Panthers Shoot for the Moon

Part of the Exploration Ground Systems crew, 25-plus Florida Tech alumni are playing integral roles in virtually every aspect of NASA's Artemis campaign for the moon.

ALSO INSIDE:
A WALK IN OUR SHOES
SPREADING SUSTAINABILITY
MAKING HISTORY.
SHAPING THE FUTURE.
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Florida Institute of Technology does not discriminate on the basis of race, color, religion, sex, national origin, genetic information, sexual orientation, gender identity, disability, protected veteran status, or any protected minority in the admission of students, administration of its educational policies, scholarship and loan programs, employment policies, and athletic or other university-sponsored programs or activities, in accordance with Title IX of the Education Amendments of 1972, Florida Tech does not discriminate on the basis of sex.
In 2021, Florida Tech installed solar-powered tables that are as functional for working students as they are a shady place from the sun. Initiated and funded by the Student Government Association, the tables provide “off the grid” power day or night. The energy generated by the one 100-watt and three 65-watt solar panels on each table can be used to charge devices such as cellphones, laptops and tablets. Best of all, they are completely self-sustaining!
Abecedary of Florida Tech

Ad Astra Per Scientiam
Our beloved motto, which reminds us where we're going and how to get there.

Bisk College of Business
Offering all the elements of a top-notch business education—innovation, ethics, leadership, diversity—with a STEM-school twist.

Clemente Center
Home of Panther Athletics, as well as the varsity gym and a newly updated fitness center.

Denius Student Center
The center of Student Life and a place to grab a bite, get your books, attend a club meeting and visit Career Services.

Greatness
What we—the Panther family—aspire to in everything we do. Good isn't good enough. Greatness is the goal!

Engineering

Florida
The Sunshine State. What more needs to be said?

Hands-On
A distinguishing quality of every degree offered on campus. Real, immersive, career-oriented experience with the tools and technologies used by professionals.

Innovation
Not to brag, but it’s kind of what we’re known for.

Jungle
Nickname for our beloved Patterson Botanical Garden.

Keuper

Lagoon
Located in our backyard, the Indian River Lagoon is the most biologically diverse estuary in North America. Ideal for research. Pretty nice for boating, fishing, kayaking and the likes, too.
**Mathematics**

Essential to natural science, engineering, medicine, the social sciences and more, at Florida Tech, math is so much more than numbers.

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**NASA**

Without it, there may not have been a Florida Tech. The reverse is also true.

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**Olin Quad**

Home to some of our most cutting-edge labs and equipment, the Olin Quad was recently completed with the addition of the brand new, state-of-the-art Nelson Health Sciences building.

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**Quali**

Raising these birds and selling their eggs out of a hatchery on campus was a literal “pet project” of founding president Jerome P. Keuper back in the early 1970s.

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**Research**

For the benefit of all humankind—starting your very first year.

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**Science**

One of our four biggest strengths that make us Florida’s STEM University™.

---

**Vacation**

The second-best reason to visit Melbourne. (Florida Tech is the first.)

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**Webb**

Our new favorite space telescope (sorry, Hubble), which professors like Eric Perlman use for astronomy and astrophysics research.

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**Umbrella**

Bring one.

---

**Xcellent**

How the Global Employability University Ranking and Survey describes the employability of our graduates—17th in the nation and 76th overall among 250 ranked universities, to be specific.

---

**“Yes!”**

What we say to students who want to do the impossible.

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**Zoo**

A local attraction for people who love wildlife, Brevard Zoo also provides a place for Florida Tech animal psychologists to study the behavior of spider monkeys and other primates.
Why Florida Tech?

Florida Tech is a small and young university with a diverse student population. As the type of person who enjoys building relationships and who learns best by doing, it is important to me that my professors are approachable and available. Since coming to Florida Tech, I have had ample opportunities to get hands on and to engage closely with my teachers both in and out of the classroom.

BRIAN DIXON ‘21, B.S. METEOROLOGY, B.S. STEM EDUCATION
Florida Tech stood out from other universities I considered because of its location. First of all, I’m from Bonaire, in the Caribbean, so I wasn’t ready to commit to snowy winters my first time moving away from home! My degree is in oceanography, so being close to the coast was important to me. I love being so close to the beach and able to watch sunrises and full moon rises. Plus, Bonaire doesn’t even have traffic lights, so the small-town feel of Melbourne was so inviting. When I first visited campus, I didn’t feel overwhelmed like I did at larger campuses. I remember thinking, ‘This is it; this is home.’”

JULIA MARISOL MARTINUS ’21, B.S. OCEANOGRAPHY

Ultimately, I chose Florida Tech for its outstanding aviation program. Flying can be a risky business, and as a brand new freshman, I was nervous at first. But after my first week of lessons, I was hooked! With its high level of professionalism and unmatched safety culture paired with the knowledgeable, welcoming instructors at FIT Aviation, Florida Tech has exceeded my expectations.”

PAIGE RIEGER ’21, A.A. AIR TRAFFIC CONTROL, B.S. AERONAUTICAL SCIENCE-FLIGHT

Independent research is an experience that is given to very few undergraduate students at any other university, but at Florida Tech, we experience research from the driver’s seat. In my junior year, I was assigned an independent research project about which I am now writing a research paper as first author. Having my first publication come from undergraduate work bodes incredibly well for my future aspirations of completing a Ph.D. and becoming an expert in cancer immunotherapies. It has all required a lot of hard work and dedication. But I have had unbelievable support from the university and my professors.”

SARAH ALI ’22, B.S. BIOMEDICAL ENGINEERING

Florida Tech stands out from other universities in my mind because of how interconnected we are with the space industry. Many universities offer an education in space-related fields, such as my studies in aerospace engineering, but none can claim to have roots in the space industry as deep as ours. Having been founded the same year as NASA to educate the next generation of space industry workers, Florida Tech has the background, know-how and connections to set me up for a successful future career in the aerospace industry.”

JACOB SMITH, B.S. AEROSPACE ENGINEERING
Mobile Launcher 1 and 2

The 400-foot ground structures that are used for assembling, processing and launching the Artemis program missions. Mobile Launcher 1 (ML1) is tasked with launching the first three missions; Mobile Launcher 2 (ML2) will incorporate structural modifications and lessons learned from ML1.

Alumni involved

John Moss ’12 M.S.
Deputy Project Manager, ML2

Keith Braun ’98
Ground Integration Engineer, ML1 and ML2

Jason McCaw-Binns ’07, ’09 M.S.
Lead Ground Integration Engineer, ML1

Lauren-Ann Graham ’20
Mobile Launcher Ground Integration Engineer, KLXS III contractor

ML1 weighs about 11.3 million pounds!

Fun Fact:
The pad’s Ignition Overpressure and Sound Suppression System dumps 400,000 gallons of water—enough to fill 27 average-size pools—on the Mobile Launcher and inside the flame trench in less than 30 seconds!

Fun Fact:
While SLS has greater power than its predecessor, Apollo’s Saturn V, it is over 40 feet shorter!

Fun Fact:
Space Launch System (SLS)
The world’s most powerful rocket and the only one capable of sending Orion, astronauts and cargo to the moon on a single mission.

Alumni involved

Dion Ramiscal ’94
SLS Core Stage Operations Project Engineer

Alumni involved

Sunita Ramnarinesingh ’09, ’12 M.S.
Project Manager, Launch Pad 39B

Kristin Kendall ’95, ’96
Project Manager, Launch Pad 39B

Josiah Ruelas ’20
Launch Site Integration Engineer/Payloads

Launch Pad 39B

Originally designed for the Saturn V launch vehicle, EGS recently implemented modifications to upgrade it to a “clean pad” able to launch a variety of rockets, including the SLS.

Alumni involved

Sunita Ramnarinesingh ’09, ’12 M.S.
Project Manager, Launch Pad 39B

Kristin Kendall ’95, ’96
Project Manager, Launch Pad 39B

Josiah Ruelas ’20
Launch Site Integration Engineer/Payloads

Kennedy Space Center’s (KSC) Exploration Ground Systems (EGS) could be considered the bow that on Nov. 16, 2022, launched Artemis’ arrow in the form of Artemis I, the first uncrewed integrated flight test of NASA’s deep space rocket, spacecraft and the ground systems needed for launch and recovery.

EGS develops and operates the equipment and facilities required to connect a spacecraft and rocket, transport the launch vehicle to the launch pad and launch it into space. Historically, the work centered around a single kind of launch vehicle—such as Saturn V or space shuttle. Today, however, EGS is preparing the infrastructure for several kinds of spacecraft and rockets, including the SLS and Orion spacecraft.

Among EGS’ ranks are more than 25 Florida Tech alumni who led, programmed, implemented and launched the Artemis I maiden mission around the moon. From engineers and analysts to managers, business people and computing experts, these Panthers have dedicated their careers—some, for decades—to prepare this first-of-its-kind infrastructure and capabilities.

Meet some of EGS’ Florida Tech alumni and learn about their contributions to this historic liftoff.

Meet some of EGS’ Florida Tech alumni and learn about their contributions to this historic liftoff.

Written in collaboration with NASA Public Affairs

“I absolutely love Florida Tech and currently am a mechanical engineering graduate student. I dream of becoming an astronaut, so Florida Tech—with its location, history and curriculum—was, and is, the obvious choice to prepare for a shot at the Artemis astronaut corps.”

—Lauren-Ann Graham
Vehicle Assembly Building (VAB)
The central hub of NASA’s multuser spaceport. From shuttles to external fuel tanks to solid rocket boosters, the VAB serves as the final assembly point for a variety of rockets, spacecraft and their parts—often, simultaneously.

Alumni involved
Martyn Eastwood ’80
Project Manager, KLXS III Contractor

“...the heart of integrated engineering—it often has no end point but leads to the next process step... There’s zero error tolerance when working with hazardous materials.”
—Skip Williams

Multi-Payload Processing Facility
KSC’s “gas station” for fueling rockets and payloads with hazardous commodities.

Alumni involved
Skip Williams ’80
Mission Integration Operations Manager

BY AREA, THE VAB IS ONE OF THE LARGEST BUILDINGS IN THE WORLD—525 FEET TALL, 518 FEET WIDE AND COVERING 8 ACRES. ALSO, IT IS HOME TO ONE OF THE WORLD’S LARGEST AMERICAN FLAGS—209 FEET BY 100 FEET—PAINTED ON THE SIDE OF THE BUILDING.

Williams and his team are responsible for preparing, fueling and processing hazardous commodities for space-bound vehicles—including the Orion spacecraft, which they fueled and readied for its Artemis I mission around the moon. Once it splashed down, the team began processing Orion again to remove any residual hazardous materials.

Continued on page 10
EGS Leadership

EGS is one of three KSC-based NASA programs that support Artemis. EGS was established to develop and operate the systems and facilities necessary to process and launch rockets and spacecraft during assembly, transport and launch.

**Alumni involved**

- **Sasha Sims ‘07 M.S.**
  Artemis I Chief of Staff
- **John Kunkle ’02, ’05 M.S.**
  Chief, Ground Integration
- **Darrell Foster ’91**
  Ground Systems Integration Manager
- **José J. Amador ’91, ’94 M.S., ’01 Ph.D.**
  Project Manager, Ground Control Subsystem (KGCS); Co-Lead, Integrated Product Team, KGCS/GSE Software
- **Marcia Groh-Hammond ’83 M.S.**
  Logistics Lead
- **Jill Clark ’03**
  NASA Programmatic Integration Lead
- **Michael Thompson ’17**
  NASA Operations Project Engineer
- **Nadia Shokrani ’20 M.S.**
  Cross Program Schedule Analyst
- **Curtis Byrd ’84 M.S.**
  Budget Analyst
- **John “Paul” Douglas ’97**
  Cross Program Integration Engineer, KLXS III Contractor
- **Frederick Stotz ’12 M.S.**
  Test Project Engineer, TOSC Contractor
- **Melanie Murphy**
  Finance Intern

As chief of staff during Artemis I, **Sasha Sims’07 M.S.** facilitated collaboration among the leadership team, aiming to balance competing priorities for the Artemis mission.

**Darrell Foster’91** is a Brevard County native and Florida Tech legacy who was hired by NASA before he even graduated. Today, he leads the design, development and testing of KSC ground systems and infrastructure, overseeing several cross-functional project teams that consist of hundreds of people who enable critical launch processing requirements for the SLS, Orion and other NASA spacecraft.

With oversight of both Artemis I and Artemis II-IV launch campaigns within his direct work scope, **John Kunkle’02, ’05 M.S.**, and his team translate mission requirements into the necessary KSC ground support equipment and infrastructure for an array of KSC operations and launches.

“I was hired by NASA two weeks before graduation and literally took off my Florida Tech student ID badge and clipped on a NASA credential. ... It doesn’t get any better than that in professional life.”

—Darrell Foster

“No two days are ever the same, which is what makes this position both fascinating and complex. ... Every day presents a unique challenge in terms of solving technical issues as well as partner-ing solutions and building a team across the agency and industry.”

—John Kunkle

“Florida Tech was collaboration-focused, and that prepared me for working on a large program like Artemis. A launch requires thousands of people working in unison and, working in planning, I see how all these people come together to realize something extraordinary.”

—Nadia Shokrani
“Being at the critical mass of a launch is stressful but electrifying beyond description. Florida Tech was challenging, and I’m glad it was because it prepared me to work successfully in the greatest pressure-packed environment on Earth.”

—Sharif Abdel-Magid

Like a conductor to an orchestra, NASA test directors such as Sharif Abdel-Magid ’10, '15 M.S., are masters at ensuring that process protocols are executed according to exact procedure and timing.

Within about 20 minutes, Orion slowed from nearly 25,000 mph to about 20 mph for its parachute-assisted splashdown.

In conjunction with the U.S. Navy, EGS crew members aboard the USS Portland recovered Orion from the Pacific Ocean off the coast of Baja, California, Dec. 11, 2022.

Alumni involved
Christine St. Germain ’07, ’08 M.S.
Artemis I NASA Test Director
Raymond Francois ’20
Orion Operations Engineer, TOSC Contractor
There are at least 10 other universities in the state with esports programs. But in 2021, Florida Tech Esports entered the arena with one distinct advantage: the Esports Center. A console room, competitive stage and community gaming room comprise what is one of few stand-alone collegiate esports buildings in the country. The center is fully furnished—in-house Xbox One, PlayStation 4 and Nintendo Switch consoles, LED lighting, OMEN gaming stations, a video board for spectators, flat-screen TVs and comfy gaming chairs—and open to the entire Florida Tech community, from the competitive and casual gamers to the spectators and study-breakers.
With 100-plus student clubs and organizations ranging from the athletic and creative to the social and cultural, at Florida Tech, we’ve got you—and your social calendar—covered.

1. Active Minds
2. African Student Association
3. Anime Club
4. Art Club
5. Astrobiological Research and Education Society
6. Badminton Club
7. Campus Activities Board
8. Caribbean Student Association
9. College Players
10. The Florida Tech Crimson (student newspaper)
11. College Players
12. Esports
13. Ethos Community Garden Club
14. Fishing Club
15. Fitosophy
16. Film Festival—must go!
17. Flux Ultimate Frisbee Club (women’s competitions)
18. Freediving Club
19. Ice Hockey Team
20. India Students Association (Panokriti)
21. It’s On Us
22. Kaleidoscope
23. Keuper Palm Botanical Society
24. Korean Student Association
25. Latin American Student Association
26. Lost Musician’s Society
27. Panther Radio
28. Panther Robotics
29. Panther Spirit Squad
30. Rainbow Alliance
31. Rescue Squad
32. Rock Climbing Club
33. Rocketry Club
34. Rotaract Club service/volunteer org
35. Rowing Club
36. Sailing Club
37. Scuba Club
38. Skate Club
39. Soccer Club
40. Society for Science Fiction and Fantasy
41. Society of Women Engineers
42. Squamish “jungle keepers”
43. Student Astronomical Society
44. Student Organization for Sustainability Action
45. Surf Club
46. Sustainability Outdoors Adventure Recreation Survival
47. Surf Club
48. Swim Club
49. Tennis Club
50. Triathlon Club
51. Ultimate Frisbee Club

*athletic + creative + cultural
Florida Tech breeds success. How do we know? Stories like these. Featuring current students, young alumni, thinkers, doers and innovators, none is the same as another. But, they share a common theme:

**THE RELENTLESS PURSUIT OF GREATNESS.**

Shanita Allen ’05 M.S., author of the book series ‘Let’s Go Dreaming,’ hopes to encourage readers to “reach beyond the stars to pursue their dreams”—a practice that has served her well in life. Shanita is a Board Certified Behavior Analyst® with a master’s degree in applied behavior analysis from Florida Tech and almost 20 years of experience serving individuals with developmental disabilities.

“I initially wanted to write one book based on the concept of believing in yourself, following your dreams and teaching children that they have unlimited potential. When they set their minds to achieving their goals, anything is possible. However, one book turned into nine books, and the ‘Let’s Go Dreaming’ series was born,” Shanita says.

Ashley Lundry ’06 was working on her meteorology degree at Florida Tech during the Space Coast’s historic 2004 hurricane season. Since then, the sky has definitely not been her limit. Today, Ashley serves as both a flight director for the National Oceanic and Atmospheric Administration (NOAA) Hurricane Hunters and as a reservist aerial reconnaissance weather officer for the U.S. Air Force Hurricane Hunters. In 2020, she directed six weather reconnaissance missions into Hurricane Laura, the last one only a few hours before the 150 mph storm made landfall on the coast of Louisiana. With a supportive husband, two toddler sons and the thrilling career she’s always dreamed of, Ashley is pretty happy where she’s at. “If I could go back and give my college-aged self advice, I wouldn’t,” Ashley says. “I made mistakes and decisions I regretted, but I have learned from those experiences. I think every opportunity I took prepared me for where I am today.”
Chelsea Tuohy ’10, ’11 M.S., Ph.D., believes that her passion for protecting ocean reefs and oceans grew from some advice she received early on: Don’t waste your time doing something you don’t love. Heeding that wisdom closely, in 2015, Chelsea and her husband, Evan Tuohy ’09, Ph.D., launched Isla Mar Research Expeditions, making the turquoise waters of Rincon, Puerto Rico, their classroom. With funding from federal research grants to further their unique projects and hands-on marine biology courses, Isla Mar creates an educational environment that immerses students—including some from Florida Tech!—in a field-based marine biology experience, such as research methodologies to assess fish abundance and diversity, coral reef health and habitat composition, and reef complexity.

“Every year has something new, but there is one thing we always keep the same: our goal to give students a very hands-on experience with field research and explore hidden gems of the island of Puerto Rico that they wouldn’t find on a vacation,” Chelsea says.

Erika Ambrioso ’20 describes her first post-graduation job as a “dream”—and also, a little chilly. Erika is a software developer with Vinik Sports Group (VSG), parent company to the Tampa Bay Lightning, a National Hockey League (NHL) team and 2021 Stanley Cup champions. A computer science alumna, Erika evaluates Lightning game, team and player statistics, running performance models, writing code and conducting various tasks that team management and coaches request. Her office is housed in Amalie Arena, where the Lightning play, and part of her job is to attend home games to gather statistics.

“I get to go to the games and count it as working,” Erika says. “Working in sports was really something I never thought I was going to be able to do—but here I am!”

Boris Villa ’21, ’22 MBA, is from Barranquilla, Colombia, where he, like many others, dreamed of moving to the U.S. and playing major league baseball to earn enough money to send back to his family. Not all of the dreamers, however, are as prudent as he, who knew that earning a degree—or in his case, two—is an important back-up plan. So in 2017, Boris launched Fundación Inspira Colombia (Inspiration Foundation Colombia) and Top Prospects Colombia, two organizations that aim to create exposure for athletes across all sports in Colombia to enable them to eventually earn a scholarship to a school in the United States and receive an education that will help provide a second career after their playing days come to an end.

“I want people to be able to help their hometowns also because they’re going to go back with a degree that they can use to better their family and neighbors, as well,” says Boris, a two-time Nathan M. Bisk College of Business Outstanding Student of the Year.

Brian Murphy ’22 was named the 2021 Out Astronaut while earning his planetary sciences degree at Florida Tech. Sponsored through the International Institute for Astronautical Sciences, the Out Astronaut Project highlights the contributions of LGBTQ+ members working in science and space and provide grants to promising LGBTQ+ students pursuing professions in space-related fields. As an Out Astronaut today, Brian is completing a three-phase astronaut training program that will culminate in a suborbital flight.

“Throughout my undergrad, I’ve learned that the future is not only what you make it but who you make it with,” Brian says. “I am proud to be an LGBTQ+ individual and I dream of a future where everyone can be proud of themselves, follow their dreams and reach for the stars. For me, that future means being an advocate for equality and equity on my path to space.”
Recently repaired and refreshed, “Ad Astra Per Scientiam” is a 90-foot-long mural by Christopher Maslow in Downtown Melbourne. Named after Florida Tech’s motto, which means “to the stars through science,” the mural depicts a panther—the university’s mascot—strolling through environments of land, sea and stars, capturing the university’s STEM focus and its past, present and future. Within the mural are several “Easter eggs”—hidden nods to Florida Tech—that Maslow painted into the image. In summer 2022—seven years after he originally painted it—Maslow spent weeks repairing damage, updating some areas, repainting others and incorporating a few new Easter eggs throughout.
1. Twisted Bliss Smoothies for a post-workout cool down
2. Starbucks for an afternoon pick-me-up
3. Einstein Bros. Bagels for a breakfast of champions to start the day off right or a lunch to fuel your afternoon
4. Firehouse Subs for a signature sandwich—Try the brisket sub, a campus favorite!
5. Panther Dining Hall for a hearty homestyle meal—all-you-can-eat buffet style!
6. Rathskeller Pizza and Grill—or “The Rat” as it is affectionately known on campus—for a burger, a slice and a late-night hangout
7. Center Court for a between-classes snack to go
8. Cosmic Creamery for freshly churned ice cream with out-of-this-world toppings—Try the Panther Tracks, it’s a rite of passage!

Homestyle helpings? ✓
Grab-and-go goods? ✓
Sweet treats and savory snacks? ✓

With more than 10 convenient locations offering a variety of dining atmospheres and menus, you can find flavors for every taste right here, on campus!
They say you can’t judge a person until you’ve walked a mile in his/her shoes. Well, you could stock a closet from floor to ceiling with the number of shoes it would take to fully understand what it means to be a Panther.

So, lace them up or slip them on, and get a feel for where a stroll in our shoes might take you.
FROM HERE TO THERE
Whether you can kickflip with the best of them or you just want a faster way to get to class, skateboarding is one of the most popular modes of transportation on campus—several buildings even have skateboard racks to park them while you’re on foot.

UNDERWATER
Whether you’re snorkeling in the Atlantic Ocean or conducting research in the Indian River Lagoon, at Florida Tech, you’ll spend a lot of time underwater. Sub waders and water shoes as necessary.

TO THE GYM
To take advantage of the 58,000-square-foot Clemente Center, which includes varsity and intramural gyms, a recently updated fitness center with state-of-the-art equipment, various multipurpose and aerobics rooms and a cafe, you’ll need some sneakers. And a sweat towel. Never forget the sweat towel.

ON THE FIELD
Or the court, the track, the rink, the course—you get the picture. As an NCAA Division II school and member of the prestigious Sunshine State Conference, we have several men’s and women’s intercollegiate varsity sports teams. And for those looking for a little less commitment, we’ve got a host of intramural athletics and club sports, ranging from basketball to Ultimate Frisbee to ice hockey and more.

THROUGH THE SNOW?
Not around here.

TO THE SORORITY HOUSE
From Greek Life’s social gatherings to its networking events, joining one of our three sororities or eight fraternities ensures that you’ll always have an excuse to dress up if you’re looking for it.

MOSTLY ANYWHERE
Around here, shoes of any kind are often redundant. From swimming to surfing to oft-effective toes-in-the-sand therapy, sometimes, going barefoot is just good for the sole.
If there’s one thing all Florida Tech students have in common, it’s having big ambitions. They don’t just strive to get a good education so they can get a secure job; they strive to get the best education experience possible so they can achieve the career of their dreams.

Florida Tech empowers its students to achieve such lofty goals by offering unique degree programs, hands-on experiential learning and resources that, in turn, help students secure internships and get their feet in the door of those dream jobs.

Meet just a handful of students from across various majors who are testaments to this experience, as they share how they landed their internships and offer advice for future Panthers with equally lofty ambitions.
Meet Andy Traficante.

Thanks to the resources provided by Florida Tech’s career services office, the aerospace engineering student was able to land an internship with Northrop Grumman Corp.’s logistics and modernization team. Now, he is working toward a master’s degree in flight test engineering.

“In Northrop Grumman’s logistics and modernization team, we provided support for the E-2D Advanced Hawkeye. We coordinated the post-delivery technical support of the aircraft, including technical publications for servicing, modeling and simulation of component replacements and supportability for maintenance tasks. Being proactive in your internship search is a must. Many professors have years of working experience in the aerospace industry and can provide invaluable introductions and recommendations. My advice would be to network as much as possible. Seeking out opportunities and organizations in addition to Florida Tech’s resources will go a long way. Looking beyond this experience, I look forward to starting the next step in my education. Florida Tech is one of only a few universities with a master’s program in flight test engineering—my intended career path. I met a few flight test engineers during my internship and was fortunate that my academic advisor was the head of the flight test program. I will soon begin taking classes and plan to have my master’s by May 2025. The availability of this program was a significant factor in choosing Florida Tech,” he says.

Meet Conner Welch.

The meteorology graduate student was offered an internship with NASA in its Short-Term Prediction Research and Transition Center (SPoRT) out of the Marshall Space Flight Center. He credits the connections and research opportunities at Florida Tech for this prestigious internship.

“This internship was made possible through the connection I made with assistant professor Michael Splitt. My NASA mentor recognized my GSA [graduate student assistant] mentor, professor Splitt, because of our shared research interests in weather forecasting. He recommended me, together with the advice from upperclassmen and graduate students. Florida Tech’s career services and other résumé/interview-building opportunities also gave me the ability to build skills that were required to make a professional impression. The best advice I could give to someone seeking an internship opportunity is to reach out to a company, even if they don’t have an official position open. In my experience—talking with other Florida Tech students as well—a lot of companies don’t have internship positions actively posted, but may consider opening a position if you show interest,” he says.

Meet Mason Greene.

He’s a student in the ocean engineering program who’s working toward a career in coastal engineering, specifically, in shoreline protection/restoration and coastal structure. Greene is one step closer to making that dream a reality, as he recently completed an internship as a coastal engineering technician at ACT Engineers Inc. in New Jersey.

“During my time at ACT, I was able to work on a variety of coastal-based projects, including a dredging inspection, bathymetric survey of local coastal towns, ribbed mussel spawning and much more. The connections I’ve made at Florida Tech were an important contribution to me acquiring the internship. The hands-on work I completed as a work-study student under Dr. Robert Weaver in his coastal engineering lab greatly prepared me, together with the advice from upperclassmen and graduate students. Florida Tech’s career services and other coordination of post-delivery technical support of the aircraft, including technical publications for servicing, modeling and simulation of component replacements and supportability for maintenance tasks. Being proactive in your internship search is a must. Many professors have years of working experience in the aerospace industry and can provide invaluable introductions and recommendations. My advice would be to network as much as possible. Seeking out opportunities and organizations in addition to Florida Tech’s resources will go a long way. Looking beyond this experience, I look forward to starting the next step in my education. Florida Tech is one of only a few universities with a master’s program in flight test engineering—my intended career path. I met a few flight test engineers during my internship and was fortunate that my academic advisor was the head of the flight test program. I will soon begin taking classes and plan to have my master’s by May 2025. The availability of this program was a significant factor in choosing Florida Tech,” he says.

Meet Shayla Wilhelm.

She’s an aerospace engineering junior who is also a contractor at NASA – Kennedy Space Center, working on the plasma volatile organic compound (VOC) project. She tracks the path to her position through multiple internships and the foundational coursework she received from Florida Tech.

“This summer [2022], I worked in the Granular Mechanics and Regolith Operations lab. I was fortunate enough to return this fall and gain additional laboratory experience, working in the Applied Chemistry Lab. Florida Tech sets up students for success by providing them with rigorous coursework that is both challenging and enriching for students’ education. In particular, Florida Tech’s aerospace engineering program makes Panthers competitive candidates in the job market by refining their technical skills through assignments, design projects and research endeavors. My advice to internship-seeking Florida Tech students is to make connections with important people in academia and the industry you desire to work in. After that, apply, apply, apply! I applied to many internships before receiving my internship at NASA, but the process of applying over and over again refines your application. My college and career experiences thus far have encouraged me to pursue an M.S. in aerospace engineering at Florida Tech. Presently, I am halfway through my junior year and plan to work at Kennedy Space Center until I graduate with my B.S in aerospace engineering. After completion of my master’s degree, I would like to work at NASA – Kennedy Space Center as an engineer or scientist, preferably on a project dedicated to in situ resource utilization for the Artemis program,” she says.


Our sustainability courses and degree programs are top-notch, but at Florida Tech, “sustainability” goes beyond academics. Sustainability initiatives and practices have become core components of who we are.

“Sustainability issues involve almost everything,” says Dr. Ken Lindeman, co-chair of the University Sustainability Council (USC) and professor of ocean engineering and marine sciences.

How so? Here are six major ways Florida Tech is leading the way for a more sustainable future.

1. University Organization

Coordination and involvement of the whole Florida Tech community is a vital part of sustainability action. The USC, for example, is charged with compiling detailed data submissions to green accreditors, liaising with outside and on-campus organizations and spearheading many other sustainability efforts. Composed of more than 40 members, including 13 students representing diverse student organizations, the USC ensures broad coordination on sustainable initiatives campuswide.

2. Community Involvement

Many years of student senior sustainability research projects for the Northrop Grumman Engineering and Science Student Design Showcase have helped build first-ever sustainability plans for five local cities, including the largest city in the county, Palm Bay. Subsequent senior research students have then implemented diverse sustainability initiatives on the ground in these cities. Over 15 students from many campus majors have engaged in these unique campus-community partnerships.

“Thirteen years ago, Florida Tech’s leadership saw an opportunity to fill new education needs for the transdisciplinary challenges of the 21st century. Since then, we have relentlessly built some of the few STEM-based sustainability major and minor programs in the southern U.S. We look forward to the next steps on this journey.”

—Dr. Ken Lindeman
3. Abundant Awards

Through its sustainability initiatives, Florida Tech has attained some remarkable accomplishments. Accolades like these speak for themselves!

**AASHE SILVER STARS RATING**
One of only six universities in Florida with this prestigious campuswide award

**PRINCETON REVIEW GUIDE TO GREEN COLLEGES 2023**
“We strongly recommend Florida Tech to the increasing number of students who care about the environment and want their ‘best-fit’ college to also ideally be a green one. Florida Tech demonstrated an exemplary commitment to sustainability and to green practices—and it offers excellent academic programs.”

—Rob Franek, Editor-in-Chief, *The Princeton Review*

**LEED BUILDING CERTIFICATION**
Home to two LEED-certified green buildings

**BRONZE-LEVEL BICYCLE FRIENDLY UNIVERSITY**
For safe and accessible bicycling practices on campus

**SIERRA CLUB COOL SCHOOLS RANKING**
Recognized for energy-efficiency actions

5. A+ Academics

**SUSTAINABILITY STUDIES B.S.**
The sustainability studies major program expands on Florida Tech’s science and technology strengths in combination with customized business and social science courses to satisfy industry, government and nonprofit needs for graduates who can operate across multiple disciplines.

“This is entrepreneurial, STEM-based sustainability, since many sustainability programs are not science- and tech-based. Yet, majors also take a minimum of five business courses,” Lindeman says.

**SUSTAINABILITY MINOR**
Open to undergraduate students in any Florida Tech program, sustainability minor students are required to conduct a capstone research project.

“Over the past 13 years, more than 165 students have graduated with either a minor or bachelor’s degree in sustainability at Florida Tech. Those minor students represent over 30 undergraduate programs from all colleges on campus,” Lindeman says.

**COMMUNICATING SUSTAINABILITY COURSE**
Students in this new School of Arts and Communication special topics course produce a documentary and related media materials highlighting sustainability initiatives. The course teaches applied communication strategies and tactics and how to apply them in the context of sustainability narratives.

Check out some recent student projects:

4. Impressive Infrastructure

From sustainable building design to building updates with modern, energy-efficient heating systems, LED lighting, automated controls and more, the facilities operations office plays a huge role in maintaining a sustainable campus.

“Facilities at Florida Tech is utilizing proven sustainable approaches that limit or reduce our impact on the environment because we know it is important to the campus community—and beyond,” says Kirk Hemphill, director of maintenance.

**FLORIDA TECH AQUATIC CENTER**
In 2015, the Florida Tech Aquatic Center received a LEED Silver certification. Thanks to student senior sustainability research projects alongside the facilities operations team, the complex became one of the few green-certified pools in the state.

**THE SCOTT CENTER FOR AUTISM TREATMENT**
Also the result of a partnership between student research teams and facilities operations, The Scott Center for Autism Treatment was Florida Tech’s first building formally built to LEED certification specifications.

**FOLLIARD ALUMNI CENTER**
Currently in the application process for LEED certification, the new, state-of-the-art Folliaard Alumni Center is a net-zero energy structure and serves as a model for a cost-effective, solar-powered commercial office building design for a Florida climate. It also features a lagoon-friendly lawn, using native plants that reduce water usage and nutrient runoff to help prevent algal blooms and a fish kill in the Indian River Lagoon. The building has received both the City of Melbourne Beautification and Energy Efficiency Board’s Melbourne Clean Energy award and Diamond Gems award.

**PANThER DINING HALL**
Panther Dining Hall has various vegan offerings and uses state-of-the-art systems to reduce waste, recycle water and sanitize dishes for reuse in the dining room. The adjacent grocery store also has a variety of organic offerings.

6. Student Organizations

An integral part of Florida Tech’s sustainability efforts are the student organizations that focus on sustainability education through events and practical hands-on activities. Some of these include:

**STUDENT ORGANIZATION FOR SUSTAINABILITY ACTION (SOSA)**
One of the older campus sustainability clubs, SOSA conducts projects and events on and off campus to advance sustainability initiatives. Projects include spring and fall Earth Week events and other activities with many campus and community partners.

**RESIDENCE LIFE SUSTAINABILITY COMMITTEE**
Composed of residence hall advisors and directors from all campus housing areas, this committee manages the Leave Green program, which recycles materials during the end-of-year move-out, as well as other important campus energy and recycling projects.

**ETHOS COMMUNITY GARDEN**
This student-run community garden teaches members how to grow plants—from native flowers to eggplant trees and everything in between—and about sustainable growing practices.

**THE GREEN PAW PRINT**
Your one-stop shop for everything sustainability at Florida Tech.
Florida Tech is a one-of-a-kind school in a one-of-a-kind locale. Whether you’re here for a visit, for your college career or for life, here are few must-dos to add to your Space Coast bucket list.

Visit the Joy and Gordon Patterson Botanical Garden.

A stream bordered by a shady hammock abounding in palm trees and other tropical growth winds through the heart of Florida Tech’s campus and is the setting for a 15-acre botanical garden.

Take a stroll, and see what wildlife you can spot!

Kayak one of our waterways.

With the Indian River Lagoon spanning over 150 miles and branching off into various streams and creeks—such as the always beautiful Turkey Creek—kayaking around Melbourne is a must-do.

Hike our nature trails.

What’s the best way to experience Florida’s flora and fauna? Exploring nature trails, of course. Luckily for those in Melbourne, there are many choices. Just minutes north of Florida Tech’s campus awaits Erna Nixon Park, which is great for a light walk. Ten minutes south of campus, you’ll find the popular Turkey Creek Sanctuary, which boasts a 1.85-mile boardwalk that floats above the mystical Florida hammock, and around 1.5 miles of jogging trails that take you through the native forest, not to mention 8-plus miles of mountain biking trails.

Explore Sebastian Inlet.

Want the ultimate beach day? Look no farther than Sebastian Inlet State Park. A 30-minute drive south of campus, Sebastian Inlet is a great spot for beautiful beaches, fishing, scuba diving, snorkeling and surfing—plus grills for barbecuing!

Tour Brevard Zoo.

Brevard Zoo is an absolute must-do! This gem on the Space Coast provides education, fun and entertainment for everyone. With lush, open-air habitats that are home to over 900 animals, the fun continues with animal feedings, kayak tours, train rides, aerial adventures and more.

Looking for more? You should also check out:

**Brevard Beaches**
- Cocoa Beach
- Canova Dog Beach
- Indialantic Beach
- Melbourne Beach
- Satellite Beach

**Theme Parks**
- Walt Disney World
- Universal Studios
- SeaWorld Orlando
- Andretti Thrill Park (walking distance from campus)
- Route 7 Adrenaline Warehouse (20-minute drive from campus)

**Arcades/Cafes/Entertainment**
- Arcade Monsters (short drive from campus)
- Historic Downtown Melbourne
- Eau Gallie Arts District

**Bonus:** Be on the lookout for the Dr. Mary Helen McCay Research Shed in the Primate Cognition Center. There, you’ll find School of Psychology Associate Professor Darby Proctor working with some pretty cute spider monkeys!
A waterfront facility at the mouth of Crane Creek on Melbourne Harbor named for the university’s first marine biology professor and lifelong supporter, the Mertens Marine Center serves as a base of operations for research and student training. Projects cover a very broad variety of ocean engineering and marine sciences topics, including invasive species, living shorelines, plastics pollution, eutrophication, submersible vehicles, energy generation, population biology, harmful algal blooms, oyster restoration, sediment geochemistry, nutrient flux, bathymetry, dredging techniques and restoration efforts.

“Florida Tech is all about ‘hands-on,’ and the Mertens Marine Center location provides the perfect setting for hands-on work—right next to the water where we have docks and keep our boats. This will take the already excellent education and training Florida Tech students receive to the next level.”

—Dr. Kevin Johnson, professor, ocean engineering and marine sciences
1. Global Kitchen
Each year, the campus community takes a culinary trip across the world via Global Kitchen: An International Dining Series. Hosted by Panther Dining Hall, the series features monthly buffet-style dinners offering authentic foods from different regions and countries. To ensure authenticity, each food is tasted, tested and approved by Florida Tech students and staff from the featured region. The international cuisine is also accompanied by related educational materials posted in the dining hall, together with sights and sounds from the featured area.

2. SUN ‘n FUN
We had a blast showing the community what Florida Tech is all about at one of the world’s largest annual aviation events, the SUN ‘n FUN Aerospace Expo, in April 2022. It’s safe to say the highlight of the week was getting the chance to kick off the airshow Friday. Pilots Shayne Inniss ‘16, ‘19 MSA, and Paige Rieger ‘21 flew FIT Aviation’s Piper Cherokee aircraft to open the show while Chris Larsen, of university affiliate Larsen Motorsports, commentated in the announcer’s booth to the thousands of attendees.

3. Cyber Competition
The first week in April 2022, seven Florida Tech students successfully developed, organized and carried out a three-day, international “capture the flag” cybersecurity competition that drew more than 2,000 competitors from around the world, including three of the top 10 international teams.

“Building the competition took a considerable amount of leadership, organization and hard work by these students,” said assistant professor T.J. O’Connor, who leads Florida Tech’s cybersecurity program and FITSEC competition team.

4. Black in STEM
In April 2022, students organized Black in STEM, an event celebrating African Americans in STEM disciplines with a panel discussion featuring distinguished Black scientists and professionals. The event aimed to inspire, educate and help create a broad support system for Black STEM students at Florida Tech, as well as those in high school and middle school.

“We wanted to bring a panel of Black scientists in so that the students could have the opportunity to hear some of their experiences and maybe some of the advice that they could give as far as some of the things that they’ve struggled with being Black in a STEM field,” said Jordan Forman, one of the event organizers.
5. Arbor Day with Tree Planting
In honor of the 150th anniversary of Arbor Day, faculty, staff, students and representatives from Melbourne’s Environmental Community Outreach Division gathered to celebrate the planting of two native Florida gumbo limbo trees on campus. The event also marked another step toward the university renewing its Tree Campus USA certification, which honors colleges and universities for effective campus forest management and engaging staff and students in conservation goals.

6. Geek Week
In September 2022, Florida Tech’s Society for Science Fiction and Fantasy (FITSSFF) hosted its annual “Geek Week,” featuring events such as Cosplay 101, Trivia Night, Miniatures Day and Real-Life Mario Kart (pictured).

7. Founders Day Celebration
On Sept. 23, 2022, the Office of Student Life hosted a Founders Day celebration, including tons of free food, prizes, giveaways and an insane amount of fun. Students had the chance to eat as much mac ‘n cheese as possible, get personalized Florida Tech merchandise, roast s’mores and much more.

8. Market Days Are Back
After a brief hiatus during the COVID-19 pandemic, Florida Tech Market Days have resumed. Local vendors from across the county venture onto campus to offer their local food products, produce, crafts, photography and so much more.

Continued on page 28
9. Treat or Treat
Florida Tech’s free Halloween festival for families and kids restarted in grand fashion after a two-year pandemic hiatus with lots of candy, a host of games and activities and the main attraction: five theatrical “haunted houses” in the Residence Hall Quad with age-appropriate themes and escalating levels of scariness.

10. Hurricane Help
In the early morning of Oct. 21, 2022, seven FIT Aviation aircraft flew to Naples Airport, transporting about 700 pounds of essential cargo: supplies for victims of Hurricane Ian. Purchased with funds donated by FIT Aviation and including items donated by its employees and the campus community, the $2,000 in supplies were routed to people in need by a south-west Florida food bank.

11. A Big Win
In a physical match between the No. 1 and No. 2 seeds of the tournament Nov. 6, 2022, the Panthers fought for 90 minutes to defeat Barry University 4-1. For the first time in Florida Tech men’s soccer program history, the Sunshine State Conference tournament trophy belongs to the Panthers!

12. A Day in the Life of the Indian River Lagoon
In October 2022, Florida Tech students and faculty participated in the Ocean Research and Conservation Association’s (ORCA) fifth annual A Day in the Life of the Indian River Lagoon event. The community-based, citizen science and experiential research program connected students, teachers and environmental partners to gather water quality data and biological inventories at over 40 locations in six counties along the 156-mile estuary. Florida Tech teamed up with Central Middle School to examine the oyster mats at Ryckman Park, part of the university’s Living Docks program.

13. Florida Tech Film Festival
More than two dozen short films from the U.S. and around the world were showcased at the fifth FITV Film Festival in April 2022 at Gleason Performing Arts Center on Florida Tech’s campus. The event featured films from Italy, Spain, Chile, France, Dominican Republic, Sweden, Norway, Portugal, China, the United Kingdom, Germany, Turkey, Israel, the U.S. and elsewhere. Other elements of the festival included a red-carpet photo booth, panel discussions, food trucks and free festival merchandise.

14. Music to Your Ears
Team building. Communication. Expression. No matter their major, all students can benefit from developing these skills, and at Florida Tech, we offer just the program to do so: music. The music program provides a creative and engaging environment for musicians ranging from beginners looking to learn a new instrument to experienced performers eager to continue honing their already advanced skills. For years, this creative complement to the university’s tradition of science and research has set Florida Tech graduates apart as competent, confident individuals prepared for life outside of college.

15. Athletics for All
At Florida Tech, you don’t have to be a college athlete to stay active. In fact, 60% of undergraduates participate in one or more of our intramural athletics and club sports, ranging from basketball to Ultimate Frisbee to ice hockey and more. No matter the time of day, the 58,000-square-foot Clemente Center for Sports and Recreation, which includes varsity and intramural gyms, a recently updated fitness center with state-of-the-art equipment, various multipurpose and aerobics rooms, a Starbucks and a café, is always bustling.

16. Big Day of Service
This annual event brings together students, faculty, staff and more to participate in a community service event benefiting local charities. In 2021, participants packed more than 5,000 hygiene kits for the Brevard County homeless community, and in 2022, they helped Second Harvest Food Bank distribute food to Melbourne community members in need.

17. STEMpower Day
High school students, parents and teachers participated in a host of memorable, hands-on learning experiences in November 2022 at Florida Tech’s Center for Advanced Manufacturing and Innovative Design (CAMID) during its STEMpower Day. A taste of the college life, the event celebrated science, technology, engineering and mathematics during 20 varied interactive sessions, such as “From Cockroaches to Monkeys: Inside the Minds of Animals,” “The James Webb Space Telescope: A Tour de Force of Space Science” and “King of the Packet: Cyber-attacking Remote-controlled Cars.”
SPRING 2023
REASONS TO GO TO FLORIDA TECH THAT ARE SO GOOD, NO FURTHER EXPLANATION IS NEEDED.

1. 15-minute drive time to the beach.
2. Rocket launch viewings from campus.
3. Hands-on, project-based learning.
4. Our tranquil botanical garden.
5. A fleet of planes you can experience from the cockpit.
6. 72-degree average daily temperature.
7. 14:1 student-to-faculty ratio.
8. Views like this.
Whether it covers a topic related to your major, an unrelated but complementary field or a subject you’ve just always found interesting, picking a good elective is one way to really get the most out of your college education. Florida Tech offers hundreds of electives across all disciplines for you to choose from, but here are a few you may find unique, interesting and perhaps even fun!

**analyse fiction & film**
- Crime in Fiction
- Monsters in Fiction
- Narrative Film
- Science Fiction Literature and Film
- Serial Killers in Fiction
- Television and Popular Culture

**communicate differently**
- Creative Writing
- Media Production—Audio or Video
- Photography
- Writing About Science

**play music**
- Chamber Music Ensemble
- Concert Band
- Concert Choir
- Jazz Ensemble
- String Orchestra

**dig into musical roots**
- Intro to World Music Culture
- Jazz and African American Experience
- Music Theory and Ear Training
- Music in Video Games
- Popular Music and Culture

**speak another language**
- Chinese
- French
- German
- Italian
- Japanese
- Spanish

**understand unique mindsets**
- Abnormal Psychology
- Animal Learning and Behavior
- Culture and Psychology
- Introduction to Global and Multicultural Awareness
- Psychology of Learning and Motivation
- Disasters
- Personality
- Leadership
- Women
- & More!
Nelson Health Sciences Building

The brand new, state-of-the-art Gordon L. Nelson Health Sciences building is a response to rapidly increasing societal demand for biomedical professionals. The 61,000-square-foot facility provides 20,000 square feet of classroom and training spaces and allows students access to teaching laboratories that use augmented and virtual reality tools and space for orthopedics, tissue studies, advanced computational simulations and more.

SCAN FOR A VIDEO TOUR!
There’s something special that ties Panthers together.

No matter where you come from, what you major in or what you go on to do in life, we all share it. It’s why we choose to come here. It’s why we pursue our goals. It’s a culture, deeply rooted in our history.

Founded the same year as NASA to educate the pioneers of the U.S. space program, Florida Tech got its start making history.

Our founder, Jerome P. Keuper, was a rocket scientist working at Cape Canaveral (now, NASA’s Kennedy Space Center). He founded Brevard Engineering College (today, Florida Tech) in 1958 to provide an advanced scientific and technological education to those working toward the seemingly impossible—getting mankind to the moon.

Our first students were unified by this relentless drive to pursue—and achieve—greatness.

On July 16, 1969, millions of people across the world gathered around their televisions to watch Apollo 11 launch for the moon. Residents on the Space Coast, including Florida Tech students, were lucky enough to be able to step outside to see, hear and even feel the rumbles of the historic launch.

Four days later, the world watched together, as Neil Armstrong took “one giant leap” for mankind. This moment not only showed us what we’re capable of achieving, but it motivated us to keep reaching further.

Today, Florida Tech carries on this legacy. Like our first students, we say “yes” to big ideas. We reach beyond the possible. Whether it’s our work in engineering, science, computing, aeronautics, business, psychology or the liberal arts, we embark on the endeavors most pivotal to the future.

This is the “something special” that ties us all together. It’s our shared relentless spirit. Our culture, tradition and legacy.

At Florida Tech, we are, and always have been, making history and shaping the future.
Panther Word Search

Find the following words in the puzzle. Words are hidden up, down, left, right, and diagonally.