Making The World Safer For Pollinators
Bee Campus USA
One Campus At A Time

The University of Texas
Rio Grande Valley™

Bee Campus USA 2020 Report

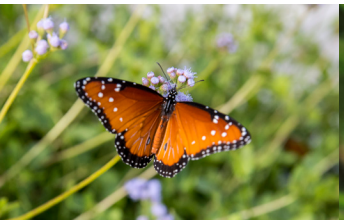



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Photo by Silver Salas, UTRGV

Photo by David Pike

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Introduction

Photo by David Pike, UTRGV

The University of Texas Rio Grande Valley serves the lower four counties of Texas, which is home to a documented 1,200 plant species and over 300 butterfly and other pollinator species, according to the Lower Rio Grande Valley National Wildlife Refuge. As an agricultural region on the U.S-Mexico border, pollinators are especially important to the Rio Grande Valley, for example, honeybees pollinate some $587 million worth of crops every year in Texas. However, pollinator populations in Texas are falling just as they are worldwide, threatened by habitat loss due to development, intensive use of pesticides, and other threats such as Africanized bees and bee parasites, mites, and diseases.

UTRGV is an emergent research university in the heart of the Texas citrus region, and as such hopes to consolidate and lead efforts in pollinator research and conservation. A Bee Campus USA recognition indicates that UTRGV's commitment to sustainability and conservation is taking actionable form. In accordance with Bee Campus USA, UTRGV commits to establishing a Bee Campus USA Committee, hosting annual events to raise awareness of pollinators, and educating through formal courses as well as workshops and signage.

Bee Campus USA aligns with UTRGV's commitment to sustainability, which it carries out through university operations, engagement, teaching and research. In addition to UTRGV's incorporation of native plants into campus landscaping and exclusion of pesticides that are harmful to pollinators, students, staff and faculty from the UTRGV's Department of Biology and School of Earth, Environmental, and Marine Sciences (SEEMS) are contributing to conservation efforts with pollinator gardens, among other efforts. In 2018, Dr. Lucia Carreon Martinez, UTRGV biology lecturer, spearheaded the establishment of the new pollinator garden on the UTRGV Brownsville Campus (The Pollinator Cantina), teaming up with Dr. Alejandro Fierro Cabo (SEEMS faculty), Dr. Julie Mustard (Biology faculty), Sara Black (Biology faculty), and Dr. Rupesh Kariyat (Biology faculty.) This year the efforts continued with the expansion of the Pollinator Cantina.

The Brownsville campus is also the home to Dr. Julie Mustard's bee research lab, where students have the opportunity to handle bees in a research setting. Their hive is thriving due to its proximity to The Pollintaor Cantina, and the bees' pollination contributes to the garden growing beautifully.

UTRGV outreach events reach the entire community, and offer opportunities to start educating about the importance of pollinators. As students and community members learn about the plants that bees and butterflies thrive on, they can begin to apply this knowledge in their backyards and workplaces. Thus, we can extend UTRGV's commitment to sustainability to the surrounding community, and empower individuals to contribute to preserving local ecosystems.

STANDARD 1

Bee Campus USA Committee

Photo by Dr. Julie Mustard, UTRGV

UTRGV has participated in programs similar to Bee Campus USA including the Arbor Day Foundation's Tree Campus USA, and has established working procedures for sustainable projects, which are always carried out by order of committees. UTRGV's Bee Campus USA Committee is made up of faculty, students, and the director of Campus Facilities Operations, among other staff. They meet quarterly to plan pollinator conservation education efforts and events.

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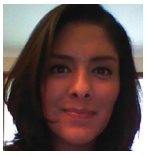

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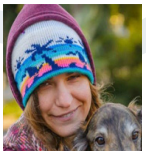

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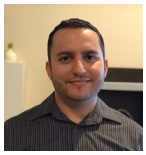

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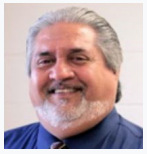

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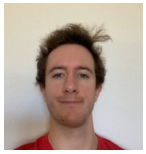

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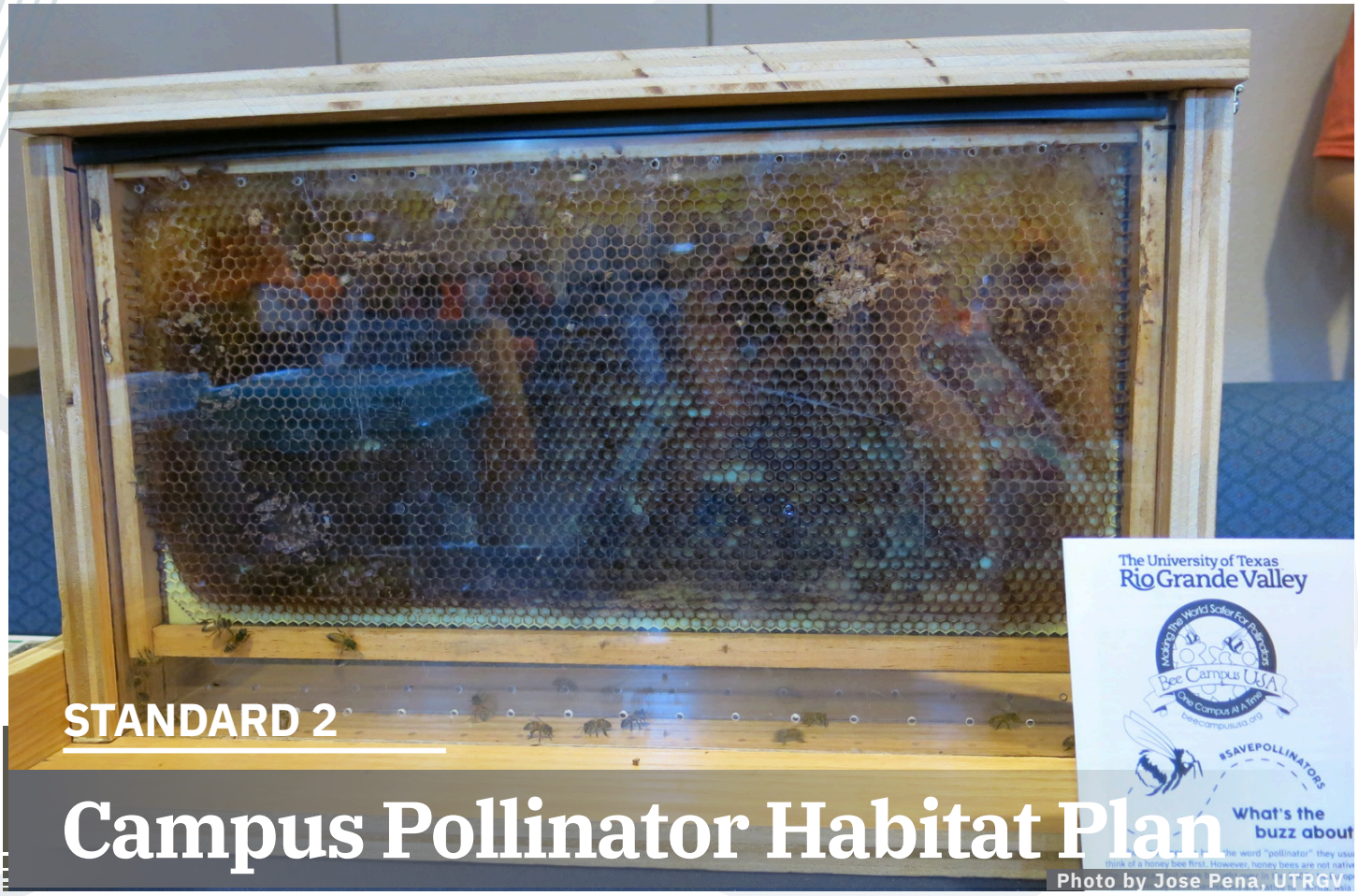

Photo by Jose Pena, UTRGV

STANDARD 2

Campus Pollinator Habitat Plan

UTRGV's Integrated Pest Management Plan includes native and pollinator-friendly plants, which are listed in UTRGV's annual Tree Care Report, available on the Office for Sustainability's website. Some of UTRGV's staples in landscaping are species preferred by insect and bird pollinators.

We are committed to taking the next step in education by adding regional sources for such plants and detail a least toxic integrated pest management (IPM) model applicable to other local landscapes.

> **" The hum of the bee is the voice of the garden. "**
>
> *-Elizabeth Lawrence*

List of Native Plants in the UTRGV Pollinator Garden

Vasey adelia
Frog fruit
Fiddle wood
Blue creeping sage
White plumbago
Texas Baby bonnet
Carlowrightia
Runyon's water willow
Snake herb
Tube tongue
Texas lantana
Scorpion's tail
Scarlet sage
Spring mistflower
Crucita
White mistflower
Golden rod
Low croton
Bettany leaf mistflower
Texas kidneywood
Sweet gaura
Heart leaf hibiscus
Turk's cap
Trixis inula
Wolly pyramid bush
White brush
Hairy wedelia
Velvet lantana
Skeleton leaf
Prairie milkweed
Common sunflower
Wild sunflower
Lady finger cactus
Twisted rib cactus
Prickly pear cactus
Pincushion cactus
Nigh-blooming cereus
Tropical milkweed
Coyotillo
Texas Sage

STANDARD 3

Annual Campus Events

Photo by Jose Pena

UTRGV is committed to raising awareness of the importance of pollinators through events which may be guided pollinator garden walks, workshops, presentations, and films on pollinators. These also serve as an opportunity to acknowledge the institution's certification as a BEE CAMPUS USA institution. UTRGV hosts an annual tree-planting event in honor of Arbor day, to which UTRGV integrates pollinator presentations. Similarly, UTRGV hosts an Earth Fest, in which pollinator awareness is featured through the Office for Sustainability's outreach efforts. For 2020, these two events were held virtually.

UTRGV hosts other events and utilizes social media throughout the year to celebrate the beauty and educate our campus and community about the importance of bees and other pollinators. Some of these are during National Garden and Pollinator Week, or Butterfly Education and Awareness Day in June, National Garden Month during April, and National Wildflower Week during Garden for Wildlife Month (May), and certainly the Annual Butterfly Count (North American Butterfly Association.) Other pollinator-specific events such as National Moth Week, National Honey Bee Day, World Bee Day, and National Bat Week are hosted by departments such as Biology, School of Environmental Sciences, and student organizations dedicated to conservation.

UTRGV engages the community with urban forestry activities and events throughout the year, such as HESTEC, FESTIBA, and Rio Reforestation. Opportunities for student participation in these events are made possible through the collaboration of the Office for Sustainability, the Department of Biology's Environmental Science program and Agroecology program, the Department of Community Engagement, the U.S. Department of Agriculture, and Texas Forest Service. The Office of Sustainability partnered with HESTEC to commemorate pollinator day and was one of the last in-person events prior to the campus-wide shut down as a result of the emergence of the COVID-19 pandemic. Over 120 campuses, with students ranging from K-12, participated in the festivies and engaged in learning activities that further expand their knowledge on the importance of pollinators and had a chance to have a look at the Pollinator Cantina Garden. UTRGV partnered with the Texas Regional Alliance for Campus Sustainability and Texas EarthX to celebrate Earth week virtually. Among the presentations offered, a session on Climate Solutions hosting 72 attendees addressed the social, environmental, and economic impacts of pollinators.

STANDARD 4

Service Learning Project

Photo by David Pike

Photo by David Pike

Students at UTRGV have the opportunity to contribute to initiatives on-and off-campus through service learning projects. UTRGV requires that officially designated service-learning courses meet defined criteria in course design, but activities remain at the sole discretion of the faculty member teaching the course. These criteria are based on nationally recognized standards and have been established to enable the institution to document and assess service learning activities in a consistent fashion and to tie institutionally recognized community engagement activities to agreed upon practices and definitions. Designations are given on a section-level on an instructor basis for a singular course.

Two such courses, Introductory Biology and Ecology took on the service learning project of expanding and maintaining the new pollinator garden on the Brownsville campus. Though volunteers are also welcome to these experiences, the participation of students enrolled in service learning courses is tracked. Other courses expected to incorporate a service learning component related to pollinator habitats include Animal Behavior, Conservation Biology, Plant-Animal Interactions, Restoration Ecology, General Biology, Cell and Molecular Biology, Sustainable Agriculture and Apiculture Research.

Photo by David Pike

Photo by Dr. Julie Mustard


Photo by David Pike


Photo by David Pike


Photo by David Pike

More pollinator habitat was created with the expansion of the UTRGV pollinator cantina as part of phase 2 of the project. This phase consisted in the construction of 16 new plant beds edged with reclaimed bricks and soil amended with city compost. Of these beds, 10 were planted with native species of perennial herbaceous and small shrubs. Additionally, drip irrigation lines were installed. To accomplish this, different groups of students participated in different stages of the process through multiple events of student volunteer days. Among the things that students learned were the importance of organic amendments to rehabilitate degraded soils and the process for transplanting native pollinator friendly seedling of multiple species. The annual sponsorship of these projects is one of UTRGV´s next commitments.


Photo by David Pike


Photo by David Pike

STANDARD 5

Pollinator Education

Photo by David Pike

In addition to pollinator focused courses such as Plant-Animal Interactions, Animal Behavior, Conservation Biology, Plant-Animal Interactions, Restoration Ecology, General Biology, Cell and Molecular Biology, Sustainable Agriculture and Apiculture Research, where one section is dedicated to pollination, UTRGV is committed to incorporating pollinator protection education into the already existing selection of professional development trainings offered to faculty and staff.

For planning the expansion of the Pollinator cantina, we had input from Silvia Barr (Quinta Mazatlán), Matt Kauffman (Valley Nature Center), Cruz Salinas (drip irrigation expert), and Max Munoz (National Butterfly Center.)

Photo by Silver Salas

Early design mockup of educational signage

STANDARD 6

Educational Signage Regarding Pollinators

UTRGV commits to educating the campus and broader community about pollinator-friendly landscaping principles by labeling the plants in campus pollinator gardens and posting signage to explain how beneficial insects provide a natural process for pest management and pollination. Signs have been posted across both the Edinburg and Brownsville campus to explain the role of pollinators in food production and to indicate that UTRGV is part of Bee Campus USA.

STANDARD 7

Local Website & Contact Information

For more information contact:

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Pollinator Cantina
URL: https://www.utrgv.edu/pollinatorcantina/en-us

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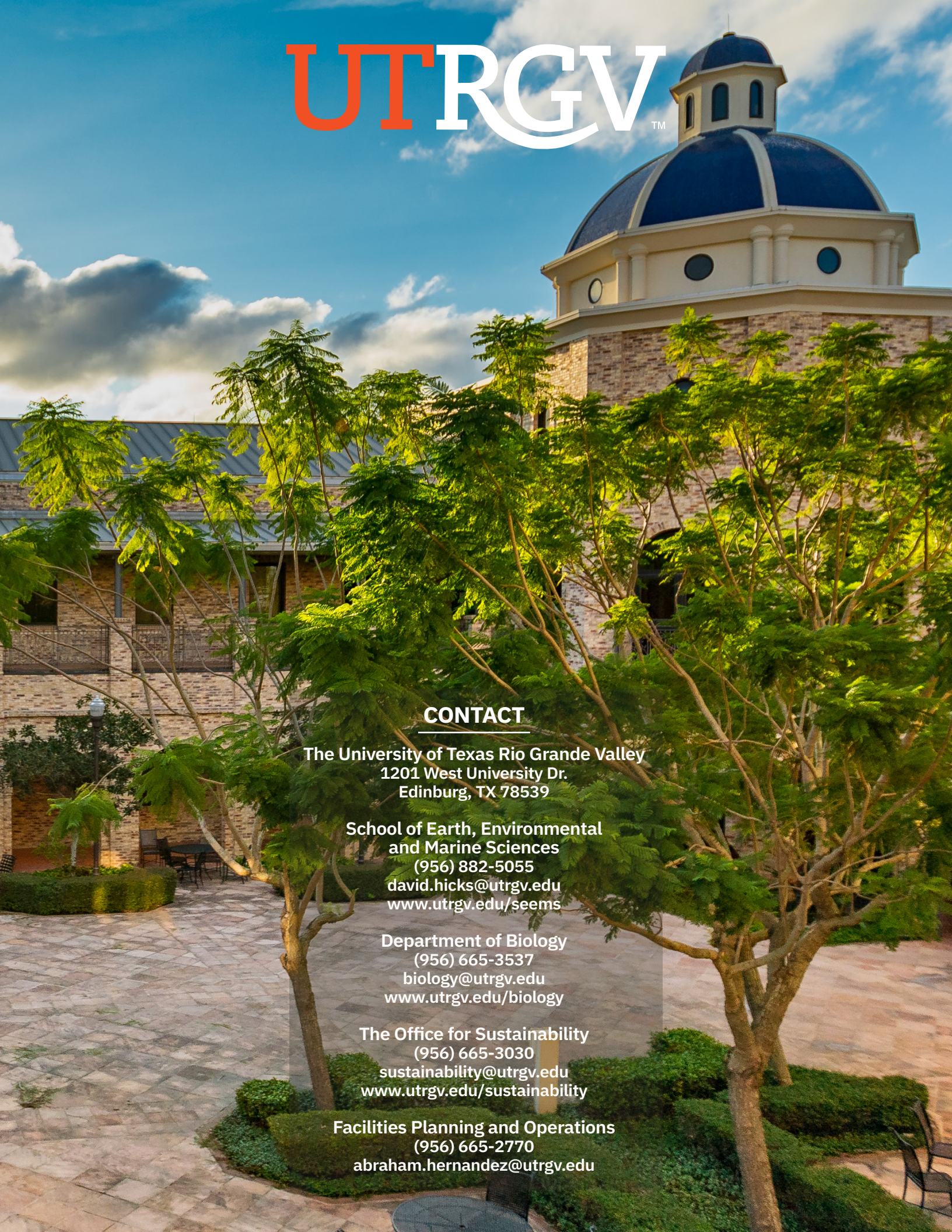
Bee Campus USA
URL: https://www.utrgv.edu/sustainability/programs/bee-campus-usa

Bee City USA

Affiliate Spotlight: University of Texas Rio Grande Valley, Texas
URL: https://beecityusa.org/affiliate-spotlight-university-of-texas-rio-grande-valley-texas/



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