# WHAT WILL YOU ENGINEER?



OU Gallogly College of Engineering

## **DECADES OF HISTORY**

1893

First engineering classes taught at OU. The College is founded in 1909.

1913

Engineers' Club hosts its first E-Week, a tradition that's still going strong. 1925

Felgar Hall becomes Oklahoma's first academic engineering building.

1957

an IBM 650, was installed on-campus in the College of Engineering.

1970

Fred Haise, B.S. 1959, served as the lunar module pilot on NASA's Apollo 13 mission. 1994

Donna Shirley, B.S. 1965, was named nanager of NASA's Mars Exploration Program Office and oversaw the development of the Mars rover, Sojourner.

Engineering begins a new era as the Gallogly College of Engineering.

STUDENT ENROLLMENT

3,000+

UNDERGRADUATE

GRADUATE

STUDY ABROAD



Programs in Italy, France,

and Mexico

UNDERGRADUATE DEGREE

**PROGRAMS** 

MORE THAN

\$3,000,000

IN STUDENT SCHOLARSHIPS+

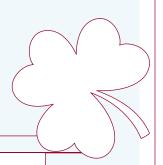


\$60.8 MILLION

in faculty research grant awards means you have opportunities to participate in

UNDERGRADUATE RESEARCH\*

<sup>\*</sup>ACADEMIC YEAR 2023



## 2019

Gallogly Hall is the newest addition to the Engineering Quad.

## 2023

Wall Street Journal Top 20 public colleges for engineering salaries.

## 2025

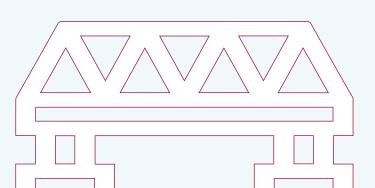
Institute joins the College, adding industry-aligned programs in both Norman and Tulsa.

STUDENT ORGANIZATIONS & TECHNICAL SOCIETIES





## **COMPETITION TEAMS**



CONTENTS
Engineering Pathways Program4
YOUR TRANSITION TO OU
Engineering Summer Bridge5 EMPOWER5
Engineering Catalyst5
SUPPORTING YOU AT OU
Engineering Environment6
Jerry Holmes Leadership Program6
Williams Student Services Center7
Scholarships7
Academic Support7
Study Abroad8
Undergraduate Research8
OUR DEGREE OPTIONS 9
Aerospace and Mechanical Engineering12
Biomedical Engineering13
Civil Engineering and Environmental Science 14
Computer Science15
Electrical and Computer Engineering16
Industrial and Systems Engineering17
Sustainable Chemical, Biological and Materials Engineering18
Engineering Physics Program19
OU-Tulsa20
OU Polytechnic Institute21
Certificates22
Mewbourne College of Earth and Energy 23
RESOURCES
Student Organizations, Technical Societies and Competition Teams26
Engineering Pathways Mentors26
SEED Outreach Ambassadors26
E-1 Council
Career Center
Facilities28
OU Engineering Contacts29
General Information29
Notes30

#### **TERMS TO KNOW**

Major	Primary area of study
Minor	Complimentary area of specialization
B.S.	Bachelor of Science
M.S.	Master of Science
M.B.A.	Master of Business Administration
M.E.S.	Master of Environmental Science
Certificate	Additional credential that enhances undergraduate experience



#### ENGINEERING PATHWAYS PROGRAM

The Engineering Pathways program welcomes students to an engineering educational system where students from all backgrounds thrive. The student-focused experts in outreach, recruitment, first-year engineering, professional skill development, student support and provide a cohesive educational experience surrounded with care and support to nurture students along each stage of their journey to becoming engineers. From preK through graduation, students receive enthusiastic instruction and mentoring along their own engineering path, ensuring students have access to technical and professional development for success in the workplace. Components of Engineering Pathways include:

- Educational Outreach Opening doors to rewarding careers through programming for preK–12 students, their caregivers, and teachers
- Engineering Catalyst Intensive academic year support program
- First-Year Engineering Faculty engage students in Pathways to Engineering Thinking and Engineering Design in Action to learn about different engineering paths as they design and prototype an engineered solution to meet a community partners need
- **EMPOWER** Support for math placement and learning

- Professional Skills and Responsibilities for Engineers and Scientists – A required course where students investigate global challenges as they build their tools for the critical professional responsibilities of all engineers and scientists.
- Undergraduate Research Faculty mentor students in engineering education projects and facilitate placement in other individual opportunities
- Informal Mentoring Faculty serve as a resource for students during and beyond their EP engineering courses
- Engineering Pathways Mentors A peer mentoring program aligned with the first-year engineering courses

https://ou.edu/coe/academics/pathways



Engineering Pathways faculty help students understand the Engineering Design Process during Engineering Days.



The College focuses on building a collaborative and experiential learning environment for all students. You can learn about these programs as well as our academic majors and more on the following pages.

#### IF YOU HAVE ANY QUESTIONS

You can email GOengineering@ou.edu or connect with us online at engineering.ou.edu!

#### YOUR TRANSITION TO OU

We at OU Engineering, believe that your success as an engineer starts with a strong foundation. Through some of our key transition programs, we aim to create a sense of community and academic success that will continue through your entire OU journey.

#### **EMPOWER**

ENGINEERING MATHEMATICS PROGRAM FOR ORIENTATION, WORKSHOPS, AND OTHER EDUCATIONAL RESOURCES

Loving mathematics is NOT required for being an engineer; engineers only need to be able to use math. Math is one of the important tools that engineers use, EMPOWER offers various degrees of support for students, beginning before students arrive on campus and continuing during their time here. The program offerings include:

- **Degree 0 Support** For incoming students, EMPOWER offers review material to support first-year math placement via ALEKS or just to brush up before the fall semester. Students may attend summer on-campus or virtual math study sessions called "Math 'Til You Drop" or they may schedule individual appointments for questions about the math placement process.
- **Degree 1 Support** For first-year engineering students, the EMPOWER faculty augment peer tutoring available in the various learning centers on campus with emailed math study tips and faculty-led "Math 'Til You Drop" study sessions and workshops. Students who find they need additional support may enroll in optional math support classes offered by the EMPOWER faculty.
- **Degree 2 Support** For students in upper division engineering courses, the EMPOWER math specialist faculty work with departmental faculty to create review materials of essential math skills to support success in these engineering technical courses.
- Individualized Support Engineering students at any level of mathematics course may schedule an individual appointment with one of the Engineering Pathways EMPOWER faculty

https://ou.edu/coe/empower

#### **ENGINEERING SUMMER BRIDGE**

The Engineering Summer Bridge Program has become a model for ensuring engineering students' academic preparedness and success. The four-week, residential program is for first-year students who have been accepted to OU and who are planning to major in our programs. It is designed to help students prepare for college-level engineering and math coursework. Since its inception in 2007, it has impacted the lives of more than 600 students.

Through coursework, community-building activities, seminars and engineering challenges, the Engineering Summer Bridge Program seeks to improve retention of students in engineering. The residential program includes all housing and meals, and provides an environment conducive to students building impactful and unique friendships that have proven to last throughout their college journey and beyond.

https://ou.edu/coe/summerbridge

Students test their water filter prototype during the 2024 program.

#### **ENGINEERING CATALYST**

Engineering Catalyst is a transitional support program during the academic year for students motivated to succeed and who are beginning their engineering degree in a calculus pre-requisite course. This two-year intensive support program is designed to help each selected Catalyst Scholar build their academic and professional success as they travel through their curriculum-to-career pathway.

As a part of the program's resource–rich framework, Engineering Catalyst Scholars engage in a variety of custom–tailored building blocks for success, including:

- **Specialized classes** Exclusive classes to support Scholar transition to OU, career planning and development, and engineering-based problem-solving through mathematics
- Robust learning support Comprehensive, embedded support for math, science, and foundational engineering learning
- Personalized planning Specialized academic and career advising
- Community connections Access to a dedicated community of supportive faculty, staff, and fellow Catalyst Scholars.

#### SUPPORTING YOU AT OU

We all know that classroom experiences are important, but did you know that engaging with your engineering peers outside of the classroom is just as important in your time on campus? OU Engineering has dedicated programs to support your academic and professional skills, and also help connect you to both your peers and alumni.

#### ENCOURAGING ENGINEERING ENVIRONMENT

Through our programs in OU Engineering, we are equipping students to tackle the global challenges of today and the future. Engineering is a global enterprise that requires a broad range of perspectives, ideas, and experiences. To further our commitment to student success, staff across the College are here to support and encourage all students through intentional programming, mentorship, and more.

Throughout your time at OU, we have embedded collaboration and teamwork into courses, starting in our



Students walking past Felgar Hall in the Engineering Quad.

first-year course. OU Engineering is built upon the idea that everyone, from faculty and staff to your peers, is here to help you succeed. We encourage students to ask questions, make connections, and build their community at OU. In each class, office and organization, you will find champions to aid you in your path to graduation.







Students participating in different hands-on experiments around OU Engineering



# JERRY HOLMES LEADERSHIP PROGRAM FOR ENGINEERS AND SCIENTISTS

The Jerry Holmes Leadership Program for Engineers and Scientists (JHLP) provides leadership education for undergraduate and graduate students in the Gallogly College of Engineering and the Mewbourne College of Earth and Energy. Our mission is to help Gallogly and Mewbourne students learn and practice the skills they will need to be effective and ethical leaders now and throughout their careers. Through JHLP, engineering and science students learn leadership and professional skills that set them apart from their peers. Opportunities include retreats, workshops, guest lectures, courses, and an academic Undergraduate Certificate in Engineering Leadership. Students can further develop their leadership capabilities as Holmes Leadership Associates (HLAs). Our students lead teams, advocate for change, tackle wicked problems, and create innovative solutions for modern problems.

https://ou.edu/coe/leadership



## WILLIAMS STUDENT SERVICES CENTER

Home to Academic Advising

The professional advisors in Williams
Student Services Center offer
assistance to engineering students at
every stage of their engineering education,
starting with their very first year. Students
meet with their adviser to ask questions
about degree programs and class schedules.
Information is also available about special
programs and events, student assistance
programs and support services offered at OU,
internships and scholarships, undergraduate
research opportunities, leadership
development, and service opportunities.

Advisors also connect students with faculty advisors who can talk through research interests, internship and career paths, and more.

#### https://ou.edu/coe/academics/advising

Historic Felgar Hall is home to academic advising, Engineering Pathways and more.

#### **SCHOLARSHIPS**

The College awards more than \$3 million in scholarships each year, with additional awards offered as departmental scholarships, tuition waivers or financial support from the University or outside sources.

There are scholarships designated for incoming students based on academic achievement and financial need. In the past year, we awarded over \$500,000 to first-year students!

In order for a first–year student to be eligible for a scholarship, they must apply by the University scholarship deadline, be a declared major in OU Engineering, and have a completed FAFSA on file. Scholarships are awarded in the spring, and students are notified by mail if they received and OU Engineering first–year scholarship.



Students participating in Commencement for engineering.





#### **ACADEMIC SUPPORT**

The Engineering Learning Center provides academic support for common 1st and 2nd year engineering coursework.

This resource is provided to OU Engineering students in addition to campuswide programs like Action Tutoring, the MATH Center and the Writing Center.

https://ou.edu/coe/academics/student-support

Students working in Gallogly Hall.

# GLOBAL OPPORTUNITIES SPECIFICALLY DESIGNED FOR ENGINEERING STUDENTS



#### STUDY ABROAD



#### **ITALY**

Two programs are offered in Italy; a four-week summer program directly after the end of the spring semester, and a semester-long program each fall. The vibrant, ancient Tuscan city of Arezzo serves as the home-base for these programs. Students are exposed to Italian culture and history while they take Professional Skills and Responsibilities for Engineers and Scientists and other engineering courses along with mathematics, physics, and science. Students also visit local corporations, work on engineering projects, and engage with the local community via volunteer opportunities and internships. The fall program includes engineering and STEM courses, as well as opportunities to take courses based on their interests offered by OU in Arezzo.



#### **MEXICO**

The program in Puebla, Mexico affords students the opportunity to earn degree credit in this historic city, known for its rich culture and culinary depth. During this program, students study ancient monuments and culture as well as take a professional elective course that includes field experiences.



#### **FRANCE**

Students can participate in a four-week program in Clermont–Ferrand, France, at the University Clermont d'Auvergne, during which they study the French language, and take a professional elective course that includes field experiences. Students visit local companies and corporations, conduct research and engage in meaningful cultural activities as they further their understanding of France and French culture.

https://ou.edu/coe/studyabroad







Students working in labs in the Gallogly College of Engineering.

## UNDERGRADUATE RESEARCH

No matter your engineering career path, undergraduate research is an excellent learning opportunity. Through a research portal, students can learn about ongoing faculty research and apply to participate in cutting-edge projects. Students also have opportunities for the open-ended, deep-learning that research offers through embedded projects in their engineering coursework.

The Engineering Pathways office offers workshops, fellowships, and a student symposium to support both students and faculty mentors in this educational opportunity.

https://ou.edu/coe/research

#### **OUR DEGREE OPTIONS**

# SCHOOL OF AEROSPACE AND MECHANICAL ENGINEERING

#### **MAJORS**

Aerospace Engineering Mechanical Engineering

Mechanical Engineering: Pre-Med

#### **ACCELERATED DUAL DEGREE PROGRAMS**

B.S./M.S. Aerospace Engineering B.S./M.S. Mechanical Engineering

# STEPHENSON SCHOOL OF BIOMEDICAL ENGINEERING

#### **MAJOR**

**Biomedical Engineering** 

#### ACCELERATED DUAL DEGREE PROGRAM

B.S./M.S. Biomedical Engineering

# SCHOOL OF CIVIL ENGINEERING AND ENVIRONMENTAL SCIENCE

#### **MAJORS**

**Architectural Engineering** 

Civil Engineering

**Environmental Engineering** 

**Environmental Science** 

#### ACCELERATED DUAL DEGREE PROGRAMS

B.S. Architectural Engineering/

M.S. Civil Engineering

B.S./M.S. Civil Engineering

B.S./M.S. Environmental Engineering

B.S./M.E.S. Environmental Science

#### **MINORS**

**Environmental Science** 

Water and Sanitation for Health and Sustainable Development

#### SCHOOL OF COMPUTER SCIENCE

#### **MAJOR**

**Computer Science** 

#### **ACCELERATED DUAL DEGREE PROGRAM**

B.S./M.S. Computer Science

#### **MINORS**

Computer Science

Computational Technology

# SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING

#### **MAJORS**

**Electrical Engineering** 

Computer Engineering

#### **ACCELERATED DUAL DEGREE PROGRAMS**

B.S. Computer Engineering/

M.S. Electrical and Computer

Engineering

B.S. Electrical Engineering/

M.S. Electrical and Computer

Engineering

B.S. Computer Engineering/

M.S. Computer Science

#### MINOR

**Electrical and Computer Engineering** 

# SCHOOL OF INDUSTRIAL AND SYSTEMS ENGINEERING

#### **MAJORS**

**Engineering Analytics** 

Industrial and Systems Engineering

Industrial and Systems Engineering:
Pre-Medicine

#### **ACCELERATED DUAL DEGREE PROGRAMS**

B.S./M.S. Industrial and Systems Engineering

B.S. Industrial and Systems Engineering: Analytics/M.S. Industrial and Systems Engineering

B.S. Industrial and Systems Engineering/M.B.A.

B.S. Industrial and Systems Engineering: Analytics/M.S. Data Science and Analytics

#### SCHOOL OF SUSTAINABLE CHEMICAL, BIOLOGICAL AND MATERIALS ENGINEERING

#### **MAJORS**

**Chemical Engineering** 

Chemical Engineering: Bioengineering Chemical Engineering: Pre-Medical B.S. Chemical Engineering:
Bioengineering/M.S. Biomedical

Chemical Engineering: Sustainability

B.S./M.S. Chemical Engineering

**ACCELERATED DUAL DEGREE PROGRAMS** 

Engineering

B.S. Chemical Engineering:

Pre-Medical/M.S. Biomedical Engineering

B.S. Chemical Engineering: Sustainability/M.S. Chemical

Engineering

#### **OU POLYTECHNIC INSTITUTE**

#### **MAJOR**

Cybersecurity

Applied Artificial Intelligence Software Development and

Integration

Digital Manufacturing

Health Information Systems

#### ACCELERATED DUAL DEGREE PROGRAMS

Software Development & Integration, B.S.

Applied Artificial Intelligence, B.S./ Applied Artificial Intelligence, M.S.

Cybersecurity, B.S./Cybersecurity, M.S.

Cybersecurity, B.S./Cybersecurity Leadership, M.S.

Software Development & Integration, B.S./Software Development & Integration, M.S.

# ENGINEERING PHYSICS PROGRAM

#### **MAJORS**

**Engineering Physics** 

With a concentration in

- Mechanical Engineering
- Electrical Engineering
- Aerospace Engineering
- Computer Science

and any other engineering discipline.







# SCHOOL OF AEROSPACE AND MECHANICAL ENGINEERING

Whether a student is interested in the broad discipline of mechanical engineering or the more focused field of aerospace engineering, we prepare students to solve today's problems in a variety of settings. Undergraduate students enjoy an exceptional educational experience through innovative teaching from faculty and participation in hands-on projects within designated laboratories. They can participate in numerous competition teams which helps develop not only engineering and interpersonal skills but also bonds that last a lifetime.

Students develop skills in computer aided design, experimental data collection, computer programming, finite element analysis, project management, and a variety of other communications and analysis methods. A semester-long industry or community sponsored capstone project ties together analysis, design, manufacturing, and testing skills for senior students.





Students get to experience aerospace and mechanical engineering up-close through our Design, Build, Fly

#### **MAJORS**

Aerospace Engineering

**Mechanical Engineering** 

Mechanical Engineering: Pre-Med

## Accelerated (5-year) Dual Degree Programs

B.S./M.S. Aerospace Engineering

B.S./M.S. Mechanical Engineering

#### **SELECT COURSES**

Materials, Design and Manufacturing

Processes

Aerodynamics/Aerospace

Systems Design

Fluid Mechanics/Design Practicum

Computer Integrated Manufacturing

Space Sciences and Astrodynamics

# AME STUDENT ORGANIZATIONS

American Society of Mechanical Engineers (ASME)

American Institute of Aeronautics and Astronautics (AIAA)

#### CAREER PATHS

Northrop Grumman Gilbert, AZ Control Engineer

Exxon Mobil Midland, TX
Facilities Engineer

Valero Corpus Christi, TX Equipment Engineer

Continental Resources Oklahoma City, OK Field Engineer

Boeing Oklahoma City, OK Structural Design Engineer

#### **CONTACT AME**

(405) 325-5011

Felgar Hall, Rm. 212

www.ou.edu/coe/ame



# SCHOOL OF BIOMEDICAL ENGINEERING

Being a student in with us means you are a valued member of a growing family made up of students, faculty, and staff. It means being at the center of life-changing research, industry networking opportunities, and nurturing an entrepreneurial culture. Our vision is to educate the next generation of biomedical engineers and create new technologies that advance human health.

The Capstone Design courses give students the opportunity to solve real-world healthcare problems from physicians and industry, develop creative solutions to those problems, and design prototypes of those solutions. Recently, a capstone team won first place at the BMES Coulter College Program for their presentation entitled "Designing a Public Blood Glucose Monitoring System."

#### **MAJORS**

**Biomedical Engineering** 

# Accelerated (5-year) Dual Degree Programs

B.S./M.S. Biomedical Engineering

#### **SELECT COURSES**

Bioelectricity

Biomaterials

Molecular, Cellular, and Tissue

Biomedical Instrumentation

**Biomechanics** 



Students participating in hands-on projects to understand the strength and repair possibilities of ACL tears.



Students in the Gate Tracking and Mobility Lab housed in the University of Oklahoma Health Science Center

# SBME STUDENT ORGANIZATIONS

Biomedical Engineering Society (BMES)

Biomedical Engineering Student Affairs (BESA)

#### CAREER PATHS

Gener8 Woburn, MA

Biomedical Engineer

#### **OU College of Medicine**

Oklahoma City, OK

Medical Student

Medtronic Dallas, TX

Clinical Specialist

#### Epic Systems Madison, WI

Technical Solutions Engineer

#### Cytovance Biologics

Oklahoma City, OK

Process Development Associate

#### **CONTACT SBME**

(405) 325-5453

Gallogly Hall, Rm. 101

www.ou.edu/coe/sbme



# SCHOOL OF CIVIL ENGINEERING AND ENVIRONMENTAL SCIENCE

As a student here, your degree means more than learning about engineering and science. Students engage in hands-on, real-world creative problem solving and engineering design, while learning leadership, teamwork, and communications skills. Students discover fulfilling careers in all three major sectors of engineering and scientific practice—government, private consulting, and industry—and address some of the most pressing infrastructure and environmental issues facing the world.

Our disciplines are inextricably tied to the world's infrastructure and ecosystems, which are deteriorating and becoming increasingly stressed. Our strategic plan aims to dramatically improve the quality of life and stimulate economic development for the state, nation, and world by solving engineering, scientific, and technological challenges.



Faculty demonstration of structural integrity at OU Engineering Days summer camps.



Students design and test their own water filtration system.

# CEES STUDENT ORGANIZATIONS

American Society of Civil Engineers (ASCE)

Environmental Science Student Association (ESSA)

#### CAREER PATHS

Arcadis Syracuse, NY Water Engineer

#### Costain Group PLC

London, England

Quality Assurance and Maintenance Engineer

Garver Fayetteville, AR

Project Engineer

 $\hbox{H.W. Lochner Oklahoma City, OK}$ 

Bridge Inspector

Oklahoma Department of Environmental Quality

Oklahoma City, OK Civil Engineer

#### **MAJORS**

Architectural Engineering
Civil Engineering
Environmental Engineering
Environmental Science

# Accelerated (5-year) Dual Degree Programs

B.S. Architectural Engineering/
M.S. Civil Engineering
B.S./M.S. Civil Engineering
B.S./M.S. Environmental
Engineering
B.S./M.E.S. Environmental Science

#### **MINORS**

**Environmental Science** 

Water and Sanitation for Health and Sustainable Development

#### **SELECT COURSES**

Soil Mechanics

Water Resources Engineering

Structural Analysis

Transportation Engineering

Environmental Biology and Ecology

#### **CONTACT CEES**

(405) 325-5913

Carson Engineering Center, Rm. 334

www.ou.edu/coe/cees



#### SCHOOL OF COMPUTER SCIENCE

Given the breadth of today's technological advances, a degree in computer science offers students a pathway to multiple possibilities including educational technology, artificial intelligence and robotics, data mining, data and wireless networks, computer security, programming and software engineering, and computational science and theory. From internationally recognized faculty to research partnering with private and public sector companies, our students are on the front lines of technology today and tomorrow. Students have access to some of the latest in technological advancement in its classrooms, team rooms, teaching labs, and research spaces.

Robust research programs include areas such as artificial intelligence, data mining, machine learning, cybersecurity, data networks, high performance computing, and database management.

#### **MAJORS**

Computer Science

# Accelerated (5-year) Dual Degree Programs

B.S./M.S. Computer Science

#### **MINORS**

**Computer Science** 

Computational Technology

**Optional Embedded Certificate** in Machine Learning and Artificial Intelligence



Students engaged in engineering education with K-12 students.



Students learn programming fundamentals during on-campus event.

#### **SELECT COURSES**

Computer Security
Machine Learning
Algorithm Analysis
Artificial Intelligence
Software Engineering

#### **CS STUDENT ORGANIZATIONS**

Association for Women in Computing (AWC)

Computer Science Student Board (CSSB)

Game Developer Association (GDA)

#### CAREER PATHS

Google, Inc. Mountain View, CA Software Engineer

Microsoft Redmond, WA Software Engineer

JP Morgan Chase & Co. Palo Alto, CA Senior Machine Learning Engineer

Paycom Oklahoma City, OK Application Security Analyst

Human Mode Oklahoma City, OK
Founder and CFO

#### CONTACT CS

(405) 325-4042

Devon Energy Hall, Rm. 150

www.ou.edu/coe/cs



# SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING

The field of electrical and computer engineering continues to evolve into an ever-broadening discipline that is rapidly reaching into more aspects of common everyday life. Students gain technical and professional skills to solve today's problems and to ethically innovate for the future. Undergraduate students concurrently learn theory and practical applications in teaching and research laboratories.

Outstanding faculty specialize in the fields of radar and electromagnetics, medical imaging technology, solid state and photonics, and communications. These focus areas provide an opportunity for students to engage in specialized learning to gain research experience in areas of targeted interest. These robust experiences often prove invaluable in building one's engineering skillset.

# ces often prove invaluable in building one's set.

Students use LabView to program an electric car in order to successfully traverse a course.

Undergraduate student in the Laboratory for Electrical Energy and Power Systems.

#### ECE STUDENT ORGANIZATIONS

Institute of Electrical and Electronic Engineers (IEEE)

Eta Kappa Nu

Sooner Competititve Robotics

#### **CAREER PATHS**

Boeing Oklahoma City, OK

Design and Analysis Engineer

ConocoPhillips Bartlesville, OK Information Technology Engineer

Fiat Chrysler Automobiles Belvidere, IL Electrical Engineer

United States Patent and Trademark
Office Alexandria, VA

Electrical Engineering Patent Examiner

Western Digital Colorado Springs, CO Software Engineer

OG&E Oklahoma City, OK

Power and energy generation, transmission and distribution

#### **MAJORS**

Electrical Engineering

Computer Engineering

# Accelerated (5-year) Dual Degree Programs

B.S. Computer Engineering/ M.S. Electrical and Computer Engineering

B.S. Electrical Engineering/ M.S. Electrical and Computer Engineering

B.S. Computer Engineering/ M.S. Computer Science

#### MINOR

Electrical and Computer Engineering

#### **SELECT COURSES**

Optoelectronics

Radio Frequency and Microwave Engineering

Communication Networks

VLSI Digital System Design

Machine Learning for Engineers

Inverter-Based Renewable Energy Systems

#### **CONTACT ECE**

(405) 325-8131

Devon Energy Hall, Rm. 105

www.ou.edu/coe/ece



# SCHOOL OF INDUSTRIAL AND SYSTEMS ENGINEERING

Our programs are vital to providing solutions to complex problems in wide-ranging fields including manufacturing, transportation, technology, healthcare, aerospace, and supply chain management. Graduates are equipped to improve, integrate, inform and innovate. While most engineers work with products or processes, we work on a broad range of problems involving both people and technology. Companies seek our students for their expertise in understanding, evaluating and improving the performance of entire technical and business systems.

Graduates have opportunities to enter a workforce that includes Wall Street financial firms, Silicon Valley start-ups and fields that include energy, healthcare, entertainment, risk management, logistics, defense, and retail/wholesale distribution.



Students working on class project in the Fabrication Lab at the Innovation Hub.



Students in the Design and Manufacturing Processes lab.

#### ISE STUDENT ORGANIZATIONS

Institute for Operations Research and Management Sciences (INFORMS) Institute of Industrial and Systems Engineers (IISE)

#### **CAREER PATHS**

NASA Houston, TX
Operations Engineer

United States Postal Service Palatine, IL Operations Industrial Enginner

NVIDIA Santa Clara, CA
Technical Product Manager

Mastercard Chicago, IL Associate Consultant

Boeing Oklahoma City, OK Systems Engineer

#### **MAJORS**

Industrial and Systems Engineering

Industrial and Systems
Engineering: Analytics
Industrial and Systems
Engineering: Pre-Medicine

# Accelerated (5-year) Dual Degree Programs

B.S./M.S. Industrial and Systems Engineering

B.S. Industrial and Systems Engineering: Analytics/M.S. Industrial and Systems Engineering

B.S. Industrial and Systems Engineering/M.B.A.

B.S. Industrial and Systems Engineering: Analytics/M.S. Data Science and Analytics

#### SELECT COURSES

Production Systems and Operations

Spreadsheet Decision Support Systems

Data Driven Decision Making I & II

Advanced Human Factors and Ergonomics

Fundamentals of Engineering Economy

#### **CONTACT ISE**

(405) 325-3721

Carson Engineering Center, Rm. 124

www.ou.edu/coe/ise



### SCHOOL OF SUSTAINABLE CHEMICAL, BIOLOGICAL AND MATERIALS ENGINEERING

Our program prepares students to perform as professionals, succeed in pursuing advanced degrees and skills, and improve their professional competencies through further training or education. We offer research opportunities for students in the areas of biomedical, catalysis for energy and chemicals, environmental engineering, soft materials, and interfacial science.

Chemical Engineering is a dynamic discipline driving change in all engineering fields, especially through rapid developments in bioengineering, nanotechnology, energy, and sustainability. The field is largely responsible for the production of energy, the purification of water and air, and the development of products involving chemical reactions from either waste materials or raw materials found in our land and oceans.



Student and faculty in the Colloid and Interface Science Lab.



Students measure numerous chemical reactions during hands-on project.

#### **CAREER PATHS**

DOW Houston, TX

Materials Coordinator

PepsiCo Plano, TX

Supply Chain Analyst

ThermalTech Engineering Cincinnati, OH
Design/Analysis - Controls Engineer

Samsung Austin Semiconductor

Austin, TX

CORP Engineer

Valero Energy Corporation Benicia, CA

Environmental Engineer

#### **MAJORS**

**Chemical Engineering** 

Chemical Engineering:

Bioengineering

Chemical Engineering:

Pre-Medical

Chemical Engineering:

Sustainability

# Accelerated (5-year) Dual Degree Programs

B.S./M.S. Chemical Engineering

#### Certificate

Bioprocessing

#### Online M.S. Program

Sustainability: Energy & Materials Management

#### **SELECT COURSES**

**Reaction Engineering** 

Separation Processes

Chemical Engineering Thermodynamics

**Process Dynamics and Control** 

Transport Phenomena

Structures & Properties of Materials

#### **CONTACT SCBME**

(405) 325-5811

Sarkeys Energy Center, Rm. T-301

www.ou.edu/coe/scbme



American Institute of Chemical Engineers (AIChE)

Society of Plastic Engineers (SPE)

Chem-E Car Team



#### ENGINEERING PHYSICS

This program prepares students for careers in areas of technology where the disciplines of physics and engineering intersect. The program provides an interdisciplinary environment where pure and applied science merge. The curriculum is designed to develop sufficient depth in both engineering skills and physics knowledge to produce engineers who excel in relating fundamental physical principles to practical problems in engineering. The recent alumni who directly entered the work force are employed in a variety of sectors, including the microelectronics industry, energy industry, and aerospace industry.

Engineering Physics is an example of a truly interdisciplinary program. Each student chooses an engineering emphasis area that aligns with their interest. Students benefit from small classes, individualized attention, and many opportunities to gain hands-on experience.

#### **MAJORS**

**Engineering Physics** 

#### **SELECT COURSES**

Introductory Physics III:

Modern Physics

**Electronics Laboratory** 

Electricity and Magnetism I

Introduction to Quantum Mechanics I

Senior Research Project I and II





Students learn about electricity and magnetism from Engineering Physics faculty.

# EPHYS STUDENT ORGANIZATION

The Society of Physics Students (SPS)

#### **CAREER PATHS**

IBM Essex Junction, VT
Design Enablement Engineer

Mason Controls Los Angeles, CA Mechanical Design Engineer

**Nobel Energy Houston, TX**Geophysicist

Raytheon Dallas, TX Senior Radar Engineer

**Texas Instruments Dallas, TX**Applications Engineer

Google Sunnyvale, CA Software Engineer

#### **CONTACT EPHYS**

Carson Engineering Center, Rm. 107

www.ou.edu/coe/ephysics

#### **OU-TULSA**

OU-Tulsa is a nationally-recognized center for higher education, offering **more than 30 undergraduate**, **Master's**, **and Doctorate level degrees**, as well as graduate certificates. The University of Oklahoma's presence in Tulsa, and our service to northeastern Oklahoma, stretches all the way back to 1957. We're proud to be a member of **the Tulsa community**, the University of Oklahoma family, a partner to several local organizations and institutes, and strong collaborators within the global education space.

Situated squarely in Tulsa's geographic center, we have deep community roots, but we're proud to serve as a launching point for graduates from across the globe. Many of OU-Tulsa's degree programs place **heavy emphasis on community engagement** – in fact, some of them were created with community needs in mind. Contributing to the needs of Tulsa and northeastern Oklahoma is woven into the fabric of everything we do.

OU–Tulsa has a long history in Tulsa, providing a world class education from the University of Oklahoma to students in Tulsa and the surrounding area for **more than 65 years**. This presence grew substantially in 1999 thanks to a generous gift from the Charles and Lynn Schusterman Family Foundation, which allowed OU to purchase **60 acres at the corner of 41st Street and Yale Avenue** to build a full, traditional campus.





#### **OU POLYTECHNIC INSTITUTE**

At the OU Polytechnic Institute (OUPI), we don't just teach tech—we live it. With hands–on learning, real–world projects, and deep industry connections, you'll be ready to launch your career the day you graduate. Our cuttingedge programs are designed with corporate partners and taught by faculty with more than 200 years of combined industry experience. You can starta four–year degree on the OU–Norman campus or complete your junior and senior years in Tulsa through our bachelor's degree completion programs. And with our 4+1 options on both campuses, you can earn a master's degree with just one extra year.



Cybersecurity students demonstrate a class project to OU Regent Waits during a visit to OUPI's Intro to Linux course on the Tulsa campus.



OUPI staff and OPAL members sharing OUPI opportunities with future students on the South Oval in Norman.

#### **MAJORS**

Applied Artificial Intelligence Cybersecurity Softeware Development and Integration Digital Manufacturing Health Information Systems

# Accelerated (5-year) Dual Degree Programs

B.S./M.S. Applied Artificial Intelligence
B.S./M.S. Cybersecurity
B.S. Cybersecurity/M.S.
CybersecurityLeadership
B.S./M.S. Software Development & Integration

#### **SELECT COURSES**

Ethics of AI and Machine Learning Cyberforensic Fundamentals Cloud Computing Foundations of Cybersecurity Data Visualization

# OUPI STUDENT ORGANIZATIONS

Oklahoma Polytechnic Association for Learning (OPAL)

#### CAREER PATHS

Information Security Analysts
Data Mining and Analysis
Security Architect
Cryptographer
Machine Learning Specialist

#### **CONTACT OUP!**

(918) 660–3456 4502 East 41st Street, Tulsa, OK 202 W. Boyd Street, Norman, OK

www.ou.edu/polytechnic

For general questions: goengineering@ou.edu



#### **CERTIFICATES**

#### **BIOPROCESSING CERTIFICATE**

The OU Bioprocessing Certificate Program provides students fundamental knowledge and skills through a combination of coursework and advanced hands–on laboratory experience at the OU Bioprocessing Core Facility, providing them with transferable skills eagerly sought in the biotech industry.

www.ou.edu/coe/research/centers/bioprocessing-core-facility/academics



# DATA SCIENCE AND ANALYTICS CERTIFICATE

The Data Science and Analytics Certificate provides students with data science concepts and knowledge in a stand-alone certificate format. The core courses for this program are developed specifically for this 15–credit hour certificate, while elective courses are selected from our graduate catalog of data science designed courses.

www.ou.edu/coe/dsai/academics/undergraduate-certificate

# ENGINEERING LEADERSHIP CERTIFICATES

Students pursuing the Engineering Leadership Certificate will develop the skills necessary for effective and ethical leadership in professional practice. The curriculum combines required and elective engineering leadership courses with a broad selection of supporting electives in business, humanities, social sciences, physical sciences, and other fields. Certificate students are encouraged to participate in study abroad. Completion is noted on a student's transcript, providing tangible evidence of their leadership education.

www.ou.edu/coe/academics/certificate-programs



#### MEWBOURNE COLLEGE OF EARTH AND ENERGY

The Mewbourne College of Earth and Energy improves people's lives through research, education and service by studying Earth's past and present, developing new energy tools and resources, and creating geoscientists and engineers who work across disciplines to address some of society's most critical challenges.

# MEWBOURNE SCHOOL OF PETROLEUM AND GEOLOGICAL ENGINEERING

The Mewbourne School of Petroleum and Geological Engineering (MPGE) is one of the oldest academic programs at OU and, according to U.S. News and World Report, is ranked No. 3 in the nation. MPEG's rigorous and acccredited curriculum prepares students for work in a far-reaching industry that supports much of the heartland. Students receive a firm foundation in contemporary oil and gas issues, extraction methods, engineering processes, resouce–development, and advanced course work in the three primary petroleum engineering specilizations.

#### **CAREER OPPORTUNITIES**

Petroleum Engineer Engineering Geologist

Geologist Petroleum Industry

Drilling Engineer Drilling Companies

Production Designer Energy Companies

Reservoir Engineer

#### **MAJORS**

GeoEnergy Engineering
Petroleum Engineering

Accelerated (5-year)
Dual Degree Programs

B.S./M.S. Petroluem Engineering

B.S. in Petroleum Engineering with an MBA

**CONTACT MPGE** (405) 325-2921

www.ou.edu/mcee/mpge

#### SCHOOL OF GEOSCIENCES

The School of Geosciences is a leader in multidisciplinary studies of complex and dynamic geosystems and their impacts on society. Geosciences provides students with high-quality education and research opportunities with an emphasis on fundamental and applied geosciences. Our programs provide one-of-a-kind learning in a hands-on environment with some of the best faculty in their field of study, including field trips all over the country. In addition to the rigorous requirements of our programs, Geoscience students are actively involved in extracurricular activities, clubs and community outreach.

#### **CAREER OPPORTUNITIES**

Environmental Geologist Curator

Geologist Consulting Paelontologist

Environmental Engineer Topographic Surveyor
Geophysicist Geoscience Technician

Engineering Geologist Mudlogger

Anthropologist Well-site Geologist

Researcher Geosteering Geologist

Engineer Science Educator

#### **MAJORS**

**Environmental Geology** 

Geology

Geophysics

Paleontology

Petroleum Geology

**MINOR** 

Geology

CONTACT GEOSCIENCES (405) 325-3253

www.geosciences.ou.edu





# STUDENT ORGANIZATIONS AND TECHNICAL SOCIETIES

The Gallogly College of Engineering has more than 60 student organizations that allow students to connect their interest areas to OU Engineering.

These organizations represent specific student interests and include general College-wide organizations, industry-specific organizations, identity-based organizations, honor societies and competition teams.

With over 60 student organizations, students have plenty of opportunities to engage with their peers. Many students will find organizations that interest them at the annual Fall Fest, which happens the first Friday of the Fall semester.



SEED Ambassadors teach students about engineering at event.

## SEED OUTREACH AMBASSADORS

Sooner Engineering Education Center (SEED) Ambassadors create and lead hands–on STEM activities for preK–12 students, inspiring them to become the next generation of great Oklahoma engineers and scientists.

Exposing more students across the state to STEM is important at OU Engineering. Each year, our SEED Ambassador team reaches over 5,000 students through on– and off–campus activities.

Students are welcome to apply to become SEED Ambassadors starting in the spring of their first-year. Any student who is passionate in broadening engineering access is encouraged to apply.

https://ou.edu/coe/explore/k-12-outreach













# ENGINEERING PATHWAYS MENTORS

EP Mentors provide each new engineering student the opportunity to engage with a network of trained peer mentors. Entering an engineering curriculum is an opportunity for learning and growth for all students; these opportunities can range from the academic to the social, even to navigating college life in general. Mentors partner with new engineering students to share the knowledge and skills they have gained through their college experience, create connections with student organizations and the broader engineering community, and introduce invaluable campus and community resources.

www.ou.edu/coe/student-life/ep\_mentors

### E-1 COUNCIL

E–1 Council is an organization designed to give first–year engineering students a voice in creating events specific to them, while also giving them leadership experience they can immediately apply to their engineering coursework. With support from a dedicated faculty and staff member, and with Engineers' Club, the oldest student organization in the College, these students create, plan, and execute different events throughout the year.



#### CAREER CENTER

The Career Center works with engineering majors in the areas of career exploration, career development, internships and co-ops, and professional development. Each year, OU Engineering hosts two career fairs – our Fall Engineering Job and Internship Fair and our Spring Oklahoma Engineering Futures Fair – are attended by companies looking for both internships and full-time positions. Through a digital recruiting platform, students can access an online job board with more than 1,000 engineering-specific posts a year.

The Career Center has a dedicated liaison to OU Engineering, which gives our students have a "go-to" person that can help with resumes, elevator pitches, and more. Plus, many of our corporate partners host events throughout the year helping students hone their professional skills.

www.ou.edu/career

#### **ENGINEERING SALARY INFORMATION**

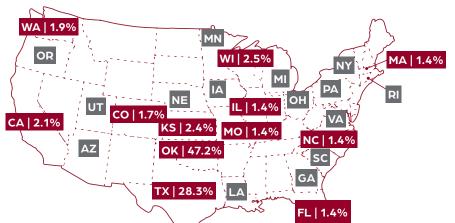
What is an engineering degree worth? Year after year, engineering jobs are paid the highest average starting salary. According to the U.S. Bureau of Labor Statistics (BLS) engineers have a median annual wage of \$104,180 and the engineering field projects to have employment growth of 6 percent from 2020 to 2030—nearly 146,000 new jobs over the next decade.

One thing is certain: engineers will continue to play a major role in shaping the world of tomorrow. The bottom line: it is well worth the time and effort it takes to become an engineer. So how much do engineers make?

www.ou.edu/coe/explore/futurestudents/salary

#### **EMPLOYMENT POST-GRADUATION**

Employment post-graduation is important as it provides financial stability, facilitates professional growth and career advancement, ensures industry relevance, fosters valuable networks, and contributes to personal satisfaction. It is a significant milestone in the transition from education to the professional world, marking the beginning of a graduate's journey toward building a successful and fulfilling career.



#### **EMPLOYMENT BY LOCATION**

Students reported hires from 27 states and 2 countries. Fifteen of the states were each less than 2% each, as well as the additional countries.

Countries: Italy and Oman

Source: The University of Oklahoma Career Center Employment Post–Graduation 2022/23



#### **FACILITIES**

The Gallogly College of Engineering has buildings in multiple locations that include the main campus (also known as the Engineering Quad), the south research campus, the north research campus and OU–Tulsa. The list that follows lists those facilities located on the Norman campus.

# CARSON ENGINEERING CENTER

202 West Boyd Street
Houses the School of Industrial and
Systems Engineering, School of Civil
Engineering and Environmental Science
and the Office of the Dean.

#### **DEVON ENERGY HALL**

110 West Boyd Street
Home to the School of Computer
Science and the School of Electrical and
Computer Engineering.

#### **ENGINEERING LAB**

200 Felgar Street
Contains research and computer labs and the University's Information Technology
Operations Center.

#### EXXONMOBIL LAWRENCE G. RAWL ENGINEERING PRACTICE FACILITY

850 South Jenkins Avenue
This student-focused facility provides
bay practice space, bench labs, a student
machine shop, robotics space, student
leadership center and our Office of
Outreach and Recruitment (your tour will
start from here!).

#### **FELGAR HALL**

865 Asp Avenue
Houses the School of Aerospace and
Mechanical Engineering, Engineering
Pathways and Williams Student Services
Center.

#### **GALLOGLY HALL**

173 Felgar Street

The newest addition to the Engineering Quad, it houses the Stephenson School of Biomedical Engineering and the Engineering Learning Center.

#### **SARKEYS ENERGY CENTER**

100 East Boyd Street

Houses the School of Sustainable Chemical, Biological and Materials Engineering, the Youngblood Energy Library, and the Mewbourne College of Earth and Energy.



Students exiting Gallogly Hall.

#### **OTHER FACILITIES**

#### > FEARS LAB

Fears Lab hosts structural engineering and structural mechanics research efforts at the University of Oklahoma. It was the first research facility on OU's South Research Campus.

## > ADVANCED RADAR RESEARCH CENTER

The Advanced Radar Research Center (ARRC) is the largest academic radar program in the nation. They are focused on developing cutting-edge radar technology for both scientific discovery and commercial needs.

# > ADVANCED MANUFACTURING LAB

The lab houses two GE M2 Series 5 Metal 3D printers: one machine for stainless steel and the other for titanium alloys. These state-of-the-art 3D printers assist OU faculty and students with designing and meeting the most critical requirements of the highly regulated military and gerospace industry. The lab also maintains cross-cutting equipment for testing parts, digital twin, CAD modeling, precision cutting and polishing, and more.

#### GALLOGLY COLLEGE OF ENGINEERING CONTACTS

#### GALLOGLY COLLEGE OF ENGINEERING

engineering.ou.edu

#### **FUTURE STUDENTS**

www.ou.edu/coe/explore/futurestudents (405) 325–3164 | GOengineering@ou.edu

#### WILLIAMS STUDENT SERVICES CENTER

www.ou.edu/coe/academics/advising (405) 325-4096 | coewssc@ou.edu

#### **ACADEMIC STUDENT SUPPORT**

www.ou.edu/coe/academics/student-support

#### **GCOE DEGREE PROGRAMS**

www.ou.edu/coe/academics/degree-programs

#### **LAPTOP INFORMATION**

ou.edu/coe/resources/tech

#### GENERAL INFORMATION

### ADMISSIONS AND RECRUITMENT

go2.ou.edu

#### **GENERAL CATALOG**

ou-public.courseleaf.com

#### **EDUCATION ABROAD**

studyabroad.ou.edu

#### TRANSFER EQUIVALENCIES

go2.ou.edu/will-it-transfer

#### STUDENT FINANCIAL CENTER

ou.edu/sfc

#### **CAREER CENTER**

www.ou.edu/career

#### **SOONER ATHLETICS**

www.soonersports.com

#### **COMPUTER HELP**

ou.edu/ouit/help

#### HOUSING

ou.edu/housingandfood

#### **QUESTIONS?**



#### DALTON BRASINGTON, M.A., M.P.S.

Director, Outreach and Recruitment

dbrasington@ou.edu

(405) 325-3445

#### WHY YOU BELONG AT THE UNIVERSITY OF OKLAHOMA

The University of Oklahoma, fosters an inclusive culture of respect and civility, belonging, and access, which are essential to our collective pursuit of excellence and our determination to change lives. The unique talents, perspectives, and experiences of our community enrich the learning, and working environment at OU, inspiring us to harness our innovation, creativity, and collaboration for the advancement of people everywhere.

#### **OU EQUAL OPPORTUNITY STATEMENT**

The University of Oklahoma, in compliance with all applicable federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, sex, sexual orientation, genetic information, gender identity, gender expression, age, religion, disability, political beliefs, or status as a veteran in any of its policies, practices, or procedures. This includes, but is not limited to: admissions, employment, financial aid, housing, services in educational programs or activities, or health care services that the University operates or provides.

#### LAND ACKNOWLEDGMENT STATEMENT

Long before the University of Oklahoma was established, the land on which the University now resides was the traditional home of the "Hasinais" Caddo Nation and "Kitikiti'sh" Wichita & Affiliated Tribes

We acknowledge this territory once also served as a hunting ground, trade exchange point, and migration route for the Apache, Comanche, Kiowa and Osage nations.

Today, 39 tribal nations dwell in the state of Oklahoma as a result of settler and colonial policies that were designed to assimilate Native people.

The University of Oklahoma recognizes the historical connection our university has with its indigenous community. We acknowledge, honor and respect the diverse Indigenous peoples connected to this land. We fully recognize, support and advocate for the sovereign rights of all of Oklahoma's 39 tribal nations. This acknowledgment is aligned with our university's core value of creating a diverse and inclusive community. It is an institutional responsibility to recognize and acknowledge the people, culture and history that make up our entire OU Community.

#### COST DISCLOSURE STATEMENT

This publication, printed by OU Printing Services, is issued by the University of Oklahoma Gallogly College of Engineering Office of Outreach and Recruitment. 3,000 copies have been prepared and distributed at no cost to the taxpayers of the State of Oklahoma.

GCoE Undergraduate Recruitment Brochure. August 2025











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