COLLEGE OF ENGINEERING, ARCHITECTURE AND TECHNOLOGY

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The vision of the College of Engineering, Architecture and Technology (CEAT) is "To be the leading public university in engineering, architecture, and technology that engages diverse students, faculty and staff with industry and government to deliver excellence in advanced learning, leadership, relevant research, and benefits to society."

"Our mission is to provide a diverse population with a quality education in engineering, architecture and technology. Through CEAT, OSU develops ethical leaders who promote economic and community vitality with technical knowledge, innovation, and communication expertise that connects scientific research, professional education, technical assistance and scholarship to industry, the State of Oklahoma, the nation and the world."

The College of Engineering, Architecture and Technology is a community of scholars, innovators and leaders that is transforming our lives. The preparation of professionals that anticipate the needs of a changing world is at the nexus of society, economy, ethics, sustainability and humanity. The College is committed to educating professionals that innovate, design and build projects that provide solutions for both the developed and the developing world.

The mission of the College of Engineering, Architecture and Technology (CEAT) is one that embraces students from diverse backgrounds to imagine and discover the challenges of engineering, architecture and technology, and to bring about innovation using their proficiency in science, mathematics, communications, ethics and humanity. This mission is built on the foundation of the University’s mission and the expectations of a world class university.

As Oklahoma’s land-grant university, CEAT fulfills the most fundamental premise that founded OSU; to promote economic and community viability through technical assistance, academic and professional education, training and communication in the areas of engineering, architecture and technology, and by connecting scientific research and scholarship to industry, communities, and individual citizens in Oklahoma, the region and the world.

As we progress into the future, professionals with a higher education will continue to be largely responsible for shaping our world. The power they exercise is an exciting prospect and presents a sobering responsibility. Less complex problems have been solved and are now a part of history. Many difficult problems remain. The need for talented and highly educated professionals is obvious; one will be embarking on a lifetime of challenge as he or she prepares for a career in engineering, engineering technology or architecture at Oklahoma State University.

The College of Engineering, Architecture and Technology offers a complete spectrum of educational opportunities at both the undergraduate and graduate levels designed to give graduates the capability and flexibility to meet the ever-changing needs of a society that is committed to technological innovation. To make continuing contributions, engineers, architects and technologists must have many abilities at their command. The modern tools and processes of industry must be understood. The processes of design and analysis require a firm understanding of mathematics and the sciences. An effective engineer, architect or engineering technologist must develop sensitivity to human needs, ideas, institutions and cultures. These programs prepare graduates to be effective contributors within human organizations and provide an increased understanding of both the technical and non-technical factors that shape our human environment. With this firm foundation, and a commitment to lifelong learning, College of Engineering, Architecture and Technology graduates are fully prepared to make contributions to society throughout their professional careers.

The curriculum in each program provides the optimum combination of breadth in the enduring fundamentals and specialization in a discipline. Each curriculum sensitizes the student to ethical, social, cultural, and global issues that will shape their ideas and contributions. To equip the student to contribute to solutions at the cutting edge of technology, curricula are continuously evolving to include current applications of the principles. Through the combination of theory, practice and improved sensitivity to diverse issues, graduates will be prepared to support their diverse interests while positively contributing to the advancement of technology and the world.

ENDEAVOR was opened in the fall of 2019. This one of a kind, hands-on, 72,000-square-foot facility allows undergraduate students to explore and experiment with engineering principles, systems, and new technologies. ENDEAVOR is a platform for interdisciplinary and collaborative learning and solutions that lead to entrepreneurial enterprise.

Academic Programs
Academic programs offered in the College of Engineering, Architecture and Technology culminate in the following degrees:

Schools of Engineering

- Bachelor of Science in Aerospace Engineering, Biosystems Engineering with options in Bioprocessing and Food Processing, Environment and Natural Resources, Machine Systems and Agricultural Engineering, and Pre-medical; Chemical Engineering with options in Biomedical/Biochemical and Pre-medical; Civil Engineering with an option in Environmental; Computer Engineering; Electrical Engineering; Industrial Engineering and Management; and Mechanical Engineering with options in Premedical or Petroleum.
- Master of Science in Biosystems Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering with options in Control Systems and Optics and Photonics, Engineering and Technology Management, Industrial Engineering and Management, Materials Science and Engineering, Mechanical and Aerospace Engineering
with an option of Unmanned Aerial Systems and Petroleum Engineering.

- Master of Engineering in Electrical Engineering and Mechanical Engineering.

School of Architecture

- Bachelor of Architecture, Bachelor of Architectural Engineering.
- Graduate Certificate in Integrative Design of Building Envelope.

Division of Engineering Technology

- Bachelor of Science in Engineering Technology in Construction Engineering Technology with options in Building and Heavy, Electrical Engineering Technology with a computer option, Fire Protection and Safety Engineering Technology, and Mechanical Engineering Technology.
- Master of Science in Engineering Technology with an option in Fire Safety and Explosion Protection.
- Master of Science in Fire and Emergency Management Administration.
- Doctor of Philosophy in Fire and Emergency Management Administration.

Accreditation

UNDERGRADUATE ENGINEERING DEGREE PROGRAMS
Undergraduate engineering programs are separately accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

UNDERGRADUATE ENGINEERING TECHNOLOGY DEGREE PROGRAMS
The undergraduate engineering technology programs are separately accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

UNDERGRADUATE ARCHITECTURE DEGREE PROGRAM
"In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year term, an eight-year term with conditions, or a two-year term of continuing accreditation, or a three-year term of initial accreditation, depending on the extent of its conformance with established education standards. Doctor of Architecture and Master of Architecture degree programs may require a non-accredited undergraduate degree in architecture for admission. However, the non-accredited degree is not, by itself, recognized as an accredited degree."

The Oklahoma State University School of Architecture offers the following NAAB-accredited degree programs:

B. Arch. (154 undergraduate credits)

Next accreditation visit: 2025

http://www.naab.org/.

High School Preparation

In addition to the curricular requirements for admission specified by OSU, the College of Engineering, Architecture and Technology strongly recommends that students have a fourth year of mathematics and an additional year of laboratory science.

Initial placement in OSU mathematics courses is by placement examination to ensure that each student will be challenged but has the preparation to be successful in the first mathematics course. Placement in science courses is based on prior preparation in the science and completion of or placement beyond prerequisite mathematics courses. When appropriate, a student with an exceptionally strong background can obtain academic credit by advanced standing examination or by College Level Examination Program (CLEP) tests or similar.

Enrolling in the College of Engineering, Architecture, and Technology

A freshman student who has been admitted to OSU can be enrolled directly into a CEAT degree program if the student has both of the following performance requirements:

1. an ACT Composite score of 24 or higher, or a total SAT score of 1160 or higher, and
2. an ACT MATH score of 24 or higher, or a SAT Math score of 600 or higher, OR achieve a GPA of 3.5 or higher (on a 4.00 grading scale standard weighting to The College Board's Advanced Placement courses and the International Baccalaureate higher-level courses) in the required 15 core high school courses.

SAT score is the combination of Critical Reading and Math sections only. SAT scores represent tests taken on or after the National March 2016 test.

Prospective engineering, architecture or technology students who do not meet these performance qualifications may enroll in any other college or may enroll in University College in the Pre-CEAT program and work with a CEAT-focused advisor to gain the academic background for enrollment in CEAT degree programs. Those students will be enrolled in a CEAT degree program when they have met the following performance requirements:

1. passed all prerequisite MATH courses needed to enroll in Calculus I or Calculus for Technology I, and
2. has an OSU Cumulative GPA of at least 2.0.

Transfer students can enroll directly into a CEAT degree program if they satisfy all OSU resident transfer student requirements, have a GPA of at least 2.0, and are qualified to enroll in Calculus I or higher in the MATH sequence. Other transfer students may enroll in University College in the Pre-CEAT program until they meet the qualifications for enrolling in a CEAT pre-professional program.

Students transferring to CEAT from another major at OSU must meet the same requirements for admission as a student transferring from another college or university.

Special College Programs

CEAT Living/ Learning Program (LLP). CEAT residential floors have been established in CEAT Parker Hall for both male and female CEAT students. Parker Hall is reserved for CEAT Freshman and provides an immersive environment to help freshman succeed in CEAT and at OSU. Special programming is provided, and upper-class mentors live on each of the floors. The CEAT Parker In Residence program allows a CEAT representative to live on the ground floor of Parker Hall and
provide inspiration and mentorship for students. The second floor of CEAT Parker Hall is referred to as Maude's Squad, and is our freshmen females LLP. All Living/ Learning Programs provide an atmosphere that is conducive to study. The students experience a community where they can work together, have access to tutoring and other services, and serve as role models for other students. Special activities are planned for the floors, including events with faculty and other leaders. They are highly recommended for student success in CEAT.

**CEAT Summer Bridge** is a three-week residential, on-campus, preparatory program for incoming freshmen students who have been accepted to Oklahoma State University and who plan to study a major in CEAT. This program is designed to guide students as they transition from high school to the academic rigors of CEAT coursework through academic review, mock exams, orientation seminars and engineering design projects. In addition, the students will build relationships with peers, faculty and staff, and start the process of building strong study habits with the assistance of CEAT upperclassmen as mentors. https://ceat.okstate.edu/studentservices/summer-bridge-program.html

The **Discover Architecture Program** introduces high school students to Architecture, Architectural Engineering, Landscape Architecture, and Construction Science and Management. This week-long summer program has academic projects that are designed to stimulate creativity and be fun! Participants live in campus housing, and complete projects that include the application of sketching and designing in model, using computer presentation tools, and several hands-on building projects to help students understand if a career in the building arts might be right for them. The program is offered by Oklahoma State University faculty at the Stillwater campus for students who are at least 16 years of age. https://ceat.okstate.edu/arch/discover-architecture.html

The **Pre-CEAT Program** is housed within University College but physically located in CEAT. This program provides a focused advisor, tutoring and other activities to help students get academically ready for success in CEAT.

**CEAT Scholars Program** provides educational experiences for a select group of students to develop and enhance their technical competence, world view, professional and public responsibility, and leadership skills. Based on demonstrated academic and leadership potential, up to 100 scholars are selected each year, by application and interview, to enter this four-year program. Students participate in special lectures, regional tours, cultural events, seminars, personal development activities, faculty mentoring, and international travel. https://ceat.okstate.edu/scholarships/ceat_scholars_program.html

**CEAT Freshman Research Scholars Program** provides opportunities for accelerated intellectual development of a select group of students. Each student is assigned a research faculty mentor and participates in a research program. The initial assignment is for one year and it may be extended based on student interest, research project continuation and mentor availability. https://scholardevelopment.okstate.edu/freshman-research-scholars/prospective-freshman-researchers (https://scholardevelopment.okstate.edu/freshman-research-scholars/prospective-freshman-researchers/)

**WW Allen Scholars Program** is designed for top academic students, who also show significant promise in leadership and career ambition. The program is highlighted by the opportunity to pursue a master's degree at the University of Cambridge in the UK following graduation from OSU. https://ceat.okstate.edu/scholarships/w-w-allen-scholars-program.html

**Phillips 66 SHIELD Scholars Program** provides scholarships and professional and personal development through enrichment activities, seminars and community service. The program is for current students enrolled full-time in chemical engineering, civil engineering, computer engineering, electrical engineering, fire protection safety engineering technology, industrial engineering, mechanical engineering or materials engineering. http://ceat.okstate.edu/scholarships (http://ceat.okstate.edu/scholarships/)

**CEAT Grand Challenge Scholars Programs** focus on preparing students to be the generation that solves the grand challenges facing society in this century with emphasis on integrative research, interdisciplinary curriculums, entrepreneurship, global understanding and service learning. https://ceat.okstate.edu/gcsp.html

**CEAT Diversity and Inclusion Programs (CDP)** provide services to support, retain and graduate all CEAT students which includes underrepresented populations such as Native Americans, African Americans, Hispanic/Latino Americans, Women, First-Generation, Non-Traditional, Disabled, Veterans and LGBTQ. All students are welcome to participate, learn and celebrate the value of a diverse CEAT community. https://ceat.okstate.edu/studentservices/diversity-equity-inclusion/index.html (https://ceat.okstate.edu/studentservices/diversity-equity-inclusion/)

**CEAT Career Services** is dedicated to helping students reach their career goals by providing individualized career assistance, specialized workshops, and resources on a variety of topics including career exploration, job search strategies, resume and job search correspondence preparation, interviewing skills, and salary negotiation. The office also supports the Cooperative Education Program (Co-op) and provides individual career assessments for undergraduate students. As part of the OSU Career Services system, CEAT Career Services works in close partnership with CEAT Student Academic Services to link academic and career success. https://ceat.okstate.edu/studentservices/career-services/index.html (https://ceat.okstate.edu/studentservices/career-services/)

**CEAT Cooperative Education Program** (Co-op) provides an avenue for undergraduate students to complete a year of full-time work experience directly related to their academic studies. Co-op students alternate terms of major-related employment with terms of full-time course work to achieve a quality education and industry experience. In addition to professional development, participation in the Co-op program earns academic credit and maintains full-time enrollment status for students during the work experience terms. https://ceat.okstate.edu/studentservices/career-services/coop-faq.html

**CEAT Study Abroad Programs** offer students the opportunity to expand their education by traveling and studying outside the United States. Opportunities range from shorter faculty-led programs to semester exchange opportunities.

**Departmental Clubs and Honor Societies**

- Alpha Epsilon (Biosystems and Agricultural Engineering Honor Society)
- Alpha Omega Epsilon (Professional and Social Sorority for Women in Engineering)
- Alpha Pi Mu (Industrial Engineering and Management Honor Society)
- Alpha Rho Chi (Architecture Honor Society)
- Amateur Radio Club - W5YJ
- American Association of Drilling Engineers
- American Indian Science and Engineering Society
- American Institute of Architecture Students
- American Institute of Aeronautics & Astronautics
American Institute of Chemical Engineers
American Production and Inventory Control Society
American Society for Quality
American Society of Agricultural and Biological Engineers
American Society of Civil Engineers
American Society of Heating, Refrigeration and Air Conditioning Engineers
American Society of Mechanical Engineers
American Society of Safety Engineers
APICS
Architectural Engineering Institute
Architecture Students Teaching Elementary Kids (ASTEK)
CEAT Student Council
CHEM Kidz
Chi Epsilon (Civil and Architectural Engineering Honor Society)
Construction Management Society
Construction Specifications Institute
Cowboy Motorsports Quarter Scale Tractor Team
Engineers Without Borders
Eta Kappa Nu (Electrical and Computer Engineering Honor Society)
Fire Protection Society
Institute for Operations Research and the Management Sciences
Institute of Electrical and Electronics Engineers (two student branches)
Institute of Industrial and Systems Engineers
Institute of Transportation Engineers
International Fluid Power Society
International Society for Automation
National Society of Black Engineers
Omega Chi Epsilon (Chemical Engineering Honor Society)
Out in Science, Technology, Engineering, and Mathematics (oSTEM)
Pi Tau Sigma (Honorary Mechanical Engineering Society)
Sigma Gamma Tau (Honorary Aerospace Engineering Society)
Sigma Lambda Chi (Construction Engineering Technology Honor Society)
Sigma Phi Epsilon (Chemical Engineering Technology Honor Society)
Society of Asian Scientists and Engineers
Society of Automotive Engineers
Society of Automotive Engineers Formula Racing Team
Society of Automotive Engineers Mini-Baja Team
Society of Fire Protection Engineers
Society of Hispanic Professional Engineers
Society of Petroleum Engineers
Society of Manufacturing Engineers
Society of Women Engineers
Society of Manufacturing Engineers Mini-Baja Team
Society of Manufacturing Engineers Formula Racing Team
Society of Hispanic Professional Engineers
Society of Petroleum Engineers
Society of Manufacturing Engineers
Society of Women Engineers
Society of Fire Protection Engineers
Society of Hispanic Professional Engineers
Society of Petroleum Engineers
Society of Manufacturing Engineers
Society of Women Engineers
Student Firefighter Combat Challenge Team
Tau Alpha Pi (Technology Student’s Honor Society)
Tau Beta Pi (Engineering Student’s Honor Society)

CEAT Honors Program

The OSU Honors College provides challenges for undergraduate students of unusually high ability, motivation and initiative. Honors classes, seminars and independent study courses are designed to align students and instructors in a manner that encourages discussion and provides a mature approach to learning.

Information regarding The Honors College at OSU, and Scholar Development/Leadership Programs can be found on the Honors College tab in the left menu.

Scholarships

Numerous CEAT scholarships are funded through the generosity of alumni, private and corporate donations. Awards are available for undergraduate and graduate students at all levels and are granted based on academic achievement, campus involvement and leadership potential, as well as financial need. Freshmen and undergraduate transfer students are automatically considered for most CEAT scholarships, based off the student’s eligibility through their OSU application and acceptance to OSU and CEAT, for priority scholarship consideration students should apply and be accepted to CEAT by November 1st. Student must be accepted by Feb. 1st for all other scholarship considerations. All CEAT scholarships are awarded on a competitive basis. Some scholarships require additional applications. Details can be found at https://ceat.okstate.edu/scholarships/index.html (https://ceat.okstate.edu/scholarships/).

Current undergraduate (continuing) students should submit applications for general CEAT scholarships online at https://ceat.okstate.edu/scholarships/index.html (https://ceat.okstate.edu/scholarships/).

Computing Requirements

For students in Engineering, Architecture and Technology, the college requires that all students have several basic tools. Students in the College must have a scientific calculator and a laptop computer. The scientific calculator should be capable of computing trigonometric functions, logarithmic and natural logarithmic functions, basic statistical analysis, and all algebraic functions. The laptop requirements are published at https://ceat.okstate.edu/itservices/.

Academic Advising

The College's Office of Student Academic Services (https://ceat.okstate.edu/studentservices/) provides advisement for all CEAT freshman students except for those who are advised in their academic department. University College provides advisement through the Pre-CEAT program, for OSU students who do not meet the qualifications for enrollment in CEAT but wish to become qualified to enroll in a CEAT degree program in the future. Each student is personally advised in the planning and scheduling of his or her coursework, assisted with the selection of a major, and is counseled and advised individually on matters of career choice, activities at OSU and on other academic matters.

Each CEAT student, and his or her advisor, carefully selects general education, core engineering or architecture, and elective courses to meet the curriculum objectives and accreditation criteria. To assist students in planning and mapping their academic success, an electronic account is created for each student at the time of initial enrollment. Students have access to their personal account, via the STAR System, where they can review their advising materials, degree sheet, flowchart and other documents. The advisor assists the student with academic decisions and works to ensure accuracy and compliance; however, the ultimate responsibility for meeting degree requirements rests with the student.