

# Her stay in Chicago leads to winning a research contest



The cosmetics and personal care industry is a sector that [Monterrey campus](#) student **Nicol Olivares Rodríguez** is passionate about.

This interest led her to conduct research during her stay at the [University of Illinois Chicago \(UIC\)](#) on **the environmental impact of companies in this sector**, which was recognized by that educational institution.

**The Chemical Engineering in Sustainable Processes** student presented her results at the **2022 UIC Undergraduate Research Forum**, where she won **first place in the Business, Computer Science, and Mathematics category**.

Nicol Olivares presentó sus resultados en el foro de investigación de la Universidad de Illinois.

*“When they told me I’d won first place, I couldn’t believe it because although I think I did a very good job, I’m a perfectionist and I only had two weeks to analyze the data.*

*“I felt that two weeks wasn’t enough time to analyze everything I wanted because by then it was April and my research stay was due to end in mid-June,”* said the student, who hails from

Tamaulipas.

Nicol will continue to stay in Chicago, now as an **international exchange student**, in order to get more research and academic experience.

***“I was very interested in the personal care and cosmetics industry because I’d like to work in it in the future.”- Nicol Olivares***

### **Corporate energy consumption and carbon emissions**

The engineering student arrived at the **University of Illinois** with professor **Unsal Ozdogru**, from the business department, and Sebastian Martínez Agoitia, from the Tec’s **San Luis Potosí campus**.

Dr. Ozdogru focuses on **sustainability** in the area of transportation but allowed students to focus on whatever topic interested them.

*“I told her that I was very interested in the personal care and cosmetics industry because I’d like to work in it in the future.*

*“She gave me the opportunity to focus my research on this industry, always keeping in mind the original objective, which is to analyze carbon emissions,”* said the student.

**Nicol chose three of the world’s leading companies** in this industry to analyze, and **it took her six weeks to collect the data**.

***“Based on the way I think and how I’ve grown up, I think that working in the U.S. would suit me very well.”***

One of the difficulties she encountered was **gathering the data from the companies**, as the information was often inaccurate when compared by year.

Her research was going to be a comparison of **carbon emissions and energy and water consumption**, but she had to drop the latter due to inconsistent data.

*“Not all companies consume their energy in the same way, so I concluded that the way they are going to report it depends on how much they consume or emit.*

*“Some companies don’t want to disclose the information because they don’t want to tell us whether they’re using renewable energy or not,”* she said.

Due to **confidentiality terms**, the names of the companies cannot be disclosed.

From the information collected and the analysis conducted, Nicol made **a poster, which she exhibited in the forum where she was the winner**.

Conducting **this type of analysis as an engineering student in the field of business** was also a challenging experience, said the student.

*“I had to analyze all these statistics. I’ve studied statistics and methods used to analyze them and make predictions, but only up to a certain point because my type of engineering focuses on something else.*

*“I learned a lot by myself, by watching videos on YouTube, and then asking my advisors if I was doing it right,” she said.*

La alumna del campus Monterrey participó en AiChE, proyecto de ingeniería química. width="900" loading="lazy">

### **Continuing her international experience**

During this next stage in **Chicago**, the young Mexican will look for a job or research stay, along with her studies.

*“Research in the United States is very different to Mexico. I feel that personally, professionally, and based on the way I think and how I’ve grown up, working in the U.S. would suit me very well,” she said.*

At the **Monterrey campus**, Nicol also conducted research projects, firstly with Professor Lucy González from the **Department of Chemistry**, in which she studied the city’s atmospheric particles.

At the end of 2019, she participated in **AiCHE**, on the **Chem-E-Car project**, in which they **designed and built a small car that uses alternative energy**.

This group won **first place in the science poster category** in 2021.

Internacionalización Tec width="900" loading="lazy">

### **Tec promotes international research**

After the success of the first two undergraduate students from the Tec in the **University of Illinois Chicago** system, it was possible to **negotiate more places for students**, not only at the Chicago campus but also at **Urbana-Champaign**.

In total **there will be 14 students representing the Tec abroad in these bonding experiences** promoted by the **Vice Rector’s Office for Internationalization**.

In addition to Chicago and **Urbana-Champaign**, the **Tec’s office in Chicago** also opened international research opportunities at the **University of Notre Dame** and the **University of Cincinnati** this semester.

*“I believe that these research opportunities at partner universities is a unique experience that contributes to the development of our students in a global environment where the researcher facilitates the process of discovery and learning,”* said Juan José Cabrera, director of the **Tec’s office in Chicago**.

These opportunities have been doubling each semester in the mid-western region of the **United States** since they began in the **summer of 2021**, he said.

*“In my opinion, this success is mainly due to meeting the expectations of students, researchers, and participating universities, the number of which has quadrupled in the same period,”* he said.

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