




ANNUAL REPORT 2024



THE UNIVERSITY OF
ALABAMA IN HUNTSVILLE



THE UNIVERSITY OF ALABAMA IN HUNTSVILLE IS ONE OF THE NATION'S PREMIER RESEARCH UNIVERSITIES, OFFERING A CHALLENGING HANDS-ON CURRICULUM THAT ENSURES OUR GRADUATES ARE PREPARED TO BECOME TOMORROW'S LEADERS.

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A MESSAGE FROM THE PRESIDENT DR. CHARLES L. KARR

Charles L. Karr

For more than 55 years, we've proudly called Huntsville home—a city known for its energy and innovative spirit. UAH was founded to help power that innovation, and since then, our institution has grown alongside this remarkable community. UAH is situated in one of the most vibrant and dynamic cities in the country, and we remain committed to advancing our programs, expanding opportunities and building a brighter future for our students and the region.

Our students truly are our “why.” This year, we welcomed 8,564 students, including a freshman class of over 1,200. We saw increased enrollment from across Alabama—especially from the Birmingham and Mobile areas. Freshman enrollment from Tennessee was up by 8.5% compared to last year. It's easy to see why: UAH routinely ranks among the “best value” universities in Alabama. We have continued to focus on enrollment, and recently welcomed Dr. Michael P. Poll as our first vice provost for enrollment management. We are excited to see him help UAH advance to the next phase of our enrollment journey.

Students are choosing UAH for the opportunities inside and outside of the classroom. UAH is routinely a top contender in the NASA Human Exploration Rover Challenge, winning first place five times in its 31-year history. Following back-to-back wins in 2023 and 2024, the team overcame nearly insurmountable obstacles and rebuilt their vehicle overnight in order to bring home a third-place finish in 2025. UAH also dominated the American Astronautical Society International CanSat competition in 2024, with teams placing first, third and fourth nationally, and all three teams placing in the top 10 in the final international rankings.

This year has also been big for UAH Athletics. Of the seven Division II schools in Alabama, UAH boasts the strongest athletics program in the state, ranking 36th nationwide in the NCSA Power Rankings. Across the board, the Chargers have been regulars in the postseason. Seven UAH Athletics



teams competed in the NCAA Division II postseason in the 2023–2024 season, with eight appearances in Conference Championship tournaments. Among 15 sports, 128 student-athletes earned a 4.0 GPA in 2024.

We are proud of our faculty, who are shaping the future right here in the Rocket City. Bold, dedicated, and deeply committed to student success, they deliver a world-class education that prepares tomorrow's leaders. This year, UAH celebrated countless faculty achievements that reflect the excellence driving our mission. From engineering and nursing to science, education, business and the arts, their expertise and passion inspire students to reach higher and dream bigger.

We are also continuing to strengthen our relationships within the research community, both here and abroad. With our proximity to Redstone Arsenal and Cummings Research Park, we are mere steps away from some of the world's most innovative developments. We continue to be a top research university with R&D expenditures totaling \$154.5 million last year. UAH is ranked in the top 25 of five federally funded programs nationally and number one among state of Alabama universities in six programs and areas, including NASA and DOD expenditures. We are focused on continuing to add to our portfolio of critical research to further explore new worlds and defend our nation.

UAH is building the future—powered by our students, faculty and staff. We're moving forward with the support of our alumni and friends, and with the drive to explore and innovate through cutting-edge research. As Huntsville continues to grow and lead, UAH stands ready to grow with it—because a great community deserves a university focused on what's next.

UNIVERSITY FACTS

547
Number of Faculty

1,118
Number of Staff

51,124
Number of Alumni
Living Today

1,212
2024 Freshman Class

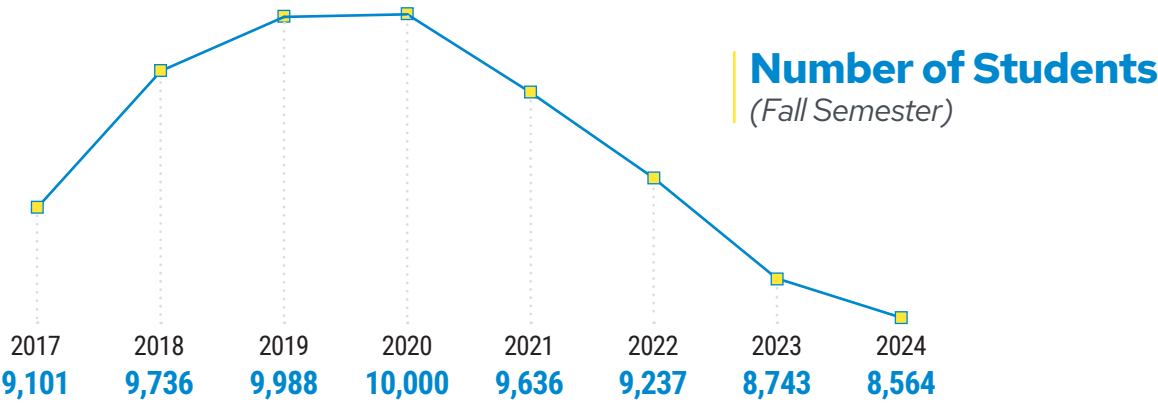
26.4
Average ACT Score
Fall 2024 Freshman Class

3.9
Average GPA
Fall 2024 Freshman Class

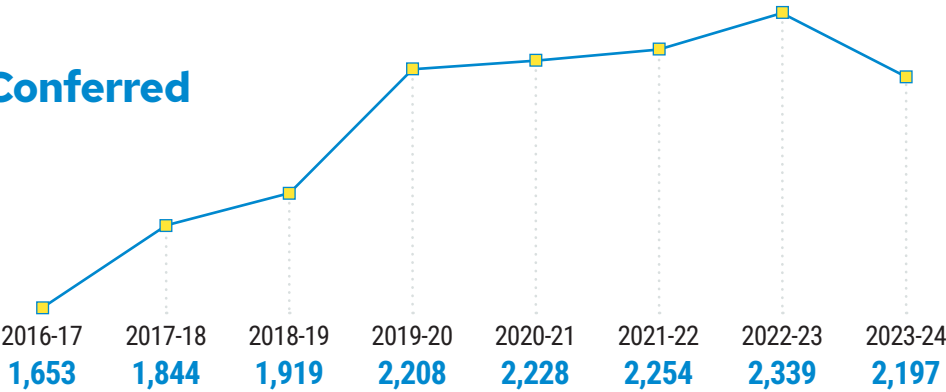
1,764
Graduate School Enrollment
Fall 2024

12
Patents Issued

72
Invention Disclosures
submitted in FY24



Degrees Conferred



UAH Research

\$154.5M

Research & Development Expenditures for FY24

FY23 marks the 12th year in a row UAH has had **five or more federally funded research expenditures ranked in the top 25** of National Science Foundation Higher Education Research & Development Survey Rankings.

National Rank



State Rank



AEROSPACE/AERONAUTICAL/ASTRONAUTICAL ENGINEERING

8

1

ATMOSPHERIC SCIENCE AND METEOROLOGY

10

1

ASTRONOMY

10

1

COMPUTER AND INFORMATION SCIENCES

10

1

INDUSTRIAL AND MANUFACTURING ENGINEERING

25

2

NASA RESEARCH EXPENDITURES

13

1

DEPARTMENT OF DEFENSE RESEARCH EXPENDITURES

22

1

ACADEMICS

CELEBRATING 55 YEARS

UAH celebrated its 55th anniversary in 2024 – it officially became an autonomous university within The University of Alabama System on June 16, 1969. Today, UAH is a top research university with six colleges, more than 100 areas of study and 17 high-tech research centers. The university achieved a record \$154.5 million in research and development expenditures in fiscal year 2023, and it has a \$615 million annual impact on the state. UAH Athletics has 15 NCAA sports programs with 57 conference championships. Athletics scholarships of \$3 million are awarded annually.

“UAH has made a remarkable impact on our students and the wider community for the past 55 years,” said UAH President Dr. Charles Karr. “Young people choose our university because they want to be educated by the brightest faculty members. Government and community members

engage with UAH as they know there are opportunities available through intensive research and collaborative learning. UAH is committed to higher learning and being a community partner for years to come.”



PARTNERING FOR THE FUTURE

UAH is committed to developing partnerships around the globe to further enhance innovation and workforce development. Through numerous memoranda of understanding (MOUs) with industry partners and other universities around the world, UAH is developing collaborations to provide students with additional opportunities for hands-on experience and support faculty research.



UAH hosted the 2024 AUKUS Industry Forum in October 2024. This first-of-its-kind event brought together U.S. administration officials, lawmakers and local industry representatives to explore how AUKUS, the trilateral security partnership between Australia, the United Kingdom and the United States, impacts the defense industrial base in Alabama.

KEY ANNIVERSARIES

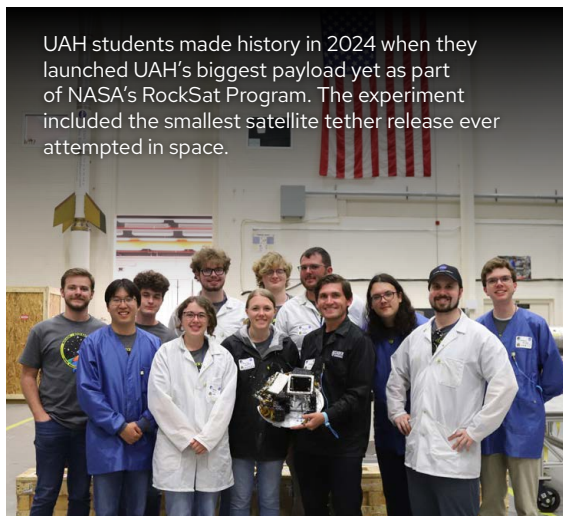
The Lancers – the official student ambassadors for UAH – celebrated 50 years of service to the university in 2024.

The College of Nursing (CON) celebrated 50 years of excellence during 2024–25 with its Golden Anniversary Series of events. More than 8,000 UAH alumni have graduated from the nursing program to date.

The Severe Weather Institute – Radar and Lightning Laboratories (SWIRLL) facility celebrated 10 years of lifesaving weather research in 2024.

UNDERGRADUATE RESEARCH

At UAH, academic excellence is only part of the equation. It's the real-world application of knowledge that truly prepares students for success. Across our 17 research centers, UAH researchers are finding new ways to support our community and help solve the world's challenges in aerospace, defense, healthcare and beyond. UAH faculty members are committed to inspiring the next generation of researchers. From plant genomics to astrophysics and lifesaving weather research, UAH undergraduates play an important role in these efforts.



GIVING BACK

UAH students also thrive on giving back to their communities. Students from the Rotorcraft Systems Engineering & Simulation Center (RSESC) participated in a drone fly day at nearby Sparkman High School in fall 2024 to inspire local middle and high school students to consider careers in STEM. The outreach has spread outside Alabama and internationally. A team from the UAH Research Institute travelled to Guam in 2024 to support a Missile Defense Agency (MDA) STEM outreach initiative. Members of the winning 2024 Human Exploration Rover Challenge (HERC) team

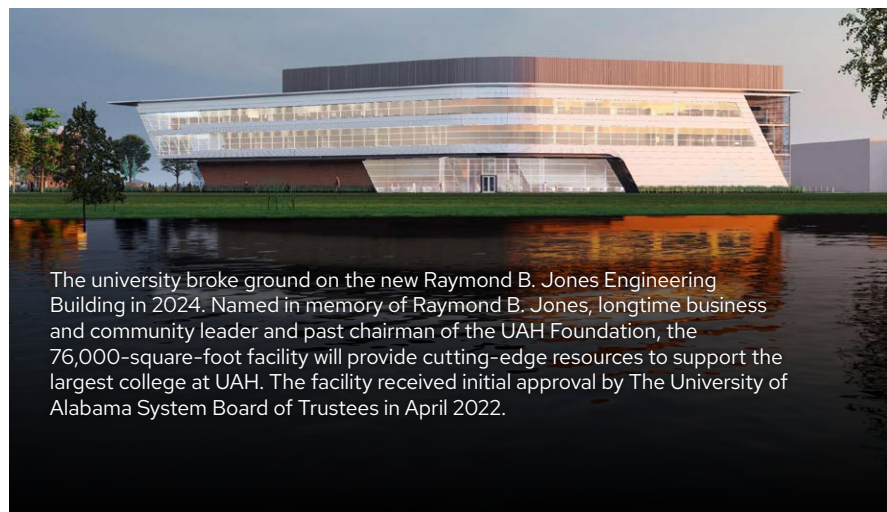
traveled to the Dominican Republic to visit with students at the Instituto Tecnológico de Santo Domingo, or INTEC University, during a summer STEM conference on campus. A shared passion for the HERC challenge has blossomed into a special relationship between the two teams.



BUILDING FOR GROWTH

As a high-tech hub and the fastest-growing region in the state, the Huntsville and North Alabama area has a constant demand for a highly skilled STEM workforce. New facilities such as the new Raymond B. Jones Engineering Building and UAH Center for Cybersecurity Research, Education and Advanced Training will offer research and collaborative teaching facilities to ensure that UAH remains a leader in meeting the state's workforce needs.

Conceptual view of the UAH College of Engineering Building. Renderings are conceptual and subject to change. All projects are subject to the approval of the University of Alabama System Board of Trustees.



YEAR IN REVIEW



Sam Wilhelm receives Gulf South Conference Commissioner's Trophy, the conference's most prestigious honor

UAH junior Caroline Bendickson honored as Goldwater Scholar for work in plant genomics

More than 1,200 students become part of the Charger Alumni Family as UAH unveils a new ceremonial mace at commencement

UAH spring 2024 grad Thomas Teper receives CBYX internship from State Department, German Bundestag

UAH researchers design revolutionary low-cost wearable biosensor to enhance athletic performance and physical health

Dr. Eric Smith honored by state teachers' group for literary scholarship

UAH hosts statewide conference on "Artificial Intelligence in Alabama Higher Education"

JANUARY

FEBRUARY

MARCH

APRIL

MAY

JUNE

UA System board approves Dr. Ronnie Hebert as vice president for student affairs, dean of students at UAH

UAH welcomes basketball coaches Mick Hedgepeth, Allen Sharpe to lead men's, women's teams

UAH leads national VIVID coalition to advance cybersecurity education with \$3.2M DOD grant

UAH College of Nursing master's program named second in state in U.S. News graduate rankings

UAH engineering students top NASA Human Exploration Rover Challenge for second consecutive year

Dr. Michael Newchurch receives NASA Exceptional Public Service Medal for his work in air-quality and atmospheric-chemistry research

UAH hosts inaugural Business of Space Conference

UAH student Josephine Severance receives CLS award to study Mandarin Chinese in Taiwan

UAH celebrates its 55th anniversary on June 16, 2024



UAH researcher demonstrates Milky Way's last major galactic collision happened much more recently than previously thought



YEAR IN REVIEW



UAH's new Air Force ROTC operating location, the first of its kind, takes off with 30 cadets

UAH announces search for a master developer to enhance college-town experience

UAH researchers help Alabama lead charge to meet surging battery needs

UAH teams excel in 2024 international CanSat competition

UAH Lancers student ambassadors mark 50 years of service to the university

UAH to partner with the Advanced Manufacturing Innovation and Integration Center (AMIIC)

UAH hosts High Energy Laser Optics Metrology Workshop aiming to advance HEL technologies

Dr. Michael Poll named Vice Provost for Enrollment Management at UAH

UAH hosts 2024 Conference on the Common Read with Alabama Poet Laureate Ashley M. Jones

UAH College of Nursing hosts Health Equity Symposium, bringing community together to collaborate on improving health care

Volleyball head coach's office in Spragins Hall named for Leila L. Nabors, UAH's first volleyball coach

UAH plasma researcher follows up first-of-its-kind study of Alfvén waves with groundbreaking new findings, possibly key to mystery of solar corona heating

JULY

AUGUST

SEPTEMBER

OCTOBER

NOVEMBER

DECEMBER

UAH kicks off the 2024 fall semester with a student population of 8,564

UAH recognized for commitment to improving experiences and advancing outcomes for first-generation college students

SWIRLL celebrates 10 years, becomes the largest mobile radar facility in the U.S.

UAH hosts AUKUS industry forum

UAH College of Nursing celebrates 50 years by kicking off Golden Anniversary Series of events

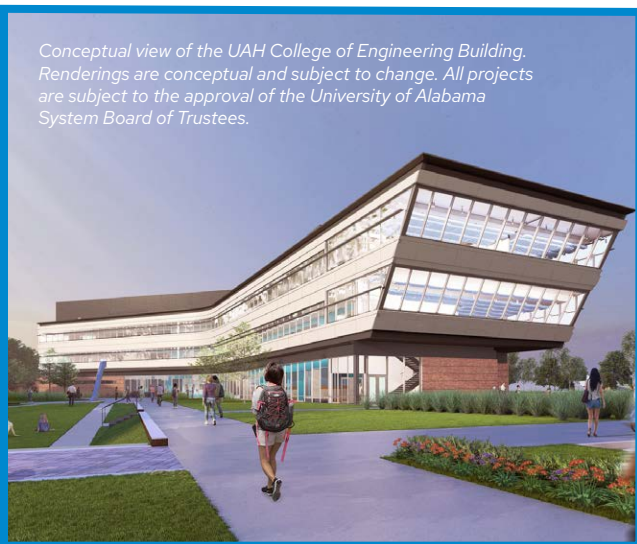
UAH President Emeritus Robert Altenkirch and his wife, Beth, honor Coach Les Stuedeman with softball endowment

UAH dedicates Black Box Theatre in memory of longtime professor Dr. Robert E. James

UAH Holiday Jazz presents gifts of talent and inspiration at third annual event

Nearly 1,000 students become part of the Charger Alumni Family as UAH unveils new blue robes at commencement

Conceptual view of the UAH College of Engineering Building. Renderings are conceptual and subject to change. All projects are subject to the approval of the University of Alabama System Board of Trustees.

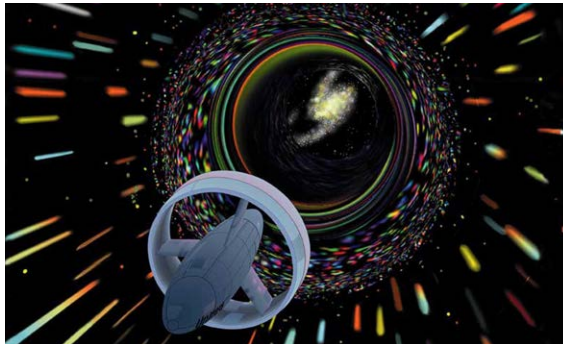


Construction begins on Jones Engineering Building

RESEARCH

UAH's Higher Education Research and Development (HERD) expenditures for FY24 totaled \$154.5 million, while the university's five-year total is \$639 million. FY23 marks the 12th year in a row UAH has had five or more federally funded programs ranked in the top 25 nationally. UAH is 8th in aerospace engineering; 10th in computer and information sciences, atmospheric science, and astronomy; and 25th in industrial and manufacturing engineering. The university is also 13th in NASA and 22nd in DOD expenditures.

UAH alumni Dr. Jared Fuchs and Dr. Christopher Helmerich published a paper that demonstrates for the first time that a subluminal warp drive is possible within the bounds of known physics without the need to employ exotic unknown forms of matter or energy, while also advancing the understanding of gravity.

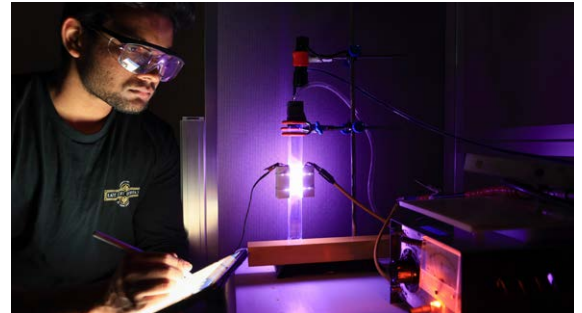


Dr. Richard Lieu published a paper that shows, for the first time, how gravity can exist without mass, providing an alternative theory to dark matter. The researcher contends the excess gravity necessary to bind a galaxy together could be due instead to concentric sets of shell-like defects in structures commonly found throughout the cosmos. Lieu's research was featured in Popular Mechanics.

**POPULAR
MECHANICS**

Incredible Breakthroughs

UAH is managing a 10-year, \$40 million federal investment in plasma science and engineering that will help transform modern society. The current grant is the \$20 million, five-year Future Technologies & enabling Plasma Processes effort that involves everything from the creation of novel materials, sterilization and food safety, to agricultural applications and space weather forecasting.



Dr. Agnieszka Truszkowska won the 2024 Oak Ridge Associated Universities Ralph E. Powe Junior Faculty Award in recognition of the potential of her goal to improve chemical reactors for ammonia synthesis. Ammonia is an essential component of the most common agricultural fertilizers, making it a critical chemical produced globally on a massive scale.

Dr. Chaity Mukherjee won a \$1 million Air Force Research Laboratory grant to develop artificial neural networks that could combat radio frequency (RF) attacks called "spoofing," where an adversary transmits RF signals coded to trick RF communication receivers. Artificial neural networks are inspired by the structure and function of the human brain.

Solving the World's Challenges

Until recently, it was believed that human urine was devoid of microbes. Now, in a study, one of the first of its kind, Dr. Tanya Sysoeva demonstrated that, even in the bladders of children, a pediatric urobiome exists. The presence of specific microbes may affect the development and progression of urinary tract infections.



Dr. Haley Hoy supported a study using machine learning algorithms to identify risk factors for cardiovascular disease and mortality among nonalcoholic steatohepatitis (NASH) patients who have undergone a liver transplant. NASH is an inflammatory fatty liver disease in which fat builds up in the livers of people who drink little or no alcohol.

Ian Wagner, a doctoral candidate of mechanical and aerospace engineering, received the U.S. Department of Energy Office of Science Graduate Student Research award for a project to study plasma-jet-driven magneto-inertial fusion at the Los Alamos National Laboratory. The initiative seeks to advance plasma-jet magneto-inertial fusion, which could one day lead to abundant clean energy.

Students Andrew Blackford and Trent Cowan used a NASA open-source program to reveal that areas in Houston, Texas, with the highest poverty levels were an average of 2 degrees F warmer than areas with the lowest poverty levels, and also noted the Clean Air Act's efficacy is locally diminished by Houston's urban pollution island.

Dr. Keka Biswas co-authored a paper that studied the use of artificial intelligence and neuronal networks to significantly cut the time required for medical professionals to classify lesions in breast cancer ultrasound images. This approach can effectively represent and utilize digital content of images for more precise and rapid medical analysis.

Ledia Shehu, a doctoral student, received a NASA Future Investigators in NASA Earth and Space Science and Technology (FINESST) grant to develop a model for 3D-printed concrete using simulated lunar materials. Using lunar materials to print buildable concrete will significantly reduce costs and provide a more practical approach to building on the moon.



ATHLETICS

UAH student-athletes continued to build on a legacy of success, maintaining winning traditions in competition, in the classroom and in the community.

Seven UAH Athletics teams competed in the NCAA Division II postseason in the 2023-24 season, with eight appearances in conference championships. This post-season success included softball, which extended its streak of NCAA tournament appearances to 21 straight years. Volleyball advanced to the Gulf South Conference (GSC) Championship final for the second straight season.

UAH boasts the strongest Division II program in the state. Of the seven Division II schools in Alabama, UAH has consistently been at the top, ranking 36th nationwide in the NCSA Power Rankings.

Track and field has had an incredible 2024-25 season. The UAH men's track and field team captured the program's first-ever GSC Conference Indoor Championship while the women's team earned second overall. Both teams earned spots in the 2025 NCAA Division II Indoor Track & Field Championships in March, with two athletes breaking program records.

SPOTLIGHT ON CHARGER BASKETBALL

In early 2024, UAH entered an exciting new chapter for UAH basketball, welcoming Mick Hedgepeth as the new head coach of the men's basketball program and Allen Sharpe as the head coach of the women's basketball program. Both of these programs excelled.

In 2024-25, the third-ranked men's basketball team broke the school record in their quest for a championship title, achieving the longest winning streak in school history of any sport with 32 consecutive wins. The team advanced to the NCAA South Region Championship game for the eighth time in program history.

Women's basketball closed out an incredible season in March, after making it to the quarterfinals of the NCAA South Region Championships. This was the team's fourth overall NCAA postseason appearance. In addition, the team broke UAH records with 25 total wins – the most in UAH women's basketball history during the NCAA era.



A FOCUS ON ACADEMICS

UAH student-athletes are standouts on the field, but a large number also excel in the classroom. UAH Athletics honored 128 student-athletes who achieved a 4.0 GPA during the 2024 calendar year as part of 4.0 Night during Homecoming weekend.



UAH's student-athletes were honored as all-conference performers 74 times in the 2024 calendar year. One standout, Sam Wilhelm, earned four All-American distinctions in cross country, indoor track and outdoor track in 2024. He also won the GSC Commissioner's Trophy, presented annually to the student athlete who best combines outstanding performance on the field or court and high academic achievement in the classroom with significant community service and extracurricular activities.

HONORING CHARGER ALUMNI

In addition to honoring current student-athletes, Athletics welcomed seven alumni into the UAH Athletics Hall of Fame in September 2024 as part of Alumni Weekend. These seven alumni were enshrined for their extraordinary accomplishments and contributions as a Charger.

2024 Inductees

- Stephanie Berry, Softball
- Josh Magette, Basketball
- Emily Miller, Volleyball
- Kyle Nichols, Baseball
- Jared Ross, Hockey
- Ostap Stromecky, Soccer
- Tracy Porter Valenzuela, Softball



A NEW ERA FOR TRACK AND FIELD

UAH will soon transform a field and parking lot on the west side of John Wright Drive across from Charger Park into UAH's first on-campus track. Along with an NCAA-compliant, 400-meter, 8-lane running track, the project will include jumping, vaulting and throwing event venues. The project will also provide UAH the opportunity to host on-campus sporting events, including Gulf South Conference and Division II championship meets. "This new facility will not only create better opportunities for our current student-athletes, but will also strongly benefit our recruiting efforts as we continue to build a championship-level program," said UAH Director of Athletics Dr. Cade Smith. In April 2025, the UA System Board of Trustees granted Stage III approval of the project, enabling UAH to move forward with advertising and bidding the project.



Conceptual view of the UAH Track and Field facility. Renderings are conceptual and subject to change. All projects are subject to the approval of the University of Alabama System Board of Trustees.

ALUMNI

ALUMNI SPOTLIGHT: LAST-MILE FUND
ENABLED **ASHRAF OINDRY** TO CONTINUE
PURSUING HER DREAMS

In December 2022, Ashraf Oindry fulfilled her dream of graduating summa cum laude with a bachelor's degree in computer engineering from UAH. But a year before she achieved her academic goal, an unexpected financial hardship threatened her plans for a bright future.

Oindry had worked hard to reach her senior year at UAH with top grades and an internship at Siemens. When her father's business failed in the midst of the COVID-19 pandemic, her family in Bangladesh could not maintain their previous level of support.

Thanks to the UAH Last-Mile Fund, Oindry was able to pay for her final year of tuition. She kept her grades up, completed her Siemens internship and continued to be an active Charger as a member of the Student Government Association, the Society of Women Engineers and the engineering honor society Tau Beta Pi.

"You don't want to give up your dream when you're so close to it," she says. "I needed to focus on my studies because there are so many harder classes in senior year, like the senior design project. Dealing with a financial struggle can only keep you back. It's really helpful to have the Last-Mile Fund to push a student at the very end."

In the two years since Oindry graduated, she's brought other dreams to reality: She became a software developer for Hexagon. She married fellow UAH grad Stephen Stammen, and they bought a house.

Oindry is glad she can be a productive part of the community she now calls home, and she hasn't forgotten her fear when she thought she might have to leave UAH – or her gratitude when the Last-Mile Fund enabled her to stay and thrive.

"This fund has helped me build the life that I'm living right now. This fund is a wonderful way to help someone. Thank you so much, UAH."



UAH GIVING

UAH works with alumni, friends, businesses and other community partners to provide support and funding through a variety of giving programs.

Together, the university and the UAH Foundation raised more than \$8 million during fiscal year 2024. The endowment value increased by more than \$14 million. Planned giving also increased this year.

More than \$1 million was awarded to students through donor-funded scholarships, and 131 students received help from the Last-Mile Fund.

These contributions go beyond mere donations; they represent a meaningful investment in our students and the broader community.

379 Number of Endowed Funds in 2024

2,721 Total Number of Gifts/ Pledges in 2024

1,204 Number of Total Donors in 2024

147 Total Planned Gifts, Including 11 New Commitments in 2024

\$8,087,303 Total Value of Gifts for 2024

\$1,041,927 Total Planned Gift Payments for 2024

\$112,652,181 UAH/UAHF Endowment Total





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