

Engineer your future today.



The UNIVERSITY of OKLAHOMA
Gallogly College of Engineering



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OU ENGINEERING

Here's what you can expect from us:

- You develop skills through experiential learning.
- You put into practice what you learn in the classroom.
- You are tutored and mentored by upper-class students.
- You have the opportunity to expand your horizons through study abroad.
- You learn from accomplished faculty members.
- You get to hear from special guest speakers who are experts, leaders and entrepreneurs.
- You are empowered through professional development.
- You receive competitive advantages in pursuing future careers.

This is where we prepare you for
SUCCESS!

VISIT GCOE

The best way to learn more about the Gallogly College of Engineering is to see it for yourself. Come meet our students and tour our facilities.

.....

Engineering and campus-wide tours are available by visiting **go2.ou.edu**. You have the option to select a GCoE information session and tour on Fridays.

If you have questions, simply email **goengineering@ou.edu**.

We can't wait to meet
YOU!

FAST FACTS

We have nearly 400 National Scholars including National Merit, National Achievement and National Hispanic students.

The alumni of the University of Oklahoma Gallogly College of Engineering is a diverse group of accomplished professionals that include:

- more than **800** corporate executives
- **12** former or current U.S. generals
- **four** former ambassadors
- **two** former astronauts
- **thousands** of successful entrepreneurs

WELCOME

to the Gallogly College of Engineering



Thomas L. Landers
Dean and AT&T Chair

OU STUDENTS are serving the global community, while gaining valuable professional experience and learning how to work in teams. These students are proving that OU engineering graduates are uniquely positioned to advocate the realm of technological possibilities for improving our quality of life.

Being a student at OU means more than learning about engineering; it means experiencing engineering as well, side by side with some of the world's most respected authorities in their fields. Our hands-on, real-world approach to the education experience makes creative problem solving, engineering design, leadership and communications skills all top priorities.

I encourage you to contact us to discuss how we can help you Engineer Your Future."

A handwritten signature in black ink, appearing to read 'T. Landers', written in a cursive style.

We invest in programs that enhance the success of our students, faculty and staff. Our faculty and accelerated B.S./M.S. degree programs provide outstanding research opportunities to both undergraduate and graduate students in areas including water, energy, materials, biomedical, radar and transportation. These multidisciplinary research initiatives conducted by faculty-student teams lead to technological developments that improve our quality of life across the globe.

Our goal is to provide students with competitive advantages in pursuing future careers. We achieve this by offering accredited degree programs in dynamic learning environments, led by world-class faculty. Additionally, we provide students with numerous opportunities for growth in leadership and professional development.



John Antonio
Senior Associate Dean



Randa Shehab
Associate Dean for Academic Affairs



Theresa Marks
*Assistant Dean for
Academic Student Services*

ENHANCED EDUCATIONAL EXPERIENCE

Where you are a member of the GCoE family

THE OU GALLOGLY COLLEGE OF ENGINEERING is committed to attracting a diverse population of outstanding students and enhancing the engineering learning experience through excellence in teaching and mentoring, educational innovations, and creativity in the knowledge delivery process. We are advancing toward this ideal through increased student involvement in basic and applied research, invention, innovation and economic development.

Our goal is to initiate and enhance collaboration with OU, the private sector, and academic and governmental partners to achieve national and international leadership in strategic cross-disciplinary research and education.



Chelsea Crissup
Senior Architectural Engineering Student

"The Gallogly College of Engineering has provided the support and encouragement needed for me to complete my engineering degree. My experience as an engineering student has been wonderful and I am thankful for my decision to study engineering. The GCoE is doing a great job of preparing students for life after OU."



Spencer Davis
Senior Chemical Engineering Student

"Our Gallogly College of Engineering provides many opportunities for students to better themselves academically, professionally and in many other ways. I am proud to be a part of this College and have grown so much myself. This was especially made possible by all of the faculty, staff and students who I have met along the way and will never forget."



School of Aerospace and Mechanical Engineering



Jawanza Bassue
University of Oklahoma

WHAT IS AEROSPACE ENGINEERING?

Aerospace engineers design and build the planes that make international travel possible and the spacecraft that have allowed astronauts to explore the universe. Led by our award-winning faculty with a philosophy of experiential learning, students gain understanding of aerodynamics, aerospace structures, propulsion systems and flight controls. In their final semester, students work in small groups to solve real-world design challenges.

ACADEMICS

Steeped in a history dating back to 1929, today's Aerospace Engineering program is the first in the nation with an emphasis on multidisciplinary Intelligent Aerospace Systems. This forward-thinking concept provides students with the advanced-technology background necessary to work in today's high-tech aerospace industries.

The AE undergraduate program has been designed to allow students to graduate after successfully completing 128 credit hours in a standard four-year plan. The program also ensures that students are equipped to become lifelong learners, utilizing and building upon engineering and scientific principles as they progress in their careers.

Graduates are well-rounded in aerodynamics, aerospace structures, propulsion systems and flight controls. This expertise is put to the test in a senior-year, two-semester capstone design course where student teams consult with a company and government labs to solve a real-world problem.

DEGREE OPTIONS

Undergraduate:

B.S. in Aerospace Engineering

Accelerated:

B.S. in Aerospace Engineering/
M.S. in Aerospace Engineering

Graduate:

Master of Science

Doctor of Philosophy

BEYOND YOUR DEGREE

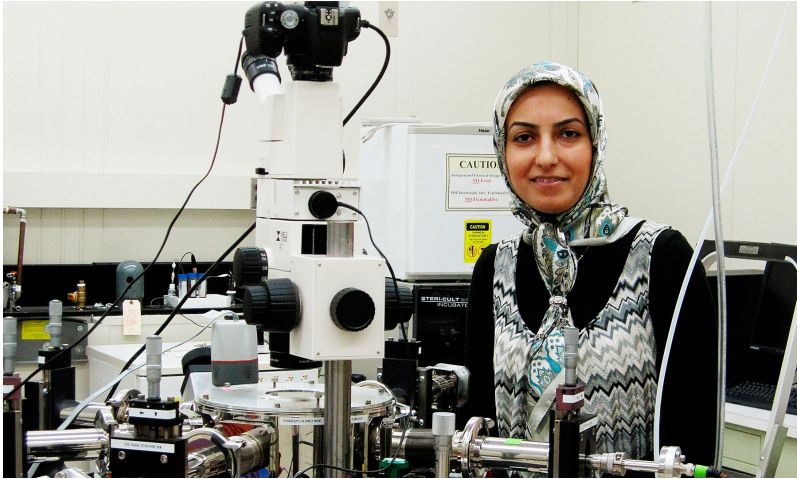
Our graduates are highly sought after in both the private and public sectors. Our alumni hold positions at a variety of levels in major corporations, small businesses, start-up software companies, government agencies, and universities.

CONTACT AME

- (405) 325-5011
- ame@ou.edu
- www.ame.ou.edu



School of Aerospace and Mechanical Engineering



WHAT IS MECHANICAL ENGINEERING?

Mechanical engineers design tools and machines that have widespread applications in almost every engineered product. Mechanical engineers are essential to manufacturing, oil and gas, aerospace, defense, civil infrastructure, health care and consumer products industries. The OU Mechanical Engineering program provides students with the opportunity to acquire a broad range of knowledge, making them strong competitors in today's job market.

ACADEMICS

The Mechanical Engineering undergraduate program has been designed to allow students to complete the degree program after successfully completing 123 credit hours in a standard four-year plan. The program also ensures that students are equipped to become lifelong learners, utilizing and building upon engineering and scientific principles as they progress in their careers.

Instruction includes statics, dynamics, vibration and strength of solids, fluid statics and dynamics, thermal sciences, and a capstone design course (Senior Design Practicum Program), which synthesizes analysis skills. Students develop computer skills for engineering analysis and computation, for the acquisition and analysis of experimental data, for visualization and modeling in design, and for the communication of results.

DEGREE OPTIONS

Undergraduate:

- B.S. in Mechanical Engineering
- B.S. in Mechanical Engineering: Pre-med option

Accelerated:

- B.S. in Mechanical Engineering/ M.S. in Mechanical Engineering

Graduate:

- Master of Science
- Doctor of Philosophy

BEYOND YOUR DEGREE

Graduates have a diverse range of employment opportunities, including government agencies; manufacturing, automotive and the oil and gas industries and small businesses and start-up companies. Graduates who pursue advanced degrees also can work in academia.

CONTACT AME

- (405) 325-5011
- ame@ou.edu
- www.ame.ou.edu



WHAT IS BIOMEDICAL ENGINEERING?

Biomedical Engineering professors and students work collaboratively with physicians and scientists at the OU Health Sciences Center on important problems that can save lives and improve the quality of life for the citizens of Oklahoma and the nation. Among other things, they are advancing X-ray and MRI imaging, designing implants for the middle ear to help the hearing impaired, investigating the conditions favorable for cell differentiation and proliferation in three-dimensional tissue engineering constructs, and producing agents to treat cancer, heart attack and stroke.

ACADEMICS

Graduate programs offer the option of choosing a concentration in biomedical engineering within the traditional branches of engineering or of pursuing M.S. and Ph.D. degrees in biomedical engineering.

Inherently interdisciplinary, our graduate students work closely with the University of Oklahoma Biomedical Engineering Center Fellows, scientists, physicians and engineers, as they learn experimental and quantitative approaches to investigation and design.

Our philosophy for education is to provide a solid core of knowledge through broad-based, rigorous coursework and a multidisciplinary research experience on a significant problem as a thesis project.

Life science courses (e.g., physiology, molecular biology) complement graduate offerings in biomedical engineering with minimum coursework credit hour requirements for the M.S. and Ph.D. of 24 and 36-48 hours, respectively.

DEGREE OPTIONS

Undergraduate:
Bachelor of Science

Graduate:
Master of Science
Doctor of Philosophy
Beyond Your Degree

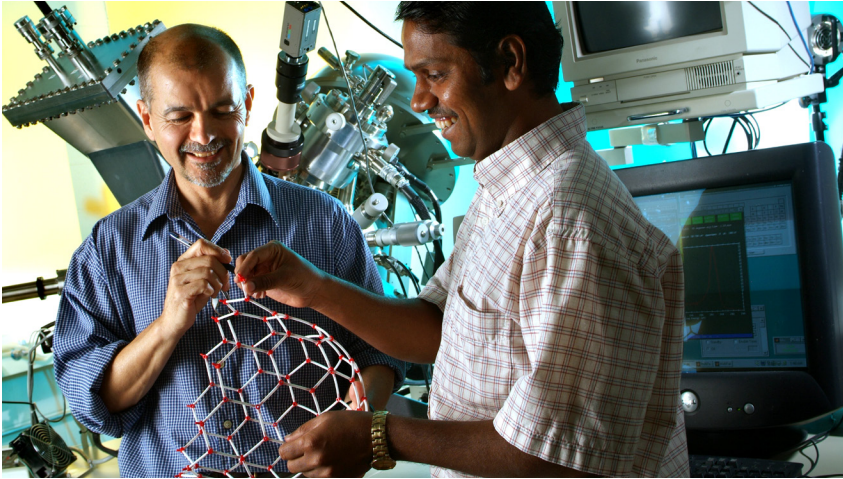
Our skilled and knowledgeable graduates work for industrial, academic, entrepreneurial or government agencies.

CONTACT BIOMEDICAL ENGINEERING

- (405) 325-5453
- bme@ou.edu
- www.ou.edu/coe/sbme



School of Chemical, Biological and Materials Engineering



WHAT IS CHEMICAL ENGINEERING?

Chemical engineers study how to convert low-value raw materials into high-value products by making highly specific chemical changes in that material. This typically involves designing or discovering novel processes rather than devices or products. Chemical engineers must have a good knowledge of the chemical nature of materials, and they must be able to predict how chemical changes to the molecular structure of a material will alter the ultimate physical properties of a material.

ACADEMICS

Our degree options allow students the opportunity to tailor their undergraduate education to their particular interests within chemical engineering.

Our faculty research and education programs include exciting new areas such as tissue engineering, single wall carbon nanotube synthesis and applications, genetic engineering, nanostructured materials and devices, and cell adhesion. These new fields build on and complement traditional strengths in energy, thermodynamics, surfactants, polymers, process systems engineering, and more.

BEYOND YOUR DEGREE

Chemical engineers are among the best equipped to attack and solve problems such as energy supplies, food and water supplies, environmental contamination, global warming, and health-related issues. The University of Oklahoma is among the best institutions in the nation to prepare you for a career in chemical engineering.

DEGREE OPTIONS

Undergraduate:

- B.S. in Chemical Engineering
- B.S. in Chemical Engineering: Pre-med/
Biomedical Engineering
- B.S. in Chemical Engineering:
Biotechnology Option

Accelerated:

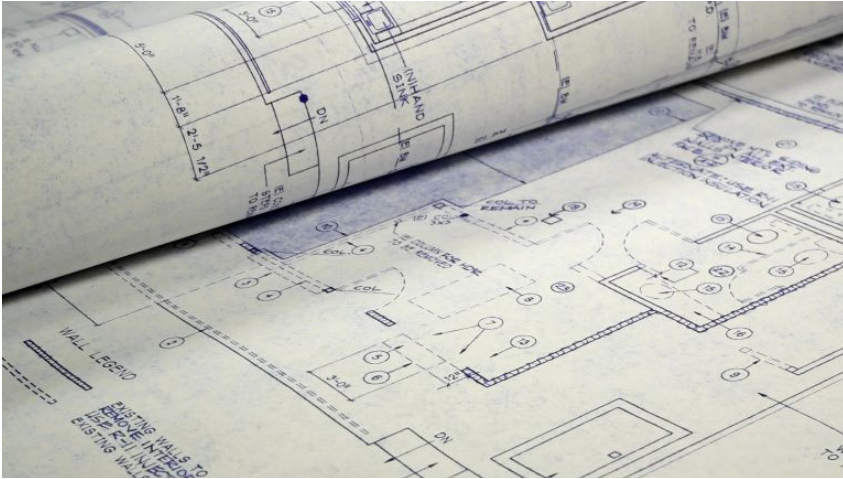
- B.S. in Chemical Engineering/
M.S. in Chemical Engineering
- B.S. in Chemical Engineering:
Biotechnology Option/M.S. in Bioengineering
- B.S. in Chemical Engineering:
Premedical/Biomedical Engineering Option/
M.S. in Bioengineering

Graduate:

- Master of Science
- Doctor of Philosophy

CONTACT CBME

- (405) 325-5811
- cbme@ou.edu
- www.cbme.ou.edu



WHAT IS ARCHITECTURAL ENGINEERING?

Architectural engineers design buildings and other structures, but the design of a building involves far more than just its external appearance. Buildings must be structurally sound, have adequate mechanical, plumbing and lighting systems, and must be economical to construct. Architectural engineers consider all these factors when they design buildings and other structures.

ACADEMICS

Students take a series of architectural planning and methods courses from the College of Architecture. During the last two years, students take structural engineering courses from CEES and building systems courses (e.g., Heating, Ventilation, and Air-Conditioning) from mechanical engineering. The culmination of each bachelor of science degree program in CEES is a two-semester capstone sequence. The capstone design experience requires students to draw upon various aspects of their undergraduate course work to develop a comprehensive solution to an open-ended problem.

CEES has developed an innovative two-semester capstone sequence. The first course in the sequence (Professional Practice) covers a lot of the non-technical issues associated with architectural engineering practice (e.g., professional registration, ethics, and environmental regulations); the second course (Architectural Engineering Capstone) focuses on a real-world architectural engineering problem. The students are assembled into multidisciplinary teams with civil engineering students. The teams are structured to simulate a typical architectural engineering consulting firm. The student teams address a real-world design problem and their work is evaluated by practicing engineers. One past capstone class undertook the design of a Radar Innovations Laboratory for the OU Research Campus.

CEES requires that all Architectural Engineering students take the Fundamentals of Engineering examination prior to graduation.

DEGREE OPTIONS

Undergraduate:
B.S. in Architectural Engineering

Accelerated:
B.S. in Architectural
Engineering/ M.S. in Civil Engineering

Beyond Your Degree

ArchE graduates have many career options, including working with architectural, civil or structural engineering consulting firms that design building structure and mechanical systems. Other graduates find employment with construction firms, as field construction engineers, project managers or cost estimators.

CONTACT ARCHE

- (405) 325-5911
- cees@ou.edu
- www.cees.ou.edu



School of Civil Engineering and Environmental Science



WHAT IS CIVIL ENGINEERING?

Civil engineering is the oldest of the modern engineering disciplines, with historical roots dating back to the 1700s. Civil engineers are responsible for the design and construction of society’s infrastructure, such as buildings, highways, bridges, mass transit systems, dams and locks, and municipal water and sewage treatment systems. They often are responsible for planning, managing, operating and maintaining these facilities.

ACADEMICS

Civil engineering is composed of four areas of emphasis: environmental, geotechnical, structural and transportation engineering. The undergraduate civil engineering student must complete a sequence of core engineering courses plus one or two courses in each of these areas. Students then choose three upper-division Professional Electives in their preferred area of emphasis.

The culmination of each bachelor of science degree program in CEES is a two-semester capstone sequence. The capstone design experience requires students to draw upon various aspects of their undergraduate course work to develop a comprehensive solution to an open-ended problem.

CEES has developed an innovative two- semester capstone sequence. The first course in the sequence (Professional Practice) covers a lot of the non-technical issues associated with civil engineering practice (e.g., professional registration, ethics and environmental regulations); the second course (Civil Engineering Capstone) focuses on a real- world civil engineering design problem. The students are assembled into multidisciplinary teams with architectural engineering students. The teams are structured to simulate a typical civil engineering consulting firm. The student teams address a real-world design problem and their work is evaluated by practicing engineers. One past capstone class undertook the design of a Radar Innovations Laboratory for the OU Research Campus.

CEES requires that all Civil Engineering students take the Fundamentals of Engineering examination prior to graduation.

DEGREE OPTIONS

Undergraduate:

B.S. in Civil Engineering

Accelerated:

B.S. in Civil Engineering/M.S. in Civil Engineering

Graduate:

Master of Science

Doctor of Philosophy

BEYOND YOUR DEGREE

Spurred by general population growth and an expanding economy, more civil engineers will be needed to design and construct higher-capacity transportation, water supply and pollution control systems, as well as large buildings and building complexes. They also will be needed to repair or replace existing roads, bridges and other public structures.

CONTACT CE

- (405) 325-5911
- cees@ou.edu
- www.cees.ou.edu



WHAT IS ENVIRONMENTAL ENGINEERING?

Using the principles of physics, biology and chemistry, environmental engineers develop methods to meet such environmental challenges as water and wastewater treatment, air pollution control, solid and hazardous waste management, waste recycling, and water resources management.

ACADEMICS

The core curriculum for environmental engineering is similar to civil engineering; however, the last two years of the program focus strictly on environmental courses. Students are required to take courses in air pollution control engineering; water and wastewater engineering; and solid and hazardous waste management. Students also choose two upper-division Professional Electives in their preferred area of emphasis.

CEES has developed an innovative two- semester capstone sequence. The first course in the sequence (Professional Practice) covers a lot of the non-technical issues associated with environmental engineering practice (e.g., professional registration, ethics and environmental regulations); the second course (Environmental Capstone) focuses on a real- world environmental engineering problem. The students are assembled into multi-disciplinary teams with environmental science students. The teams are structured to simulate a typical environmental consulting firm.

The student teams address a real-world environmental problem and their work is evaluated by practicing engineers and scientists. One past capstone class undertook a study of mine water discharge to develop a passive treatment system located in the Tar Creek Superfund site in northeast Oklahoma.

CEES requires that all Environmental Engineering students take the Fundamentals of Engineering examination prior to graduation.

DEGREE OPTIONS

Undergraduate:
B.S. in Environmental Engineering

Accelerated:
B.S. in Environmental Engineering/M.S.
in Environmental Engineering

Graduate:
Master of Science
Doctor of Philosophy

BEYOND YOUR DEGREE

Past graduates have been employed by state and federal environmental agencies, including the Oklahoma Department of Environmental Quality, the U.S. Environmental Protection Agency and the U.S. Geological Survey, as well as various private industries and consulting firms.

CONTACT ENVE

- (405) 325-5911
- cees@ou.edu
- www.cees.ou.edu



School of Civil Engineering and Environmental Science



WHAT IS ENVIRONMENTAL SCIENCE?

Environmental scientists have a variety of job responsibilities, including collecting and analyzing air, water and soil samples; monitoring compliance with environmental laws and regulation; and addressing public meetings on local environmental challenges.

ACADEMICS

Students pursuing a bachelor of science degree in environmental science complete fundamental courses in chemistry, math, physics, biology, microbiology and environmental science. Students then choose three upper-division track electives in one of four areas: chemistry, biology, math or physical sciences. Students also choose two upper-division Professional Electives in the preferred area of emphasis within environmental science. This flexible program prepares students for careers in government, consulting and industry.

CEES has developed an innovative two- semester capstone sequence. The first course in the sequence (Professional Practice) covers a lot of the non-technical issues associated with environmental science practice (e.g., professional registration, ethics and environmental regulations); the second course (Environmental Capstone) focuses on a real- world environmental problem. The students are assembled into multidisciplinary teams with environmental engineering students.

The teams are structured to simulate a typical environmental consulting firm. The student teams address a real-world environmental problem and their work is evaluated by practicing engineers and scientists. One past capstone class undertook a study of mine water discharge to develop a passive treatment system located in the Tar Creek Superfund site in northeast Oklahoma.

DEGREE OPTIONS

Undergraduate:

B.S. in Environmental Science

Accelerated:

B.S. in Environmental Science/

M.S. in Environmental Science

Graduate:

Master of Science

Doctor of Philosophy

BEYOND YOUR DEGREE

Our graduates work for the U.S. Environmental Protection Agency, Oklahoma Department of Environmental Quality, and numerous private industrial and consulting firms.

CONTACT ES

- (405) 325-5911
- cees@ou.edu
- www.cees.ou.edu



WHAT IS COMPUTER SCIENCE?

Computer science is an exciting and dynamic technical discipline. From its inception just 50 years ago, computer science has become the basis for much of the growth in today's global economy. New computing technologies are being introduced in the marketplace at an astonishing rate, making the curriculum for computer science education fresh, dynamic and evolving.

ACADEMICS

Because the development and integration of computer-based solutions for various application domains is, by definition, a multidisciplinary endeavor, the educational experience for our undergraduate students is correspondingly broad and flexible.

In addition to taking 12 core CS courses, students take three additional advanced CS elective courses in topical areas that interest them, such as computer graphics, intelligent robotic systems, data networks, data mining, cryptography, and others.

As part of their required CS coursework, students complete a major design project during a two-course capstone sequence in software engineering. Students also take general university requirements in humanities and sciences, and seven mathematics courses. Many required computer science classes include the social context of computing and professional ethics topics.

DEGREE OPTIONS

Undergraduate:
B.S. in Computer Science

Accelerated:
B.S. in Computer Science/M.S. in
Computer Science

Graduate:
Master of Science
Doctor of Philosophy

BEYOND YOUR DEGREE

Our graduates are highly sought after in both the private and public sectors. Our alumni are very successful, holding positions at a variety of levels in major corporations, small businesses, start-up software companies, government agencies and universities.

CONTACT COMPUTER SCIENCE

- (405) 325-4042
- cs@cs.ou.edu
- www.cs.ou.edu



Engineering Physics



WHAT IS ENGINEERING PHYSICS?

The engineering physicist is interested not only in understanding physical phenomena and the underlying principles, but also in applying this knowledge to the solution of a broad range of challenges. As the miniaturization of transistors, lasers and memory elements continues, understanding of their operation increasingly requires knowledge of quantum mechanics, statistical mechanics and other aspects of nanoscience.

ACADEMICS

The curriculum includes the basic courses that are common to an engineering degree, as well as those of a degree in physics. Coursework includes a block of upper-division physics courses, and a planned sequence of advanced courses in one of the engineering disciplines that fulfills the design/synthesis requirements of an engineering degree. Coursework includes electronics, engineering computing, structure and properties of materials, electromagnetism and optics, modern physics and quantum physics, physical mechanics, fluid mechanics, statistical physics and thermodynamics, an extensive mathematical preparation, and in-depth laboratory skills. This curriculum is designed to develop sufficient depth in both engineering skills and physics knowledge to produce engineers capable of working at the cutting edge of developing technologies and contribute to new fields as they emerge.

DEGREE OPTIONS

Undergraduate:
B.S. in Engineering Physics

Graduate:
Master of Science
Doctor of Philosophy

BEYOND YOUR DEGREE

An engineering physics graduate may find employment with a computer chip manufacturer as a process engineer whose job is to improve the operation and yield of semiconductor devices.

CONTACT ENGINEERING PHYSICS

- (405) 325-3961
- ephys@nhn.ou.edu
- www.ou.edu/coe/ephysics



WHAT IS COMPUTER ENGINEERING?

The School of Electrical and Computer Engineering at OU offers students professional courses using the most up-to-date technology to ensure they will be ready to enter the job field as soon as they graduate. Computers are vital to our everyday lives, and computer engineers work to develop computer programs and hardware. From personal laptops to high-tech defense programs, computer engineers create and test much of the hardware and software that is used daily. They also determine the best ways to upgrade and use the technology that is available.

ACADEMICS

A computer engineering student graduates with a Bachelor of Science in Computer Engineering degree. Students then can choose to further their education and pursue a Master of Science in Computer Engineering or a Master of Science in Telecommunications Systems degree.

Qualified computer engineering students may choose accelerated program tracks leading to an MSECE or MS in Computer Science. Accelerated program students complete their M.S. degrees with an accumulated 12 credit hours less than normally required to obtain both degrees. Curricula are designed to give a thorough understanding of the physical principles, the design process and the current technology in the student's chosen discipline. CpE specialties include instrumentation and control systems, digital signal and image processing, and advanced computer architecture.

DEGREE OPTIONS

Undergraduate:

B.S. in Computer Engineering

Accelerated:

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

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

Graduate:

Master of Science

Doctor of Philosophy

BEYOND YOUR DEGREE

Jobs in this field include design, manufacture and utilization of computers, power systems, communications, automatic control systems, electronics, semiconductor devices, quantum electronics, microwave systems, instrumentation, digital signal and image processing, system instrumentation and biomedical electronics.

CONTACT COMPUTER ENGINEERING

- (405) 325-8131
- ecschool@ou.edu
- www.ece.ou.edu



School of Electrical and Computer Engineering



WHAT IS ELECTRICAL ENGINEERING?

Electrical engineers design and test a variety of electrical and electronic systems for a diverse set of applications, including electric energy delivery, avionics, consumer electronics, communications, radar, navigation and lasers, to name a few. The OU Electrical Engineering program is one of the broadest disciplines within the Gallogly College of Engineering. Students work with state-of-the-art equipment and technology to prepare them to enter the job field upon graduation.

ACADEMICS

An electrical engineering student graduates with a Bachelor of Science in Electrical Engineering degree. Students could also choose to pursue Accelerated Bachelor of Science and Master of Science in Computer and Electrical Engineering degrees.

Curricula are designed to give a thorough understanding of the physical principles, the design process and the current technology in the student's chosen discipline. EE conventionally specializes in communications, electric power systems, microwave and rf systems, solid state electronic devices and electronics.

DEGREE OPTIONS

Undergraduate:

B.S. in Electrical Engineering

Accelerated:

B.S. in Electrical Engineering/

M.S. in Electrical and Computer Engineering

Graduate:

Master of Science

Doctor of Philosophy

BEYOND YOUR DEGREE

Many career options are available, including research, management, sales and manufacturing development. Technical areas include the design, manufacture and utilization of computers, power systems, communications, automatic control systems, electronics, semiconductor devices, quantum electronics, microwave systems, instrumentation, digital signal and image processing, system instrumentation and biomedical electronics.

CONTACT ELECTRICAL ENGINEERING

- (405) 325-8131
- ecschool@ou.edu
- www.ece.ou.edu



WHAT IS INDUSTRIAL AND SYSTEMS ENGINEERING?

Industrial and systems engineers design, enhance and manage complex, large-scale data-driven processes and systems to inform decision making. ISEs work on a broad range of complex systems problems involving both people and technology. Companies seek ISEs for their expertise in understanding, evaluating and improving the performance of entire technical and business systems.

ACADEMICS

The School of ISE offers degree tracks to accommodate a variety of career paths. All bachelor of science degree tracks provide solid grounding in traditional areas of ISE: statistics, manufacturing, decision analytics, simulation, production management, and human factors engineering.

While most of our students pursue the standard industrial engineering curriculum, we offer several ways to customize your degree. Our Decision Support Systems option combines an ISE bachelor's degree with a minor in computer science. Organizations everywhere seek to interpret massive amounts of data, making predictions about system sustainability, changing markets, and even changing political situations. By choosing the DSS option, you will gain both the statistical and analytical skills of ISE and the software skills of CS, giving you a competitive edge in this rapidly growing field.

Because ISEs are experts in improving quality while eliminating unnecessary costs, career opportunities in health care organizations are growing as well. Hospital systems, electronic medical records companies, and medical device manufacturers all hire ISEs. And if becoming a physician is your goal, our pre-med option will prepare you for medical school and provide skills that will help you run your own medical practice.

Students also can pursue accelerated master's degrees in business administration or in ISE, developing targeted skill sets that can enhance success in the workplace or in graduate school.

DEGREE OPTIONS

Undergraduate:

- B.S. in Industrial and Systems Engineering
- B.S. in ISE: Pre-Medicine Option
- B.S. in ISE: Decision Support Systems

Accelerated:

- B.S. in ISE/M.S. in ISE
- B.S. in ISE/Master of Business Administration
- B.S. in ISE/M.S. in ISE with Decision Support Systems Option

Graduate:

- Master of Science
- Doctor of Philosophy

BEYOND YOUR DEGREE

Our ISE graduates can be found working in a wide range of jobs and locations, from Wall Street financial firms to Silicon Valley start-ups and fields that include energy, health care, entertainment, risk management, logistics, defense, and retail/wholesale distribution.

CONTACT ISE

- (405) 325-3721
- ise@ou.edu
- www.ou.edu/coe/ise

ENGINEERING RESEARCH

Making a difference through research

Research in the Gallogly College of Engineering is focused on both science and technology of societal significance:

Biomedical, Energy, Engineering Education, Infrastructure, Nanotechnology, and Weather Technology.

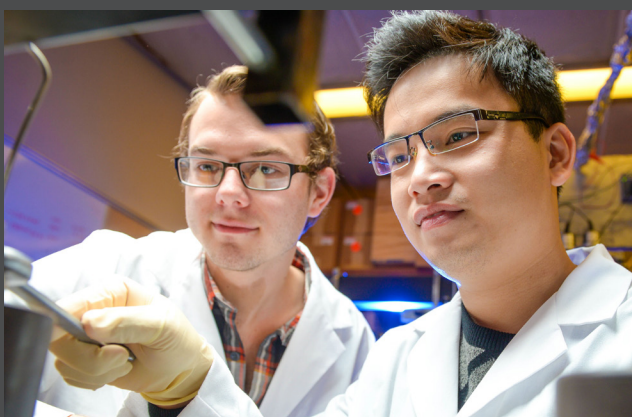
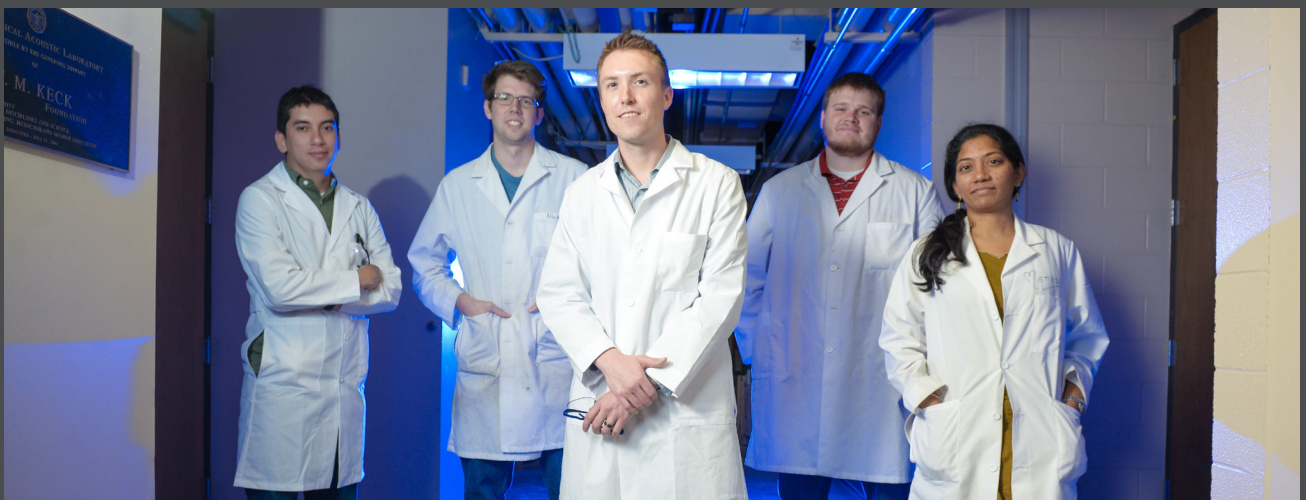
The college is active in several cross-disciplinary research institutes and centers that bring together faculty, students and other professional participants from different disciplines.

- www.ou.edu/undergraduate-research
- www.ou.edu/coe/honors_research

There are many opportunities for you to get involved in undergraduate research. The Gallogly College of Engineering offers research opportunities for Honors students and all engineering students through REUs (Research for Engineering Undergraduates).

Get Involved. Your undergraduate research experience provides you with state-of-the-art laboratories, working with the latest equipment and mentored by faculty who are experts in their respective disciplines.

Visit the links above to learn more.



STUDENT RESOURCES

We are here for you

THE WILLIAMS STUDENT SERVICES CENTER



WSSC academic advisers are ready to assist you.

The Williams Student Services Center is the central contact center for delivering the highest-quality student services for engineering. On the lower level of Felgar Hall, the WSSC offers assistance to students at every stage of their engineering education. Staff advisers are available to answer questions regarding degree programs, class schedules, student organizations, study-abroad programs, and other issues that arise during your college days.

The WSSC is home to student advising and services, and the Multicultural Engineering Program - a part of the Diversity and Inclusion Program, student enrichment and development, and recruiting. It provides a one-stop-shop for student services and support. Engineering students can obtain information about special programs and events, internships and scholarships, undergraduate research opportunities, leadership development and service opportunities. An extensive support framework keeps students on track for graduation and includes tutoring, academic advising and linkage to student assistance programs and support services offered at OU.

CONTACT WSSC: (405) 325-4096 | www.ou.edu/coe/advising

THE DEAN'S LEADERSHIP COUNCIL

The Dean's Leadership Council of more than 50 sophomore, junior and senior engineering students volunteered to serve as leaders for the Gallogly College of Engineering. DLC Mentors help first-year engineering students make a successful transition to the college. DLC Tutors help engineering students with their academic coursework. DLC Recruiters host prospective students and families when they visit the college and the OU campus.

BECOME A DEAN'S LEADERSHIP COUNCIL MENTOR!

"I love being able to welcome new students to the Gallogly College of Engineering, and to be able to help guide and connect students from all walks of life."

Isaac Hill
DLC President





ExxonMobil Lawrence G. Rawl Engineering Practice Facility

This is where students become leaders.

The REPF is a perfect fit for the student of today. This progressive facility provides a one-of-a-kind showcase for engineering education in the state of Oklahoma. The REPF provides all the tools required to bring an idea from concept to finished product and to recruit, motivate and develop our graduates to become professionals and leaders in their community.

It is this synergy of effort that the Gallogly College of Engineering is confident will inspire tomorrow's engineers by exciting young elementary, junior high and high school students about the possibilities that exist in an engineering career.



The Archie and Linda Dunham Student Leadership Center

Students come together to collaborate and exchange ideas. Student organizations occupy dedicated cubicles, where they meet and plan how they can best serve the College and each other.

CONTACT REPF

- (405) 325-3164
- goengineering@ou.edu
- www.ou.edu/coe/practice

This is where our teams come together to:

1. COLLABORATE

Teams work side-by-side in open bays to facilitate collaboration. We are better together than we are apart.

2. CREATE

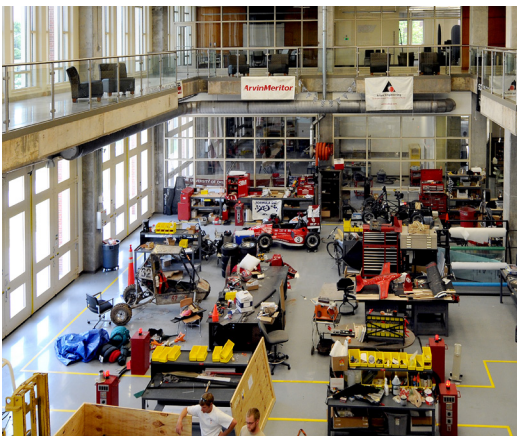
Engineering is a creative discipline. The best way to learn is by hands-on experience.

3. COMPETE

Competition is a real-world experience. Students participate in teams to be better prepared as they enter the engineering workforce.

4. WIN

It is a Sooner tradition to compete at the championship level. But it's about more than just winning. It's about learning and growing as a member of a team. It's what makes you a better engineer.



ExxonMobil Lawrence G. Rawl Engineering Practice Facility



This is where YOU practice engineering!

BOOMER ROCKET TEAM



Students on the Boomer Rocket Team design, build and compete at local and national competitions with their customized rockets.

CHEM CAR



Students design, build and test a small car powered by a specific chemical reaction and calibrated to carry a certain volume of water a specified distance.

CONCRETE CANOE



The team enters a canoe in the National Concrete Canoe Competition each year, where they design, build, document, present and race their canoe.

DESIGN-BUILD-FLY



The team competes in an international engineering competition to develop an unmanned aerial system that is required to complete a series of missions, which vary from year to year.

SOONER ELECTRIC RACING EV GRAND PRIX



The EV Grand Prix team works to research, design and develop electric vehicles to compete in a variety of races. Competitions take place at the Indianapolis Motor Speedway.

SOONER OFF ROAD



Sooner Off Road is a relatively new team that is in its third year of competition. The team attended two national and international SAE Baja competitions with more than 100 entered teams in each.

SOONER POWERED VEHICLE



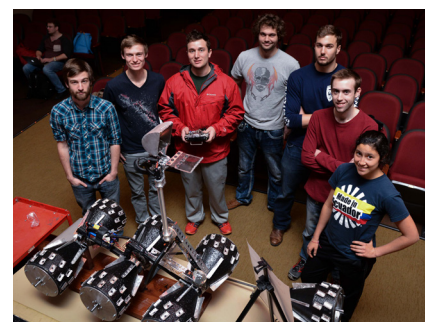
The Sooner Powered Vehicle team designs, constructs and tests a vehicle for the National American Society of Mechanical Engineers Human Powered Vehicle competition each year.

SOONER RACING TEAM



OU engineering students have designed a Formula-style race car every year since 1995, garnering numerous awards for design and performance.

SOONER ROVER TEAM



The Sooner Rover Team won the 2016 NASA Rover Challenge. They continue their mission to design, build and compete in the 2017 University Rover Challenge in Utah for the National Institute of Aerospace RASC-AL Robo-Ops competition.

Additional team opportunities include Sooner Competitive Robotics and Software Studio.

STUDY ABROAD

Engineering is a global discipline. As such, it is a priority of both the University of Oklahoma and the Gallogly College of Engineering to provide our students the opportunity to engage in a variety of global and cultural experiences. These opportunities are specifically designed for engineering majors:

France — a six-week summer program in Clermont-Ferrand, France, at the University Clermont d’Auvergne (formerly the University of Blaise Pascal). Students study the French language, disruptive technologies and ideation, engineering professional development and engineering leadership. Students visit local companies and corporations, conduct research and engage in meaningful cultural activities as they further their understanding of French history.

Italy — there are three programs of varying length offered in Italy: a two-week program in May, a four-week program in July and a semester-long program each fall. The vibrant and ancient city of Arezzo serves as the home-base for these programs. Students are exposed to the treasures of Italian art, culture and history while they study engineering and visit local corporations, work on engineering designs and assignments, and engage with the local community via volunteer projects.

Brazil and Mexico — a two-week engineering program starting in May has been offered in alternate years in Brazil and Mexico since 2016 with Rio de Janeiro. The South American program serves as an exemplary model for integrating students with the local culture and engaging them in engineering study, all while exposing them to how the enterprise of engineering is conducted in a foreign country. Participants will have the opportunity to meet Brazilian students while studying engineering in this beautiful and unique foreign country.

www.ou.edu/coe/studyabroad



Students enjoy the view from atop Puy de Dôme in south-central France.

Scholarships



The OU Gallogly College of Engineering awards more than **\$1.4 million** each year in college, school and departmental scholarships and fee waivers, of which more than **\$475,000** scholarships and fee waivers are to incoming freshmen. Freshman scholarships are based on academic achievement as demonstrated by ACT/SAT performance, GPA and class rank, leadership, community involvement, and achievements related to math, science or technology. Some highlights include:

- More than **40 percent** of incoming freshmen receive scholarships and/or fee waivers from the Gallogly College of Engineering each year.
- There are nearly **400** National Scholars in the Gallogly College of Engineering (Fall 2016).
- Both the Gallogly College of Engineering and the engineering schools also award scholarships to the upperclassmen engineering students.

www.ou.edu/coe/scholarships





The Gallogly College of Engineering has an active and service-oriented student body. There are many opportunities for you to get involved. From Engineers' Club sponsored events that include a week of activities in February to celebrate Engineer's Week, to the Winter Ball, Sooner Saturday and Homecoming, you are invited to become an active member of the engineering community. The consistent theme of all these events is how much our students enjoy being together. They are great examples of the memories you make and the friendships that you will develop here.

Come Join the Fun!

The following list represents many of the more than 50 technical societies and college-wide student organizations:

- American Association of Drilling Engineers
- American Indian Science and Engineering Society
- American Institute of Aeronautics and Astronautics
- American Institute of Chemical Engineers
- American Society of Civil Engineers
- American Society of Mechanical Engineers
- Architectural Engineering Institute
- Association for Computing Machinery
- Biomedical Engineering Society
- Electric Vehicle Research Institute
- Engineers' Club
- Game Developers Association
- Human Factors and Ergonomics Society
- Institute for Operations Research and Management Science
- Institute of Electrical and Electronics Engineers
- Institute of Industrial Engineers
- Loyal Knights of Old Trusty
- National Society of Black Engineers
- Society of American Military Engineers
- Society of Asian Scientists and Engineers
- Society of Automotive Engineers
- Society of Hispanic Professional Engineers
- Society of Manufacturing Engineers
- Society of Petroleum Engineers
- Society of Women Engineers
- Sooners Without Borders

For a more comprehensive list of student organizations and to learn more about becoming involved in your Gallogly College of Engineering, visit

www.ou.edu/coe/studentlife.

ENGINEERING@OU

Snapshot from GCoE Social Media



DIVERSITY AND INCLUSION

Multicultural Engineering Program



Diversity and inclusion continues to be a priority on our campus, and the achievement of our diverse student body is testimony to that ideal. Open to all students, OU Gallogly College of Engineering Diversity Programs facilitates the outreach, recruitment, retention and overall success of underrepresented minorities, including African American, Native American, Hispanic, women, first-generation college students and students with disabilities.

Diversity programs also supports lesbian, gay, bisexual, transgendered and queer students. One facet of Diversity Programs is the Multicultural Engineering Program. With a diverse student population, we are better able to solve problems and implement new ideas because our students come to us with different backgrounds, experiences, knowledge and understanding.

The goal of MEP is to cultivate and impact the retention efforts for underrepresented engineering students through:

Tutoring

Scholarships

Professional Development

Career Fair Reception

Diversity Programs Awards Banquet

Industry Networking Opportunities

Textbook and Calculator Rental

Laptop Scholarship

ExxonMobil Peer Mentoring Opportunities

Freshman Engineering Orientation Section

Cultural Organizations

CONTACT MEP

- (405) 325-0095
- mep@ou.edu
- www.ou.edu/coe/diversity



Multicultural Engineering Program



AT&T SUMMER BRIDGE

One of the goals of the Multicultural Engineering Program is to facilitate a healthier transition from high school to the Gallogly College of Engineering environment and provide support for individual needs of the MEP students. Sometimes engineering coursework can be a challenge. The AT&T Summer Bridge Program has become a model for ensuring engineering students' academic preparedness and success. Bridging the gap between high school and college, the four-week on-campus program is designed to help African American, Hispanic/Latino, Alaska Native/ Pacific Islander, American Indian, first-generation students or students from rural communities for their first year of engineering coursework. The program includes all housing, meals, seminars, team-building exercises, and much more.



 **The UNIVERSITY of OKLAHOMA**
Gallogly College of Engineering
Diversity and Inclusion Program



The AT&T Summer Bridge Program is designed with the intent to improve retention of under-represented minorities in engineering. The program also focuses on the importance of building relationships within the engineering community; students who attend the program form unique friendships that have proven to last throughout their college journey. It is important for underrepresented minorities to feel a part of the OU Gallogly College of Engineering, but our first priority is to focus on the smaller MEP family.

www.ou.edu/coe/summerbridge

HALLIBURTON



HALLIBURTON WOMEN'S WELCOME

Halliburton Women's Welcome is a two-day program occurring the week prior to the start of the fall semester and is designed to assist incoming female freshman and transfer students in their transition to the study of engineering and the OU campus. Participants will get a jump start on forming unique connections that will ensure their success as engineering students.

www.ou.edu/coe/womenswelcome

OU CAREER SERVICES

From career development to employment



OU'S CAREER SERVICES works with engineering majors in the areas of career exploration, career development, internships and co-ops, and professional development prior to graduation.

Our programs connect students with hundreds of employers. Students can access an online job board that boasted more than 1200 engineering specific postings during the 2015/2016 academic year. Also, Career Services coordinated over 1300 on-campus interviews exclusively for engineering students during the 2015/2016 academic year.

Going forward Career Services will be utilizing a state-of-the-art recruiting platform called Handshake to connect engineering students to employers.

Career Services has created presentations, major specific handouts and a technical resume-writing guide geared specifically to an engineering majors' unique job search.



WHO RECRUITS GALLOGLY COLLEGE OF ENGINEERING GRADUATES?

In 2016, 131 companies attended and participated in the OU Gallogly College of Engineering Career Fair, including the following:

- 3M Commercial Solutions
- ABB, Inc.
- Aguirre & Fields, LP
- Alvine Engineering
- American Airlines, Inc.
- Anheuser-Busch Brewery
- Apache Corp.
- ArcBest Corp.
- AT&T
- Boeing Company
- BP America
- CACI International, Inc.
- Capital One
- CEC Corp.
- Chesapeake Energy Corp.
- Chevron Phillips Chemical Co., LP
- Chickasaw Nation Industries
- Citation Oil and Gas Corp.
- Conoco Phillips
- Devon Energy
- Ditch Witch
- EST, Inc.
- ExxonMobil
- FM Global
- Ford Audio-Video LLC
- Garmin International
- Garver, LLC
- General Electric
- Halliburton
- Haskell
- HollyFrontier Companies
- International Paper
- Jack Henry & Associates, Inc.
- Johnson Controls, Inc.
- Kimberly-Clark Corp.
- Koch Industries, Inc.
- L-3 Mustang Technology
- Lufthansa Technik Component Services
- MacArthur Associated Consultants
- Magellan Midstream Partners, LP
- Michelin North America
- Mu Sigma Inc.
- NALCO Water
- National Instruments
- NORDAM
- Northrop Grumman Aerospace Systems
- OG&E Energy Corp
- Oklahoma Department of Transportation
- Olsson Associates
- ONE Gas, Inc.
- ONEOK, Inc.
- OpenLink, Inc.
- Paycom
- Peregrine Petroleum
- Phillips 66
- Pioneer Natural Resources
- Raytheon
- Sabre
- Schlumberger
- Shell Oil Co.
- Spirit AeroSystems
- Terracon Consultants, Inc.
- The Boldt Co.
- Tinker Air Force Base Civilian Employment
- Union Pacific Railroad
- United Parcel Service
- Walmart US eCommerce
- Williams

WHERE ARE THEY NOW?

...and where will your engineering degree take you?

ENGINEERING CAREERS

The diversity of careers and accomplishments of the more than 24,000 OU Gallogly College of Engineering graduates prove that the limitations of what you can do and be as an engineer are only bound by your personal imagination and self-motivation to see your vision become a reality.

ENGINEERING INTERNSHIPS

We believe it is especially valuable for students to have an internship experience during their academic career. These internships may involve research with faculty members or the opportunity to work in industry.



Michael Miller
B.S. Electrical Engineering
Founder, Advanced Financial Solutions

Combining an electrical engineering degree with a love for designing, Miller created one of the world's most successful companies in the banking technology industry. Writing software for financial institutions led Miller to revolutionize the process of storing old checks for customer and bank use. Today, the check imaging created by Miller is used in banks around the globe.

Miller is proof that the value of intellectual property has the power to create quality jobs and generate economic wealth for regions, nations and the world.



Pam Tucker
B.S. Chemical Engineering - M.S. and Ph.D. Thermodynamics of Polymer Blends
Co-founder and Vice President, Utility Composites Inc.

After working for 3M in the areas of conductive, static dissipative and insulative polymeric materials, Tucker co-founded her own company producing composite fasteners. RAPTOR® Nails are a great example of how engineers innovate to meet the needs of customers and consumers by understanding how their innovations and technologies work within an entire system and not just for a limited function.

Tucker emphasizes the value of analytical and critical-thinking skills for solving diverse, complex problems toward the achievement of personal goals.



Teni Ogunsola
B.S. Electrical Engineering
Equipment Reliability Engineer, Williams

After accepting a position at Williams, Ogunsola has quickly realized the value of the education he received at OU. "At the University of Oklahoma I was challenged by my professors to always think of real-world applications when working on assignments, and thus far in my short career, it has paid dividends time and time again. The problem-solving methods and techniques I learned while earning my electrical engineering degree at OU have allowed me to continue learning and completing projects that are not in my engineering discipline, thereby increasing my value to the company."

YOUR GCOE CONTACTS

Future Students

www.ou.edu/coe/futurestudents

(405) 325-3164

GOengineering@ou.edu

Academic Student Support

www.ou.edu/coe/support

(405) 325-4096

coeadvising@ou.edu

Diversity/Inclusion Programs

www.ou.edu/coe/diversity

(405) 325-0095

Imorales@ou.edu

GCoE Degree Programs

www.ou.edu/coe/academics

School of Aerospace and Mechanical Engineering

www.ame.ou.edu

(405) 325-5011

School of Chemical, Biological and Materials Engineering

www.cbme.ou.edu

(405) 325-5811

School of Civil Engineering and Environmental Science

www.cees.ou.edu

(405) 325-5911

School of Computer Science

www.cs.ou.edu

(405) 325-4042

School of Electrical and Computer Engineering

www.ece.ou.edu

(405) 325-8131

Engineering Physics

www.ou.edu/coe/ephysics

(405) 325-3961

School of Industrial and Systems Engineering

www.ou.edu/coe/ise

(405) 325-3721

Stephenson School of Biomedical Engineering

www.ou.edu/coe/sbme

(405) 325-5453

YOUR OU CONTACTS

Prospective Student Services

go2.ou.edu

General Catalog

catalog.ou.edu/current/index

OU Student Media

studentmedia.ou.edu

Study Abroad

www.studyabroad.com or www.ou.edu/intprog

Transfer Equivalencies

<https://enroll.ou.edu/thebook/tesd>

University-Wide Degree Sheets

www.ou.edu/checksheets

University College

<http://www.ou.edu/univcoll.html>

Financial Aid Services

www.financialaid.ou.edu

Career Services, Internships, Co-op Programs

www.ou.edu/career

Sooner Athletics

www.soonersports.com

Mewbourne College of Earth and Energy

www.ou.edu/mcee

YOUR GCOE STUDENT SERVICES CONTACTS



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Recruitment and Outreach

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Lisa Morales

Executive Director of Diversity
and MEP

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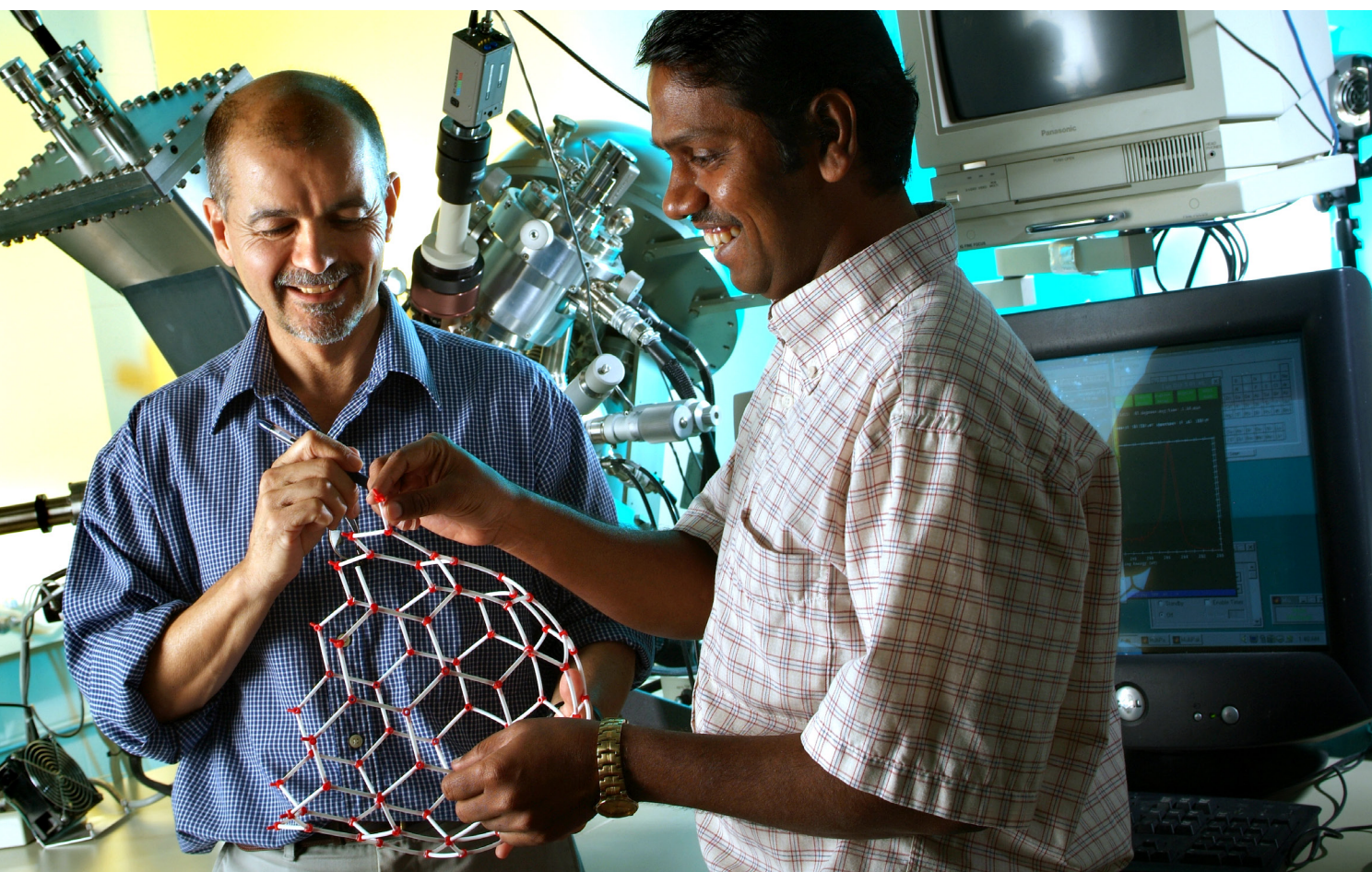
Tiffany Smith

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