Florida Institute of Technology
High Tech with a Human Touch™

SUSTAINABILITY Florida Tech

UNIVERSITY SUSTAINABILITY GUIDE

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- Campus Sustainability
- Student Organizations
- Academics and Research
- Energy and Water
- Waste and Recycling
- Food and Dining Services
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The Importance of Sustainability

As a Tier One Best National University, Florida Institute of Technology is well-poised to set the precedent of how a campus can reimagine and rethink sustainable strategies to provide a more productive and interactive living, learning and working environment. This University Sustainability Guide explores strategies that have been enacted to increase campus energy-efficiency and other objectives, while reducing our environmental footprint and fostering a more sustainable culture. This guide showcases the steps Florida Tech has already taken and provides insights, facts and tips on how to become more sustainable during our daily lives.

With ongoing challenges from climate change, sea level rise, human health degradation and natural resource depletion, the university recognizes the importance of operating more sustainably. It is committed to working toward new goals and initiatives that focus on promoting changes in the classrooms, across campus and in the community.

Won't you help us become a more sustainable campus and allow Florida Tech to become a beacon of sustainable innovation? Through the campus and your efforts, you can help us become more ...

"High Tech with a Human Touch!"

—Daniel Sutton
University Sustainability Officer

What you can do to Live Green on Campus

AASHE
Association for the Advancement of Sustainability in Higher Education

The university is always looking for ways to reduce its environmental impact and improve business operations. One such way has been to become a member institution of AASHE. This membership provides numerous tools and best practice examples on the AASHE website. Just go to aashe.org and create an account with your Florida Tech email to start taking advantage of the latest sustainability trends and resources from campuses around the world.

The campus sustainability office is also in the process of benchmarking current campus practices using AASHE's STARS reporting tool. STARS is the premier green campus certification program and measures major categories of university operations such as: Academics, Engagement, Operations, Planning & Administration and Innovation. Through the AASHE membership, Florida Tech hopes to better identify key areas for improvement and strives to meet and exceed specified goals to engage the social, economic and environmental aspects of sustainability.

Campus Engagement

Florida Tech strives for ways to increase campus participation and engagement with university-wide sustainability initiatives. Check out fit.edu/sustainability for a wealth of information on current campus and community sustainability in terms of academics, research and practices, along with an FAQ section for more information.

The Florida Tech Student Government Association, the Office of Residence Life and diverse student organizations are actively seeking to engage students in more sustainable practices through participating in national campus sustainability competitions, such as Project Green Challenge and the campus's first fall Earth Week. The University Sustainability Council is responsible for advancing campus initiatives and communicating ideas to upper administration through the efforts of faculty, staff and student representatives.

Leave Green

The Leave Green initiative, originally started as a student capstone project and with the help of Residence Life and the Sustainability Office, has expanded to a campus-wide move-out program.

Initially implemented during the spring 2015 semester, this student-led coalition helped improve recycling efforts from students moving out by diverting and donating usable materials that would otherwise end up in the county landfill. This first collection saved over 1,785 lbs. of usable materials and were donated to local charitable organizations. Expanding campus wide during the spring 2016 semester and generating more awareness, the Leave Green initiative donated over 3 box truckloads of usable items weighing over 9,000 lbs. to local Melbourne charitable organizations.

Campus GHG Inventory

Along with the scoping of the STARS reporting initiative is the development of an accurate campus-wide GHG (Greenhouse Gas) emissions inventory. To create an accurate annual inventory, aspects of the university's operations need to be analyzed and this includes: utility purchases (electricity, natural gas, water and sewer), campus fleet operations and commuter operations.

Through this analysis, the university will be able to identify which facilities are emitting the most GHGs to devise a plan to help mitigate emissions in the future. This process will also allow establishment of a baseline to assist with reduction goals as the university looks to reduce its environmental impact.

One way to create this inventory and measure our total campus impact is to utilize the Energy Star Portfolio Manager to benchmark our current campus buildings to similar buildings across the country. This helps the university better understand the buildings that are underperforming so steps can be taken to reduce our environmental footprint.

Responsible Cleaning Products

With a large physical plant of 2.1 million sq. ft., Florida Tech has made the commitment to clean its spaces responsibly by electing to use Green Seal certified cleaners. Green Seal is a recognized standard that considers the environmental impact of products around the world. Presently, over 90% of all cleaners used on campus are Green Seal Certified.

Spring 2016 University Commencement

A new initiative this past spring offered an eco-friendly cap and gown manufactured using 100% post-consumer plastic bottles with each gown consisting on average of 23 bottles. Through the students eco-friendly purchasing, over 7,000 plastic bottles were diverted from entering the landfill, helping to aid in reducing the university's environmental footprint.

More examples are presented on the following pages and are available at fit.edu/sustainability.

Campus Sustainability

Our current LEED-certified buildings include:

Harris Student Design Center

Newest building on campus, opened November 2015

Currently seeking LEED Silver certification

Environmentally responsible student workspace for design and construction of senior design research projects

The Scott Center for Autism Treatment

LEED Certified

First building at Florida Tech formally built to LEED specifications, opened June 2013.

Provides improved environment for caregivers and families

Panther Aquatic Center

LEED Silver since 2015

One of the only LEED-certified campus pools in Florida, opened January 2015.

Utilizes geothermal technology and other advances to reduce energy consumption

Campus Buildings

Buildings can be some of the biggest energy consumers and pollution generators in society, but that is changing. Universities "build the future" and are exercising leadership in sustainable construction. Florida Tech's academic sustainability program has built many student-staff partnerships to assist campus Facilities Operations in their building certification initiatives.

This new generation of campus sustainability is fostered in part by incentive-based models involving quality certifications. At the same time, many best practices in building design and operations have been implemented without formal certification. As a center of higher education and research, we are always searching for advances in sustainable design, policies and practices.

One aspect the university considers when designing a new campus building is LEED, or Leadership in Energy & Environmental Design. This is a green building certification program developed by the USGBC (U.S. Green Building Council) that recognizes best-in-class building strategies and practices. LEED-certified buildings save money and resources and have a positive impact on the health of occupants, while promoting renewable, clean energy.

Botanical Garden

A stream bordered by a shady hammock abounding in palm trees and other tropical growth winds through the heart of the campus and is the setting for our 15-acre Botanical Garden or "Jungle."

Through the intense interest of founding president emeritus Jerome P. Keuper and the inspiration and help of Mr. Dent Smith in the 1960s, Florida Tech's garden has become one of the most unique campus botanical gardens in the United States. Serving as a major wetland resource for the community, the garden is free to the public and open every day sunrise to sunset.

Botanical Fest

What better way to welcome spring than to refurbish yards and gardens? Just in time to do the job are a wide range of plant and accessory choices at Florida Institute of Technology's annual Botanical Fest.

Botanical Fest is located on the Crawford Green, and the event showcases some of Florida's finest plant and garden vendors, offering palms, exotics, native plants, ornamental shrubs, bamboo and flowering plants. Free guided tours of the Botanical Garden take place throughout the day, and master gardeners are on hand to answer questions. The festival is an annual environmental stewardship and gardening showcase.

As a Tree Campus USA member, Florida Tech participates in campus tree planting during the State of Florida's annual Arbor Day in January.

Student Organizations

Florida Tech Student Government Association (SGA)

SGA acts as a liaison between the student body and the faculty, staff and administration by developing programs and activities that reflect the opinions of the students and enhance the quality of life for all on campus.

Student Organization for Sustainability Action (SOSA)

SOSA works to bring best practices in sustainability to the Florida Tech campus and community. The organization has several teams working on projects and events on and off campus, many tied to projects within the academic sustainability program.

Florida Tech Environmental Club

The Florida Tech Environmental Club works on sustainability with an environmental focus. In the past they have organized campus cleanups and other events to make the campus more environmentally friendly.

Residence Life Sustainability Committee

The Residence Life Sustainability Committee strives to set the vision and direction of sustainable living in Florida Tech residence halls to meet 21st-century challenges. The committee recognizes that sustainability has short- and long-term goals that require a variety of actions to have an impact.

This group of resident assistants work together to address issues they see in their residential complex, learn current environmental topics, and plan events for their residents. ResLife hosts at least six sustainability-themed programs every school year, and this committee's goal is to continue to improve these events and advance understanding of campus environmental impacts.

Squamish

Squamish is a co-ed environmentally minded group, with interests in activism, awareness and social networking. Squamish regularly coordinates jungle and beach cleanups.

Sero Society

The Sero Society's primary mission is to raise awareness and appreciation of plants and their diverse applications. Additionally, they aim to enhance our local habitats by aiding existing conservation efforts on campus and in Brevard County.

Alpha Phi Omega

Alpha Phi Omega is a co-ed service organization that initiated recycling on campus, before Florida Tech's Facilities Operations enacted institution-wide recycling. The organization also participates in other activities from campus cleanups to fundraising for rainwater collection barrels.

Florida Tech **Sustainability Pledge**

Take the pledge online to see just how big your impact will be!

To help improve and make Florida Tech more sustainable, I pledge the following:

1. To reduce my waste by using a reusable bag when I go out shopping ...
   _ for one week
   _ for one semester
   _ for one year

2. To reduce waste by recycling all recyclable materials (paper, plastics, metals, glass and e-waste) ...
   _ for one week
   _ for one semester
   _ for one year

3. To reduce waste by using a reusable water bottle on campus rather than purchasing bottled beverages ...
   _ for one week
   _ for one semester
   _ for one year

4. To conserve water by reducing my shower time down to five minutes per day ...
   _ for one week
   _ for one semester
   _ for one year

5. To conserve water by turning off the tap while brushing my teeth ...
   _ for one week
   _ for one semester
   _ for one year

6. To conserve energy by unplugging electronics, or by using a power strip and turning it off when not in use ...
   _ for one week
   _ for one semester
   _ for one year

7. To conserve energy by washing my clothes in cold water ...
   _ for one week
   _ for one semester
   _ for one year

8. To conserve energy by replacing regular light bulbs with more efficient LED bulbs ...
   _ one bulb
   _ two bulbs
   _ three bulbs

9. To reduce my greenhouse gas (GHG) emissions by walking or biking short distances instead of driving ...
   _ for one week
   _ for one semester
   _ for one year

10. To reduce my greenhouse gas (GHG) emissions by taking more sustainable transportation (buses, campus shuttles, etc.) instead of driving ...
    _ for one week
    _ for one semester
    _ for one year
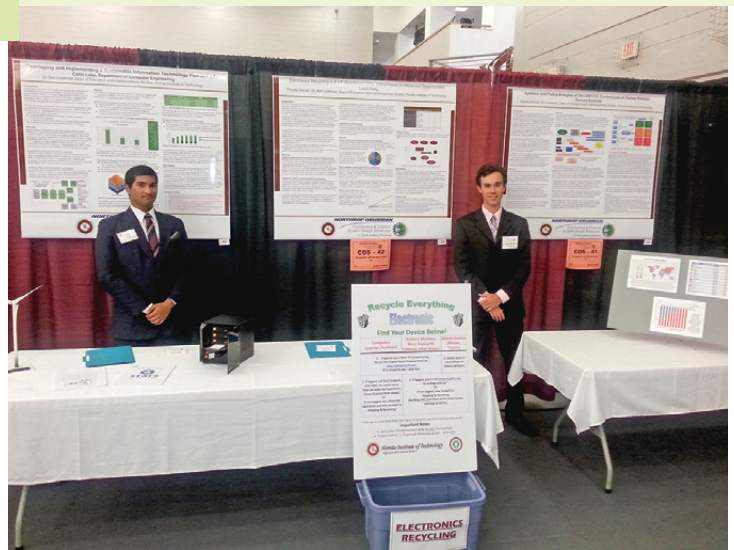
Academics and Research

By May 2017, over 100 students will have graduated from FIT's Sustainability major and minor programs, two of the first such academic programs in the southeastern U.S. A primary focus of the academic program has been the campus classroom model: all students complete capstone projects that apply classroom learning to hands-on innovations in new or existing university or off-campus projects. Such approaches merge academics and research for the greater good and real-world project management experience.

Bachelor of Science: Sustainability Studies

Florida Tech's major program in Sustainability Studies expands on our well-known science and engineering strengths with customized business and social science courses to produce sustainability degree graduates who can operate across multiple disciplines in existing and emerging careers. Four concentrations are offered: Technology and Engineering, Business and Economics, Environmental Sciences, and Social Sciences. Student capstone sustainability projects are helping spearhead sustainability initiatives on campus and around the Space Coast.

Sustainability Minor Program

The Florida Tech minor in Sustainability is designed to complement all undergraduate programs and includes graduates from over 20 majors and all five colleges on campus. Students learn to apply sustainable practices to their major field and diverse careers. Participants also build real-world skills through hands-on senior projects, providing experience in project management. Some examples of minor and major projects are in this guide and on the Florida Tech Sustainability website.

fit.edu/sustainability/academics
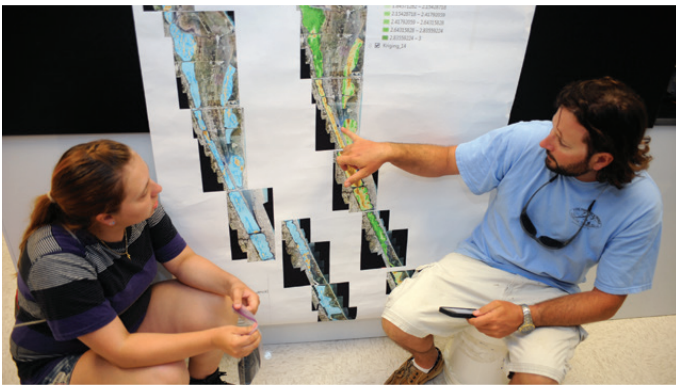
Sustainability Research Crosses Many Disciplines

Sustainability is emphasized in increasingly diverse research fields and funding arenas. Long-term management of inherently dynamic environmental, economic and social systems requires a vision for innovation, and a focus on careful planning and measurement of project performance.

Areas of research on campus include but are not limited to ecosystem monitoring and conservation, renewable energy, coastal management and climate adaptation, purification of landfill gas, groundwater quality and storm water management, use of recycled materials in road construction, hurricane risk assessment and mitigation, aquaculture, cyber-security, green chemistry, and sustainability as it relates to transportation, ecotourism, high-tech industry and business ventures.

Sustainability research crosses continents as well as disciplines and Florida Tech has partnered since 2001 with leading STEM universities in Hungary and Germany on a series of international sustainability conferences. More information on these are on Florida Tech's Sustainability website.

The increasing impact of the academic capstone student research projects means local businesses, non profits and governments actively seek Florida Tech students for internships focused on sustainability research and actions.

To learn more about sustainability research at Florida Tech, visit fit.edu/research/portal where you can search sustainability and related fields across many disciplines.

fit.edu/sustainability/research

Energy and Water

Siemens Performance Initiatives

- **Water efficiency through plumbing upgrades**
- **Efficient lighting upgrades**
- **Science lab fume hood efficiency upgrades**
- **Boiler retrofit project**
- **Campus automated power monitoring**
- **Fire sprinkler system installations**

Striving for Efficiency

Florida Tech has partnered with Siemens Industries, Energy Savings Performance Contracting Services to initiate energy saving programs to increase operating efficiencies. To date, the contract has yielded a net reduction of 8,000,000 kWh of electricity annually, which reduces Florida Tech's environmental footprint by over 6,500 tons of greenhouse gas emissions per year.

Other aspects of the Siemens contract were initiatives to install a new 1,000-ton chiller plant to serve the north campus buildings (Evans, Link, Gleason, Denius, Funk, Crawford and Skurla) to increase efficiency and cooling capabilities. This leads to reduced cooling costs per building and increased operational efficiency when compared to traditional central air systems. Another initiative was the installation of solar window film, helping Florida Tech reduce solar heat gain in campus buildings while lowering cooling costs.

To further reduce energy costs, the university utilizes a solar PV array to recharge the electric carts around campus. When the carts are not charging, the panels are still generating electricity, and we sell what is generated back to the electrical grid, which aids in reducing the university's environmental footprint and operational costs.

> **Lighting currently accounts for about 11% of the total U.S. Energy Consumption.** — *U.S. Energy Information Association*

Water System Retrofits

Through the Siemens Performance Contract, Florida Tech has implemented main water system retrofits to reduce overall campus water consumption. For example, hundreds of faucets across campus have been installed with either 1.0–0.5 gallon per minute aerators to help reduce consumption while running water for various activities.

Without these improvements, typical faucets use 2.0–2.5 gallons of water per minute. This reduction initiative cuts water consumption by nearly 50% at each individual use. Another improvement was the retrofit of hundreds of showerheads from 2.5 gallons/minute to 1.75 gallons/minute fixtures. This is a net savings of 30% for each minute of shower time that adds up over the course of the year.

Retention Ponds

These play an essential role in the university's Storm Water Management Plan because they allow for the capture of rainwater from impervious surfaces rather than draining directly into the city's storm sewers. The university can use this water for irrigation throughout the campus to help regulate pond levels and prevent future overflows.

Crane Creek Watershed

The creek is a major tributary of the Indian River Lagoon and runs through the Botanical Garden. It is home to varied wetland species, which add to the garden's biodiversity. As a growing university, we are conscious of the connection between the creek and the Indian River Lagoon and have created many sustainable initiatives to reduce polluting runoff into this important watershed.

> **97.5% of all water found on Earth is salt water. Only 1% of the fresh water is accessible.** — *Global Change*

Saving water and reducing waste in Panther Dining Hall

After diners finish a meal in Panther Dining Hall, they clean their tables and go to the three-tiered conveyor in the back where the dishes are shuttled behind the scenes.

Here, a state-of-the-art system is in place to reduce the waste, recycle the water, and clean and sanitize the dishes for reuse in the dining room.

First, the waste is rinsed from the dishes and processed through the waste pulper system. The semi-dry pulp, which is an 88% reduction in volume, is fed to a trash container. 95% of the water is fed back to the trough/pulper by the return pump. Next, the dishes are placed in racks and sent through the dishwasher unit.

Geothermal Heated Pool

Energy costs associated with the Panther Aquatic Center were lowered with the implementation of geothermal heating. A geothermal system utilizes the Earth's internal temperature to help heat and cool when necessary to reduce the need for fossil fuel heating methods. This system also helped obtain a LEED (Leadership in Energy and Environmental Design) Silver rating, making this facility one of the highest- performing on campus, and one of the first LEED certified outdoor pools in the state of Florida.

Water Use: What Can You Do?

Use a low-flow showerhead.

Take shorter showers (4–5 min shower uses 20–40 gal. of water).

Nearly 22% of indoor home water use comes from doing laundry. Save water by making sure to adjust the settings on your machine to the proper load size.

Check faucets and pipes for leaks. A small drip from a worn faucet washer can waste 20 gallons of water per day. Larger leaks, like a toilet that keeps filling, can waste hundreds of gallons.

Energy Use: What Can You Do?

Turn things off when you're done

Always buy an Energy Star appliance as it uses less energy over its lifetime.

A game console consumes 10 to 20 times more energy to stream a movie than an Internet-ready TV or computer.

Enable the "sleep mode" feature on your computer, allowing it to use less power during periods of inactivity.

Make sure new (and old) game consoles have their auto power-down feature enabled.

An LED bulb uses up to 85 percent less energy to deliver the same amount of light.

Waste and Recycling

Residence Hall Recycling

Various partners have introduced room-by-room dormitory recycling to the Florida Tech campus. The Florida Tech Residence Hall Association, in partnership with the Student Organization for Sustainability Action (SOSA), started a pilot residence hall recycling program in Harris Village in fall 2012, based on a student sustainability capstone project.

E-waste Recycling

Electronic waste is a growing challenge, as technology becomes more and more a part of our lives. There are also excellent opportunities to divert these toxic materials away from landfills. Florida Tech Property Administration, in partnership with Tech Support, has a program that allows for sustainable disposal of many electronic items. Contact Property Management at 321-674-7225 for more information on what is acceptable.

Cardboard Recycling

You may have noticed the cardboard baler located on the lower level of the parking garage. Dining Services operates this unit to bale the boxes the food is distributed in. Each finished bale weighs roughly 700 lbs., and annually Dining Services recycles over 54 tons of cardboard. This process helps to reduce Florida Tech's environmental footprint by reducing the amount of material going into the landfill, enabling these products to become new recycled cardboard or paper stock.

Trash to Treasure

Another way that Florida Tech is reducing our environmental footprint is by donating a sizable amount of used office equipment to the local Habitat for Humanity. Each year many offices, rooms and spaces are refurbished, and rather than send these items to the trash, these perfectly usable, unwanted items can benefit those in need in the local community and across the country through Habitat for Humanity's network. Check out the Florida Tech recycling pamphlet and information at *fit.edu/sustainability*

During an average week, Florida Tech sends over 30,000 lbs of trash to the landfill ...

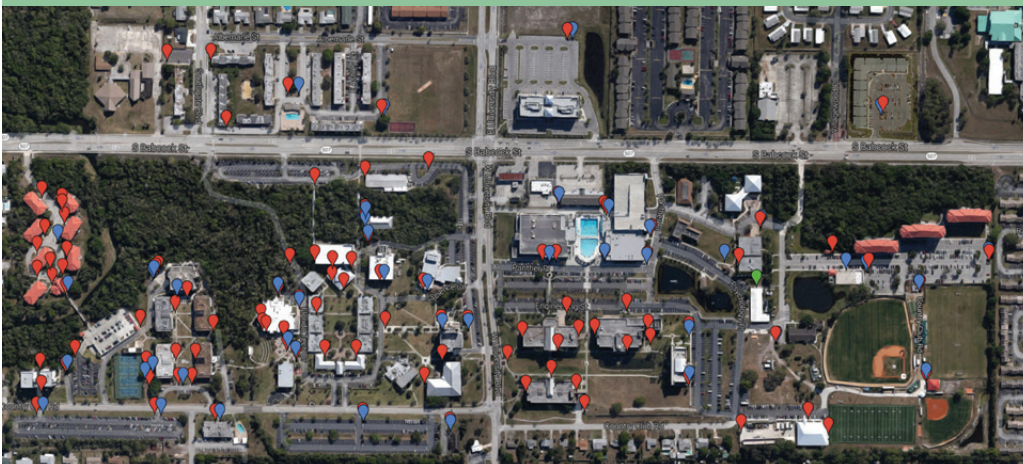*Your recycling efforts can help reduce that amount.*

Check out our bag boards during tailgating events for free trash and recycling bags for more sustainable tailgating.

Recycling Facts

- **Americans go through 2.5 million plastic bottles every hour. Try using a reusable bottle.**

- **It can take up to 700 years for a plastic bottle to decompose in a landfill.**

- **Around 60% of everything we throw out on a daily basis could be recycled.**

- **By producing a ton of paper from recycled materials, energy consumption is cut in half and 17 trees are saved.**

- **Aluminum can be recycled infinitely without losing quality.**

Do you know where you can recycle on campus?

- ■ Trash bin
- ■ Recycle bin
- ■ Aerosol/Battery bin

Low-Impact Dining

Florida Tech is always looking for ways to reduce its environmental footprint, and Campus Dining Services is constantly developing initiatives to improve operations. One strategy is a cook-to-order process that helps reduce, and possibly eliminate, food waste. Instead of cooking large quantities in advance, this strategy allows the dining hall to adapt and satisfy each student's order without wasting pounds of food.

> **"Current estimates on food waste in the U.S. are staggering— 40% of the food in this country is thrown in the trash."**
> —Center for Food Safety

Campus Dining Options

Florida Tech is proud to offer an exceptional campus dining service that is committed to providing our community with quality food and services at an excellent value in a clean, comfortable and increasingly green atmosphere.

Campus Dining Services offers a diverse menu in each operation, providing healthy choices including vegan, vegetarian and selections for patrons with food allergies. Most menu items can be made vegetarian at your request and our chefs will be happy to specially prepare items to accommodate nearly any food allergy on request.

The university also offers a nutrition calculator so you can determine what foods work best for your diet and the location that offers those specific combinations of entrees. ***Visit: fit.edu/food***

Current campus sustainable dining practices include:

- Recycling packaging waste (plastic, glass, steel and aluminum) through single-stream recycling dumpsters (All dining locations)
- Recycling waste cooking oil through SOS Oil Recycling (All dining locations)
- Cardboard recycling (Dumpster at SUB/Rathskeller; Baler at Panther Dining Hall—PDH)
- Pulping post-consumer waste (plate waste and napkins)(PDH)
- Conversion to "green" cleaning chemicals (ware washing and floor care) (All locations)
- Trayless dining hall operation (PDH)

Sustainable Facts

Eat lower on the food chain by adding more fruits, vegetables and grains to your diet and limiting your intake of red meat.

Eco-labels like USDA Organic and others give us a way to reward environmental performance in the marketplace.

Organic agriculture is a safer choice for the environment and your family because organic growers don't use synthetic pesticides and fertilizers.

A recent study estimated that the average household wastes 14 percent of its food purchases—a loss of significant value for most families.

Buying locally can help reduce the pollution and energy use associated with transporting, storing and refrigerating food.

Eat Organic

Organic agriculture avoids or largely excludes the use of synthetic fertilizers and pesticides. This reduces not only the toxins released into the environment (and our bodies), but also the need for fossil fuel to create those chemicals. Unfortunately, much of these savings can be squandered if the organic produce has been shipped over long distances.

Eat Less Meat

Animal-based food is typically much less energy efficient than grains, vegetables, legumes, seeds and fruits. Raising livestock takes large quantities of water and energy. A pound of beef requires anywhere from 2,500 to 5,000 gallons of water to produce. The crops necessary to feed farmed animals use fully half of the United States' dwindling water supply as well as a great deal of petroleum-based fertilizers. By the time a factory-raised cow is slaughtered, it will have consumed roughly 284 gallons of oil worth of fertilizer alone. By contrast, beans require 4% of the energy needed to produce their caloric equivalent in beef.

Eat Local

Although not all products can be found locally, a surprising number can. Farmers markets and CSA (consumer-supported agriculture) outfits are cropping up in unprecedented numbers, and it's becoming easier than ever to purchase locally. Doing so cuts down enormously on fossil fuel consumption, supports local farmers and recreates the sense of community. When given the choice between local and organic, local is often better. Local is often better "as it reduces travel distance."

Community Sustainability

Internships in the Community

A growing number of students have completed internships with Space Coast nonprofit organizations, businesses and city government. Many of these internships have been through senior year capstone projects required in Florida Tech's sustainability academic programs. A subset of the projects are presented on campus at the Northrop Grumman Student Design Showcase at the end of the academic year. Below is a partial list of Florida Tech internships, partners and other on- and off-campus sustainability projects. For more information, visit *fit.edu/sustainability.*

Marine Resources Council

The MRC has been a historic leader in the science-based protection of the Indian River Lagoon—including a National Estuary Program designation in 1991. This huge waterway is one of North America's most biodiverse estuary systems and is threatened on many fronts. Florida Tech students have worked at the MRC to aid the design of an estuary report card process and to develop a green certification program for businesses along the Lagoon.

Mangrove Planting

Sixty students and 15 RAs participated in a mangrove planting event at Cape Canaveral. The students worked in conjunction with the MRC to plant over 60 mangroves and learn how their efforts impact the coastal ecosystem. Many such activities have occurred throughout the years.

Keep Brevard Beautiful

Keep Brevard Beautiful works throughout the Space Coast to keep public areas free of trash, restore dune vegetation and other issues. Students have done diverse beach and road cleanups through KBB and value the opportunity to make our community more sustainable with nonprofit partners. Intern work has involved bringing best practices to large events and developing criteria for regional sustainability awards.

Indian River Lagoon Research Institute

The IRLRI at Florida Institute of Technology is working to develop and implement sustainable solutions for the health of the Indian River Lagoon. The institute is focused on a research-based approach to addressing the issue of coastal water quality and ecosystem sustainability, including research into nutrient loading and removal, oyster reefs in water and on docks, and other projects involving students and community outreach.

City of Satellite Beach

Satellite Beach is a small barrier island city that has tackled many sustainability challenges including the preservation of its oceanfront lands. Florida Tech students have worked on sustainable building practices and climate adaptation policies with city staff. With a new city Sustainability Board, Florida Tech interns from the major program are helping to implement a citywide sustainability plan.

WFIT 89.5 FM

A voice of the community for more than 40 years, WFIT provides programming that enriches the educational and cultural environment of east central Florida. The station forms a unique partnership between the resources of Florida Tech and the community, and has long assisted many sustainability endeavors on and off-campus.

Brevard Zoo

The Brevard Zoo is an enormous resource for the community and has many sustainability-related programs including IRL shore and oyster restoration programs. For a capstone project, a student is building a sustainable seafood purchasing guidebook for Space Coast restaurants as a product with the zoo—a member of the Monterrey Bay Aquarium's Seafood Watch program. Work on climate change education is one of several other collaborations.

Youth Making Ripples

The Beneath the Waves Youth Making Ripples program was launched in 2013 and provides K–12 students the opportunity to serve as a voice for ocean conservation through an annual marine-science film competition. The goal of the Youth Making Ripples program is to engage and excite students and raise public awareness about the importance of our ocean and coastal communities.

Brevard Cultural Alliance (BCA)

Florida Tech worked with Brevard Cultural Alliance on the first "Art of Sustainability" event in 2016. This event featured an exhibition of large-scale kinetic art sculptures and a symposium on sustainability that included extensive discussions and a panel featuring three Florida Tech faculty.

Smooth Running Inc.

Smooth Running produces several of the most prestigious and unique endurance events in East Central Florida. Smooth Running has worked with several interns to achieve best practices in sustainability at events, with major partners including Ron Jon Surf Shops.

Florida Tech's Reach

In addition, Florida Tech's sustainability program, various departments, clubs and Greek Life have participated in on- and off-campus sustainability events. This work includes the Ocean Reef Beach Festival, produced by Surfrider Foundation's Sebastian Inlet Chapter and Pure Ocean TV; food drives for Daily Bread coordinated by Florida Tech's Office of Business and Retail Operations; the Indian River Lagoon Research Institute work to improve estuarine management; athletics and construction management volunteer programs for Habitat for Humanity; and other examples.

Florida Tech's programs also have a national and global reach from:

1. The actions of our graduates around the world
2. The student-administered FIT Virtual Climate Adaptation Library
3. A continuous flow of research publications that advance sustainability at regional, national and global scales.

Campus Transportation

SGA Bike Share Program

Did you know that Florida Tech's SGA (Student Government Association) offers a bike share program here on campus? Currently the program offers 18 bikes (16 regular size and two smaller size) on a two-week sharing agreement. Whether you are looking for a means of commuting around campus or are looking to explore the surrounding area, the rental agreement allows you to travel as far as you want. This is great news considering the Space Coast now has a vast network of trails that offer an economical and healthy way for people of all ages and abilities to access their destinations, enjoy Brevard County's outstanding natural resources and enjoy bicycling with friends, family and neighbors.

Campus Trolleys

The Florida Tech campus utilizes shuttle buses, resembling streetcar trolleys, to move students around the main campus and to the extremities of the school. There are five trolleys in the Florida Tech fleet.

How Do I Know Where the Trolley Will Be?

Panther Express operates one route to all parts of the university campus. The trolley route map will help you determine where you need to go. The trolley stops are identified by trolley stop signs. Campus transit drivers will be happy to answer your questions and provide assistance. A detailed pickup schedule for the Panther Shuttle is on the website.

trolley.fit.edu

## Sustainable Transportation Guide

This student capstone document was developed along with the Facilities office to create an all-in-one guide that outlines plans to develop sustainable transportation on the Florida Tech main campus. The document contains plans and initiatives of relevant ideas and designs for sustainable solutions around campus.

What can you do?

- **Bicycle or skateboard. Simply incorporating this transportation into your lifestyle not only reduces your gas consumption but keeps you in great shape as well.**

- **Walk. Explore the joy of walking a little bit every day—it's healthy and energizing.**

- **Drive responsibly. Aggressive driving habits can lower highway fuel efficiency by up to 33%, and speeds over 50 mph significantly lower gas mileage.**

- **Shut down car if idling for more than one minute. Savings up to 14% in fuel consumption can be realized.**

Greenhouse gas emissions from the transportation sector accounted for 27% of the total U.S. GHG emissions, second to only the electricity sector, and has risen by about 16% since 1990.

— U.S. EPA

15 min. walk

15 min. bike ride
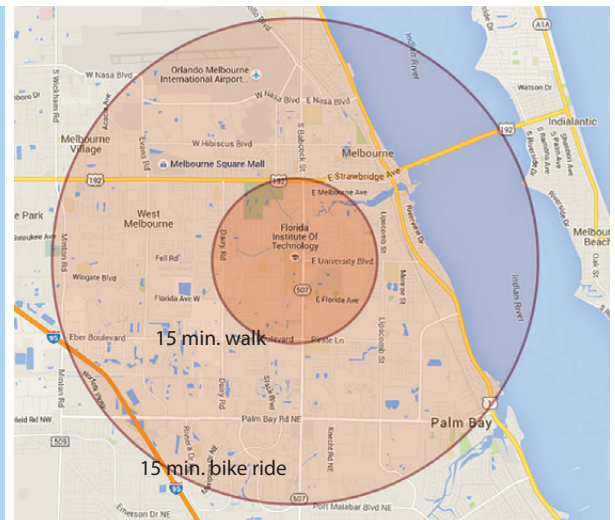
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For more information, please visit fit.edu/sustainability