Texas Tech Costa Rica
A4LE 2019 LEsolutions Awards
Executive Summary
Live | Work | Play | Learn at Central America’s First Satellite University

Texas Tech University in San José, Costa Rica celebrates the live-work-play-learn ethos of a satellite campus facility that is fully integrated into local businesses, the community, and culture. The Texas Tech University Costa Rica (TTU-CR) campus builds on the success of the vibrant business district Avenue Escazú and adds a transformational economic and cultural component to the district. The architectural and educational design have been calibrated to support the strategic economic mission of Costa Rica, and to be the center of stability and business investment in Central America. This project exemplifies cutting edge educational facility design by successfully integrating these goals into a campus and program that utilizes all the local amenities of this unique integrated development.

Before TTU-CR was conceived, cultural climate of Costa Rica was suffering from a lack of affordable, available higher education. Government and economic leaders were driven to address this gap in education and understood the immense potential of the internationalization of higher education. The majority of Costa Rican young adults pursuing higher ed degrees were leaving their home country in search of the highly-regarded US-brand education. The strategic development of Costa Rica and the region is related to strong science, technology, engineering, and mathematics (STEM) education programs for which there has traditionally been limited access to within the country. The development of a Texas Tech Satellite University in San Jose, Costa Rica creates a pathway for Costa Rican and Central American students to study at a U.S. university. Local students are now able to pursue high quality education programs without leaving the country.

Texas Tech University was selected to develop a satellite university in Costa Rica because of the way their programs align with the economic and industrial needs of the region, particularly in the STEM fields and hospitality. Engagement with TTU leadership and local stakeholders informed the design team’s process of aligning the satellite university with TTU while also connecting the new campus to local community. Throughout every phase of the process, the theme of integrating learning, business, and culture was the overall goal.

Meeting the unique needs of this project required designing a balance between flexible and highly specialized spaces. The creative tension involved in designing both collaborative and dedicated spaces demanded that the campus be designed to function with the utmost agility. The design includes groupings of Learning Studios that can be connected, effectively expanding the capacity from 30 students to 150 students and from one teacher to three. Agility was also a design requirement when considering how to phase development to accommodate the student body as enrollment grows. At this time, TTU-CR only occupies the first three floors of the building while business and retail tenants occupy the upper levels and ground floor, respectively. However, as the university’s enrollment increases, the building has been designed and phased in a way that will allow the university to increasingly occupy all levels of the building.

Engineering labs designed specifically for program requirements also accommodate collaborative spaces for students to discuss design problems, develop solutions, fabricate prototypes, and test their designs. These spaces facilitate the communication of ideas among students and provide equipment for diverse methods of fabrication. There are many spaces throughout the building where groups of students can brainstorm and test their prototypes. Labs also have the capacity to open to the library, supporting collaborative breakout spaces.

Continual changes in technology have led to the redefinition of the library. It is no longer simply used to access information, but instead is an increasingly important space to encourage learning and to collaborate. Digital technology allows for more mobile, instantaneous fact-finding. As a result, libraries are not needed as much for access as they are for space to encourage learning. The physical location and spaces of the library are a catalyst for connecting the different disciplines in a common gathering spot and promoting interdisciplinary interactions.

Formal and informal spaces are connected throughout the facility and exemplify interdisciplinary learning in action. The design of the Hospitality Program spaces perfectly illustrates the seamless integration of learning, community, and business. The fully equipped teaching and commercial kitchen was intentionally designed to connect to the dining room, where students have the opportunity to practice skills they are learning while building community. The commons serve as a community hub, where the public, students, and faculty can socialize, and purchase food made by student chefs.

“I am very thankful with TTU-CR & Portafolio Inmobiliario for giving me an incredible opportunity of working whilst studying. This not only will have a great impact on my employability but it will also teach me many skills that will prepare me for my personal and professional growth.”

- Andres Alvarado, Student
School and Community Engagement

The engagement process for this project was incredibly dynamic and required a transdisciplinary team that represented different countries, universities, and economic organizations. One of the economic leaders driven to internationalize higher education in Costa Rica was the Banco Promerica Development Organization. In pursuit of a project lead with a deep understanding and passion for education in Costa Rica, Promerica teamed with Jack Bimrose, an inspiring educational leader and former director of the Lincoln School in San Jose, Costa Rica. Jack Bimrose recommended our firm to partner as the design architect for this radical endeavor.

Together we toured over twenty K-13 schools and universities throughout Costa Rica to gain insight into the challenges facing local learning facilities. The team discovered education throughout Costa Rica was still quite traditional, and greatly restricted by an antiquated ‘cells and bells’ model marked by small and isolated classrooms directed by a teacher and disengaged students. The vision for a satellite university in San Jose was to be future-focused and needed to address the educational and economic needs of the region. Selecting a university interested in a satellite campus in Costa Rica required in-depth research and engagement with multiple candidates throughout the United States. It was paramount that the university selected identified with Costa Rica from an economic point of view, and had strengths and programs such as engineering and hospitality. After the two years selection process, Texas Tech University was determined to be the best educational institution to partner with for the project.

The team then toured the main campus of Texas Tech University in Lubbock, Texas, where they had many opportunities to engage directly with students and faculty. As a satellite university, it was important that that the new Texas Tech Costa Rica also be in alignment with the educational values and mission of the main campus. However, it was equally important to stakeholders that TTU-CR also reflect the local community and culture and be able to respond to specific needs. Integrating an American-style university into the cultural climate of San Jose required extensive engagement with local businesses and community organizations. The goal of this synergy between the university and local community was to provide students with relevant skills and programs to serve and thrive in Costa Rica’s rapidly evolving work force.

Education Vision

Texas Tech University-Costa Rica’s mission is to offer students high quality academic undergraduate, graduate, and certification programs aligned to the strategic development goals of Costa Rica and the regional strategy for economic integration within Central America. As a public research university, the vision of Texas Tech is driven by innovation. Innovative learning, teaching, and research practice is the means by which students are prepared to solve complex problems and enhance the cultural and economic development of their communities. Texas Tech-Costa Rica offers competitive programs in Science, Technology, Engineering, and Math (STEM) and Restaurant, Hotel and Institutional Management (RHIM) which directly aligns with the current economic climate and the longterm goals of the region.

The campus has a maximum project capacity of 1,300 students and enrollment growth will be phased over many years. The current student population is primarily comprised of Costa Rican and Central American students. U.S. students also have the chance to learn at TTU-CR through a variety of student exchange and study-abroad opportunities. Programs are designed to enhance the development of multicultural and global competencies enormously valuable in an increasingly interconnected world. The teaching faculty is comprised of a combination of TTU professors from the main campus in Texas, and highly qualified adjunct local professors who meet TTU faculty standards.

The educational environment is designed to be internationally connected, rooted in the local community and infrastructure, and supportive of a variety of learning experiences. The learning environment was specifically designed to support highly specialized labs, break-out spaces for collaboration, and agile spaces that can open and connect to facilitate transdisciplinary learning. This multi-functional agility is best illustrated in the teaching kitchen/dining commons connection, an adjacency that aptly facilitates transdisciplinary learning. Culinary Arts students prepare meals as part of their training and practice hospitality skills by serving food to other students and faculty. This space serves as a hub for learning, socializing, and building community. A vibrant community culture has developed through the excitement of students pursuing their passions in programs embedded in a real-world context.
The term Learning Community has become standard practice when discussing, planning, and designing innovative schools today; however, the concept is still often loosely defined. Similarly, connections between the school and the local community, while ubiquitously touted, often merely means that the local community can assess and use the school facilities and/or occasional guest speakers are brought-in to give in-person or virtual presentations.

At TTU-CR, the concept of connection with community forms the very basis of both the curriculum and physical structure. Spaces are designed for remote communication with TTU professors in Lubbock, and very specific labs and amenities are designed for hands-on training by local experts. Keeping in line with the vision of Anaveue Escazú to serve as a community-oriented business and commerce hub, the building is extremely ‘porous,’ promoting inviting indoor-outdoor connections and activated by a ground floor retail space, public cafe, common areas, and an auditorium. Because this campus is being phased in enrollment, the top four levels are currently being leased to local businesses. They and many other local entities offer internships to TTU-CR students.

Creating a local workforce of 21st century self-directed learners has been tied directly to the future success of Costa Rica by their government, and TTU-CR Education Specification is based on the three essential activities of successful workers and learners, which comprise a daily Learning Cycle as illustrated in the chart at the upper left:

- Collaborative
- Individual
- Active

Workers and learners tend to form and reform teams as needed for projects, using collaborative sessions to discuss strategies, individual periods to work on their piece of the project and active sessions to design and prototype with one or more members of the team. Care was taken to create spaces that support this cycle throughout the planning and design process.

The Phase 1 concept design to the left demonstrates how a culinary student might move through their day:
1) They might start in the morning with a menu review in a small conference room in collaborative mode,
2) research the nutritional value of a recipe in individual mode, then
3) move to a kitchen area for active mode, preparing food for lunch in the cafe.
4) Afternoon sessions might include an interactive video seminar on restaurant management given by a professor remotely from Lubbock.
5) Finally, the student meets again with their team to debrief on the day.
Results of the Process and Project

The design and process of this project achieved the educational goal of Texas Tech-Costa Rica: to provide students with an unparalleled education while also creating an environment that encourages them to build their practical and soft skills. The campus is equipped with the most advanced technologies in labs and flexible learning spaces which can connect in real-time to the TTU host campus in Lubbock, Texas. Students can collaborate with other students and professors from around the world without leaving the country.

Within the context of Higher Education, and specifically Texas Tech University, mastering content competencies is of great necessity. At TTU-CR, specialized spaces are designed to facilitate competency-based learning. These spaces are further enhanced by collaborative spaces that promote other learning competencies, including soft skills. Common areas are designed to reflect the creative and collaborative environments that are increasingly becoming necessary in the global workplace. The arrangement and sequence of spaces also promote transdisciplinary connections. By placing the lab spaces around common areas and the library in-between, a free exchange of ideas and interaction between disciplines is fostered.

Experiential Learning

The design of the TTU-CR campus was driven by the vision to create spaces where students could learn experientially, within a real-world context. As a result, students have the ability to practice what they learn while creating community through workshops and hands-on experiences. For example, the university has an exploration laboratory that allows students across all majors to immerse themselves in the worlds of robotics and engineering, inspiring them to create practical solutions to real-world problems. Lab students have the flexibility to discuss design problems, develop solutions, fabricate prototypes and then test them. These spaces facilitate communication of ideas between students and provide equipment for diverse methods of fabrication. Multi-purpose labs are designed in a way that increases the room utilization and the amount of space available for teaching. Mobile lab tables make it easy to rearrange the space for multiple use configurations (e.g. individual labs, group labs, or demonstrations).

A Catalyst for Innovation

The Texas Tech-Costa Rica facilities are a centerpiece for recruitment efforts and community engagement and the new campus has proven to be a catalyst for progress, development, and innovation. TTU-CR has also become a place to learn, ignite curiosity, promote leadership and increase connections to the community at large. The administration regularly hosts events and conferences, seminars and workshops with topics ranging from sustainability and the economy, to robotics and the future of cities. Texas Tech-Costa Rica is working hard to connect with the local and national Costa Rican communities by launching programs driven by initiatives designed to address social challenges facing the country today and into the future.

Community Mentoring

Texas Tech-Costa Rica has designed two community mentoring programs, one for women in STEM and one for competency in technical English. The university offers scholarships targeted at talented girls who aspire to study STEM-related fields and come from lower-resource backgrounds.

Sustainability Programs

The campus is also running sustainability and recycling campaigns that have received wide participation from the larger community. The building design and curricular emphasis on sustainability are very much part of the culture and experience at TTU-CR.
“I am studying RHIM, Restaurant and Hotel Institutional Management, at Texas Tech University- Costa Rica. I am working at Edulink S.A Texas Tech University’s partner in Costa Rica. My experience so far has been great, I have gained a lot of experience through the short time I have been working, but I have definitely improved my skills in Excel! The benefits of being able to work and study have been the best, they are very flexible in the hours so they don’t interrupt my classes, and also it’s on the same floor where I have my classes!”

- Eugenia Ávila, Student
Physical Environment

Avenue Escazú in Greater San José

9 Hectares Mixed-Use: 2 Hotels, 20 Restaurants, 110 Stores, Hospital
Avenue Escazu won the first place award for Diseño Urbano de la VIII Bienal de Arquitectura y Desarrollo Urbano. The district is a few hundred meters west of the upscale Trejos Montealegre residential area which is probably home to more ambassadors and diplomats than any other area of Costa Rica. The purpose-built environment is designed to attract investment to the region. It is truly an international hub, uniting business, finance, entertainment and education. The district creates an anchor of stability in Central America.

Avenue Escazu consists of nine hectares of land with 15 buildings, 110 stores, 100 ‘loft’ type apartments, corporate offices, two hotels, a gym, spa, dance academies, shops, 20 restaurants, open air coffee shops, seven movie theaters including an IMAX theater and parking for 2,500 cars behind the buildings. TTU-Costa Rica anchors one end of this urban village.

Aligned with a connecting plaza, the complex is dotted with outdoor fountains, cafes, benches, and a variety of large-scale pieces by local artists. Night and day, events large and small have a traffic-free zone where people can relax and connect with each other, and the culture of the area. Views of the surrounding mountains and scenery are especially spectacular from the second and third story open-air balconies in many of the buildings.
Exterior Views

Front/Side

Side

Side/Back
Integrated Streetscape

Outdoor Gathering Space

Stair to Cafe
Section Shows Tenant Integration and Future Expansion

A floor-by-floor phasing strategy is ideal for the expansion of a vertical post-secondary school, as shown here in the context of TTU-CR. The building has been designed to be structurally flexible, easily accommodating build-outs for a diverse range of uses. This flexibility allows TTU-CR to selectively lease their unused space to tenants whose businesses align with their STEM and RHIM curricular aims. Leasing the unused spaces within the building serves the following purposes: (1) the intentionally selected businesses provide internship and employment opportunities for students, and (2) the university can generate income as the enrollment gradually increases.
TTU-CR Plan: Level Zero

- Engineering Lab
- Study Nooks
- Library Commons
- Workstation Lab
- Machine Shop

Remainder of Level is Unconnected Tenant Space
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TTU-CR Plan: Level Three

- Large, Flexible Learning Space
  - Can Be Reconfigured in Size
- Breakout Room
- Learning Commons
- Study Booths
- Kitchen Lab
- Commercial Kitchen
- Cafe
- Workstation Lab
Texas Tech University is strongly branded with the color red, but they wanted their Cost Rica satellite to reflect the local ethos, and natural colors and materials. With large windows that overlook and even open to the adjacent park and nearby mountains, the interior colors reflect the natural beauty of the area. The use of local woods in ceilings and detail elements adds warmth and texture against the strong color blocks.
Interior Education Spaces
The welcoming entry encourages socialization within TTU-CR and with the community-at-large.
Interior Education Spaces

At the top of the gathering stair, a nook is used for collaboration and individual study.
Interior Education Spaces

The gathering stair is used throughout the day, and also as seating for remote presentations.
Interior Education Spaces

Varied spaces in proximity support the daily learning cycle.
Interior Education Spaces

Individual study rooms are popular, especially for students that need more quiet to do research.
Interior Education Spaces

This flexible lab space contains fewer built-ins and more wheeled equipment.

- Transparency to Prep Area
- Mobile Furnishings
- Concrete Floor for Easy Maintenance
Interior Education Spaces

This kitchen lab adjoins the cafe - students practice food preparation here, and front-of-house service during mealtimes.
Interior Education Spaces

The concept of high flexibility extends to the library commons - nearly everything can be rearranged as needed.
Interior Education Spaces

Sound control is important in commons areas with multiple activities happening simultaneously.

- **Acoustic Treatments**
- **Avoiding Long Walls that Produce Sound “Bounce”**
- **Strategic Use of Soft Furnishings and Carpeting**
Impact on the School Community

In Their Own Words

“At Texas Tech-Costa Rica, we aim to be at the forefront of change. We consider the learning experience at our university to be the magic elixir that can facilitate the curiosity crucial in preparing tomorrow’s workforce today.

Student life, education, and engagement at Texas Tech University—Costa Rica are significantly enhanced by the facilities that the campus offers. Be it through state-of-the-art technology or through the various spaces designed for student’s unique needs, the building presents a space proposal that promotes a community that thrives on learning, studying, working, and socializing. We are building a university from the ground up with a growth mindset that hinges upon innovation, curiosity and a willingness to embrace lifelong learning. At Texas Tech-Costa Rica we are aware that students must become more deeply engaged in developing creative thinking, logic, a passion for research and emotional intelligence—skills and abilities that translate across fields and opportunities that we have yet to have been imagined.

This innovative project was always intended to be an integrated university experience that fit well into its surroundings, the thriving development of Avenida Escazú. This means that the campus was designed to incorporate the services that a university requires within the same space, rather than scattered across the city. The design and location offer students a value proposition regarding commute times and accessibility to the resources they need from the university. The incorporation of facilities in the same space improves productivity and allows students the opportunity to better use their time, be it for study, work, or relaxation. Education is not limited by the space but enhanced by it. Thus, we seek to create spaces in which students can also create community through workshops and classes.

Our facilities were designed to contribute to an improved way of learning. Our labs and specialized spaces are comprised of cutting-edge equipment and the workspaces are arranged in a collaborative fashion, so students can work together more easily. The arrangement and sequence of spaces promote transdisciplinary connections. By placing lab spaces around common areas, there is a free exchange of ideas and interaction among disciplines, including students and faculty. As a satellite campus, we try to provide interaction with the home campus by having classrooms that are equipped to connect with instructors on the main campus in Lubbock, Texas. Our students participate in a more integrated learning process and partake in a more international atmosphere. The design of our facilities also takes academic needs into consideration aside from classes. Therefore, there are various shared study rooms and individual study “pods” on each floor to suit the student preferences. These spaces allow students to distribute themselves throughout campus and embrace independent, deep learning.

The campus was conceived of as a space that would to ignite curiosity, leadership, knowledge, and environmental responsibility within our students and the greater community. The construction and design of the building were oriented toward sustainable practices. The facilities were planned in accordance with this core topic of sustainability in mind, which can be seen in the cradle-to-cradle flooring and furniture. The design of all of our spaces also bears in mind the vision of creating a place for continuous learning. Aside from holding classes, we also host events and conferences that open our doors to the community and share the greater knowledge and vision of Texas Tech-Costa Rica with wider audience. Today we are proud to say that our vision for a cutting-edge research university that is fully integrated into the local community has been realized. We hope to be an example for greater educational change throughout Costa Rica and Latin America.”

- Ellen Rose, Executive Director, TTU-CR

“This process has involved the diligence, hard work and resources of many dedicated people in Costa Rica and Lubbock, all of whom recognized an opportunity to enhance the educational opportunities for students in both countries.”

- Lawrence Schovaner, Texas Tech President

“The Texas Tech campus in Costa Rica is a catalyst for progress, development and innovation. U.S. higher education engaging in Latin America can have a significant impact on the future growth of our emerging economies. We see Texas Tech as a leader in this regard and we are proud to be their partner.”

- John Keith, Director of Promerica Group

“Being in the Work & Study program has been a lifetime opportunity! Not only I can pay part of my classes, but also learn experience and work tips that are going to be useful in four years from now, when I graduate from Texas Tech Costa Rica! I 100% recommend taking this chance to everyone: if you are planning to pay the tuition, the books or even if you are just doing it for a hands-on experience you should be involved in it!”

- Javier Echeverría, Student, TTU-CR
Project Time Line

There were two phases to the project. In the first, our design and planning team created a master plan of a satellite university school that would fully integrate with the direct local community concept. In this phase, the team interacted with the community by visiting both higher and lower education facilities, and doing extensive interviews with all their members.

In the second phase, after the selected partner Texas Tech University was determined, the plans from phase 1 were used as a strong starting point for phase 2, planning and designing TTU-CR and tailoring the campus to their emphasis on STEM, technology and hospitality management.
PROJECT SCOPE & DETAILS
Name: Texas Tech University - Costa Rica
Location: San José, Costa Rica
Year Opened: 2018
Student Capacity: 1,500
Cost: $22 Million USD
LEED: Silver Targeted
Client: EDULINK, Texas Tech University

SUB-CONSULTANTS
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