Virtual campus! Tec gives its first entire class in the Metaverse

Students turn on their **computers** for their **online classes**, but they're not connecting to a video call. Instead, they are entering a **virtual world** similar to a video game.

So began **Tec de Monterrey's** **first complete course** in its **own Metaverse**, known as the **Tec Virtual Campus**, a **3D virtual world** created by the institution where students take classes and spend time together.

Professor and architect **Antonio Negrete Juárez**, from the Querétaro campus, was the first to move his entire class to the Metaverse during the 2021 winter term.

*"My students told me that they liked learning and having this **experience of almost being on-site**,"* says the professor.

The **Tec Virtual Campus** includes buildings such as a library, classrooms, an auditorium, and outdoor areas where students can have learning experiences inside the **Metaverse.**

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The first entire class in the Tec's Metaverse

Juárez explains that he got the idea of taking his **Alternative Systems and Installations** class to the **Metaverse** after attending courses at the Tec's **Center for Teacher Development and Educational Innovation (CEDDIE),** which helps teachers work with technology for education.

"During the CEDDIE courses, I received some training to see what activities we could do in a couple of hours on the Tec Virtual Campus.

*"I had a **class** lasting **5 weeks** for several hours a day. I sent them an email, and they said yes, that we were going to **work** on the **pilot**,"* the professor recalls.

That would be the beginning of the **class** that Juárez taught for 5 weeks, the length of the **winter term** for students at Tec de Monterrey.

"The benefit is being able to be in a virtual space where the subject can be taught as if it were in the classroom. The fact that it's virtual doesn't hinder the objectives at all.

*"It's the **first time**, but I sent the activity to see if we can present it elsewhere. In the future, it would be good to be able to **lead the way** for other **professors** to do the same,"* says the teacher.

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The students' routine in the Metaverse

Sitting in front of a computer was the first step to entering the **Tec Virtual Campus** via the **Virbela platform,** after entering a username and password.

Once they've selected their **avatar**, a physical representation of themselves inside this virtual world, students attend **activities** inside a classroom, and outside, depending on what they're looking to learn.

The aim of the class taught by Professor Juárez was for students to learn about **installations** of **alternative systems** in **homes**, i.e., water, sanitary, electrical, gas, and even home automation installations, known as **Smart Homes.**

"My students told me that they liked learning and having this experience of almost being on-site."

*"The students worked as a team in a **virtual classroom** and on virtual computers using **AutoCAD** (design software). Each student demonstrated the progress they were making, **as if in a face-to-face class.***

*"They made project presentations in one of the **virtual auditoriums** and showed us their installation proposals,"* says Professor Negrete.

Not only did the Tec Virtual Campus allow them to **simulate a traditional classroom**, but Juárez explains that they used virtual spaces outside to hold a **treasure hunt**, in which students used their

avatars to search for notes in order to **answer a questionnaire.**

*“In this questionnaire, they answered questions about **ethics in architecture and engineering**, and we held a discussion at the end,”* says the professor, who points out that it was a pleasant experience.

“At the end, a student came up, thanked me, and shook my hand virtually. It was a cool experience,” he says.

Currently, Professor Negrete is teaching another class in a format known as **Global Classroom**, where Tec students learn with other students from foreign universities, in this case, with the **Catholic University of Colombia.**

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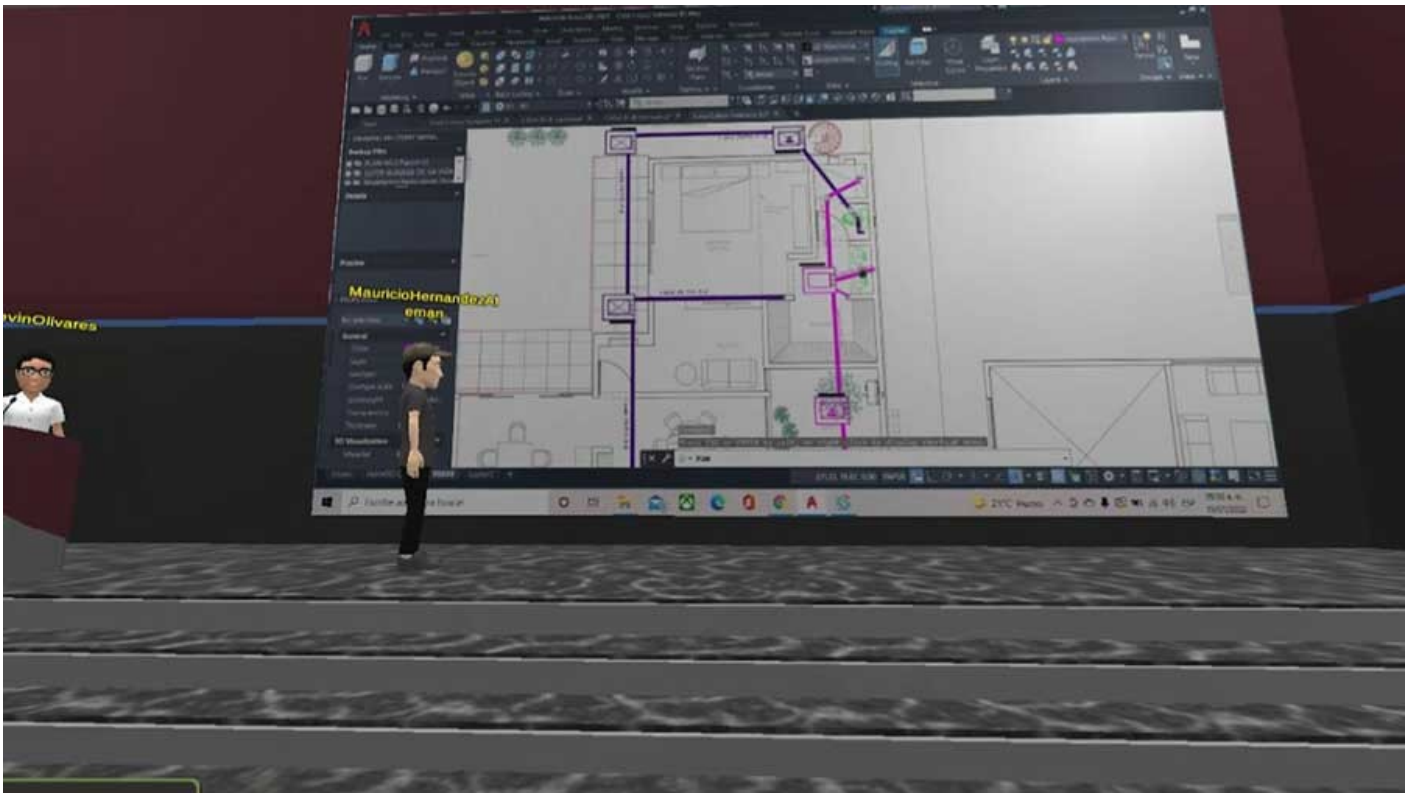
An open door to learning experiences

Joaquín Guerra, Vice-Rector for **Educational Innovation** at Tec de Monterrey, points out that the institution had already been working on promoting **learning experiences** with technologies such as virtual reality and **augmented reality**.

*“The **pandemic** accelerated these **processes**. Now, instead of just entering Zoom, we can enter a virtual world, as we do in video games, and it makes the experience immersive.*

*“This **Metaverse** was made with spaces, gardens, conference rooms, classrooms, and cafeterias. That’s where you enter, build your avatar, and interact with others,”* says Guerra.

Regarding the **experience** of the students during the first class to be carried out entirely in the Metaverse, the Vice-Rector says that it was **gratifying to see how much they liked it.**



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He says that this type of experience doesn't happen in every class, but rather the experience is **analyzed** and **designed** with the **quality of student learning** in mind.

*"It's not about doing these kinds of things for the sake of doing them and using technology for the sake of using it. The **process** is **important**, as is making sure that the design allows you to take advantage of the tools.*

*"We're looking to identify where it can work well. This is a **trend** that we must continue to **explore.** If we see Metaverses as being for entertainment and video games, why not think about using them for education?"* he concludes.

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