



THE UNIVERSITY
OF TEXAS AT DALLAS

SUSTAINABILITY

REPORT



2020

The University of Texas at Dallas

is dedicated to integrating sustainability into everything we do. Within the Strategic Plan, *Theme 9* outlines our efforts to “ensure a sustainable, rewarding campus environment” by taking care of our people, our campus and our environment. *Goal 5* of UTD’s Strategic Plan further states that UT Dallas aspires to be “a responsible global citizen that enthusiastically attends to our duty to create a sustainable environment.” As the University grows, UT Dallas places a strong priority on sustainability as we aim to graduate well-rounded citizens whose education has prepared them for rewarding and productive careers in a constantly changing world.

How do we ensure UT Dallas is embracing sustainability?

We track our success through the Association for the Advancement of Sustainability in Higher Education’s (AASHE) Sustainability Tracking, Assessment & Rating System (STARS). STARS is a transparent, self-reporting framework utilized by hundreds of universities in the United States and internationally.

The STARS framework measures sustainability across all aspects of higher education in four broad categories: academics, engagement, operations, and planning and administration. Within these four categories, UT Dallas measures 63 credits and provides over 1,000 data points in order to holistically assess sustainability. Sustainability efforts are quantified by STARS as points and are awarded in each credit category according to performance. Depending on the number of points accumulated, a university earns certification as a Reporter, Bronze, Silver, Gold or Platinum institution.

The Office of Sustainability has embraced the international standard for sustainability provided by the AASHE STARS report and has adopted a mission statement to collaborate with stakeholders to integrate sustainability into the fabric of UT Dallas impacting academics, engagement, operations, and planning and administration.

As UT Dallas has embraced sustainability in the Strategic Plan and developed programs and efforts according to STARS, the University has received Gold certification from AASHE. Reference chart on page 11 of this report for more on the growth of sustainability at UTD and how sustainability excellence aligns UTD with peer institutions.



On the Cover: The orange Coreopsis is one of the native wildflowers planted at four monarch/bee way stations located around campus.



The Office of Sustainability’s mission is to engage the UT Dallas community as a catalyst and champion for environmental stewardship and social responsibility while fostering a culture of sustainability that permeates all aspects of the campus experience. We believe that sustainability is a collaborative, interdisciplinary field to which all members of the UT Dallas community contribute. The Office of Sustainability collaborates with stakeholders across the University to facilitate the integration of sustainability principles and practices into operations, academics, research, student engagement and administration. We strive to exemplify sustainability leadership as we contribute to the education of the next generation of leaders.

Academics

STARS Scores
Curriculum: 29.02/40 Research: 14/18

The University is committed to graduating well-rounded citizens whose education has prepared them for rewarding lives. This charge includes fostering and engaging responsible global citizens who enthusiastically attend to the duty of creating a sustainable environment. We believe education is important to achieve that goal.

In order to ensure our students are receiving an education with a component of sustainability, the Office of the Provost designated a sustainability liaison to work hand in hand with the Office of Sustainability for program implementation and data collection to integrate sustainability in curriculum and research.

For the purpose of assessing sustainability in the curriculum, the Office of Sustainability audited every class offered to determine if the course included sustainable development goals. Undergraduate and graduate students are able to choose from 193 courses at UT Dallas on environmental,

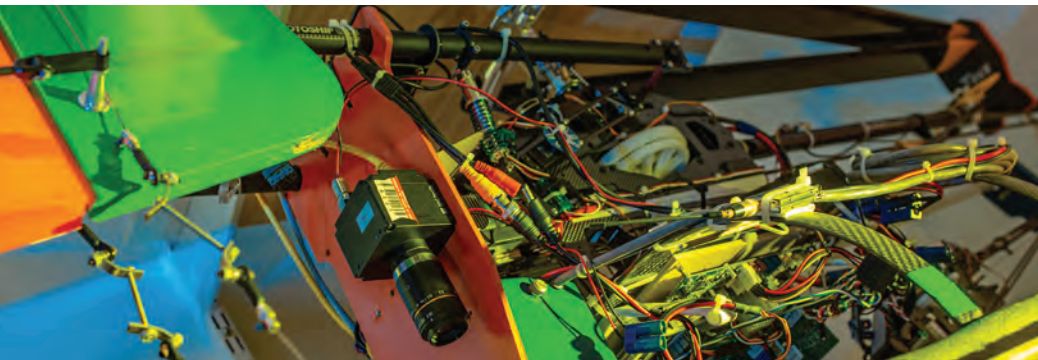
social and economic components of sustainability to equip students to address the issues they are likely to face as graduates.

To inform assessment and campuswide learning outcomes of the curriculum, our team designed Comets to the Core, a co-curricular program for incoming freshman and transfer students. Comets to the Core is designed to help students showcase skills in the areas of critical thinking, oral and written communication, problem-solving, teamwork, and social and personal responsibility, providing UT Dallas with an opportunity to determine what students know with respect to these skills. Additionally, students will be able to identify the social, political, environmental and economic components of a complex world problem, and will provide a solution that addresses sustainability in each of these areas.

In 2017, UT Dallas received a Quantum Leap grant from The University of Texas System to grow community-engaged learning at UT Dallas. Through the grant, the University was able to develop a Community of Engaged Service Learning course, which focusses on training

students in sustainability leadership. This course teaches students about the global framework for sustainability through lectures and facilitated discussions focused on the United Nations Sustainable Development Goals. Throughout the semester-long course, students apply their knowledge through local leadership to address sustainability issues in our region through collaboration with a community partner. In Fall 2019, students partnered with Wylie ISD to address food waste on high school campuses. Students collaborated with the North Texas Food Bank and Childhood Poverty Action Lab to assess root causes of hunger in the Dallas-Fort Worth area and make recommendations for systemic change to address the issues.

Recognized as a Carnegie R1 doctoral institution, UT Dallas is leveraging its research prowess to address pressing issues of sustainability across disciplines. Researchers at UT Dallas earned maximum credit in the Research and Scholarship category in recognition of the work taking place on campus to address pressing environmental, social and economic issues related to sustainability.



Monitoring Air Quality

Dr. David Lary, professor of physics, received a grant from the National Science Foundation to pilot a project called Geolocated Allergen Sensing Platform (GASP) to detect asthma-aggravating particulate matter and pollen in metropolitan Chattanooga, Tennessee. Dr. Lary says this work will help asthma sufferers to identify locations to avoid. Currently, there are 10 GASP sensors in Chattanooga, and thanks to a sponsorship of Earth Day Texas, 10 are in schools in the Dallas area, and several are at UT Dallas.



Right, standing: Dr. David Lary, professor of physics, at work in his lab.



“Combining machine learning with many types of sensors on multiple scales is of great value to sustainability researchers. We are using this combination for a wide range of studies from 24/7 sensing of air quality across DFW, to electric survey cars, to using coordinated robotic teams, such as unmanned aerial vehicles, autonomous boats and walking robots to characterize the comprehensive state of the environment. Machine learning is of considerable utility for a variety of applications, from the accurate calibration of low-cost sensors that can then be used to provide a dense sensor network at the neighborhood scale, to the creation of new data products such as estimating airborne pollen from weather radars. Machine learning is also used by autonomous robot teams to characterize the environmental composition in real time.”

— Dr. David Lary, Professor of Physics

Smart UT Dallas Campus

The smart UT Dallas campus project maps facilities, resources and human activities on campus to synergize both effective management from the top down and citizen engagement from the bottom up. We have developed a geographic information system (GIS) with detailed data about the locations, geometries and properties of buildings (footprints and floor plans), streets (driveways, walkways, crosswalks and stop signs), parking facilities (parking structures and coded spaces in parking lots), sports facilities and trees. The UT Dallas GIS database provides a foundation to map resources and issues on campus to develop integrated location-based solutions. For example, we dynamically map enrollment data to buildings and building floor plans to visualize enrollment distributions across campus or within a building through class hours on each week day. We experiment mapping campus events by time, type and location to alert end users of events happening in their vicinity at any given time. We are planning to install 10 air-quality sensors to map real-time, air-quality distributions, examine how campus traffic and building layout relates to hot spots of poor air quality on campus and explore alternatives



(e.g., traffic management) to improve campus air quality.

Other plans to develop apps for the campus based on the UT Dallas GIS database include room-to-room navigation, parking-spot finder, surface runoff and flooding monitoring, vegetation health watch, what's up UTD (real-time UT Dallas event mapping), citizen science apps for data updates, issue reports and opinion surveys. We envision using the campus as a living laboratory and using the GIS database to catalyze collaborations from campus communities to build a smart UT Dallas campus for sustainability. Sciences and technologies developed and tested in the UT Dallas living laboratory can then be transferred to building smart and sustainable communities in cities.

The UT Dallas GIS database is developed by many former and current students working in the Geospatial Analytics and Innovative Applications Laboratory. Current student leaders are Brent Dell, Yogita Karale and Haoran Weng.

— Content contributed by Dr. May Yuan, Professor, Geospatial Information Sciences

Academics Credits

CREDIT CATEGORY	CONFIRMED CREDITS	MAXIMUM CREDITS
CURRICULUM	29.02	40.00
AC1 Academic Courses	7.04	14.00
AC2 Learning Outcomes	3.98	8.00
AC3 Undergraduate Program	3.00	3.00
AC4 Graduate Program	3.00	3.00
AC5 Immersive Experience	2.00	2.00
AC6 Sustainability Literacy Assessment	4.00	4.00
AC7 Incentives for Developing Courses	2.00	2.00
AC8 Campus as a Living Laboratory	4.00	4.00
RESEARCH	14.00	18.00
AC9 Research and Scholarship	12.00	12.00
AC10 Support for Research	2.00	4.00
AC11 Open Access to Research	0.00	2.00
Category Total	43.02	58.00

Engagement

STARS Scores

Campus Engagement: 20.25/21

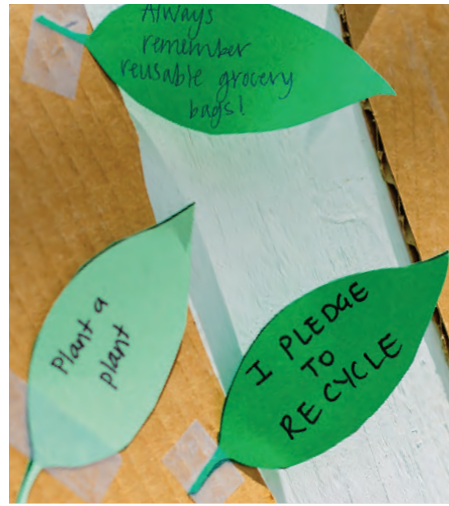
Public Engagement: 8.21/20

Sustainability is only possible with an engaged community of students, faculty and staff, and our community is committed to UTD's goal to be a leader in the field. Our students are incredibly passionate about this work. They are motivated and engaged in educating members of the UT Dallas community and back home in their own communities. Our students are motivated and excited to continue their leadership beyond college.

Through the Office of Sustainability, students have a variety of ways to get involved in conservation and sustainability measures. In 2017, we launched the Eco-Reps program where students make UT Dallas greener by serving as peer educators and project leaders on campus. Eco-Reps have led sustainability in many ways, including: developing the Sustainability Service Honors program, developing the Bee Campus USA program, launching the Campus Clean Up Program and training students to compost, among others.

As defined by a Student Government resolution, the Green Initiative is aimed at improving campus sustainability. The initiative includes issues like recycling and waste-water reduction efforts, and identifying infrastructure and efficiency projects. In spring 2019, students participated in a 10-week program focused on the global water crisis. Students explored the scarcity of water both in the U.S. and around the world and attended lectures from University and community experts on topics from water capture systems to the Environmental Protection Agency.

The Environmental Conservation Organization is an actively engaged group on campus that focuses on projects such as the Food Recovery Network (FRN). The network is a student-led movement fighting hunger in North Texas and is aimed at transforming food surplus into food recovery. They recover excess prepared food across the Dallas-Fort Worth Metroplex and donate it to people who are deprived of nutritional food. Volunteers pick up food from UT Dallas dining locations



"FRN allows students to have a direct impact on reducing food waste in a way that helps people in need by driving excess food from UTD Dining Services to a nearby shelter. Last year, we were able to donate over 950 pounds of food throughout the academic year and also collected over 2,000 pounds for the shelter during an end-of-the-year food drive."

— Sandra Mihail, President of Food Recovery Network UTD Chapter

and deliver it to Hope's Door New Beginning Center, a nonprofit organization that helps individuals and families escape and heal from domestic and dating abuse and family violence.

Students also get involved in sustainability activities through our annual Earth Week. Each year, the UT Dallas community comes together to celebrate sustainability and environmental practices through interactive and educational events and programs. In 2019, 891 students, faculty and staff engaged in Earth Week. Of those, 114 were students. Over 166 volunteer hours were recorded, which equates to more than \$4,000 donated. We are extremely proud that Earth Week in 2019 was zero waste for the first time. During Earth Week 2018:

- Four honey beehives were installed;
- 428 pounds of electronic waste was appropriately recycled;
- 85 pairs of shoes were created from upcycled denim; and
- 12 pounds of kale and lettuce was harvested from the Community Garden.

The events students can participate in include but are not limited to garden workshops, LEED tours, fairs and a pop-up farmers market.



Campus Engagement

Our students are committed to service. In the 2018-2019 academic year, we accumulated 47,000 hours of student community service. Many of those hours were completed through Viva Volunteer, UT Dallas' annual service event. Through Viva Volunteer, hundreds of students, staff and faculty unite to serve others on Make A Difference Day. Some of the projects students focus on during Viva Volunteer are Bee Campus USA and Tree Campus USA.

Another way students get involved is through the Sustainability Service Honors program. This award honors graduating students who give service toward advancing the United Nations Sustainable Development Goals.

Above: Campus Eco-Rep Kelsey Lyle, who graduated in May 2019, helped plant pollinator-friendly flowers around the University. Above, right: UT Dallas arborist Frank Rodriguez helped the University earn the Tree Campus USA designation. He and fellow arborist Sam Eicke tend to approximately 6,700 trees on campus. Below: As part of the Bee Campus USA project, students learn to care for and manage the campus' two apiaries.



Public Engagement

In response to the United Nations Decade of Education for Sustainable Development, the United Nations University launched the Education for Sustainable Development project (ESD), a global, multistakeholder network of Regional Centres of Expertise (RCE). UT Dallas, in partnership with UT Arlington, created the RCE North Texas to bridge the gap between different sectors, such as nonprofits and private and

government sectors. The RCE North Texas provides a framework for regional sustainability that allows us to find synergies and begin speaking with a collective voice regarding sustainability. The global RCE network provides fellowships and grants to UT Dallas. Currently, this is the eighth Regional Centre of Expertise in the U.S. and the 168th worldwide.

Engagement Credits

CREDIT CATEGORY	CONFIRMED CREDITS	MAXIMUM CREDITS
CAMPUS ENGAGEMENT	20.25	21.00
EN1 Student Educators Program	4.00	4.00
EN2 Student Orientation	2.00	2.00
EN3 Student Life	2.00	2.00
EN4 Outreach Materials and Publications	2.00	2.00
EN5 Outreach Campaign	4.00	4.00
EN6 Assessing Sustainability Culture	1.00	1.00
EN7 Employee Educators Program	3.00	3.00
EN8 Employee Orientation	1.00	1.00
EN9 Staff Professional Development	1.25	2.00
PUBLIC ENGAGEMENT	8.21	20.00
EN10 Community Partnerships	3.00	3.00
EN11 Intern-Campus Collaboration	3.00	3.00
EN12 Continuing Education	0.00	5.00
EN13 Community Service	2.21	5.00
EN14 Participation in Public Policy	0.00	2.00
EN15 Trademark Licensing	0.00	2.00
Category Total	28.46	41.00

Operations

STARS Scores

- Air and Climate: 4.75/11
- Buildings: 2.71/8
- Energy: 6.02/10
- Food and Dining: 2/8
- Grounds: 2/3
- Purchasing: 3.27/6
- Transportation: 3.54/7
- Waste: 4.29/10
- Water: 4.43/8

*This page, right: The LEED Platinum Student Services building.
Below: Inside the LEED Gold Engineering and Computer Science West building.
Below, right: The LEED Gold Bioengineering and Sciences building.*



To ensure we are making an impact in our community, UT Dallas is committed to making sustainable decisions with regard to our campus operations and environmental stewardship. Our sustainable campus now has seven LEED buildings and one net zero parking garage. To help the conservation and protection of pollinators, we have monarch way stations and wildflower planting throughout campus.

We are also building a sustainable culture through dining services, waste management, compost and RecycleMania. Many of the food and beverages provided through Dining Services are sustainable or ethically produced. UT Dallas tries to minimize food and dining waste through trayless, reusable "to-go" meal containers and by donating food instead of disposing of it. For food that cannot be donated, we make every attempt to reclaim through composting. There are compost containers installed near kitchen locations all over campus. Through RecycleMania, the UT Dallas community collects data and educates peers on how to reduce waste and increase recycling.

"Our sustainability program's roots are in operations, and it is important that we stay focused on reflecting sustainable values with our campus environment. Operations is where we walk the talk of sustainability, and it is important that our students see the value that UTD places on sustainability."

— Gary Cocke, Associate Director of Energy Conservation and Sustainability



*This page, top left: Davidson Management Honors student Carlos Rodriguez-Cruz y Celis helped plant milkweeds during Earth Week. The milkweeds serve as monarch waystations and help provide the necessary environment for the monarchs during their yearly migration.
Bottom: Kaumudi Sanampudi, a psychology student, scrapes leftover food into one of the compost bins at the dining hall. Compost from campus food waste has been used in landscaping at the Northside complex.*

Operations Credits

CREDIT CATEGORY	CONFIRMED CREDITS	MAXIMUM CREDITS
AIR AND CLIMATE	4.75	11.00
OP1 Greenhouse Gas Emissions	3.75	10.00
OP2 Outdoor Air Quality	1.00	1.00
BUILDINGS	2.71	8.00
OP3 Building Operations and Maintenance	1.50	5.00
OP4 Building Design and Construction	1.21	3.00
ENERGY	6.02	10.00
OP5 Building Energy Consumption	6.00	6.00
OP6 Clean and Renewable Energy	0.02	4.00
FOOD & DINING	2.00	8.00
OP7 Food and Beverage Purchasing	0.00	6.00
OP8 Sustainable Dining	2.00	2.00
GROUND	2.00	3.00
OP9 Landscape Management	1.00	2.00
OP10 Biodiversity	1.00	1.00
PURCHASING	3.27	6.00
OP11 Sustainable Procurement	2.00	3.00
OP12 Electronics Purchasing	0.41	1.00
OP13 Cleaning and Janitorial Purchasing	0.77	1.00
OP14 Office Paper Purchasing	0.09	1.00
TRANSPORTATION	3.54	7.00
OP15 Campus Fleet	0.40	1.00
OP16 Student Commute Modal Split	1.11	2.00
OP17 Employee Commute Modal Split	0.03	2.00
OP18 Support for Sustainable Transportation	2.00	2.00
WASTE	4.29	10.00
OP19 Waste Minimization and Diversion	3.01	8.00
OP20 Construction and Demolition Waste Diversion	0.78	1.00
OP21 Hazardous Waste Management	0.50	1.00
WATER	4.43	8.00
OP22 Water Use	2.43	6.00
OP23 Rainwater Management	2.00	2.00
Category Total	33.01	71.00



Planning and Administration

STARS Scores

Coordinating and Planning: 6.5/8
 Diversity and Affordability: 9.16/10
 Investment and Finance: 0/7
 Well-Being and Work: 2.88/7



At UT Dallas, we pride ourselves on our commitment to diversity. Not only do we have students who come from different backgrounds and more than 100 countries, but we have departments and entities that support, participate in and host events and activities that promote and raise awareness of the diversity at UT Dallas. We strive to ensure that our environment is both inclusive to underrepresented students and affordable for students who might otherwise not be able to attend the University. Through programs like the Tuition Promise and Guaranteed Tuition Plan, the University endeavors to provide a world-class education to every student, regardless of means.

The University of Texas at Dallas' Strategic Plan is committed to *Goal 5*: being "a responsible global citizen that enthusiastically attends to our duty to create a sustainable environment." Theme 9 of the Strategic Plan ensures that UT Dallas is "a sustainable, rewarding campus environment." UT Dallas is already working toward this goal through the establishment of the Sustainability Committee. Its mission is to cultivate a culture of environmental responsibility in which the entire UT Dallas community is aware of, engaged in and committed to advancing environmental awareness and sustainable practices through education, research, operations and community service activities.

Planning and Administration Credits

CREDIT CATEGORY	CONFIRMED CREDITS	MAXIMUM CREDITS
COORDINATION AND PLANNING	6.50	8.00
PA1 Sustainability Coordination	1.00	1.00
PA2 Sustainability Planning	3.75	4.00
PA3 Inclusive and Participatory Governance	1.75	3.00
DIVERSITY AND AFFORDABILITY	9.16	10.00
PA4 Diversity and Equity Coordination	2.00	2.00
PA5 Assessing Diversity and Equity	1.00	1.00
PA6 Support for Underrepresented Groups	3.00	3.00
PA7 Affordability and Access	3.16	4.00
INVESTMENT AND FINANCE	0.00	7.00
PA9 Committee on Investor Responsibility	0.00	2.00
PA10 Sustainable Investment	0.00	4.00
PA11 Investment Disclosure	0.00	1.00
WELL-BEING AND WORK	2.88	7.00
PA12 Employee Compensation	0.49	3.00
PA13 Assessing Employee Satisfaction	0.00	1.00
PA14 Wellness Programs	1.00	1.00
PA15 Workplace Health and Safety	1.39	2.00
Category Total	18.54	32.00



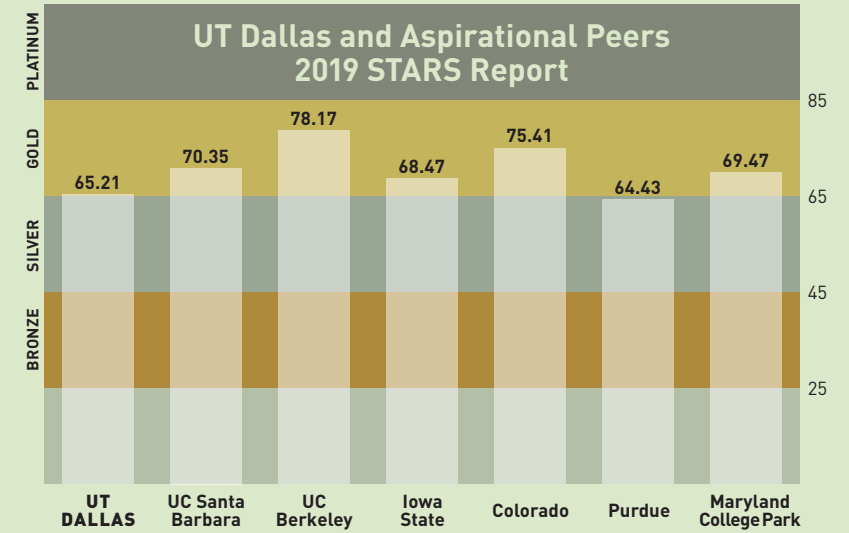
Innovation and Leadership

This category allows universities to receive recognition for programs that do not fit existing categories. UTD received maximum credit here for the Comet Composting Initiative, Comets to the Core program, and UN Regional Centre for Expertise North Texas.

CONFIRMED CREDITS	MAXIMUM CREDITS
4.00	4.00

Growing Sustainability

In its 50 years, UT Dallas has evolved from a center for graduate studies to a tier one institution with aspirations to be a first-choice university for the next generation of leaders, thinkers and creators. But with this rapid expansion comes the duty to lead our community in responsible and sustainable growth. Achieving a STARS Gold status in our brief history is remarkable, but we realize our work in sustainability is just beginning. As UTD continues to grow as a world-class university, we recognize that leadership in the field of sustainability is critical for us to become the university that we aspire to be.



The Long Path Toward Sustainability

Sustainability means meeting the needs of the present without sacrificing those of tomorrow. It is transdisciplinary. It is complex. It is difficult. And it is important.

Sustainability is going to be the lens through which many of our students apply their education. UT Dallas is proud of all that we do to graduate well-rounded citizens, able to engage on the pressing issues of today and committed to continuous improvement in order to prepare tomorrow's leaders with the skills to address the challenges of a constantly changing world.





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