

Strategic Plan Progress Report

Iowa State University's 2022-2031 Strategic Plan demonstrates the commitment to innovation to make our students, Iowa and the world better.

To be the most student-centric leading research university

We are...

» ... training students to help Iowa industries.

The Center for Industrial Research and Service (CIRAS) reports that students from across the university have completed **more than 1,280 capstone projects** for more than 440 businesses, delivering an economic impact of more than \$447 million according to CIRAS.

» ... putting high impact into career goals.

Iowa State University's first-year students and seniors **participate in high-impact practices at a significantly higher rate** than other Carnegie Research Intensive Universities, according to a 2023 national survey of student engagement. More than 97% of ISU undergraduates who earned their degrees during 2023-24 participated in at least three high-impact practices. Examples of high-impact practices — which support students' academic and career goals — include undergraduate research, internships, the honors program, learning communities, study abroad, peer leadership, capstone courses and more.

» ... making a college education more affordable.

A 2024 ranking by Money.com puts Iowa State University in the **top 10% in the nation for affordability**. ISU received the highest overall score — 4.5 out of 5 stars — among public colleges and universities in Iowa for affordability, education quality and positive student outcomes. In 2022-23, 44.4% of Iowa State seniors graduated without debt. The remaining 55.6% represent the lowest percentage of a graduating class with debt in more than 15 years.

» ... adding more donor-funded scholarships.

This fall, around 72% of undergraduate students and 77% of first-year students are supported through donor-funded scholarships and grants. Scholarship fundraising is a perennial priority for Iowa State. During FY24, **\$44.8 million was raised for scholarships**, and 123 new scholarship funds were established. A total of 8,105 students received scholarships funded by private support in FY24.

» ... preparing students to imagine better healthcare.

In a national competition, architecture students won **first place for their design of a critical access hospital for a rural, medically underserved community**. Their design solutions emphasized patient-centered care, sustainable building practices and seamless integration into the surrounding community.

» ... producing nationally honored future leaders.

Victoria Kyveryga, who completed a bachelor's degree in chemical engineering and chemistry, will be in a Ph.D. program as part of the **prestigious Knight-Hennessy Scholars Program**, which develops a community of future global leaders to address the world's complex challenges through innovation.

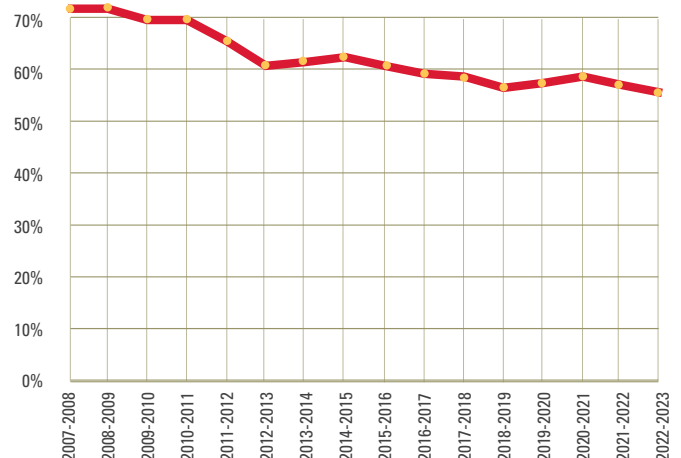
» ... producing nationally honored STEM scholars.

Emma Alstott, majoring in global resource systems and horticulture, was selected for a Goldwater Scholarship, **the nation's premier undergraduate scholarship in mathematics, natural sciences and engineering**.

» ... producing prestigious Fulbright scholars.

Two students and one recent graduate were selected for the **prestigious Fulbright U.S. Student Program**. The Fulbright awards give grants to participants who wish to pursue graduate studies, conduct research or teach English abroad.

PERCENTAGE OF STUDENTS WITH LOAN DEBT



To be the university that cultivates a diverse, equitable, and inclusive environment where students, faculty, and staff flourish

We are...

» ... continuing to attract more students.

Fall 2024 enrollment at Iowa State is 30,432, an **increase of 255 students over last year**, who hail from all 99 Iowa counties, all 50 states and 116 countries. Fall enrollment included 5,906 first-year students, an increase of 16% over the past five years. Nearly 21% of first-year students are first-generation and nearly 23% are eligible for Pell grants.

» ... extending a warm welcome to all students.

Iowa State's new tradition of Cyclone Welcome Weekend — now in its third year — invites all students to celebrate the **start of a new academic year with all-day programming** prior to fall-semester classes. The program helps first-year students meet new friends, learn about different parts of campus and engage with out-of-class activities. Cyclone Welcome Weekend is coordinated with Destination Iowa State, the events that help connect first-year students with campus and prep them for classes.

» ... an excellent place for employees to work.

Forbes ranked Iowa State University **#12 in the state of Iowa in its 2024 list of America's Best Employers**. Iowa State offers programs and services to help employees with work,

personal and family commitments. The university is dedicated to supporting the well-being of its community in the pursuit of productive, meaningful and balanced lives.

» ... recognized globally for education and employability.

According to the Center for World University Rankings, ISU is in the top 1% of 20,966 ranked universities based on education, employability, faculty and research. Also, Iowa State is ranked in the top 30% of national universities in the latest U.S. News & World Report rankings. **Iowa State is #1 for agricultural and biological engineering programs and #26 for entrepreneurship.**

» ... enhancing support for students' well-being.

Seventy-two percent of ISU seniors completing the National Survey for Student Engagement said that ISU emphasized creating a supportive learning environment by providing support for students' overall well-being. One key program to achieving that goal is Cyclone Support, an all-campus approach to better serve all Iowa State students. The program, which includes a comprehensive web portal, encourages and promotes help-seeking opportunities, fosters connections among the campus community and enhances student success — **all which lead to higher persistence and graduation rates.**

To be the university that fosters lifelong learning

We are...

» ... Iowans' source for science-based education.

Over the past year, ISU Extension and Outreach facilitated **9,630 educational programs** around the state. Statewide, extension and outreach specialists made nearly 15.3 million direct and indirect educational contacts with Iowa adults and youth. Iowans seeking educational resources downloaded 1,036,032 materials from Extension and Outreach.

» ... building industry skills in artificial intelligence.

In the summer of 2024, **ISU offered for the first time an artificial intelligence** course called Master PyTorch. PyTorch is an open-source, deep-learning framework for AI. The course is intended for software engineers, data scientists, data engineers, data analysts, research scientists and software developers, participate in the hands-on, real-world training with professionals from companies.

» ... recognized nationally for online excellence.

ISU's online master's degree program in healthcare analytics and operations was **ranked #6 in the nation** by AnalyticsDegrees.org — and the most affordable program among its top 10. Iowa State's online cybersecurity master's degree program was ranked **#20 in the nation** by Fortune, with criteria that included average undergraduate GPA of 2023-24 enrollees and graduation rate.

» ... meeting a demand for technical expertise.

A new online master's degree program in digital health will help meet a growing demand for skilled professionals at the intersection of data analytics, technology and healthcare. The program marks another milestone in **addressing student and workforce demands** by introducing innovative degree programs that align with emerging trends in industries. A new online undergraduate certificate in cybersecurity will help employers looking for expertise in protecting their customers and employees from cyberthreats. The certificate program is aimed at working professionals, bridging the knowledge gap between a two- and a four-year degree.

» .. addressing mental health across Iowa.

More than a million Iowans live in communities without enough mental health professionals to meet local needs. Since 2018, ISU Extension and Outreach has certified more than **2,200 Iowans in Mental Health First Aid**, raising awareness of mental health risk factors and warning signs. Participants learn strategies for how to help people in crisis and noncrisis situations, and where to turn for help.

To be the university that creates opportunities and forges new frontiers

We are...

» ... expanding success in research grants.

Iowa State researchers attracted a record **\$346.2 million in external funding** for the fiscal year that ended June 30, 2024. That's the third straight year of record research funding over \$300 million. The latest total includes record amounts of federal and non-federal research funding. Overall, Iowa State's total external funding for FY24 increased to \$544.6 million, rising 2.7% over the prior year. Iowa State ranks in the Top 3% in the nation for research among universities without a human medical school.

» ... increasing patent applications.

Iowa State inventors filed 32% more patent applications in FY24 compared to the previous three years. Iowa State was #42 on the Top 100 U.S. Universities Granted Utility Patents in 2023, a list published by the National Academy of Inventors. The ranking improved by 12 placings from 2022, and places ISU 26th among public institutions.

» ... partnering to serve Midwest defense and manufacturing sectors.

Iowa State partnered with the University of Illinois System and Western Illinois University to launch the **Quad Cities Manufacturing Institute**, which will work with local industry to study and innovate in advanced manufacturing, additive manufacturing and materials engineering for use in defense and non-defense applications. ISU researchers will work to develop protective, lightweight and impact-resistant materials and structures to protect our nation's soldiers and their equipment.

» ... training graduate students to help administer research projects.

ISU's Research Administrators Internship Program for graduate students is developing interest and expertise in the **field of research administration and research development**. The graduate student interns gained experience in funding opportunities and topics in research development. The initiative spurred a successful \$3.7 million National Science Foundation grant that will support additional student experiences at ISU and other Iowa colleges.

» ... investing in potential high-impact research.

ISU's Presidential Interdisciplinary Seed and Initiative Programs exist to grow large-scale collaborations, promote and support interest in **high-risk, high-reward research**, and create productive, diverse teams. One recent result from these investments was \$10.6 million in USDA funds for an ISU-industry partnership to encourage more farmers to plant cover crops and perennial prairie grass by demonstrating how harvested crops can be processed into renewable natural gas.

» ... leading tests to withstand future tornados.

ISU aerospace engineers are designing a \$14 million national testing facility to study the effects of tornado downbursts, with a goal of **designing more resilient homes** and buildings that can better withstand extreme wind. The project is funded by the National Science Foundation.

» ... exploring possibilities of agrivoltaics.

ISU researchers, in partnership with the Electric Power Research Center at ISU, are developing cropping practices that could be a **innovative marriage of agriculture and solar power sites**. With a \$1.8 million U.S. Department of Energy grant, they are exploring agrivoltaics — establishing horticulture crops and pollinator habitats on solar farms.

» ... innovating to convert biomass to useful products.

ISU chemistry researchers are developing new synthetic catalysts to break down cellulose, the plant fibers in biomass such as crop residues. The team is building nanoparticles that act as **super enzymes**. The new catalysts could make biomass a practical source of sugars that can be converted into fuels and chemicals. Improved biomass conversion could advance a carbon-neutral economy and sustainability efforts.

“Achieving a third consecutive record for sponsored research and growth in overall external funding strengthens Iowa State University as a national research powerhouse and leading land-grant university. This success is the result of our faculty and staff researchers' excellence in securing competitive funds to address complex challenges, innovate solutions for business and industry and generate economic opportunities that benefit all Iowans.

— Wendy Wintersteen, President

To be the trusted partner for proactive and innovative solutions

We are...

» ...collaborating with state partners to grow Iowa business and industry.

The economic benefit of this work is tremendous. Businesses supported by Iowa State's Center for Industrial Research and Service (CIRAS) through the Iowa Economic Development Authority's Manufacturing 4.0 Technology Investment Grant program reported **\$123 million in financial impact and 441 jobs added or retained over two years.**

» ...supporting entrepreneurs to launch new ventures.

Iowa State's flagship entrepreneurial programs are one reason ISU was named **Entrepreneurial University of the Year for the Americas**. In 2022-23, ISU's Pappajohn Center and local Small Business Development Center served 1,423 clients, which led to 63 new ventures, 362 jobs and \$41.4 million in capital raised in the state of Iowa.

» ...ensuring a safe food supply.

The caseload for Iowa State University's Veterinary Diagnostic Laboratory continues to increase every year. In fiscal year 2023, the VDL processed more than 124,000 cases involving nearly **1.7 million individual tests**. More than 90% of the lab's cases come from animals being raised for food. The new VDL is designed to meet the growing need.

» ...protecting power grids from cyberattacks.

Iowa State engineers received a \$2.5 million dollar Department of Energy grant to develop tools that can **detect and mitigate cyberattacks** and power system faults in real time. The researchers will use artificial intelligence and machine learning tools to help detect grid problems and malicious activities.

» ...transforming rural power generation.

Iowa State is leading the effort to build the **first "microgrid" in rural Iowa**. The project will create a utility-scale microgrid in Montezuma to provide reliable, resilient and affordable electricity. The new system will feature power generation from solar panels, a battery storage system and two chargers for electric vehicles.

» ...preparing students for high-demand jobs.

More than 60% of Iowa State students major in a STEM field and **more than 1,300 of those students received Workforce Grants** to prepare them for high-demand jobs in Iowa. Nearly 70 degree programs fit the criteria for Workforce Grants authorized by the Iowa Legislature in 2023.

» ...equipping snowplow drivers with technology to stay on the road.

Iowa State engineers are working to develop, test and prove the **concept of a snowplow navigation system**. The system is designed to help snowplow drivers maintain their position in a lane during white-out and blizzard conditions. The project, which is supported by the Iowa Department of Transportation, will help snowplow drivers avoid collisions with snow-covered cars or debris in the roadway.