIONAL NETWORKS AND CONSORTIA



SACS COC Southern Association of Colleges and Schools Commission on Colleges to award undergrad and graduate degrees.



APRU

Association of Pacific Rim Universities (APRU)
(+60 universities)



Latin American Universities Consortium



The European Consortium of Innovative Universities

LA TRÍADA

Alliance for higher education and research in Latin America (PUCC, UNIANDES y Tec de Monterrey)



Magalhaes network



27 universities

Mobility and Research with T.I.M.E. universities Tecnológico de Monterrey

Australia	Mobility Out / Inbound 2020 – 2024	Co-authored publications 2021 – 2024
University of Queensland	31 / 3	27
Argentina		
Instituto Tecnológico de Buenos Aires	4 / 0	1
Austria		
Technische Universität Wien	1 / 0	1
Belgium		
Vrije Universiteit Brussel		11
Université de Mons		
Université de Liège		6
Université Libre de Bruxelles	33 / 4	34
Université Catholique de Louvain	6 / 8	18
Brazil		
Universidade Estadual de Campinas		15
Universidade de São Paulo	1 / 0	

Mobility and Research with T.I.M.E. universities Tecnológico de Monterrey

Canada

Polytechnique Montréal

Mobility Out / Inbound 2020 – 2024

9 / 2

Co-authored publications 2021 – 2024

5

China

Xi'an Jiaotong University

0 / 1

Beihang University

2 / 5

Denmark

Danmarks Tekniske Universitet

194 / 91

24

Finland

Lappeenranta-Lahti University of Technology

4

France

Centrale Supélec

4

ENSTA Paris

École Centrale de Lyon

2

École Centrale de Lille

École Centrale Marseille

5

École des Ponts ParisTech

Mobility and Research with T.I.M.E. universities Tecnológico de Monterrey

Germany	Mobility Out / Inbound 2020 – 2024	Co-authored publications 2021 – 2024
Leibniz Universität Hannover	2 / 3	9
Technische Universität München	133 / 32	22
Technische Universität Dresden		4
Technische Universität Berlin		5
RWTH Aachen University	28 / 23	47
Greece		
Aristotle University of Thessaloniki		13
Hungary		
Budapest University of Technology and Economics		6
Italy		
Università degli Studi di Trento	18 / 1	3
Università degli studi di Padova		68
Politecnico di Torino	29 / 25	33
Politecnico di Milano	22 / 4	39
Università degli Studi Federico II		41

Mobility and Research with T.I.M.E. universities Tecnológico de Monterrey

	Mobility Out / Inbound 2020 – 2024	Co-authored publications 2021 – 2024
Japan		
Yokohama National University		3
Keio University	17 / 4	6
Norway		
Norges Teknisk-Naturvitenskapelige Universitet	6 / 3	19
Latvia		
Riga Technical University	5 / 0	
Poland		
Wroclaw University of Science and Technology		6
AGH University of Science and Technology	4 / 0	7
Portugal		
Instituto Superior Técnico		
Romania		
University Politehnica of Bucharest		1

Mobility and Research with T.I.M.E. universities Tecnológico de Monterrey

Spain	Mobility Out / Inbound 2020 – 2024	Co-authored publications 2021 – 2024
Universitat Politècnica de Catalunya	36 / 10	31
Universitat Politècnica de València	28 / 6	31
Universidad Pontificia Comillas	99 / 20	2
Universidad Politécnica de Madrid	331 / 19	29
Sweden		
KTH Royal Institute of Technology	37 / 12	27
Lunds Tekniska Högskola		



TEC21

EDUCATIONAL MODEL



**Challenge
based learning**



Flexibility



**Inspiring
faculty**



**Memorable college
experience**

**7 Transversal
competencies**
+ disciplinary competencies



Self-awareness



Entrepreneurship



Social intelligence



Ethical and citizen commitment



Reasoning for complexity



Communication

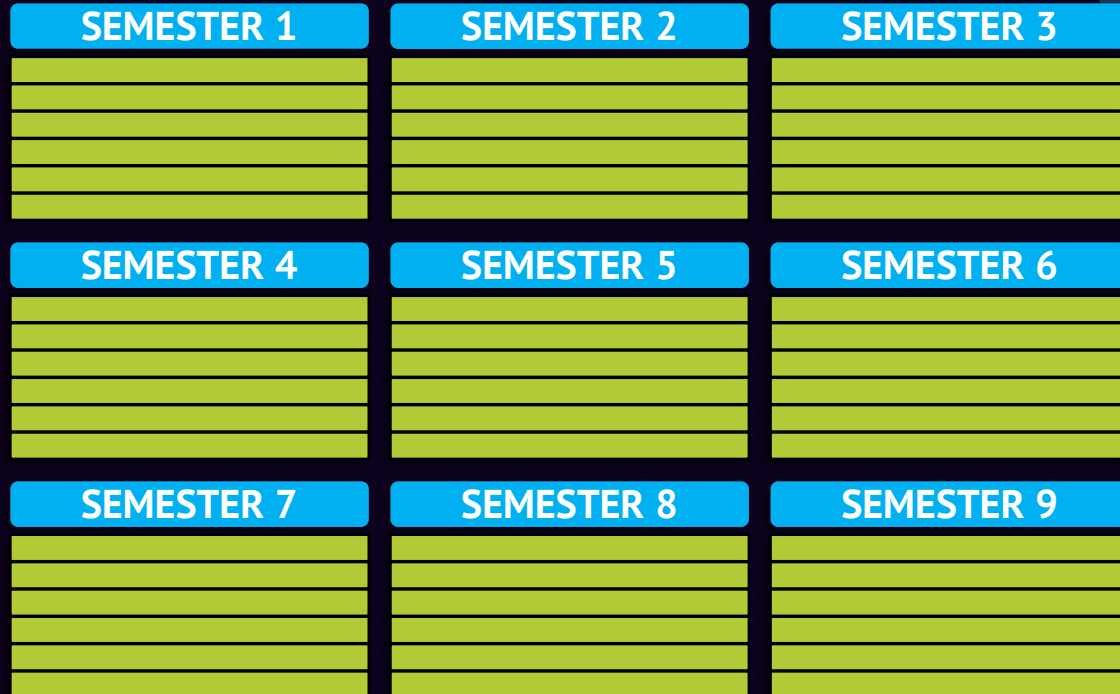


Digital transformation



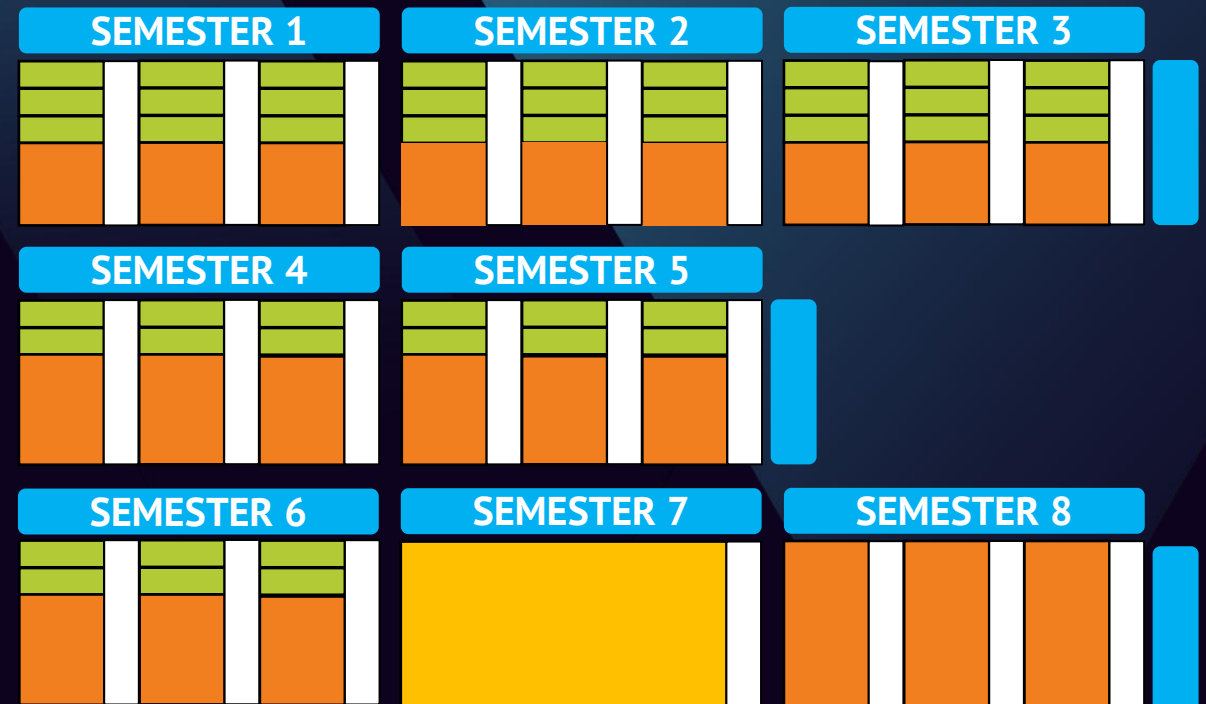
Flexibility

Before



Curriculum

Tec21



Courses



Block



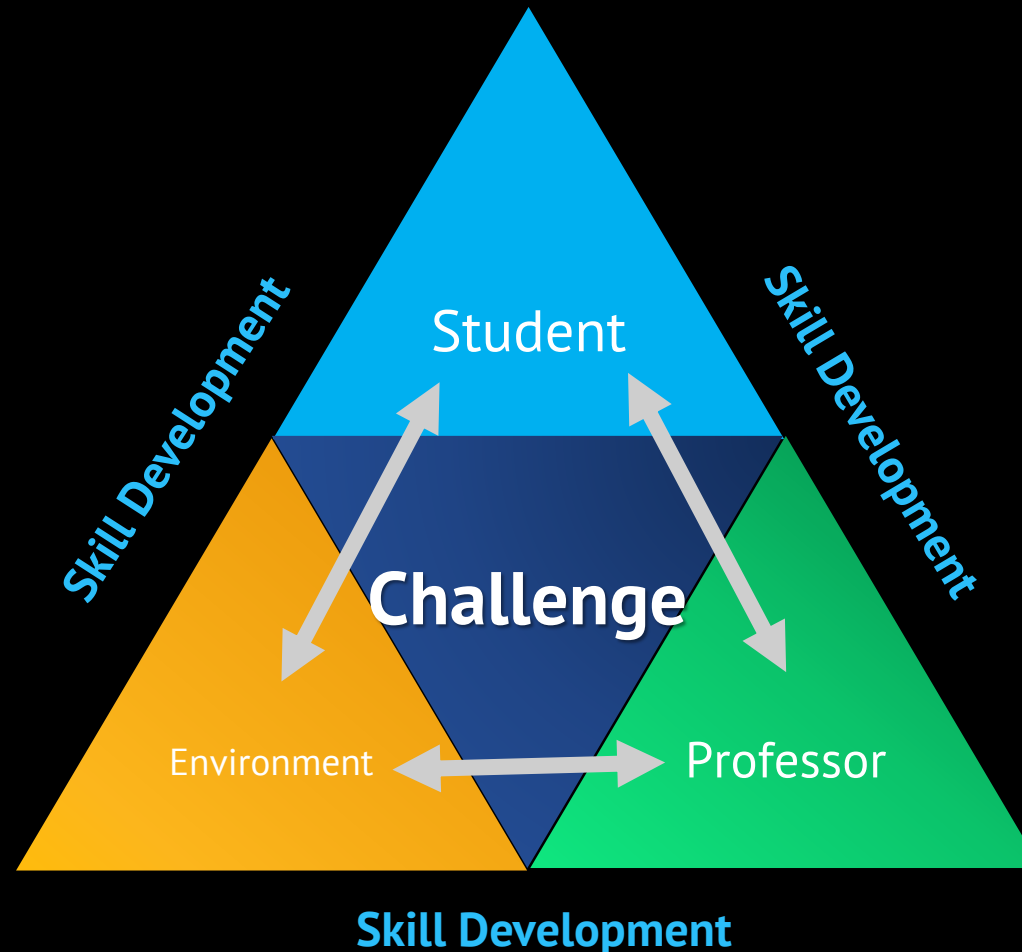
Tec
Semester



Tec
Week



Assessment



A **challenge** is an **experience designed** jointly by the academy and the industry-partner* to **expose** students to a real, **attractive** and **challenging situation**

Environment are **real situations** that can be developed inside and outside the classroom and in a national or international environment



Challenge based learning

+1,200
education partners

Companies, organizations & institutions

National, regional and local



Semestre i



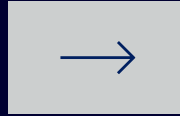


Challenge-based learning

+1,600

Industry-partner





...

**Focus our research activities
and **impact** to tackle the
challenges **people, the planet**
and **industry** face**

2024 - 2030 Impact Areas

Health



People

**Climate and
Sustainability**



Planet

**Industrial
Transformation**



Prosperity

● In Health...



Aging

- Engineering applications to provide solutions the the physical and mental problems related to aging.



Food Security

- Multidisciplinary research covering the complete food production chain. This includes sustainable agriculture, food transformation improvement, ease of access to nutritious foods, food insecurity reduction and long-term sustainable development.

● In Climate & Sustainability...



Water 360°

- Sustainable water management and treatment, inclusive and resilient cities, health and well-being, climate change mitigation and ecosystem protection.



Sustainable Energy

- Develop and implement innovative solutions to promote the efficient and sustainable use of energetic resources in key industries. This includes electricity generation all the way to intelligent infrastructures and advanced technologies. The final goal is to reduce the environmental impact, stimulate economic development and improve communities' well-being.

● In Industrial Transformation...



Mobility

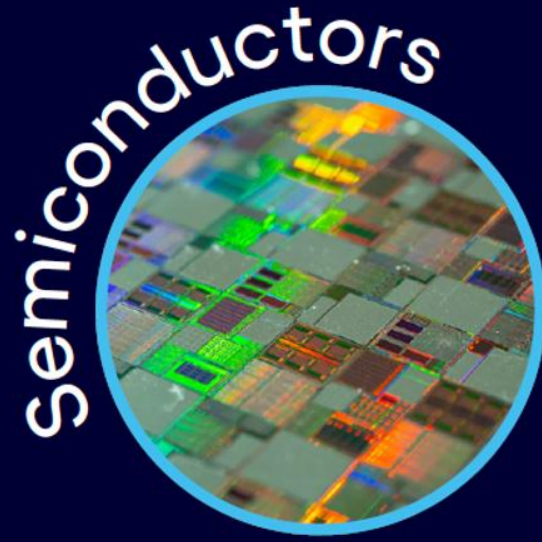
- Generate knowledge and technologies to advance in the main trends of intelligent mobility: electrification, autonomy, connectivity and consumer experience.



Industry 5.0

- Develop intelligent technologies to improve manufacturing processes, services and logistics, focusing on sustainability and productivity.

Strategic Initiatives



+ others in the future





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