

OKLAHOMA STATE UNIVERSITY

COLLEGE OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY



ZINK CENTER FOR COMPETITIVE INNOVATION 2023-2027 STRATEGIC PLAN



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Introduction

The Zink Center for Competitive Innovation was founded in 2022 with a gift from The Zink Family Foundation. The Center perpetuates the spirit of John “Jack” Zink, whose legendary ingenuity, grit, and competitive drive carried his team to the Indianapolis 500 Victory Circle and beyond.

We envision graduates of Zink Center programs prepared to lead intellectually, technically, and ethically. We envision graduates who are ready and willing to tackle the "impossible," who have the technical, interpersonal and leadership skills necessary to propose innovative solutions to challenging problems and the grit, perseverance and creativity to get the job done!

Vision

The Zink Center will transform Oklahoma State University students into ethical and professional next generation leaders, whose grit, innovation, and competitive spirit will make the world a better place for all.





Mission

The mission of the Zink Center is to create, promote and develop interdisciplinary innovation teams for the benefit of current and future generations of OSU students.

We will engage with a broad spectrum of current and future OSU students to create, promote and develop state, regional and national collegiate and STEM competition teams in all areas of interest to CEAT students.

Collegiate Competition Goal

Achieve national recognition for our highly professional, student-led, interdisciplinary competition teams.

Many engineering societies are well-known for their international collegiate competitions. Competitions bring together students from across the country or the region to compete for top honors in a variety of categories. The Zink Center will leverage the recent successes of our teams to develop and maintain vibrant, nationally-recognized, student-run competition teams. We will provide design and build spaces for our teams and mentor team leaders in communication, project management and teamwork skills.

Strategic Priorities for Competition Teams Goal

- Incubate and develop new CEAT competition teams within the existing Interdisciplinary Senior Design framework
- Develop student leaders by:
 - › Sponsoring leadership seminars
 - › Providing hands-on training in manufacturing, design, planning, and problem-solving skills
 - › Mentoring team leaders in one-on-one and group settings
 - › Develop and maintain well-equipped, well-organized, safe, and collaborative, student-run makerspaces and design environments
- Sponsor team travel to national competitions
- Create Excellence in Leadership fellowships
- Create bylaws that:
 - › Articulate the leadership and funding model governing the Zink Center
 - › Articulate the qualifications, responsibilities, and benefits associated with membership on the:
 - » Zink Center Advisory Council
 - » Zink Center College of Mentors
 - » Zink Center Student Leadership Council

Metrics for Competition Teams Goal

- Four keynote lectures from industry leaders each semester
- Ten online training modules in critical leadership and management topics
- Six 'hands-on' training modules in industry-critical fabrication and manufacturing processes offered once each semester
- Three faculty and/or industry mentors engaged with each Zink Center competition team
- State-of-the art, student-run makerspaces supporting five Zink Center competition teams
- \$100,000 in annual team competition travel and Excellence in Leadership fellowships



The Zink Center will leverage the exceptional makerspaces, teaching laboratories and shop facilities available to CEAT students to create a culture of innovation within the CEAT academic programs. The Zink Center will partner with the CEAT academic units, the Riata Center for Innovation and Entrepreneurship and the School of Entrepreneurship to create opportunities for interdisciplinary student teams to develop and nurture a spirit of innovation and entrepreneurship.

Innovation Goal

Create a culture of innovation within the CEAT programs.



Strategic Priorities for Innovation Goal

- Collaborate with the School of Entrepreneurship to design an ‘Innovation Option’ suitable for adoption by the CEAT academic programs
- Create a freshman/sophomore design-build competition to anchor the CEAT freshman experience and provide opportunities for CEAT students to develop teamwork, innovation and rapid prototyping skills
- Create a section of Introduction to Engineering focused on innovation and entrepreneurship. The course will feature:
 - › Guest speakers from the Riata Center and School of Entrepreneurship
 - › Mentoring and instruction in teamwork and communication
 - › Development of hands-on rapid prototyping skills
 - › Participation in a freshman/sophomore design-build competition
- Collaborate with the Riata Center to create opportunities for interdisciplinary teams of entrepreneurially-minded students to persist through graduation by:
 - › Creating suitable technical electives
 - › Accommodating interdisciplinary senior design teams focused on launching a business around a new product design
- Develop metrics for the innovation goal
- Adopt entrepreneurial options in three CEAT programs
- Increase capacity to 100 students participating in the freshmen/sophomore design competition each semester
- Increase capacity to 100 freshmen participating in the innovation section of Introduction to Engineering each academic year
- Create five interdisciplinary senior design teams focused on prototyping a new product and launching a new business each academic year

STEM OUTREACH COMPETITION GOAL

Support existing STEM competition initiatives with mentors, instructors, and facilities.

The Zink Center is uniquely positioned to support CEAT, state and national competitions designed to inspire Oklahoma middle and high school students to pursue careers in science, technology, engineering and mathematics. Zink Center technical staff will collaboratively support hands-on STEM competitions in our makerspaces by providing instruction in manufacturing process and instruction in manufacturing process, design, teamwork and leadership, and project management.

Strategic Priorities for STEM Outreach Competition Goal

- Support established state, regional and national STEM competitions by providing participating student teams access to Zink Center makerspaces
- Participate in planning, facilitating, and leading STEM competition events on the OSU campus
- Encourage, train, and incentivize CEAT student leaders to participate in CEAT STEM outreach activities
- Increase the use of social media platforms to broadly communicate Zink Center success stories and activities at the student and organization levels

Metrics for Interdisciplinary Design Teams Goal

- Support five STEM outreach competition team activities each year
- Annually support two national and regional STEM programs in our makerspaces
- Five student leaders actively collaborating with CEAT outreach programs and activities



