

2020-2025



School of Chemical Engineering Strategic Plan



School of Chemical Engineering
Oklahoma State University
2020-2025

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Proud of its land grant heritage, Oklahoma State University (OSU) advances knowledge, enriches lives, and stimulates economic development through teaching, research, and service. The mission of the College of Engineering, Architecture, and Technology (CEAT) is to advance the quality of human life through strategically selected programs with strong social, economic, and environmental dimensions, while emphasizing graduate programs in engineering that provide leadership for the state, region and nation, and are internationally recognized for excellence.

Chemical engineering was established at OSU in 1917. Notably, Oklahoma A&M College was the first school in the southwestern part of the United States to offer a degree in chemical engineering. For almost a century, OSU has been producing engineers, knowledge and technology which have transformed society. A retrospective review of the accomplishments of the School's faculty and alumni since 1917 affirms the School's emphasis on high expectations, hard work and the power of human creativity.

MISSION

The School of Chemical Engineering (CHE) mission is to develop human resources, professional knowledge, and the infrastructure through which chemical engineering can contribute to human welfare. The School of Chemical Engineering strives to achieve the mission by educating and preparing next generation of chemical and petroleum engineers with knowledge and skills for life-long careers, conducting research and scholarly activities, and sharing the knowledge through outreach activities.



VISION

The School of Chemical Engineering is recognized for its positive, meaningful and enduring impacts on humanity through its academic, research, and outreach programs and for its respectful focus on students. Specifically, the School of Chemical Engineering vision is to:

1. Sustain a nationally competitive undergraduate program recognized for quality, fundamental-practice balance, and educational leadership.
2. Attain widespread recognition for contributions to professional knowledge and tools, which are useful, widely accepted, and practiced by others.
3. Sustain and create infrastructures that facilitate synergism, creativity, personal and professional growth, and productivity by students and professional personnel both within OSU and the outside world.

ACADEMICS

Goal

- Academic Goal: Recruit, retain and graduate diverse, intellectually talented students throughout Oklahoma and the nation with a world class education to address the chemical engineering challenges of the 21st century with a focus on the next 5-10 year needs of the State of Oklahoma and the region's employers to maintain their competitive advantage through innovation.

Metrics

- Number of CHE faculty (goal = 18 to 20, 2018-2019 AY 19)
- Number of undergraduate degrees granted per year (goal = 60-80, 2018 – 2019 AY 79)
- Number of M.S. and doctoral degrees granted per year (goal = 6 MS and 8 Ph.D., 2018 – 2019 AY 10 MS and 3 Ph.D.)
- Percentage of underrepresented undergraduate students (goal is increase to reflect the population breakdown of Oklahoma, 2019 breakdown was 39 % women, 5 African American, 10 Native American, 19 Hispanic, 21 multiracial of 308 undergraduates)
- Percentage of students graduated within 4 years (goal 60 %, 2019 54.1 %)
- Percentage of students graduated within 6 years (goal 90 %, 2019 84.9 %)
- Percentage taking and passing FE exam (taking goal 60 %, spring 2019 20 % taking, passing goal 85 %, spring 2019 82 %)



RESEARCH

Goal

- Research Goal: Create impact through a growing research enterprise that engages faculty, graduate and undergraduate students in funded federal, state, and industry-sponsored research.

Metrics

- Research expenditures increase to an average of \$ 200,000 per year per faculty by FY 25 (2019 approximately \$ 120,000)
- Number of large institutional and/or center-based grants (mega grants) applications funded with CHE and/or PETE leading or participating (2 submissions per year, 3 awarded over \$1M by FY 25)
- Number of peer reviewed journal publications per year per faculty (goal = 3)



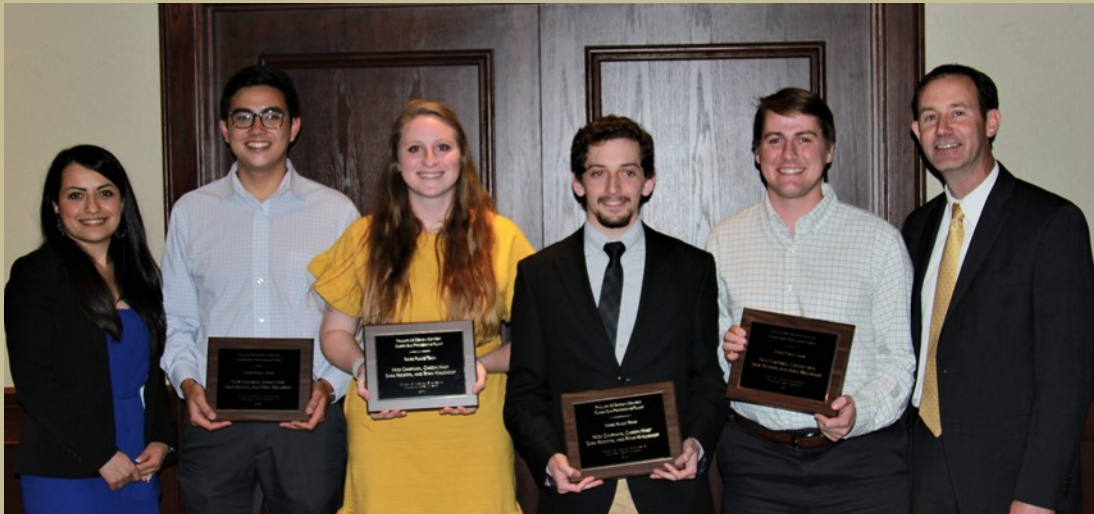
ADVANCEMENT AND REPUTATION

Goal

- Elevate the reputation, engagement, and resources of the School to be among the top public chemical engineering programs in the US.

Metrics

- Number of endowed faculty fellowships, professorships, or chairs (2019 eight endowed chairs and one endowed professorship)
- Number of graduate fellowships and undergraduate scholarships (2019 1 fellowship and 57 scholarships)
- Increase in annual CHE fundraising to \$ 500,000 per year
- Participation rate of alumni as donors to the School (numbers of CHE donors, goal = 150 per year, 84 in FY 2019)
- Accomplishments of alumni = based on surveys of at least 40% of alumni per year
- Awards of nationally competitive scholarships and fellowships
- Faculty awards
- Student awards



Date of approval by CHE faculty: September 11, 2020

Date of approval by CEAT Executive Council: November 12, 2020