Here are the achievements by the Tec and its community in 2022



Educational innovations, awards, the return of face-to-face events, inaugurations, and further achievements are part of what <u>Tec de Monterrey</u> has accomplished, as an **institution** and as a **community**, in **2022**.

Students, faculty, graduates, and staff joined forces to stand out in their areas of expertise.

"In 2022, we took steps to continue to increase our national and international impact. We're grateful for all the lessons learned, as they allowed us to further promote our students and community," said David Garza, Rector and Executive President of Tec de Monterrey.

CONECTA shares the most significant events that have taken place at **Tecnológico de Monterrey** this year with you.



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Educational innovation Tec professors venture into the Metaverse

Tec de Monterrey gave its <u>first entire class in the Metaverse</u> during the 2022 winter term, using a tool known as **Tec Virtual Campus**.

This tool allows a Tec campus to be simulated in a virtual space where students can spend time together, do practical exercises, and take classes online.

Likewise, the Tec opened its doors during the <u>Tec Virtual Campus Open Day</u> with guided tours and a treasure hunt with the participation of **54 professors** who knew this virtual space.

Some Tec classes also included **virtual reality** in their educational experiences, with trips to cities such as Athens and Pompeii.



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First intercontinental class taught with holographic-effect professors

El Tec de Monterrey y la <u>Universidad Tecnológica de Delft</u> (TU Delft) de **Países Bajos** realizaron en septiembre la primera clase intercontinental usando la innovación educativa de la institución de **proyecciones holográficas de profesores.**

La clase se realizó en tiempo real con alumnos y profesores del Tec del campus Monterrey y campus Querétaro a la par de estudiantes y un profesor invitado de TU Delft.

El proyecto de **proyección bidimensional con efecto de holograma** fue iniciado por el Tec en 2018 y permite a los estudiantes **ver**, **escuchar e interactuar en tiempo real con un profesor proyectado en tamaño real**.

15 more international professors join the Faculty of Excellence

The Tec had the opportunity to **bring together world-renowned leaders** as part of its **Faculty of Excellence** initiative, to form part of the institution's educational work.

This initiative aims to bring together 100 international professors to enhance the student learning experience and promote international collaboration, innovation, diversity, and multidisciplinary research.

These professors joined the **6 Tec de Monterrey** schools: Business; Art, Architecture, and Design; Engineering and Sciences; Education and Humanities; Social Sciences and Government; and Medicine and Health Sciences.

Find out about the professors here.



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4 campuses added to the Tec's 11 VR Zones

Virtual reality reached four more Tecnológico de Monterrey campuses so that students can interact in an **immersive and innovative learning ecosystem.**

Forming part of the educational technologies in the **Tec21 Educational Model**, VR Zones were inaugurated on the **Chihuahua**, **San Luis Potosí**, **Saltillo**, **and Toluca** campuses in December, bringing the total number of **VR Zones to 11**.

The Tec21 Model is based on **challenge-based learning** with flexibility, inspiring professors, and a memorable student experience.

These spaces aim to offer students **immersive experiences through simulations** of real environments using avatars and resources in the virtual world.



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International evaluations QS Rankings

International evaluation firm Quacquarelli Symonds (QS) ranked Tec as the <u>best university in</u> <u>Mexico</u> and fourth in <u>Latin America</u> in the QS Latin America University Rankings for 2023.

QS ranked the Tec as 170th in the world and 6th place in Latin America in the QS World University Rankings 2023.

In the Top 5 for Entrepreneurship

<u>The Princeton Review</u> ranked the institution in **fourth place in the Top Undergraduate Schools for Entrepreneurship ranking**, maintaining its ranking in the Top 10 of this list.

Leader in employability for Mexico

Likewise, it was ranked first place in Mexico and Latin America by the Global Employability University Ranking and Survey (GEURS), entering the Top 250 universities in the world, according to French consultancy firm Emerging.

Leader for climate action

The Tec was also recognized as the <u>number 1 university in Latin America and Mexico for climate action</u> and for its commitment to the Sustainable Development Goals, according to the <u>Times Higher Education (THE) Impact Ranking</u>.

Inauguration of new research institutes Institute for Obesity Research

Tec de Monterrey announced <u>The Institute for Obesity Research</u>, a new research institute to address solutions to the obesity problem in Mexico and Latin America.

Guillermo Torre, Rector of TecSalud and Vice President of Research at the **Tec**, explained that the institute will seek integrated solutions to generate **knowledge**, develop **therapies** and devices, set up **science and technology** companies, and support decision-making for **healthier societies**.

Institute of Advanced Materials for Sustainable Manufacturing
In addition to this effort, the Tec inaugurated the Institute of Advanced Materials for Sustainable

Manufacturing, an initiative that aims to bring together efforts to create more sustainable materials and processes.

Some of the projects already being worked on by this initiative include industrial processes that will pollute less, reduction of environmental CO2, and developing materials that are not only biodegradable but also benefit the environment.

Institutional Awards and Recognitions Corporate reputation

The 2022 **Corporate Reputation Business Monitor** (Merco) ranking recognized both Tec de Monterrey and its rector as one of the **100 companies and 100 leaders** with **the best reputation in Mexico** for the seventh consecutive year.

Online Programs recognized

The Tec was awarded the **2022 Quality Matters Award: Making a Difference for Students** for seeking **high quality standards in its over 400 online courses and educational programs** and contributing to improving digital learning in Latin America.

Quality Matters (QM), a leading global organization for **quality assurance in online and innovative digital learning environments**, awarded the Tec in the Outstanding Impact by a Non-U.S. Higher Education Organization category.

Emotional Intelligence Award

The <u>Yale Center for Emotional Intelligence</u> recognized PrepaTec, the Tec's high school, with the **Marvin Maurer Award** for its implementation of the **RULER** model for managing emotions during the **COVID-19 emergency**.

Tec community Awards and Recognitions Research Award for Young Scientists from the Mexican Academy of Sciences.

Daniel Jacobo Velázquez, a Tec de Monterrey Guadalajara professor, won the <u>2022 Research</u> <u>Award for Young Scientists</u> in the area of **Natural Sciences** from the <u>Mexican Academy of</u> <u>Sciences</u>.

Established in 1961, this award is considered the **greatest honor** awarded by the **Mexican Academy of Sciences** to researchers under the age of 40 who carry out **state-of-the-art research.**

The professor was awarded this recognition for his research on the <u>elucidation of molecular and physiological mechanisms</u> that induce the biosynthesis of secondary metabolites in fruits and vegetables.

National Awards in Bionanotechnology

Drs. Mario Álvarez and Grissel Trujillo won the 2022 Innovation Award in Bionano: Science and Technology, from the Center for Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV) and the Neolpharma Pharmaceutical Group.

A <u>microscopic image</u> from the research group led by Dr. Álvarez and Dr. Trujillo was featured on the cover of the **Advanced Healthcare Materials** journal.

First place in the NASA Human Exploration Rover Challenge

The <u>IKTAN Roving</u> team, made up of students from the <u>Cuernavaca campus</u>, won <u>first place</u> in the <u>Overall Winner</u> and <u>Ingenuity Award</u> categories of the <u>2022</u> <u>NASA Human Exploration</u> <u>Rover Challenge</u>.

They became the **first Mexican team** to win **international first place in the university category** of the U.S. space agency's design competition.

The team of **students** from the **School of Engineering and Sciences** won these awards in the school's tenth year of taking part.

Students from the Aguascalientes campus were finalists in the Shell Eco Marathon

Making a splash at fourth place in the world was the School of Engineering and Sciences from the Tec's Aguascalientes campus with its electric car prototype in the Shell Eco-Marathon Brazil 2022.

The <u>Shell Eco-Marathon</u> is an automotive energy efficiency competition, considered the most important in the world by engineers.

This program brought together Science, Technology, Engineering, and Mathematics (STEM) students from different countries with the aim of contributing to building more sustainable mobility.

Gold Medal for Chihuahua campus at International Genetically Engineered Machine

After nine months of work, the Chihuahua campus team was awarded **gold** at **International Genetically Engineered Machine**, **iGEM 2022**.

The students achieved gold thanks to their <u>Agrocapsi project</u>, a biofungicide aimed at protecting chili plants.

Organized by Harvard, **iGEM** is the most important synthetic biology competition in the world. The 2022 edition took place in Paris, France and over **45 countries and 350 projects** took part.

What's more, the team earned a **special award nomination for inclusivity**, for their work in education, dissemination, and communication of scientific results.



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Tec teams at the FIRST Robotics World Championship

<u>PrepaTec</u> and <u>Tecmilenio</u> teams participated in the <u>FIRST Robotics Competition</u>, one of the most important youth robot competitions in the world, in which several Mexican teams stood out.

The 2022 Mexican delegation was **finally represented in person by various teams after two years** of the pandemic, with three from **PrepaTec**, three from **Tecmilenio**, and five from other schools.

PrepaTec San Luis team **Lambot** advanced to the quarterfinals as the group captain and leader, winning **5th place** out of more than 70 teams from around the **world** in its division.

Also, **Botbusters**, the PrepaTec Eugenio Garza Sada team from Monterrey, was selected by another team to join their alliance in the quarterfinals.

International partnerships Four years of La Triada and RECLA symposium

Tec de Monterrey, Colombia's University of Los Andes (Uniandes), and the Pontifical Catholic University of Chile celebrated four years of their La Tríada alliance.

With strategic projects and initiatives to help the development of Latin America, the alliance met in August this year on the anniversary of their union to evaluate their progress after 79 projects.

David Garza also participated in the 2022 International Symposium of the Continuing Education

Network of Latin America and Europe (RECLA) along with other rectors from Ibero-American universities to discuss continuing education.

During the **symposium**, **organized by Tec and the UANL**, the academics analyzed the importance and **impact of continuing education on work and society**, as well as on current and future world challenges.

https://twitter.com/TecdeMonterrey/status/1522268805866704896?ref_src=twsrc%5Etfw%7Ctwcamp%5Etec-nuevo-miembro-del-comite-ejecutivo-de-red-de-universidades-u21

Membership of international boards

- SACSCOC

Tec de Monterrey was invited to join the board of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

David Garza was also invited to join the **board of trustees of this organization**, which is in charge of **accrediting undergraduate and graduate programs** at universities and ensuring the quality of education of its members.

-APRU

Likewise, the institution once again joined the **board of directors** of the **Association of Pacific Rim Universities** (APRU), representing the **Latin American region.**

- U21

Represented by the institution's rector and president, **David Garza**, the Tec was also invited to become a member of the **Executive Committee of Universitas 21**, a network of 28 world-leading universities.

Member of Global Initiatives: The Reach Alliance, Venture Café, and MIT REAP

The university remains a key member of **The Reach Alliance**, the **University of Toronto's** global outreach program focused on student-led, multidisciplinary research.

This project **aims to develop initiatives and social research** to evaluate how to get resources to **marginalized communities around the world.**

In partnership with the Tec, the <u>Venture Café</u> of the Cambridge Innovation Center (CIC) was officially launched in **Monterrey** with the aim of connecting the city's entrepreneurial community.

Alongside the Tec, the Massachusetts Institute of Technology (MIT) presented the MIT REAP Focus Mexico initiative, an entrepreneurship acceleration program in Mexico City, Querétaro, Chihuahua, Jalisco, and Guanajuato.

- Visit from President of MIT

Leo Rafael Reif Groisman, who has served as President of the Massachusetts Institute of Technology (MIT) since 2012, visited Technologico de Monterrey in Monterrey.

This visit served as a **reminder of the close collaborative relationship between the institution and MIT**, named the best university in the world by the **QS World University ranking**, to the benefit of their communities.

Return of face-to-face events 2022 International Book Fair

Tecnológico de Monterrey's **International Book Fair** (FIL) returned to its **face-to-face format after two years**.

In its 30th year, the Monterrey FIL brought with it nearly 900 activities and the participation of around 550 authors and 600 publishing labels.

This **version of the FIL** integrated **emerging technologies** into the reading experience, through the **presence of writers** such as Isabel Allende via holographic projection.

INCmty Entrepreneurship Festival

Similarly, the <u>tenth edition of the INCmty entrepreneurship festival</u>, organized by the Tecnológico de Monterrey, was held in person, bringing together **over 100 national and international speakers**.

Trends and ideas were shared at the **event during talks and panels**, as well as **startup presentations**, **networking opportunities**, **and competitions** within the entrepreneurial community.

VibrArt 2022, the Tec's national art and culture festival

This was the **second edition of the festival that included** national competitions for original song, dance, dramatic monologues (theater), literature, cinema, and visual arts, and was held **in person.**

After having won the regional finals, students participated from **25 Tec campuses throughout Mexico**.

The festival was mainly held in **Guadalajara**, with some events taking place in Mexico City and Monterrey, from **May 17 to 21.**



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Infrastructure growth Opening of the Mexico City campus

This year, **the new Mexico City campus was opened**, which has been operating throughout 2022.

Rashid Abella Yunes, Vice President of the Mexico City Region and General Director of the Mexico City campus, said that the campus has currently completed the first stage of the project.

In the future, the new campus is expected to include an EXATEC Center for Tec graduates, an administrative building, a Conference Center, a Welcome Center, a Wellness Center, and Punto Blanco, among other additions.

Likewise, students from the **School of Medicine and Health Sciences** on the Mexico City campus had the opportunity to **apply their knowledge** thanks to the inauguration of the **Clinical Simulation Center**.



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Expedition Building and E2 Off-Grid

Phase 2 of DistritoTec commenced with the construction of <u>Expedition</u>, a building on the Monterrey campus that aims to promote innovation and entrepreneurship by connecting local, national, and international experts.

José Antonio Fernández, Chairman of the Tec's Board of Directors, explained that the creation of this space is part of the commitment made by the Tec in its (2025) **Strategic Plan.**

With construction of Expedition, the institution kicks off the **next phase of DistritoTec** and its transformation into an innovation district, which includes approximately **280,000 m2 of real estate development.**

Similarly, the new **E2 Off-Grid** was created as the **Tec's new living laboratory** in Monterrey, capable of **transforming rainwater** via a harvesting and collection system to make it **safe for human consumption.**

Social Impact

Second Sustainable Development Initiatives report

The Tec presented its **second 2020-2021 Sustainable Development Initiatives report** including **820 actions, projects, and programs** with a social impact.

This document included **initiatives from the Tec ecosystem** that actively benefited **vulnerable populations** and/or minority groups, as well as **social organizations**, **businesses**, **government**, **and the general population**.

The document reported that more than **250,000 people had benefited and educational material** was provided to one million users, more than 1,800 trees were planted, and more than 11 tons of garbage was collected, among other achievements.

Venue for the first Indigenous Knowledge Workshop organized by APRU

The Tec joined forces with the <u>University of Melbourne</u> to organize the 1st Indigenous Knowledge Workshop of the Association of Pacific Rim Universities (<u>APRU</u>) to discuss language preservation, education, cultural diversity, and indigenous identity.

The event was held in Chiapas, at the **Tec's Social Innovation Center (CIS)** and hosted by the institution's **Center for the Recognition of Human Dignity.**

Representatives from Ecuador, the Philippines, Australia, New Zealand, Canada, the United States, and Mexico met to discuss <u>actions taken by their academic institutions</u> for **indigenous peoples.**

Tec-UNAM and Tec-UANL consortia

Tecnológico de Monterrey and the Autonomous University of Nuevo León (UANL) signed an agreement for research aimed at education, health, sustainability, and industry 4.0 challenges.

According to this agreement, both universities committed to collaborate on the **UANL-TEC Consortium for Research, Technology Transfer, Innovation, and Entrepreneurship**.

Similarly, the Tec joined up with the **National Autonomous University of Mexico (UNAM)**, the two highest ranked universities in Mexico, in an agreement to boost the country's scientific and **technological ecosystem**.

As part of the <u>UNAM - TEC Consortium for Research</u>, <u>Technology Transfer</u>, and <u>Entrepreneurship</u>, the universities made a commitment to contribute a seed fund of 10 million pesos to promote <u>initial projects</u>.

Science and technology-based startups

Tecnológico de Monterrey and the **SayaBio** investment fund founded **Forma Foods** to produce **meat by culturing animal muscle cells.**

This new science and technology-based startup develops next-generation protein by rethinking meat processing to take it to the next level.

Currently, Forma Foods has started with a **100% plant prototype from which they can gradually migrate** while increasing the number of cells until they reach a **cultivated prototype**.

Health and Wellbeing

Launching health agreements

- TecSalud Network

In order to **create partnerships in private medical care**, the institution started the **TecSalud Network**, a collaboration and advisory network for quality private hospitals.

- Houston Methodist Hospital Agreement

What's more, directors from the **Tec** and the **Houston Methodist Hospital** signed the **renewal** of their **agreement** to expand and strengthen medical services and share **best practices** in areas such as **quality metrics**, **medical services**, and **hospital operations**.

To this end, the medical institutions will work together on **developing** lines of service in **cardiology and neuroscience**, **guidelines** for implementing **education** programs, and **medical and administrative leadership training**.

- FunSalud Agreement

TecSalud also **collaborated with the Mexican Health Foundation** (FUNSALUD) to promote **greater transparency** in hospitals, as well as develop **public policy proposals** and research in Mexico.

Inauguration of the first Primary Care Center

TecSalud opened its first medical center to attend minor illness consultations and provide laboratory and X-ray services.

The main goal of the new **Primary Care Center** is to provide primary care through preventive, family, and general medicine.

Guillermo Torre, Rector of **TecSalud**, explained that this center will focus on **pre-hospital care** with first-class medicine.

Support network for people with post-COVID-19 condition

The Tec launched a call to form a **national support group** for people who have had COVID-19 and have long-lasting symptoms of the so-called **post-COVID-19 syndrome or long COVID**.

This consists of a **free forum for the public** through which it aims to collect data that help find solutions to the **ailments of patients with this condition**.

Sports

- Borregos, ONEFA 2022 football champion

Borregos Monterrey was crowned **ONEFA champion** at the home of arch-rival **Auténticos Tigres**, by beating them 32-30 in overtime.

It was an intense game at the **Gaspar Mass Stadium**, in which both teams had the advantage at different times, ending in a **17-17** tie in real time thanks to a Borregos field goal.

In overtime, **Borregos Monterrey** was able to gain the advantage they needed thanks to their two-point conversion, which **Auténticos** later failed to convert.

Tec student invited to 2023 NFL Pro Bowl

Student **Diana Flores**, quarterback for the <u>world champion</u> Mexico Women's National **Flag Football** team, will serve as **offensive coordinator** for the American Football Conference (AFC) team in the **NFL 2023 Pro Bowl Games**.

Flores, who plays for the **Borregos Santa Fe** team, is **currently considered the best female player in the world**, alongside legends such as **Peyton Manning**, the team's head coach, and defensive coordinator **Ray Lewis**.

24-year-old Diana Flores also led the Mexican team this year to win the gold medal against the United States at The World Games 2022 in Alabama.

Borregos Monterrey, college basketball champions

Borregos Monterrey won their first Student Basketball Association League (ABE) championship by beating Los Gallos del CEU 74-63 in the "Eight Greats" final.

The game took place on Sunday, June 26, at the **CEU gym**, the hosts of the tournament, in a match where the Tec de Monterrey team was also able to overcome pressure from the local fans.

Borregos player Orlando Torrero gave an outstanding performance with 23 points and 19 rebounds, some of them offensive, which were key in the final minutes of the game, as well as 5 assists, to be named the Most Valuable Player of the tournament.

You might be interested in reading:

https://conecta.tec.mx/en/news/national/education/most-significant-events-mexico-and-world-2022