A CYBER WARRIOR

Fighting cybercrime in the real world.

NEW IN METEOROLOGY

A driving ambition — Student gamer builds his brand

AND IN ENGINEERING

Shields in space — Students focus on satellite safety
Embry-Riddle Aeronautical University offers the world’s premier collection of programs in aviation, aerospace, engineering, business, security and intelligence. Students immerse themselves in real-world research, pushing boundaries and reaching new career frontiers. By the time they graduate, they’ve interned at top flight companies, probed the farthest reaches of the solar system and helped unravel the deepest mysteries of the human body, all in preparation for future success.

Where will your future take you? Find out at our campuses in Florida, Arizona or Online anywhere in the world.
HANDS-ON EXPERIENCES

NASA is currently designing and developing a new spacesuit system, called the Exploration Extravehicular Mobility Unit (xEMU), for use during Artemis missions to the Moon that is adaptable for other destinations near and far. The next generation of spacesuits are designed to give astronauts enhanced mobility to accomplish their exploration tasks on the lunar surface.

Hit the Ground Running

Forensic Biology graduate Nina Egbalic (’19) says the hands-on experiences she got at Embry-Riddle have helped her “hit the ground running” by opening doors to several dynamic career options, including a stint at the Las Vegas Police Department.

Specifically, she credits an internship at The Biomechanics, a physical therapy and sports medicine center near the Prescott Campus, with helping her chart a career course she’s excited about.

“My passion is to not only be involved in my career, but also to be involved in my community,” she said. “I was able to learn a lot of individual knowledge from the different therapists I got to work with,” she said.

And her degree from a renowned STEM school like Embry-Riddle has Egbalic feeling “more than ready” to tackle whatever opportunities her future may offer. When it comes to her time at the university, Egbalic said:

“My passion is not only my passion, but also my obsession,” Carver says of spaceflight, adding: “My dream job really hasn’t changed much from what it was nine years ago.”

From Paper Planes to Payloads

In elementary school, he was known for designing innovative paper airplanes.

Today, as an Aerospace Engineering major at Embry-Riddle, Joshua Carver (’22) has already helped design suborbital research payloads for Blue Origin’s New Shepard rockets and is now part of the Eagle Space Flight Team, which is planning to launch a rocket of its own.

Carver worked on Blue Origin’s RainierOne, which launched in 2017, helping fit a science experiment into the rocket’s payload compartment. He did similar work with RainierTwo, which has yet to launch.

His previous work with Blue Origin transitioned smoothly into Carver’s current role as an Eagle Space Flight Team member. They are striving to launch a rocket and payload to fly beyond the Kármán line, the altitude where space begins.

“It’s not only my passion, but also my obsession,” Carver says of spaceflight, adding: “My dream job really hasn’t changed much from what it was nine years ago.”

As he looks toward tomorrow, Carver says he’s focused on taking advantage of the “wonderful engineering and aerospace opportunities that are available at Embry-Riddle.”

Next Level NASA

Embry-Riddle’s Nick Lopac (’20), part of a student team that designed an orbital camera mount for the International Space Station that was tested in NASA’s Neutral Buoyancy Lab by astronaut Victor Glover, is now playing a role in designing the agency’s newest spacesuits.

Lopac, a Spaceflight Operations major, earned an internship at NASA after the camera mount test and worked in the Johnson Space Center’s Anthropometry and Biomechanics Facility.

He used motion-capture technology to assess suit parts and also learned new software and coding languages, as well as how to use advanced 3-D body scanning hardware.

Lopac credits his work as lead technician and research manager at Embry-Riddle’s Spacesuit Utilization of Innovative Technology (S.U.I.T.) Laboratory with helping him make the most of his NASA opportunity.

It also helped him land the remote internship he did at the Johnson Space Center this past summer, supporting the NASA team developing the first new EVA spacesuit in 40 years. The new suit will likely be worn when astronauts return to the moon, an event now planned for 2024.
Preventing Injuries
The current prevention methods such as ankle braces are ineffective due to bulkiness, excessive movement and lack of comfort. Engineered for athletes, by athletes, a 3D printed, customizable and thin ankle brace was designed specifically for soccer players to limit inversion and eversion ankle sprains but allow natural range of motion.

Opening the Firewall
The Infosec Cybersecurity Scholarship program was established to address the ongoing cybersecurity workforce skills gap. Current estimates suggest there are more than 300,000 positions open in the U.S.

AEROSPACE PHYSIOLOGY

Spaceflight on the Brain
Long-term spaceflight presents many challenges, including a threat to the health of the human brain. That problem is hydrocephalus, fluid accumulating in the brain, and it is the focus of research by Embry-Riddle senior Haleema Irfan (‘21), who is majoring in Aerospace Physiology and Human Factors Psychology.

Hydrocephalus is provoked by shifts in the cephalic fluid that occur in microgravity and can cause symptoms that include impaired functioning. Irfan has her sights set on a sensor that would detect the condition before it poses a problem for astronauts.

“Studying hydrocephalus and its involvement in gravitational stress will allow scientists to better understand cerebral spinal fluid disorders. However, before exploring this condition, a rapid detection method should be created.”

Irfan’s proposed sensor would detect certain metabolites that are present with hydrocephalus. Her research is being funded by a Student Internal Grant from the Embry-Riddle Office of Undergraduate Research.

MECHANICAL ENGINEERING

Bracing for Change
Three Mechanical Engineering students who also made their marks as Eagle athletes have combined their academic and sporting skills to help address one of the most common injuries in sports: sprained ankles.

Izah Deang (‘20), who played volleyball, Sophie Brundin (‘20), a soccer player, and Quinn Guzman (‘20), a golfer, teamed up to research and create a lightweight, strong and comfortable ankle brace using additive manufacturing, more commonly known as 3D printing.

“To solve our own issues, and the number one injury in the world’s biggest sport, we decided to come up with a solution,” Deang said. “We invented a brace that is created to prevent ankle sprains.”

The brace designed by the trio uses a geometric mesh design that combines the benefits of the classic ankle brace setup concept with 3D printing and modern material science. That will result in a customized ankle brace that is lighter, more malleable and thinner than those currently available.

“The ultimate objective of this project is to produce a working product that will be available on the commercial market,” Deang said.

CYBER INTELLIGENCE & SECURITY

Passion Becomes Profession
When Michaela Adams (‘21) arrived at Embry-Riddle with some high school computer coding classes under her belt, she had no idea what doors the university could open for her. Now a senior, she’s landed two prime internships, served as president of the Prescott Campus Cyber Defense Club, landed an Infosec Cybersecurity Scholarship and discovered her passion for responding to cyber incidents.

“For me, it’s definitely about getting real-world experience,” she said. “I like that I have a view of a potential career now.”

The scholarship Adams earned is part of an effort by Infosec to fill the more than 300,000 cybersecurity openings by helping boost representation from women and minorities.

She says her classes, and her work with the Cyber Defense Club, prepared her well for her recent intern stints with a wearable technology company and a major theme park.

“That was an eye-opening experience, and it showed me how I can make a difference, find what I’m good at and apply it to cybersecurity,” she said.

Florida | Arizona | Worldwide/Online | erau.edu
One of the perks of going to school in Daytona, racing is always nearby. Here are a few of our team members enjoying the Daytona 500.

Pre-pandemic image. Masks and distancing are now in place.

The S.U.I.T. Lab has begun a series of underwater scuba tests to verify the design of ARRCHER in an analogous lunar environment. In less than a month ARRCHER will be shipped to @nasajohnson for testing in the Neutral Buoyancy Laboratory (NBL) as the finale to this year’s #MicrogNExT challenge. #Spacesuitup #GoERAU

The Council for College and Military Educators awarded $1,000 scholarships to seven service members and one spouse earning a degree through Embry-Riddle’s Worldwide Campus. Congratulations to all our Eagles! #GoERAU

Students in our #EagleWorks Advanced Vehicle Lab continue work on their attempt to break an electric vehicle land speed record! #GoERAU

Some pretty awesome riding up here in the #Prescott area! @erau_cycling_arizona #mountainbiking #cycling

Happy National School Spirit Day! @eraucheer wants to remind everyone to mask up and stay 6 feet apart. #GoERAU #eraucheer

What’s life like when you join the Embry-Riddle family? It’s rewarding, challenging — and fun. Have a look for yourself. Are you ready to #GoERAU?

Let’s get social!
AERONAUTICS

Dual enrollment student completes aviation trifecta for 16th birthday

Although he is only 16, Frankie Fremont already has a list of accomplishments that would make someone twice his age proud. The rising high school junior has finished two classes in Embry-Riddle’s Dual Enrollment program and recently started a third, on top of his regular classes at Faith Lutheran High School in Las Vegas.

But perhaps his biggest feat so far was celebrating his birthday in January with a unique aviation trifecta: First solos in a helicopter and a fixed-wing aircraft, then passing his glider pilot check ride, all within 24 hours of turning 16.

“It was pretty nerve wracking,” Fremont said of his birthday achievement, which included a four-hour drive from Las Vegas to California to take the glider test. “But I was able to pull it together because I really wanted to please everyone who helped me.”

That would include his parents, James and Thomasina, who were very pleased indeed. “It was complicated, it was sticky, but he found the determination and motivation to move forward,” his mother said. “He found a way to be strong and stay absolutely focused, which still chokes me up.”

Although Fremont has always been an aviation fan, his initial passion was baseball. But he broke his throwing elbow when he was 14 — and that opened the door to flying.

He started glider training, and his powered flight training started not long after with a helicopter ride he got as a Christmas present from his parents, and soon expanded to include fixed-wing flying as well.

He discovered Embry-Riddle’s unique dual enrollment program, which allows high school students to earn valuable early college credits, when he was looking to bolster his aviation studies.

“We were incredibly impressed” with Embry-Riddle, said Fremont, who has already completed one class in English and one in Aeronautical Science, with a Computer Science course on tap for the summer.

“The instructors are fantastic,” he said. “But my favorite part is that everything, even the writing assignments, can all be tied into aviation.”

His father said the Embry-Riddle experience has fueled Fremont’s academic ambition and ability.

“He’s learned to be a better student,” he said. “He dives into schoolwork with determination now and, without a doubt, it’s increased his confidence.”

Connect anytime, anywhere with Worldwide’s eUnion Virtual Community.

Worldwide students can now feel just as connected to the University experience as students on residential campuses thanks to eUnion, a one-of-a-kind virtual community that students, faculty and staff can access from anywhere on any device using their Embry-Riddle credentials, either online or through the eUnion mobile app!

This exclusive site, modeled on social communities such as LinkedIn and Facebook, allows collaboration in a dynamic environment while building a strong sense of camaraderie, spirit and pride.

eUnion members can build their own profiles to share information such as professional backgrounds, hobbies and skills. Another exciting facet to eUnion is the ability to create and join groups — that’s where the social connections happen! Users can post comments and pictures, create polls and respond to each other in group discussion feeds.

eUnion also offers access to a whole new portal with direct links to Canvas and other tools in ERNIE, the chance to join groups focused on common interests and serves as the home to the Worldwide Campus Student Government Association.

Are you ready to connect? There is a whole wide world of students, faculty and staff waiting to join you and help make your educational journey more fun, more connected and more successful.
STUDENT FACTS

6,400 UNDERGRADUATES

- 50 states/107 countries represented
- 10% international students

ATHLETIC TEAMS

WOMEN’S
- Basketball
- Cross Country
- Golf
- Lacrosse
- Rowing
- Soccer
- Softball
- Tennis
- Track & Field

MEN’S
- Baseball
- Basketball
- Cross Country
- Golf
- Lacrosse
- Rowing
- Soccer
- Tennis
- Track & Field
- Volleyball

COED
- Cheerleading

CLUBS & ORGS

200+ student clubs ranging from Mars Society to Musicians Club; and from Eagles FM-WIKD 102.5 to Microgravity Club; as well as Club, Intramural & Recreational Sports.

METEROLOGY

Driven to be First

Dan Nyman (’22) is going somewhere fast.

The junior Meteorology major is a video game whiz who was recently named “The Fastest Driver in North America,” beating out 15,000 other gamers in the World Gaming Forza Motorsport 7 North American Championships. He went undefeated to capture the title and the $7,500 prize that comes with it during the Canadian International AutoShow in Toronto.

The New Jersey native says his recent esports experience has actually altered his career goals.

“A major part of esports is building your own brand, through interviews and social media content, which ultimately allows you to get sponsors and build a following,” Nyman said.

This kind of brand building, he said, has now “really piqued my interest in marketing and broadcast” — so much so that he is now considering pursuing a career in broadcast meteorology after he graduates, a path followed by a number of Embry-Riddle meteorology alumni such as Vicki Graf and Aly Bayens.

While some might consider playing video games a distraction from studying, Nyman doesn’t see it that way. Working to be the best requires dedication, whether the objective is winning a race or mastering a subject.

“It takes a really strong work ethic and lots of dedication to be the best in any sort of sport or activity, and video games are no different. I often apply the same strategies to practice as I do to studying, which allows me to do both as efficiently and effectively as possible.”

Dan Nyman (’22)

SUCCESS ON ICE

For the first time in its 21-year history, the Embry-Riddle Eagles Ice Hockey Team earned its way into the National Championship Tournament, thanks to victories over Georgia Institute of Technology and Florida Gulf Coast University.

The team compiled a 15-12-2 season record in one of the toughest conferences in the country and had high hopes after winning a tournament bid. The cancellation of the event after the pandemic was a blow but didn’t dim their accomplishments.

“...this team was one of the most important parts of my undergraduate experience.”

RYAN MARKS ’21, Team Captain

Breaking Barriers

For Samantha Villagran (’20), a love affair with aviation that started early in life is hitting an unprecedented stride thanks to Embry-Riddle.

“I’ve always loved planes and aviation,” she said.

“When I found out about Embry-Riddle Aeronautical University and that it is the best in aviation and aerospace, that’s where I wanted to go,” Villagran said.

Villagran has made the most of it. The UAS major is the first female student to fly the school’s groundbreaking Penguin C.

Although Villagran is well aware that women are under-represented in aviation, she never saw that as an obstacle.

“It was kind of a shock to realize I’m going into a field with very few women,” she said. “Embry-Riddle taught me to see past those barriers, and now I don’t even see it as a challenge.”

Samantha Villagran (’20), Unmanned Aircraft Systems Science
STUDENT FACTS

3,000 UNDERGRADUATES

- 48 states / 45 countries represented
- 7% International students

ATHLETIC TEAMS

WOMEN’S
- Basketball
- Cross Country
- Golf
- Outdoor Track
- Soccer
- Softball
- Volleyball

MEN’S
- Baseball
- Basketball
- Cross Country
- Golf
- Outdoor Track
- Soccer
- Wrestling

CLUBS & ORGS

190+ student clubs ranging from the Mountain Biking Club to Society of Women Engineers; and from the Blue Eagles Skydiving Team to the Brotherhood of Steel; as well as a variety of Intramural and Recreational sports.

PAR FOR THE COURSE

The Women’s Golf Team made the most of a season shortened by the pandemic by winning the Embry-Riddle Spring Invite by more than 70 strokes and capturing the top three individual honors. Sophomore Kendall McBean secured the number one spot with a stellar performance during the three-day event. She was followed by senior standout Jessica Williams, with senior Megan Hessil and freshman Hannah Spiller tying for third and senior Tana House finishing seventh.

STUDENT LIFE

My “Dream Job” is Now Reality

Four years at Embry-Riddle took Aerospace Engineering major Alexis Hepburn (’20) exactly where she wanted to go: Straight to her dream job at Raytheon Missiles and Defense. Hepburn, who started with the aerospace giant after graduating in May, made the most of the research track her professors and mentors laid out for her during her time as an undergraduate.

Besides being an honors student, she also was a member of the Society of Women Engineers, the NASA Space Grant Consortium, one of the leaders of the Campus Academic Mentor program and active in a variety of STEM outreach and community service activities.

On top of that, Hepburn also earned Aviation Week’s “Tomorrow’s Technology Leaders: The 20 Twenties” Award for her outstanding academic performance, industry and civic contributions and exceptional research, which focused on advanced plasma thrusters that one day could be integrated on small satellites.

The Washington native credited her mentor, Assistant Professor of Mechanical Engineering, Dr. Daniel White, and Honors Program Director, Dr. Anne Biebottcher for helping her plasma research be accepted for a 2019 Portz Interdisciplinary Fellowship and for the chance to present at the American Institute of Aeronautics and Astronautics (AIAA) Propulsion and Energy Forum in 2019 and 2020.

Hepburn’s success on campus also translated directly into internships that escalated into her most recent summer stint at Raytheon Space Systems Operations, which led directly to her full-time job offer.

“The class experience that I got here really helped me to get prior internships, which gave me a successful springboard to get into this very unique role,” Hepburn said.

The Golden Eagles Flight Team won the National Intercollegiate Flying Association’s Safety and Flight Elevation Conference (NIFA SAFECON) regional competition. The Golden Eagles participated in the Region II competition held at Prescott Regional Airport, which included seven teams from Arizona and California. The team finished first overall with 396 total points. San Jose State University finished a distant second with 88 points.

“My very proud of the way that the team came together and put their best foot forward to win. Every member worked tirelessly to prepare for competition and constantly pushed each other to do better.” - Colin Ho-Tsung (’20)

AVIATION

The Streak Lives On

For the past 33 years running, Embry-Riddle Aeronautical University’s Golden Eagles Flight Team has won the National Intercollegiate Flying Association’s Safety and Flight Elevation Conference (NIFA SAFECON) regional competition. The Golden Eagles participated in the Region II competition held at Prescott Regional Airport, which included seven teams from Arizona and California. The team finished first overall with 396 total points. San Jose State University finished a distant second with 88 points.

“I am very proud of the way that the team came together and put their best foot forward to win. Every member worked tirelessly to prepare for competition and constantly pushed each other to do better.” - Colin Ho-Tsung (’20)
HOW TO APPLY
Submit the following:
› Application: erau.edu/apply
› Official high school and/or college transcript or GED scores.
› ACT and/or SAT scores (strongly recommended).
› $50 nonrefundable application fee.

Please note: Additional documents may be required of specific audiences.
› We evaluate applications on a continuous basis. Once all documents have been received, we will notify you of your admission status.

Based on the quality of our programs and the exciting and growing industries we serve, Embry-Riddle degrees are in high demand. Some of our programs may have limited capacity and we encourage you to check the website or contact one of our admissions counselors for updates.

SCHOLARSHIPS
Every student applying for admission is automatically considered for scholarships.

Scholarships:
› Are based off of student’s grade point average and test scores, if submitted.
› Do not have to be repaid.
› Are sometimes need-based and require a FAFSA be submitted.

FINANCIAL AID
96% of Embry-Riddle freshmen receive some form of financial aid through scholarships, grants and loans.

To apply for need-based financial aid:
› Fill out the Free Application for Federal Student Aid (FAFSA) at fafsa.ed.gov. It is available October 1 of the year before you intend to start college.
› Include Embry-Riddle’s federal school code on the FAFSA: 001479.

The FAFSA is the first step in receiving additional aid. Notification of your complete financial aid package will arrive after you submit your FAFSA form. Federal and state financial aid programs are available to U.S. citizens or permanent residents who qualify.

COMING VISIT
A visit to our residential campuses in Daytona Beach, Fla. and Prescott, Ariz. lasts about three hours and includes:
› Walking tour of campus.
› Admissions presentation.
› Meeting with an admissions counselor.

Register online where you can customize your visit experience and view schedule of available tour times. You may also request to sit in on a class or to meet with a professor, a financial aid advisor or an ROTC representative.

CONTACT US
Schedule your visit and learn more about Embry-Riddle.

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