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Florida Tech Bucket List

1. Try a **NEW DISH** at our annual International Festival

2. Watch the Florida Tech **JET DRAGSTER** fly down the racetrack with Larsen Motorsports

3. **STUDY-ABROAD** in the Caribbean, Netherlands, Spain, England, Galapagos or Peru

4. Play a round of **HUMANS vs. ZOMBIES**

5. Take a picture at our **PANTHER MURAL** in Downtown Melbourne

6. Buy some goodies at WFIT’s **MARKET DAYS**

7. Enter the realm of **VIRTUAL REALITY** in the Digital Scholarship Lab

8. Talk a walk through our 15-acre **BOTANICAL GARDEN**
Caring for Coral Carly J. Randall ’16 Ph.D., Marine Biology

After graduating with her Ph.D. in 2016, Carly Randall accepted a prestigious three-year postdoctoral fellowship at the Australian Institute of Marine Science in Townsville, Queensland. She joined a team of researchers working on coral restoration science on the coast along the central Great Barrier Reef, which has experienced unprecedented back-to-back bleaching events in 2016 and 2017 that caused wide-spread loss of corals.

“One of the best experiences I’ve had so far is participating in a six-day research cruise out to the Great Barrier Reef,” Randall said. “We collected some coral samples and crown-of-thorns starfish for research, and then evaluated the damage caused by the 2016 and 2017 bleaching events at the collection sites. I am already learning a tremendous amount about this reef system, which is different from those in the Caribbean and Atlantic.”

Over the Moon for Publishing Casey Doran ’15, ’17 M.S., Software Engineering

Casey Doran founded Spacewalk Publishing along with three friends from high school as a bit of a joke because they couldn’t find the services they needed already available. But from that bit of humor, a successful business grew. From design, distribution, editing and publishing print materials, to software development and audio production, these guys are basically a one-stop-shop for the average person who wants to produce and sell above-average content. Daniel Batcheldor, physics and space sciences department head, happened to be one of those people.

Doran took Batcheldor’s Observational Astronomy class a few years ago, and they continued to keep in touch. So when Batcheldor wrote his book, Astronomy Saves the World: Securing our Future Through Exploration and Education, Doran offered his services.

“He made me aware of some components to publishing for which I didn’t have the resources,” Batcheldor said. “For example, digital formatting for hardcopy printing, digital formatting for the e-book version, contacts for the graphic designers needed for the cover art and the setting up of the Amazon listing.”

Reaching for the Stars Laura Forczyk ’06, Astrophysics

You can take the girl out of the Space Coast, but you can’t take the Space Coast out of the girl.

When Laura Forczyk moved to Georgia in 2016, she wasn’t quite sure what her future would really hold. Her previous employer closed its doors at Kennedy Space Center, and she was in the third trimester of her pregnancy. She knew she didn’t want to start a brand-new job with a brand-new baby, so the only logical step was to start her own business. Thus, Astralytical was born in January 2016—a few months after her child.

Astralytical is a consulting company for the space industry and professionals. From helping individual clients to companies and local and federal government, Forczyk has positioned herself as an authority on the industry and has a direct hand in shaping its future.

“That’s the beauty of creating my own company,” Forczyk said. “I can be flexible in what I do, so if I want to work on a project, I can go do it. I don’t need to ask anyone’s permission. I can just focus on what is very meaningful to me, which is assisting the space industry and assisting students who are young, career professionals who want to get involved.”
The X Factor
Jennifer Geethan ’17, Aerospace Engineering

When she graduated from Florida Tech in May with a degree in aerospace engineering and minor in flight technology, she intended to go on to graduate school. Then SpaceX called. Does SpaceX call? Or do they send you a holographic message via self-driving Tesla? Either way, it’s pretty cool.

She signed on as a launch intern in the Payload Integration Department for the summer. Specifically, she worked with the Dragon capsule.

“It is the coolest thing I have ever done,” Geethan said. “I have gotten the chance to do things I had only dreamed of previously.”

In fact, it was so cool and she was so good at the job, that SpaceX asked if they could extend her internship to December. How could she say “no” to that? Geethan is hoping the internship eventually becomes a full-time position, although she still plans to pursue her graduate work at Florida Tech.

An Office in the Sea
Chelsea Harms-Tuohy ’10, ’11 M.S., and Evan Tuohy ’09, Marine Biology

As the owners of Isla Mar Research Expeditions in Puerto Rico, Chelsea Harms-Tuohy and husband Evan organize and lead field courses, train young scientists in marine field research skills, coordinate internships and lead local outreach and research.

“As alumni, we are really excited for this on-going partnership that allows us to network with current students and give back to our alma mater that helped shape our careers,” Harms-Tuohy said.

During the course, students gain experience in field research methods like underwater visual census and fish identification. They explore the marine environment and learn about the entire coral reef ecosystems, including mangroves and seagrass beds as well as other island biogeography like waterfalls, caves, rainforests and dry forests.

Glamour with Substance
Elizabeth Webbe Lunny ’93, Humanities

As vice president of style for The New York Times, Elizabeth Webbe Lunny ’93 is at the helm of an industry with revenue in excess of a hundred million dollars.

Not only does Lunny oversee all luxury advertising revenue for the Times—she also facilitates campaigns for clients like Louis Vuitton, Christian Dior and Fendi. In addition, she organizes and attends events like “New York Times Talks” where a reading of Good Will Hunting might end with a surprise pop-in from Ben Affleck and Matt Damon.

But that’s not her only job. In fact—it’s only half of it. Lunny is also the publisher of T Magazine—The New York Times fashion brand, which regularly features celebrities like Lady Gaga, Kanye West and Nicole Kidman. Published 11 times each year, it focuses on fashion, style, art, literature, design and travel.
Culturally Competent Commandos

When you are a member of the Army Special Forces, failing to win the trust of allies in a combat zone could mean the end of a mission or end of a life.

Rich Griffith, professor of industrial/organizational psychology and executive director of The Institute for Cross Cultural Management, is working with the Army on ways to test members of the Green Berets on cross cultural competence, a set of skills and attitudes that allow individuals to move in and out of any culture by studying local customs and the ability to take behavioral cues from a population.

During a two-week-long Robin Sage exercise, 15 counties in rural North Carolina turn into the People’s Republic of Pineland, where real civilians take on the role of the Pinelanders who have their own set of laws, rules and cultural norms. Pineland simulates an environment of political instability and armed conflict in order to put soldiers in a position to analyze and solve problems.

It is completely up to the student-soldiers to figure out the culture and successfully procure food, information and even places to stay during the night without upsetting the locals with taboo behavior.

For Griffith’s team, this is an almost perfect (and safe) way to validate the cross cultural competence assessment without having to actually go to the heart of an armed conflict. The team has developed a set of measurements they will implement, collect data over a period of time and hopefully prove the new method of testing works.

Piloting with Discrepant Data

Meredith Carroll, associate professor of aviation human factors, received a $600,000 FAA grant subcontracted through Enroute Computer Solutions to study how pilots respond when faced with discrepant data in the cockpit.

Donna Wilt, professor of aeronautics, and Debbie Carstens, professor of aviation human factors, will also contribute to the two-year research effort entitled “Human Factors Considerations for Information of Varying Levels of Integrity, Reliability, and Security on the Flight Deck.”

Answers for Autism

Getting reliable information about autism spectrum disorder can be daunting to parents seeking answers online. In an effort to cut through the clutter with clear, practical insights and advice is AutismAdvisor.org produced by Florida Tech’s Scott Center for Autism Treatment.

The telehealth initiative offers expert guidance on numerous subjects ranging from what autism is to how to teach ASD children everyday skills. More than 100 videos feature experts from The Scott Center and Florida Tech’s applied behavior analysis program, as well as parents discussing challenges, experiences and successes with ASD family members.

One of the missions of The Scott Center is to offer assistance and beyond its facility the Melbourne campus by offering expert staff, cutting-edge research and training programs to people in need far beyond Florida through digital technology.

Eventually, AutismAdvisor.org will include an interactive portal that can facilitate ongoing interactions between therapists and families and clinical support.

El Niño Impact on Coral Health

Three common diseases affecting Caribbean corals spike during El Niño years, an alarming association given how climate change may boost the intensity of El Niños.

The findings from research associate Carly Randall and biology professor Robert van Woesik, published in the journal Scientific Reports, are based on an analysis of 18 years of coral disease data, at nearly 2,100 sites collected by the Atlantic and Gulf Rapid Reef Assessment Program. Those data were compared with 18 years of coinciding climate data to see if the disease cycles matched the climate cycles.

“We found that three coral diseases—white-band disease, yellow-band disease and dark-spot syndrome—peak every 2–4 years, and that they share common periodicities with El Niño cycles,” Randall said. “Our results indicate that coral diseases cycle predictably and that they often correspond with El Niño.”
No Foul

Professor Geoffrey Swain is one of the world’s most respected anti-fouling scientists. For 30 years, he and his team of Florida Tech researchers have made a global impact by improving the fuel efficiency and lessening the environmental impact of huge, oceangoing ships.

Applying anti-fouling coatings to a vessel makes it difficult for plant and animal life to stick to the boat. Smooth, streamlined progress is key to a ship’s performance, and less resistance from barnacles and other marine life means better fuel economy and fewer greenhouse gases. Swain has received more than $8 million in funding for this work, much of it from the Office of Naval Research. He also contracts with industry leaders such as Dow Corning Corp., DuPont Canada, General Electric, International Paint, Pittsburgh Paint and Glass, and Royal Caribbean Cruise Lines.

Lightning More Powerful Over Water

Amitabh Nag, assistant professor of physics and space sciences, and Kenneth L. Cummins, research professor at Florida Tech and the University of Arizona, recently published, “Negative First Stroke Leader Characteristics in Cloud to-Ground Lightning Over Land and Ocean” in the American Geophysical Union’s Geophysical Research Letters. The scientists analyzed strikes over parts of Florida and its coasts using data provided by the U.S. National Lightning Detection Network.

In their study, which measured peak currents of various cloud-to-ground strikes over land and ocean from 2013 to 2015, Nag and Cummins calculated the duration of the “negative stepped leader”—the electrical channel that moves down toward ground from a thundercloud. The durations of negative stepped leaders over the ocean were significantly shorter than those over land, which indicates that they carry more charge in them. This leads to a higher following current surge from ground.

Nag and Cummins found that with strikes over water in western Florida, the median stepped-leader duration was 17 percent shorter over ocean than over land, and in eastern Florida the median durations were 21 and 39 percent shorter over two oceanic regions than over land. Using a relationship between leader duration and lightning peak current derived in this study, the authors estimate that lightning with peak currents over 50 kilo amperes is twice as likely to occur in oceanic thunderstorms.

These findings suggest that people living on or near the ocean may be at greater risk for lightning damage if storms develop over oceans and move on-shore. This new understanding of the nature of lightning could inform how off-shore infrastructure and vessels are to be built to minimize the risk of super-powerful lightning bolts from thunderstorms formed over the sea.

A Pearl of an Idea

Last year, Florida Tech, the Brevard Zoo and Brevard County partnered to create the Living Shoreline project in an effort to restore oyster beds to the Indian River Lagoon.

Robert Weaver, associate professor of ocean engineering, and his students performed physical model simulations of oyster reef breakwaters and revetments at Florida Tech’s Coastal Engineering Lab to establish the design and performance for the Living Shoreline initiative. The reefs are made from long, mesh bags containing real oyster shells that attract oyster larva to attach and make a home there.

Last summer, Brevard Zoo volunteers placed the engineered breakwaters and revetments into the lagoon near the shoreline where they should collect enough living oysters and other creatures to help prevent further erosion along the banks. The oyster reefs work by dissipating incoming waves and diminishing the waves’ power to pull sediment from the shore.

What Will Space Tourists Wear?

As a part of their research efforts, the Human Centered Design Institute recently acquired a functional spacesuit from Final Frontier Design of Brooklyn, N.Y., for use in developing a universal cockpit specifically for space tourism. Florida Tech is one of just three universities nationwide to have a spacesuit of this type.

To test the functionality of the simulated spacecraft environment, Ondrej Doule, an assistant professor at HCDI, needs to know what the pilots and passengers will be wearing when they blast off and later make the journey back to Earth.

“The suit provides pilots and spaceflight participants with another level of safety and we believe it may become as common in future space tourism as gloves and helmets are for motorcycle road trips,” Doule said.

The human body, and human activities in space, have to be understood in much higher detail than in any other environment. What we learn in space about artificially built environments, can be then applied on Earth for enhancement of sustainable development.”

Professor Geoffrey Swain is one of the world’s most respected anti-fouling scientists. For 30 years, he and his team of Florida Tech researchers have made a global impact by improving the fuel efficiency and lessening the environmental impact of huge, oceangoing ships.

Applying anti-fouling coatings to a vessel makes it difficult for plant and animal life to stick to the boat. Smooth, streamlined progress is key to a ship’s performance, and less resistance from barnacles and other marine life means better fuel economy and fewer greenhouse gases. Swain has received more than $8 million in funding for this work, much of it from the Office of Naval Research. He also contracts with industry leaders such as Dow Corning Corp., DuPont Canada, General Electric, International Paint, Pittsburgh Paint and Glass, and Royal Caribbean Cruise Lines.
FLY 2,600 MILES, ACROSS 14 STATES IN THREE DAYS?

Challenge accepted by three Florida Tech women in aviation. Zigzagging their way across the United States, from Maryland to New Mexico, aeronautical science with flight student Chesapeake Gustin, aviation human factors alumna Sherisse Pierre and aviation management major McKenzie Krutsinger participated in the epicenter of women’s air racing—the Air Race Classic (ARC).

“The Air Race Classic memorializes the first all-women’s air race in 1929 called the Women’s Air Derby. Twenty pilots, including Amelia Earhart, raced from California to Ohio,” said College of Aeronautics Associate Dean Victoria Dunbar.

Two-women teams, flying only during the day, traversed a route of nine flyby timing locations. After one practice flight Gustin and Pierre made their racing debut, and their event performance was strong—taking first place at the sixth timing mark and third place at the seventh mark.

“I am so impressed that we did that well,” said Gustin. “This was our first time racing, and before leaving for the race, we had flown together only one time. I could not have done this without Sherisse.”

The College of Aeronautics participates in many events each year that foster females in aviation.

Victoria Dunbar, associate dean

Av.D. DOCTOR OF AVIATION PROGRAM

Florida Tech’s College of Aeronautics recently launched of a doctorate in aviation degree designed for aviation professionals and built on the college’s 50-year legacy as one of the top university-based aviation programs in the country. The innovative Doctor of Aviation, or Av.D., is the first 100-percent online, residency-free aviation doctoral degree offered anywhere. The year-round, research-based program can be completed in three years.
FIT AVIATION INSPECTOR HAY HONORED WITH FAA AWARD

FIT Aviation mechanic Thomas Hay received the Federal Aviation Administration’s Charles Taylor Master Mechanic Award, the single highest award the FAA can give to aviation technicians.

The award, presented on Aug. 15, is named in honor of Charles Taylor, personal mechanic of the Wright brothers and designer of the engine used to power their first flight.

Hay earned the award in recognition of the professionalism, skill and expertise he has displayed in his over 50 years in the aircraft maintenance profession. Less than 2,500 people have earned the award since Charles Taylor died in 1956.

The Origins of Skurla Hall

Skurla Hall is where most students take aeronautics classes. From above, it looks like a B-12 stealth bomber. The interesting thing about this, is that the architectural drawings and design were drawn up while the bomber’s design was still confidential.

Skurla is named in honor of former CEO of Grumman Aerospace (now Northrop Grumman) George Skurla. Skurla made generous donations to the College of Aeronautics and was on the university’s board of trustees from 1979 until his passing in 2001.

Recently, retirees from Grumman Aerospace who knew Skurla donated memorabilia to be displayed on campus, including a replica of the plaque that was left on the moon as part of the Apollo 11 mission.

DIAMOND AWARD

The Federal Aviation Administration recognized FIT Aviation LLC’s maintenance shop and aviation maintenance technicians with the William (Bill) O’Brien Diamond AMT Employer Award, the agency’s highest honor given to aviation organizations that employ FAA-certified mechanics.

The award is presented as recognition of the dedication to safety demonstrated by FIT Aviation in committing the time and funding to provide its 19 AMTs with training and professional development that help strengthen safety.

FIT Aviation is one of just four Florida recipients of the Diamond Award in 2017. “FIT Aviation works to ensure our technicians have the latest training and education to help ensure they can work to the highest levels of performance and safety,” said Isaac Silver, assistant dean of flight operations at FIT Aviation. “We are honored and thankful that their hard work and dedication has been recognized by the FAA.”

REFER A PILOT

GoJet Airlines, which carries in excess of 5 million passengers a year, serving more than 70 destinations with 240 daily flights, has partnered with the College of Aeronautics to help facilitate post-graduation airline careers. Benefits to students who elect to participate in the program include:

- Placement in a hiring pool once the student meets degree and flight time requirements
- Participation in the GoJet Pilot Referral Program, which provides compensation for successfully referring other pilot applicants to GoJet
- Expedited interview and entry to GoJet Airlines
- Eligibility for up to $10,000 in tuition reimbursement upon successful completion of GoJet’s New Hire Initial training
- Limited flight benefits for the student

Computers don’t get tired or bored or have a bad day. They’re a lot cheaper to maintain and easier to produce than real, live pilots, who are already in short supply among U.S. regions. Humans in the cockpit could even be seen as a hazard. Research shows about three-quarters of all airline accidents are the result of pilot error. John Deaton, an ex-Navy aviator who chairs the human factors program, offered his take on the issue to Air & Space/Smithsonian recently.

“I think we will eventually get down to one pilot in the cockpit, but I don’t see us ever going to unmanned airliners. People are going to demand that somebody is responsible [for flying the airplane].”

And that’s, roughly, where the discussion has stalled.
If business is in your blood, you are probably already pondering an MBA. Through our Fast Track master’s program, undergraduate students are able to take graduate-level courses while pursuing their undergraduate course work. This allows students to finish their MBA in less time than a traditional program.

“I couldn’t say no to the opportunity to get a master’s in half the time!”

Christian Austria ’17, Accounting and Financial Forensics M.S.

ARE YOU ON THE FAST TRACK?

The X-Culture project is an important component of Florida Tech’s International Business course. Over an eight week period, Florida Tech students work on global virtual teams with students from various foreign universities. A typical six person team would contain at least one student from a U.S., African, European, South American, and Asian university. In addition to completing a comprehensive business project for a multinational company, the students experience first-hand the cross-cultural challenges of working on a global virtual team. The students learn to use the latest technological tools to coordinate and communicate with their international teammates. They gain real-life experience working on a team and meeting strict deadlines.

Borderless Collaboration: X-Culture

I had the opportunity to participate in the X-Culture project this semester, and it was a really interesting experience. I worked on a team with students who live in the Netherlands, Colombia and India. We were able to work around different time zones and create a project that I believe the company we partnered with will actually use. The project gave me an idea of how people in other countries think, and how their ideas are different but similar at the same time. Overall, it was a great experience and I can’t wait to apply the ideas I learned throughout my career.”

Colton Johnson ’18, Business Administration
Making a Business Challenge Easy as Pi

Raspberry Pi is an inexpensive, credit card-sized computer created to teach people of all ages how computers work and how to program. Business students in Foundations of Creativity, Innovation and Entrepreneurship 1 (CIE1) participate in a three-week project where they are challenged to use a Raspberry Pi to produce something resourceful, innovative and easy-to-use. The students identify a business idea, use technology (Raspberry Pi) to design a solution and then market their project to a group of judges.

One winning project—FIT Food—proposed using the Raspberry Pi to help restaurant-goers choose healthy foods based on allergy-restrictions or health conditions. With the team’s app, a person could select a restaurant and use the app’s bio-sensing technology to scan his or her body. Based on the results of the body scan, the app would list the menu items best-suited for the customer.

FIT Shark Tank

STUDENT PROJECT REIMAGINES CAMPUS DINING

Business students in Foundations of Creativity, Innovation and Entrepreneurship 2 (CIE2) work through the Business Model Canvas to develop a business idea, build prototypes, interview potential customers and compete in a “shark tank” business model competition.

This course encourages students to get out of the classroom, talk to people, make prototypes, get feedback and make more prototypes. One project required students to redesign the campus dining experience—resulting in an idea for a farm-to-table operation. The student team researched farms on campuses, spoke to professors and students, and came up with a prototype.

Community Influencer

Abram Walton, director of the Center for Lifecycle and Innovation Management at Florida Tech and professor of management, received the Emerging Influential Award at the Space Coast Public Service Awards. The award is presented to an emerging influential (40 years old or younger) for exceptional leadership and outstanding contributions to the community.

Walton was also awarded the Economic Development Commission of Florida’s Space Coast’s (EDC) 2017 Volunteer of the Year Award for his continuous contributions to the innovative culture in Brevard County. Walton was also a LEAD Brevard 4 Under 40 recipient.

FACULTY SPOTLIGHT: Angel R. Otero, Ph.D., CPA, CISA, CITP, CICA, CRISC

Angel R. Otero has close to 20 years of experience in the areas of public accounting/auditing, internal control audits, information technology (IT) consulting and information systems (IS) auditing. He authored the textbook *Information Technology Control and Audit* and was critical in launching Florida Tech’s master’s program in Accounting and Financial Forensics. He is now ramping up to start an accounting and finance center of excellence to establish relationships with local accounting firms to open up opportunities for accounting students.

DESIGNING A PARTNERSHIP

College of Business students can choose to work on engineering design teams during Florida Tech’s Engineering and Science Student Design Showcase to provide financial insights, make presentations to customers, prepare budgets and track major milestones.

Business student Thomas Haynie worked with a team of engineers as the business lead on the Harris Corp.-sponsored Urban Search and Rescue Robot project and got to experience a real-world look into contracting, procurement and sales.
We want to get a computer to think more like a person. We want them to have their own view of the world, to predict what they would do.

Tom Eskridge, associate professor at the Harris Institute who specializes in artificial intelligence and cognitive modeling

Where Hobbies Become Science

You might not expect to see students and faculty “playing” with model electric trains in the lab, but it’s providing a fun and novel way for researchers to explore machine learning. By creating collision avoidance algorithms, faculty and student researchers are able to run calculations and send information to hand-made circuit boards affixed to the top of each car. These processors take in the information, calculate factors like location and speed, and then determine how the train cars proceed.

The concepts being explored in this seemingly lighthearted project will, in fact, end up influencing some of society’s key technologies in years to come, from cybersecurity to autonomous vehicles to robot-filled factories. Rather than a Terminator-style dystopia, such advances could lead to improvements in safety, efficiency, transportation and more. The train set, which is almost like a virtual network manifested, is the perfect place to experiment.

Mechanical and aerospace engineering professor Shengyuan Yang recently published his research on stem cells in Biotechnology Journal. Yang’s patent-pending invention was found to naturally narrow the spreading of stem cells by growing them on microscopic glass balls immobilized in a gel medium. The surface-curvature of the balls successfully restricted the cells from spreading. These findings could be used for future cell and tissue engineering. Yang’s group will continue to investigate the effects of substrate curvature on the behaviors of stem cells.
$256M SIEMENS TECHNOLOGY GRANT

“This is huge,” said President Dwayne McCay when it was announced that Siemens was gifting Florida Tech a $256M technology grant. Through the grant, students now have access to Siemens’ industry-leading product lifecycle management (PLM) software, which is used by more than 150,000 companies around the world in the aerospace, automotive, medical device, machinery, shipbuilding and high-tech electronics sectors. With more than 75 companies in Florida using the software, including Northrop Grumman, students will enter the workforce with hands-on experience using the in-demand software.

The software will be incorporated into student course work and projects related to computer-aided design, engineering simulation, industrial design, digital manufacturing and manufacturing management at Florida Tech’s Center for Advanced Manufacturing and Innovative Design (CAMID).

Pilings that Bounce

Engineering Florida’s highways is a bit different than other parts of the country given that bridges have to withstand hurricane-force winds. To do this, the pilings used to build these structures are extremely large and require enormous impact hammers to drive them in. One of the challenges of installing these pilings is that Florida soil (in most places) is made from sand, which “grabs” piles in an unusual way and in fact can bounce or push pilings back upward as much as three inches following each impact of the hammer.

With funding thorough the Florida Department of Transportation, Paul Cosentino’s research has led to the development of a decision tree that engineers can follow to avoid the bounce, saving the state millions of dollars in engineering trial and error.

OPEN-SOURCE COURSE

Students in Keith Gallagher’s CSE 2410, Introduction to Software Engineering, work on real-life projects. They are required to go out to the open source world, find a suitable project, find some issues with that project (repairs or enhancements), make repairs to those issues and, if possible, resubmit them back to the open source repository.

“The course gives the students an opportunity to work in teams, use modern software management and configuration tools, and, perhaps, make a contribution to software that people use, rather than some ‘toy project’ that gets thrown away after the term,” said professor Keith Gallagher.

Get the Muck Out

Ocean engineering professor Robert Weaver presented his students Leigh Provost, Hannah Grisanti and Ryan Christiansen with a unique opportunity to design, build and deploy a dredging system to address the overwhelming build-up of muck in the Indian River Lagoon. Muck is a thick mixture of nitrogen and phosphorous that chokes the life out of the lagoon, covering sea grasses and contributing to oxygen-sucking algae blooms that kill massive amounts of marine life.

While traditional dredging techniques focus on the larger parts of the river, their design is addressing the removal of muck in hard to reach areas. Their compact dredge design can maneuver between docks and inside more narrow canals, with a controlled flow rate that only pulls out the muck and not the beneficial sediments and sea grasses.
With several cores under our belts and the experience of a lifetime, I will forever be grateful for the experience that made me push my limits and that taught me new things.”

Molly Kingston, biological sciences major

Paleoecology in Peru

Molly Kingston, a biological sciences major, joined Professor Mark Bush on his yearly summer expedition to Peru. The goal of the research trip was to visit two lakes and take sediment core samples for paleoecology. After obtaining permits, acquiring horses and hiking for almost seven hours, the team finally reached their destination, Laguna Huayabamba.

The lake was deeper than they had imagined, so acquiring their sediment core sample provided a challenge. After a few attempts, and almost ready to pack it in, the team gave it one more go and was able to pull a 2-meter-long tube full of sediment from a 50-meter lake.

The team was rewarded with some pretty interesting finds, including ancient wall paintings and brick structures built into cave walls, as well as a cave filled with mummies. #nbd

The National Science Foundation-funded Young Mathematicians Conference is highly competitive and only selects around 50 research projects among thousands of U.S. universities. This year, math students Muhammad Abdulla and Jake Barrett received full funding from NSF to present their research project, “Minimal Orbits, Sharkovski Ordering and Universality in Chaos,” with oversight by Ugur Abdulla, department head for mathematical sciences.
Once a month, students don’t have to feel like they are walking into the lion’s den when they need help with research—thanks to the Research Den. The Interdisciplinary Students Research Association (ISRA) hosts the den one evening each month to help students of all disciplines with proofreading, feedback, the academic process and pinpointing resources.

“As graduate students, we felt that, besides your advisor, sometimes you need someone else there to guide you, support you and understand what you’re going through,” said Lorraine J. Ramirez, a doctoral student in science education, and ISRA president and co-founder. “We’re basically students helping other students.”

**BRONZE STAR FOR SUSTAINABILITY**

The Sustainability Tracking, Assessment and Rating System (STARS) solidified Florida Tech’s standing as a state and national leader in university sustainability with a Bronze-level award. Florida Tech is one of just five colleges and universities among more than 150 in Florida to be STARS certified. The certification requires a demonstration of rigorous performance across dozens of individual areas within four categories of sustainability: academics, operations, engagement, and planning and administration. The primary contributor to the point totals needed for certification was Florida Tech’s academic program, which offers both major and minor programs in sustainability. Ken Lindeman, sustainability program chair, led the initiative with assistance from several others on campus including federal work-study students Melissa Bramble, Montana Steell and Marcus Farley.

**AWARD-WINNING ECOLOGICAL PHOTOGRAPHY**

Two biological science doctoral students Majoi de Novaes Nascimiento and Pablo Juarbe Martinez received honorable mentions in the 2017 BMC Ecology Image Competition for their photos taken during their Galapagos field research trip. The annual competition features entries from ecologists around the world and is designed to showcase “research that is increasing our understanding of ecosystems worldwide and the beauty and diversity of life on our planet.”

**FIT Experiment Aboard ISS**

One of the biggest quests in astrophysics is to find planets around other stars—places where life may exist. Regular telescopes are not good at directly imaging such small objects because a host star’s light generally drowns out the relatively dimmer light of a potential planet. With the help from some graduate students, Daniel Batcheldor, department head of physics and space sciences, developed a new space imaging prototype that will help spot Earth-like planets.

The charge injection device (CID), a type of high-contrast camera, successfully captured and downloaded its first picture of a test pattern from outside the International Space Station.

After this rigorous demonstration period, the devise could now qualify for future space missions, either on a stand-alone satellite or as part of a space telescope in its quest to photograph alien worlds.

"If this technology can be added to future space missions, it may help us make some profound discoveries regarding our place in the universe.”

Daniel Batcheldor, department head of physics and space sciences

**STUDENT SPOTLIGHT**

Zach Eichholz: Sustainability Superstar

You can’t say the word sustainability on campus without talking about Zach Eichholz. Eichholz was instrumental in bringing the Ethos Community Garden to campus which then seeded an off-campus sister garden, the Logos Community. As part of a Residence Life Initiative, Eichholz worked with university stakeholders and secured funding to make the garden a reality. Using that experience, Eichholz then helped upstart a second garden for the local community. Since then, Eichholz has written a climate change-themed fiction novel and is leading the university’s Live Green Energy Challenge. The Live Green Energy Challenge is a friendly competition between residence halls to see who could conserve the most energy.

"With them, I intend to save the world,” said Eichholz.
You learn something about yourself by the response you get from the animal. So many times in our culture, we talk about looking at animals. We rarely take into account the fact that they are looking back at us, and that’s an important piece.”

Sandra Wise ’95 Psy.D.

Experiential Therapy Through Nature

Through Sandra Wise’s “Eye of a Horse” program at Forever Florida in St. Cloud, doctoral students have the opportunity to work with a variety of individuals, from humans to horses. This experiential therapy approach to psychology not only gets these students outside, but it teaches them a lot about communication, trust and themselves.

Wise, a licensed psychologist, started the “Eye of a Horse” program in 2002 with the help of Dean Van Camp, an experienced horse trainer. Their relationship with Florida Tech began with workshops for doctoral students in the clinical psychology program who wanted to hone their skills by working with the non-verbal side of therapy using horses. Veterans struggling with PTSD, at-risk youth, young adults on the autism spectrum, those with spinal cord injuries and clients struggling with substance abuse are some of the clients they work with together with Florida Tech students.

The program is a practicum site where students can earn credit toward their degree. That’s how Caroline Witek and Emily Burch, both third-year students in the clinical psychology doctoral program, got involved. Students accompany their clients throughout the property on the Crescent J Ranch at Forever Florida. They head out into the fields, where they sit quietly and build trust with wild horses and their colts. They also work with horses in the corrals and training ring. All along the way, they build their situational awareness by observing the wildlife around them.

DID YOU KNOW?

Florida Tech has an literary arts magazine, The Kaleidoscope! Students, faculty and staff share their short stories, poetry, photography and artwork in the magazine—which is published at the end of each spring semester.

Photo credit: Alice Shepard, Forensic Psychology ’20
Fired Up: Grit, Grind and Jet Fuel Documentary

Elaine Larsen of Larsen Motorsports can successfully maneuver a 5,000-horsepower, jet engine-powered race car, traveling at speeds approaching 300 miles per hour in a mere five seconds. She is bold and brave. Her life has been exciting, dangerous and everything in between. So when senior communication students learned they needed to film a documentary for their senior design project they knew who their subject had to be.

Audrey Gangloff served as the film’s director. “From concept to final product, it was my job to create and maintain the integrity of a seamless, engaging story,” she said.

Riley Geeskie was one of the students who traveled to Gainesville for the Gatornationals to capture the Larsen team in action, from the drivers to the pit crew. His role was to collect research and serve as the film’s narrator.

“I think the documentary turned out even better than I could have hoped for,” Elaine Larsen said. “The biggest surprise was how emotional I got while watching the documentary. I was so proud to see how far our company has come through all types of adversity—from other racers trying to pull my license, to my husband talking about what it feels like watching me go down the track. I was so impressed.”

FIVE QUESTIONS WITH
Mary Kozaitis
The Crimson Newspaper’s Editor-in-Chief

1. What is The Crimson?
The Crimson is a 100 percent student-run newspaper. We cover events on and off campus that relate to Florida Tech—including campus life, opinion, national and world news, sports, entertainment and technology.

2. What has surprised you about being editor-in-chief?
Learning how much power newspapers have. It is a huge responsibility to oversee any news organization.

3. Why did you join The Crimson?
I joined as a sophomore and have been writing ever since. I knew it would be good experience as a communication major and thought it may end up being something I would want to do with my career.

4. Why should students join The Crimson?
There are a million reasons! Get paid, earn class credit, get free food and have a great time. It is the absolute best way to get involved and learn about campus.

5. What advice do you have for newly accepted students?
Step out of your comfort zone! Don’t be afraid to join a club or sit down at the library with unfamiliar people. The world opens up new opportunities when you try new things and give new experiences a chance. That doesn’t mean you have to lose yourself in the process, but by living a life full of novelty and excitement, you never know when you may just discover something or someone you love.
Digital Scholarship Lab

On the second floor of the Evans Library there is a playground for creative students. 3-D printers and scanners, virtual reality, media production, 360° cameras, cutting-edge software and collaborative spaces provide students a wealth of tools to ideate, design and develop their ideas (and just have a little fun).

Flight Simulators

“It feels real,” say aviation students when they’re seated in the cockpit of an FIT Aviation flight simulator. Elite, RedBird or Frasca simulators provide a safe place to work on your pilot chops. The primary flight simulator display shows heading, altitude and airspeed and pilots can customize their flight conditions, from day to night, from clear skies to raining.
Panther Aquatic Center
Breaststrokes, backstrokes, butterfly and freestyle are the most common sights seen in the Panther Aquatic Center’s competition pool where our swim team regularly trains. Students relaxing on lounge chairs, getting some sun and catching up with friends are part of the scene on the recreational pool side of the 32,000 square foot facility.

Larsen Motorsports
Larsen Motorsports facility is pure eye-candy for anyone who loves the excitement of race cars. It’s hard to know where to look first. The working shop/laboratory includes $8 million in equipment, tools, turbines, jet cars, welding stations and other tools of the jet car trade. Larsen Motorsports partnership with Florida Tech has created one of the most highly sought after internship opportunities for students of all disciplines.

Harris Student Design Center
Also known as “Panther Works,” it is the heart of student design. Here, students collaboratively fabricate projects, from unmanned submersibles to Formula race cars. With access to spray booths, welding stations, acid etching and work spaces, the design center is always buzzing in the spring as students finalize their designs.

Physics and Space Sciences Rooftop
The crowning architectural feature of the F.W. Olin Physical Sciences Center is the dome that houses the Ortega 0.8-meter (32-inch) telescope—one of the largest research telescopes in the Southeast. Also atop the four-story building is a custom-designed indoor-outdoor astronomical classroom, with an observing deck that can support up to 15 instructional telescopes as well as monthly star-gazing parties.
Student Design

Florida Tech’s annual showcase of capstone research and design projects wows judges year after year. While only a few winners are selected in each category, all students leave triumph that they’ve contributed to the betterment of science and technology.

BUILDING ON MARS

It’s not every day that a team of college seniors gets to present a prototype idea to NASA and Buzz Aldrin. But when the opportunity came knocking, students answered with a very novel Mars invention—a microwave kiln that creates building blocks from Martian soil. After pivoting from a 3-D printing solution, the team found it would actually be more efficient to revisit a 6,000-year-old building practice—but with a twist.

The kiln is step two in a three-part, multi-team project collaboration. One team created a collection and filtering system for the soil before it goes in the kiln, while another team built a robotic arm to assemble the completed bricks into structures on Mars.

SHELLED LIGHT, NOT BLOOD

Living with diabetes isn’t easy, but a team of biomedical engineering majors is trying to make life a bit more painless for sufferers. By shining light through the earlobe, known as near infrared (NIR) technique, the different wavelengths interact with the blood constituents which can absorb, refract or transmit the light. Based on these interactions, the glucose monitor known as Stellaris is able to make calculations without having to draw blood.

“This allows a safer, faster and less painful way of getting a patient’s glucose,” Trevor Schmitt said.

Melanoma Big Data

A team of biological science majors developed a melanoma treatment detection tool that crunches big data to develop sophisticated algorithms that are able to find better treatment options.

“Even though many treatment options exist for melanoma, they are not that effective—even with combination therapy. If more effective drug therapies can be identified to target genes associated with melanoma progression, then we’ll likely see a reduction in the cases of cancer across the globe,” said Alexia Pearah.

S.A.T.I.R.E.

A sneaky way to make sure no one messes with your underwater monitoring station is to disguise it. Since an old tire is probably the last thing someone would want to pick up from the ocean floor, that’s where a team of engineering students stashed their autonomous monitoring device. The device has multiple sensors, including sonar and has ecological and military applications with the benefit of being stealthily hidden.

“The plan is to dump it, so it looks like litter. If someone comes across it, they just leave it alone,” said Clayton Esposito, software engineering major.
SHRIMP IN THE SAHARA?

Aquaculture majors, David Scharlman and Samantha Paitsel, think they’ve found a healthy replacement to some of the harmful chemicals and antibiotics often used in fish and shrimp farming facilities. The duo found that replacing the chemicals with a probiotic, known as Biofoloc, helped treat waste and reduced the outbreak of disease, making the tank much cleaner. With this technology, even landlocked regions of the world can farm their own fish, no boat needed.

CRYOTHERAPY FOR CANCER

For many chemotherapy patients, the almost inevitable hair loss it causes can be very emotional and traumatic—enter cryotherapy. Chemotherapy attacks rapidly growing cells and does not discriminate between the cancerous and healthy ones. So, the rapidly growing cells of hair follicles are prone to the grueling assault of chemotherapy. Cryotherapy works to restrict the blood flow to hair follicles, decreasing the opportunity for chemotherapy to attack those cells and help keep the hair follicle intact.

A team of biomedical and mechanical engineering students built a system that pairs a neoprene cap with integrated saline solution throughout the cap to cover all the hair follicles at once. The cap is then connected to a vapor compression refrigerant system that keeps the saline at a constant temperature, and can be adjusted as needed.

This solution address the disadvantages of many current methods of cryotherapy, like uneven freezing, the inability to adjust temperatures leading to patchy hair loss and systems that tether a patient to a large non-mobile device for long periods of time.

FISHY INSIGHT INTO ALZHEIMER’S

Just like your teeth, gel-like plaque can build up on the brain and cause healthy neurons to lose connections with each other, killing cells and eventually leading to neurodegenerative conditions like Alzheimer’s and Parkinson’s disease.

Brain plaque is the result of the accumulation of proteins that don’t align correctly, known as protein misfolding, and can have dire effects. Many organisms are afflicted with protein misfolding, and fish seemed to have developed a solution. By producing Trimethylamine N-Oxide, fish have been able to stabilize the proteins and provide an environment where they are less likely to misfold and cause tissue damage. So taking a cue from nature, molecular biology major Benjamin Orris hopes to apply this finding to neurodegenerative conditions in humans.

“Nature provides a whole bunch of solutions that we haven’t looked into yet,” said Orris.

CARACAL: 3-D BIOPRINTER

One of the biggest challenges facing bioprinting is cell death during the printing process. Without healthy cells, tissue cannot form to build organs.

Cell creation must be done in a sterile lab with large hoods that require immense capital investments for universities. Many students are often vying for lab time to build their cells. A team of biomedical engineers designed a bioprinting system known as Caracal that allows for multiple 3-D bioprinters to be running side-by-side inside an encased sterile environment. This kind of all-in-one approach enables scientists to conduct more advanced experiments that require longer print times because the sterile environment wards off cell death.

“Lab space is very confined, so having a stand-alone 3-D bioprinter will clear up some space and allow more work to be done,” said team member Cameron Hume.
When Apollo 11 astronaut Buzz Aldrin signed on as a research professor at Florida Tech, he also established the Buzz Aldrin Space Institute (BASI) to promote the settlement of Mars through research.

On May 30–31, researchers from across North America gathered at Kennedy Space Center Visitor Complex for the Mars Mission Social Sciences Workshop co-hosted by Florida Tech’s Buzz Aldrin Space Institute and its Institute for Cross Cultural Management. The two-day event brought together leading scholars from a variety of social science disciplines to develop common characterizations of the psychological, sociological and human performance challenges associated with permanent Mars colonization, and to consider the approaches and research needed to cope with these challenges.

When Hurricane Maria hit in September and caused catastrophic damage, volunteers—including alumni from Florida Tech’s College of Aeronautics, students from F.I.T. Aviation and others—sprang into action to get aid to Puerto Rico. Miguel Estremera ’98, a commercial pilot for United Airlines with many family members in Puerto Rico and local knowledge of the needs, initiated the relief efforts and mobilized the College of Aeronautics Alumni Association. The effort resulted in more than 10,000 pounds of cargo bound for Puerto Rico through a series of missions out of Melbourne that attracted the attention of actor/comedian Tyler Perry, who loaned his personal jet for one of the missions, and coverage by CNN’s Anderson Cooper program.

In its November issue, spotlighting what it calls the “top science and tech colleges,” Popular Mechanics magazine listed Florida Tech and a handful of other schools in the Southeast as part of its “More STEM Schools We Love” section.

As many as 1,500 people, including Florida Tech students, faculty, staff and community members, saw the Great American Eclipse on campus in August, joining millions of amateur astronomers across the United States in witnessing this rare celestial event. The university provided 500 pairs of safety glasses and offered safe viewing of the partial eclipse at six telescopes set up on the lawn near the Olin Physical Sciences Center.

Occasional Campus Crasher! You never know who you’ll run into on campus—like astronaut Buzz Aldrin, who surprised this student with a selfie.

MORE BUZZ

A STEM SCHOOL TO LOVE

BUZZ ALDRIN SPACE INSTITUTE

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ECLIPSE PARTY

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MORE BUZZ

Occasional Campus Crasher! You never know who you’ll run into on campus—like astronaut Buzz Aldrin, who surprised this student with a selfie.

PUERTO RICO HURRICANE RELIEF EFFORTS

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Florida Tech’s Hakeem Oluseyi appeared in April as a panelist on the first season of the Netflix show “Bill Nye the Science Guy” in an episode titled “The Original Martian Invasion” where he discussed the hypothesis that life exists throughout the universe. Oluseyi is best known for hosting popular science television shows including “Outrageous Acts of Science,” “How the Universe Works” and “Strip the Cosmos,” which all appear on Science Channel. He lent his voice and scientific expertise to the award-winning science education video game ExoTrex: A Space Science Adventure Game in collaboration with Dig-It! Games and co-authored the children’s popular science book Discovery Spaceopedia: The Complete Guide to Everything Space.

Amitabh Nag, assistant professor of physics and space sciences, was on the CBS Evening News to talk about the power of lightning and why Florida is the lightning capital of the U.S. Additionally, his findings on lightning being more powerful over water than land were featured in many outlets across the globe, including Fox News, Minneapolis Star Tribune, Iran Daily, The Times of India and Orlando’s NPR affiliate, WMFE.

Mitchell Roffer, an adjunct faculty member in the department of ocean engineering and sciences, was among the witnesses testifying Aug. 10 at a field hearing in St. Petersburg convened by U.S. Sen. Bill Nelson, D-Fla., the ranking member of the Senate Committee on Commerce, Science and Transportation. The hearing was titled, “Threats Facing Florida’s Tourism-Driven Economy.” Sen. Nelson heard from Roffer and other witnesses on some of the leading negative impacts to Florida’s tourism industry and ways to protect and bolster the economy.

Darby Proctor, assistant professor in the School of Psychology, has an ongoing study of primates at the Brevard Zoo. One of her projects is using behavior shaping to train a lemur named Matilda to use a touch screen computer. Proctor’s work was recently filmed for a segment of the upcoming season of the long-running Science Channel show “Daily Planet.”
Audrey Gangloff  
*M.S. Global Strategic Communication M.S ’18*  
**Public Relations Intern,**  
**Hill & Knowlton Strategies, Puerto Rico**  
My responsibilities were to manage the firm’s social media accounts, assist with media monitoring for clients, assist with new business acquisitions and a variety of special projects, such as updating the presentation for new client meetings, new client research and reports, and project data management. To be an intern outside of the U.S. was intimidating at first. The opportunity not only allowed me to grow as a communication professional, but also as a global citizen. I now feel more confident applying classroom skills to the workplace and more comfortable adapting to international work environments in the future.

Nicholas Matey  
*Applied Behavior Analysis & Organizational Behavior Management ’17*  
**Environmental Health & Safety Intern,**  
**Marathon Petroleum Company, Texas Refining Division**  
My responsibilities included learning about a current behavior-based safety process and taking steps to improve the process. This was done by assessing the process, designing interventions, gaining stakeholder buy-in and implementing the interventions within the refinery. Some of these projects focused on increasing the accuracy of safety data and increasing employee engagement in the process. The opportunity to see the science I’m so passionate about contribute to the well-being of others will continue to motivate me indefinitely.

Felix Sibert  
*Civil Engineering ’18*  
**Intern, Atkins Global**  
I had the opportunity to edit drawings in AutoCAD 3D, find out material quantities for project cost estimates, work closely with project managers in the organization of civil project development, and I even got to design a neighborhood concept plan layout for 46 three-story, single-family residential housing units. I love having the opportunity to work with professional engineers in my field on numerous projects throughout the state. This internship has really opened my eyes to deciding where I want to see myself in my own professional future.

Malaak Araujo  
*Civil Engineering ’19*  
**Intern, Unique Engineering Solutions, LLC**  
I applied engineering principles and theories under actual field conditions. I performed inspections at construction sites and completed inspection reports, including bolt-up inspections of steel columns and beams, steel and aluminum inspections, and masonry inspections. I designed storefronts for businesses such as Chipotle, Outback Steakhouse and Capital One Bank. This internship gave me experience in the real world and a real look at what engineering is about. I worked with concepts and ideas that I had not even learned in a school setting. I learned about the ethics of engineering, codes, designs and different software. After working as an intern in structural engineering, I can honestly say that I chose the right field of study.”
Interesting Internships

Alicia Camella
M.S. Industrial/Organizational Psychology ’18
Human Resources Business Partner Intern, Northrop Grumman Corporation
I could not have asked for a better internship experience! My time at Northrop Grumman has been challenging and very rewarding. I have been given the opportunity to apply what I learn in classes and take it to the next level. Some of my responsibilities include supporting development initiatives, and analyzing and interpreting data to identify engagement, retention and cost issues and develop actionable solutions. The culture of innovation and continuous development at Northrop Grumman is a very exciting work environment. I can’t wait to convert from an intern to a full-time employee next May!

Christiana DeFlumeri
Global Management & Finance ’18; FastTrack MBA ’19
Finance Intern, Lockheed Martin, Space Systems Company, Fleet Ballistic Missiles
My time at Lockheed has exposed me to the world of Earned Value Management (EVM), which is not typically taught to undergraduate students. Therefore, a lot of hard work and effort has been involved in familiarizing myself with EVM and understanding how and why it applies to the finance world of defense contracting. It has been both challenging and rewarding to dive into a field of finance that I have not been previously exposed to. I am responsible for the upkeep of a database that houses multiple programmatic repositories of information used by control account managers and program managers.

Lukas Hassler
Business Administration – Sport Management ’18
Research Intern, PMS Elektro- und Automationstechnik GmbH
I researched and developed a strategic plan for the future of the electric and automation industry regarding upcoming trends, like Internet of Things and smart manufacturing. I also compared global market trends in different countries like Austria, Norway, Germany and Japan. This internship has shown me a new career path I may want to go into. Additionally, it has shown me the importance of new strategies with upcoming trends in human resources, research & development, workplace optimization, and sales. Although it has been a very exhausting and stressful summer, I have learned a lot in this internship, and I am looking forward to working with this organization in the future.

Malia Ashmead
Biomedical Engineering ’19
Endo-Mechanical R&D Co-op, Johnson and Johnson Ethicon Endo-surgery
I supported the Research and Development sector for Ethicon—a medical device company that is part of the JNJ family of companies. Their specialization is in surgical staplers, cutters and other laparoscopic devices. My duties involved designing and fabricating test fixtures, running root cause analysis and statistical analysis of data, rapid prototyping, and executing device testing through clinical wet labs and tissue testing. It’s crazy to think that even as a student I am doing work that is changing the future of surgery and helping people across the globe.

Damian Smith
Aerospace Engineering with a minor in Unmanned Aerial Systems ’19
Avionics/Electrical Engineering Intern, Piper Aircraft Inc.
During my internship, I provided engineering support to the Avionics Software group, as well as other engineering groups when needed. I produced engineering drawings and manufacturing support documents. I also performed software testing on Glass-Cockpit Avionics. Being hands-on with aircrafts every day reinforced the belief that this is the field I want to build a career in.

Alicia Camella
M.S. Industrial/Organizational Psychology ’18
Human Resources Business Partner Intern, Northrop Grumman Corporation
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Homecoming 2017
Highlights from the biggest event of the year

Homecoming Football Game
Free concert featuring The Fratellis
Homecoming 5K Run/Walk

Homecoming 2017
Highlights from the biggest event of the year
WOMEN’S ROWING WINS 2017 SSC CHAMPIONSHIP
As the No. 1 ranked team in the nation, Florida Tech took home both the Varsity Eight and Sunshine State Conference Team Championship. The Panthers completed the day with an accumulation of 16 points, besting their closest competitor by four. In the Varsity Eight event, the Panthers’ shell flew through the finish line with a time of 6:40.57, pacing at a comfortable 34 strokes per minute most of the way. With the victory, the Panthers earned their program’s sixth SSC Championship, with the last time occurring in 2005.

WOMEN’S LACROSSE FIRST
After recording a program-best 13-3 regular season record in 2017, the Florida Tech women’s lacrosse received its first-ever NCAA Tournament bid as the No. 6 team in the south region.

WOMEN’S SOCCER WINS FIRST SSC TOURNAMENT CHAMPIONSHIP
Florida Tech reached a historic milestone for the women’s soccer program, as the Panthers were crowned Sunshine State Conference Champions after a battle that endured until the shootouts. FIT clawed the title with a 4-2 victory over the Tampa Spartans. The win marked the programs first-ever conference title and an automatic bid to the NCAA Division II South Regional Tournament.

RECORD-BREAKING SEASON EARNSSSC FIRST TEAM HONORS
Men’s basketball junior Sam Daniel set a new school record with 93 three-pointer field goals made this year. He also eclipsed the 1,000-point milestone this season. Daniel garnered First Team All-Sunshine State Conference honors. He led FIT and ranked second in the SSC in scoring. Daniel also finished fifth in the league in rebounding.

ABAD SIGNS WITH TENNESSEE TITANS
Former Florida Tech football standout, Manny Abad ’16, became just the second player in program history to sign with an NFL franchise, inking a standard three-year rookie contract with the Tennessee Titans. Abad ended his career as a four-time All-Gulf South Conference selection, a 2015 USA College Football All-American and a 2016 First Team Academic All-American.
First Year Experience

First Year Experience (FYE1000) is a required one-credit course designed to show you all the opportunities available to you at Florida Tech. Our University Experience team has jam-packed the course with fun and interesting sections, so you will never be bored and you’re bound to make friends.

*Whatever you’re interested, there’s a section for that ...*

Even though they have a crazy theme, they are truly about **motivating students to understand the college environment**, help them develop study skills and find the resources they need to succeed.”

Jared Campbell,
University Experience instructor
FIT: Your Passport to the World

Our core commitment to developing global citizens is much more than a count of countries.

With students hailing from over 130 different countries, Florida Tech is the perfect place to explore other cultures, make friends from around the world, taste new food and learn to think globally. The university is committed to developing global citizens through activities like the International Dinner Series, the X-Culture project, the Certificate in Cross-Cultural Competence, the International Festival, International Coffee Hours and more.

Here’s what Florida Tech students have to say about the value of Florida Tech’s international diversity:

“I play softball at Florida Tech, and my coach is from Argentina. Having an international coach is such a cool experience. I am also lucky to have three international teammates—two from Curaçao and one from Australia. I love hearing about the differences between their homes and mine.”
Alexandra Bettermann
Strategic Communication ’19

“I met my boyfriend as a freshman at Florida Tech. He’s from Naestved, Denmark. We celebrated Christmas in Denmark with his family and friends from high school. If you want to learn a bunch about the world, date someone international. It comes with some challenges but also leads to plenty of adventures!”
Bridgette Soucy
Ocean Engineering ’18

“What I like most about Florida Tech is how culturally diverse our student body is. I have been able to meet people from places I’ve never been before, which has allowed me to learn more about their cultures.”
Mariana Casteañeiras
Global Management & Finance ’18
Welcome to the Florida Tech Family!

Orientation is one of the most important, exciting and memorable events of your college experience! You will explore the amazing resources on campus, meet other students and faculty, make lifelong friends and have fun!

Interview with Student Orientation Coordinator

Nashaita Patrawalla, Astrobiology ’19

What should new students know about Orientation?
Orientation is a week-long program for all incoming students that ensures a smooth transition into college life and the Florida Tech family.

What do you love about Orientation?
I love how the school customizes the Orientation program for all tracks of students—for example, undergraduates, transfers, graduates. There are so many different sessions, and there is information on everything you need to know. There are also a lot of fun activities planned for the students.

Do you have a favorite memory from your Orientation?
The dean of science, Dr. Rassoul, compared me to Carl Sagan at his presentation during the Academic Unit meeting. I don’t exactly remember what we were discussing, but he asked a question to all the students in the room that only I could answer. It was a great day!

What advice do you have for new students?
Keep an open mind and an open heart. Find your purpose at Florida Tech.

THERE’S AN APP FOR THAT!
The Florida Tech Orientation app is a one-stop guide to making the most of your Orientation experience— including event guides, your schedule, a campus map, our social media feeds and much more!

Campus Jargon Guide

Get in the know with this guide to common terms used on campus.

ASC—Academic Support Center, which offers free tutoring

Canvas—Learning Management System used by Florida Tech for all academic course work

FlexCredit—Part of the meal plan, on the student ID card. This money can be used at any dining facility or vending machine on campus. For food purchases only.

Jungle—The Botanical Garden on campus. Over 300 species of plants and 200 species of palm trees, takes up 30% of campus. Nice to walk through between classes.

Panther Cash—Money a student deposits onto his or her ID card. This money is used for purchases in the bookstore, laundry facilities, photocopy services, printing in the library and special services at the Health Center.

PAWS—Panther Access Web System, where you view grades, access financial aid information, register for classes, etc.

PDH—Panther Dining Hall

RAT—Rathskeller, a campus dining facility located under Evans Hall. Also offers a small convenience store, pool tables, video games, cyber den, coffee house, stage and large-screen TV.

SUB—Student Union Building, housing the bookstore, mailroom, SUB Cafe, Student Life Office and student organization offices.

TRACKS Account—Username and password that serves as a student’s electronic signature. Used to log in to any computer on campus and complete any online function related to Florida Tech.
What is “Color Wars”?

Color Wars is a cross-campus, multi-day competition where all new students are grouped into different colored teams based on their residence hall. These teams compete in many fun and challenging events — from cheer-offs to trivia wars to talent shows to bounce house obstacle courses to Pete Pleads (a version of Simon Says). Other events have included a glow paint night, a block party, minigame madness and a comedy hypnotist.

I would describe Color Wars as a field day on steroids. We have chants. We have T-shirts. We have rally towels. We have wristbands that display all of the colors. It is a great time!

Krishna Patel, Associate Director of New Student & Family Orientation

37 Cent Day:

Florida Tech was first founded on a donation of 37 cents. So, within Color Wars, there is a fundraiser called 37 Cents Day — where incoming students compete to raise money for a local charity. This year, Florida Tech students raised nearly $1,200 for the Brevard County Supply Zone, an organization that provides new supplies to teachers and students in underprivileged schools.
Can you catch a fish with a gallon-size bag and some crackers? Alum Evan can!

Setting up for our underwater survey #thisisharderthanitlooks

Outdoor classrooms are just the best!

Can you catch a fish with a gallon-size bag and some crackers? Alum Evan can!

Day 2 of BIO 2955/5022, Coral Reef Ecology. Not bad for a summer class!

Thinking about our long day of class on the water with @ismarexp

Setting up for our underwater survey #thisisharderthanitlooks

During our lionfish dissection, we learned how to extract the otolith (a bone within a fish’s ear) that scientists use to age the fish.

Big thanks to alumni Chelsea and Evan Tuohy, owners of Isla Mar Research Expeditions, Dr. Ralph Turingan and all the students in BIO 2955/5022 for an epic two-week field course in Puerto Rico.

Exotic Research Expedition

Animal behavior major Erin Walters spent her summer diving coral reefs, spotting sea turtles and taking in the historic sites of Cuba and Puerto Rico—all for course credit. The expedition focused on learning the tricks of the research trade. Thankfully, Walters brought us along with her as she Instagramed her experience on @MyFloridaTech
Next time you are on campus (maybe for Discovery Day, wink, wink), we suggest playing a fun game of eye spy? Here are some ideas to get you going.

We spy with our little eye something ...

- mystical
- old and red
- retro
- strange looking
- dapper
- for Hobbits
- tranquil
- friendly
- that goes nowhere