The University of Tulsa is uniquely positioned among other institutions of higher education as a nationwide leader in energy. Home to students from 66 countries, TU offers an internationally renowned petroleum engineering program while embracing a multi-disciplinary approach to energy education. The energy field encompasses faculty, students, research and employment placement from the Collins of Business, the College of Engineering and Natural Sciences and the College of Law. TU’s historic North Campus has been a beacon of technical research, hands-on learning opportunities and cutting-edge innovation for more than 50 years. While honoring its 90-year history in oil and gas research, TU is evolving into a center of excellence for all energy resources now including solar, wind, nanobatteries and biofuels.
Tulsa’s Energy Center

A leader in energy education and research for 90 years

- TU’s McDougall School of Petroleum Engineering was named the world’s best university for oil, gas and petroleum engineering, according to the 2017 CEOWORLD magazine university rankings.

- TU, named the greenest university in Oklahoma, powers its Case Tennis Center through rooftop solar panels.

- Ranked No. 4 among petroleum engineering graduate schools by U.S. News & World Report

- Recipient of ARPA-E and U.S. Department of Energy grants for solar power research and other alternative energy projects.

- Longstanding program excellence in energy law

- Renowned programs in Native American law and sustainable energy and natural resources law

- Energy Law Journal edited by TU’s law students on behalf of practicing members of the Energy Bar Association

- ABA’s Year in Review publication section on Environment, Energy and Resources Committee also edited by TU’s law students

- Ranked 15th among U.S. law schools for job placement for the Class of 2017 (National Law Journal 2018), including placements in the energy field

- The Energy Management Program is one of only 10 such university programs in the United States. In July 2014, the Collins College of Business established the School of Energy Economics, Policy and Commerce in response to growth in the energy industry and the university’s energy business degree programs.

- TU houses one of only two undergraduate energy management programs at a private institution accredited by the American Association of Professional Landmen.

- Master of Energy Business program ranked No. 49 by U.S. News & World Report for Best Online Program and one of only three post-baccalaureate programs accredited by the American Association of Professional Landmen (AAPL).
Degree Programs and Consortia Related to the Energy Industry

**Petroleum Engineering** – BSPE, ME, MSE, Ph.D.
**Energy Business** – BSBA, MEB
**Energy Law** – J.D., SERL Certificate, J.D. and LL.M. in Energy and Natural Resources Law, LL.M. in Energy & Natural Resources Law for Foreign Lawyers, MJ in Energy Law

**Chemical Engineering** – B.S. with options in materials, refining, pre-med, business and environmental, M.S.Ch.E.
**Chemistry** – B.A., B.S., M.S., Ph.D.
**Biochemistry** – B.S., M.S.
**Engineering Physics** – B.S., M.S.
**Physics** – B.S., M.S., Ph.D.
**Geosciences** – B.S., M.S., B.S., J.D./M.S., Ph.D.
**Mechanical Engineering** – B.S., M.S., Ph.D.

- Applied Research Center for Cloud of Things
- Center for Boundary Integral Methods
- Coiled Tubing Mechanics Research Consortium (CTMRC)
- Computational Neuroscience and Adaptive Systems Lab (CNAS)
- Critical Infrastructure Protection Lab
- Cyber Corps Program
- Erosion Corrosion Research Center (ECRC)
- Hurricane Motor Works (HMW)
- Indoor Air Program
- In Silico Research Group
- Institute of Alternative Energy
- Institute for Biochemical and Psychological Study of Individual Differences
- Institute of Bioinformatics and Computational Biology
- Institute for Information Security (iSEC)
- Institute of Nanotechnology
- Institute for Software Research (TUISR)
- Materials Research Group
- MultiAgent SysTEms ReSearch Group (MASTERS)
- Oklahoma Photovoltaic Research Institute
- Security Economics Laboratory
- Software Engineering Architecture Team (SEAT)
- TU Artificial Lift Projects (TUALP)
- TU Center of Research Excellence (TUCoRE)
- TU Center for Reservoir Studies (TUCRS)
- TU Delayed Coking Project (TUDCP)
- TU Center for Reservoir Studies
- TU Drilling Research Projects (TUDRP)
- TU Fluid Flow Projects (TUFFP)
- TU High-Viscosity Oil Projects (TUHOP)
- TU Horizontal Well Artificial Lift Projects
- TU Hydrates Flow Projects (TUHFP)
- TU Paraffin Deposition Project (TUPDP)
- TU Petroleum Reservoir Exploitation Projects (TUPREP)
- TU Sand Management Projects (TUSMP)
- TU Separation Technology Projects (TUSTP)

**COMMUNITY RELATIONS AND INDUSTRY ADVISORY BOARDS**

- Engineers Without Borders student partnership with the Red Cross
- Capstone projects in oil and gas, renewable resources and alternative energy
- Mentoring/advising provided by industry leaders to energy students in the Collins College of Business, College of Engineering and Natural Sciences and TU College of Law
Research/Patents

CHEMICAL ENGINEERING

- Developing genetic engineering tools to facilitate algae biofuels development
- Experimental investigation and modeling of flow assurance issues to control many solid deposits such as paraffin, hydrate and asphaltenes in oil and gas pipelines and well bores.
- Applying thermodynamic principles to practical problems of hydrocarbon energy industry.
- Produced water purification using novel technologies.
- Using sub and supercritical water to convert biomass to biofuels (renewable energy).
- Catalytic methane dehydroaromatization to produce liquid fuels
- Liquefaction of biochar to produce value-added chemicals and fuels
- The Fundamentals of Delayed Coking Joint Industry Project has been studying, for the past 20 years, ways of understanding and improving the delayed coking petroleum refining process
- Using zeolites for all types of oil refining processes including cracking, hydrocracking, isomerization, reforming and hydrogenation.

CHEMISTRY AND BIOCHEMISTRY

- Synthesis and fabrication of photovoltaic (PV) materials where nanostructuring greatly enhance the PV system. This work has received more than $1M in Federal funding.
- 3D Printed Electrodes for Electrochemical energy storage. 3D printing opens new doors for battery fabrication. This work has resulted in four patents.
- Nanostructured battery materials (electrodes and electrolytes) to enhance the energy storage capabilities. This project has had more than $3M in Federal and Industrial funding. This work has resulted in seven patents.
Research/Patents

**GEOSCIENCES**
- Reservoir characterization research particularly aimed at understanding permeability anisotropy related to facies architecture elements to improve reservoir exploitation strategies.
- Geothermal and petroleum related fluid injection induced seismicity forecasting and alert systems development to better inform industry and regulator decision making.
- Geophysical imaging and signal processing to improve petroleum exploration and exploitation efforts.
- Research geophysical theory and applications for effective delineation and production of fossil fuel reservoirs.
- Educate our students, providing a strong foundation in geophysics to enable participation in the energy business.
- Educate our students in computational geophysics enabling their ability to create geoscience solutions for energy applications.
- Teach our students on how to participate and contribute within a multidisciplinary geoscience team for hydrocarbon exploration and production.
- Instruct our students to be critical thinkers and socially aware with respect to world energy concerns regarding fossil fuel production.
- Guide our students to act in a responsible and ethical manner with respect to fossil fuel operations, including environmental preservation, induced seismicity mitigation and public safety.

**COMPUTER SCIENCE**
- Situational awareness tools for cyber security in the energy sector (oil & gas, electric power); researchers have developed a number of specialized tools for protocol analysis and intrusion detection.
- Patent for a Compliance Method for a Cyber-Physical System with applications and use in regulated energy-related environments.
- Cyber risk assessment methodology for nuclear reactor control systems.
- Automated tool for identifying critical digital assets in nuclear reactors.
- Use of machine learning algorithms and data science to determine optimal parameters for multiphase flow models.
- Tulsa Cyber Summit 2019 includes sector panels on energy, oil & gas.
- Scaled down electric power substation to test and evaluate cyber security solutions for the electric power sector.
Professor Parameswar Hari serves as the director of the Oklahoma Photovoltaic Research institute which is an interdisciplinary, inter-university (TU, OU and OSU) center dedicated to the design, fabrication, and testing of third generation photovoltaics (PV). This institute is operated from the physics department at TU.

The primary mission of the Institute is to design, model, and fabricate new generation of cost-effective solar cells.

The secondary mission of the institute is to foster interdisciplinary research between faculty and students in Physics, Chemistry, and Engineering disciplines at TU. In addition, through the institute projects we will share resources between three major Oklahoma research universities on PV research.

Solar energy research at TU has attracted funds more than $5 million in the past 5 years.

We have three ongoing projects supported by OK-NASA EPSCoR for over $2.25 million.

Currently, 6 TU faculty (physics, chemistry, chemical engineering, mechanical engineering and electrical engineering), 6 graduate students (3 in physics) and 2 undergraduate (physics) students are engaged in solar energy related research projects.

We have two dedicated labs in the physics department with 21 instruments utilized in solar energy projects.

PV institute annual symposium in 2018 had 42 participants, 6 students’ talks and 16 poster presentations.

The higher operating efficiencies and longer lifetimes make light-emitting diodes (LEDs) highly competitive in the general illumination market. This technology is expected to reduce energy consumption by 40% in 2030, which corresponds to energy saving of 261 TWh and budget saving of $26 billion. Current generation white LEDs are realized by incorporating yellow phosphors into III-nitride based blue LEDs. The challenges of cool color and limited material availability of the rare-earth elements need to be solved to realize the widespread adoption of white LEDs in the general illumination market. Therefore, the utilization of cost-effective approaches to achieve high-efficiency LED with superior color quality is instrumental in the application of this technology in the general illumination market. The key for obtaining photo down conversion materials to acquire high quantum yield materials with emission in the blue, green, and red ranges. We are developing cost-effective approaches to achieve high-quality white LEDs using the earth-abundant elements with goal of widespread adoption of white LED in general illumination market. This will result in a significant reduction in energy consumption.

Ferroelectric thin films and heterostructures are unique multifunctional nanomaterials for energy applications that include electromechanical and photovoltaic energy generation, ultrahigh density capacitive energy storage, and energy efficient electronic components such as non-volatile memories and ferroelectric field-effect transistors. Our research aims at the fundamental understanding of electrostatic and electromechanical interactions at ferroelectric interfaces in order to craft recipes for advanced energy materials with new and enhanced functionalities.
Energy Partnerships

INTERNATIONAL UNIVERSITY PARTNERSHIPS IN ENERGY

China University of Petroleum East
China
China University of Petroleum Beijing and Karamay
Robert Gordon University, Edinburgh
Siegen University
Singapore Management University College Dublin
University of Cantabria
University of Auckland
Catholique de Lille

STUDENT INTERNSHIPS/EXTERNSHIPS IN ENERGY

Paladin
Phillips 66
Tital Energy
Vega Energy
WCM Resources
Williams
XTO
Yukon Minerals
Chesapeake Energy
Cimarex Energy
Devon Energy
Dox Chemical
Environmental Resources Management Foundation Energy
Halliburton
Hilcorp Energy
Newfield Exploration
Nomac Services
ONE Gas
Saudi Aramco
Schlumberger
Unit Corporation
Victory Energy
Zeeco
Okie Crude Company
Oklahoma Corporation Commission
WPX Energy
Blueknight Energy Partners
Cypress Energy Partners
Nichols Brothers, Inc.

Law Offices of Lee W. Paden, PC
Energy Source Advisors
Hugh W. Savage, Attorney at Law
Columbia River Inter-Tribal Fish Commission
Oklahoma Water Resource Board
Patrick, Miller, Kropf
The Railroad Commission of Texas
NGL Energy
OK Department of Agriculture
TX Department of Agriculture
Oklahoma Water Resources Board
Indian & Environmental Law Group
Needham & Associates
Army Core of Engineers
Grand River Dam Authority
Nichols Brothers, Inc.
Breathe Utah
Cypress Energy Partners
Energy Source Advisors
Patrick Miller Noto
WPX Energy
QuikTrip
Blueknight Energy Partners
Texas RCC
Oklahoma Corporation Commission
Williams
Hall Estill
Environmental Defense Fund
Jet Propulsion Laboratory

BOK
Buffalo Land & Title
Canyon Creek
Chesapeake
Chevron
Concho
ConocoPhillips
EDP Renewables
Hilcorp
Navico
Newfield
North Dakota, Bismarck, ND
OCP, Ecuador
ONEOK
EMPLOYMENT OF TU ALUMNI IN ENERGY-RELATED ROLES

Four Point Energy
Chesapeake
Concho Resources
ICE/Chatham Energy
Magellan
Williams
ONEOK
ONE Gas
BOK Financial
Encana
Titanium Exploration
Stinnett & Associates
Stonebridge
Scout Energy
Chesapeake Energy
Chevron
Cimarex Energy
ConocoPhillips
Devon Energy
Dox Chemical
Environmental Resources Management
Foundation Energy
Frontier Electronic Systems

Halliburton
Hilcorp Energy
Newfield Exploration
Nomac Services
ONE Gas
Phillips 66
Saudi Aramco
Schlumberger
Unit Corporation
Victory Energy
Zeeco
Bearcat Land
Brent Blackstock, PLC
Energy Transfer Partners
Fred Dorwart Law
Jordan Law Firm
Levinson Smith Huffman
Munson McMillen
Needham & Associates
Oklahoma Attorney General’s Office
Whiting Petroleum Corp.
Oklahoma Corporation Commission
XTO Energy

Wind River Oil & Gas
Patrick Miller, and Noto
McDonald Land Services
US Committee on Science, Space, Technology
Levinson, Smith, Huffman
Hess Corporation
Petrofac
Environmental Defense Fund
Robur, LLC
Marathon Petroleum
Crowe & Dunlevy
Shell
Occidental
Morado Energy Partners
Okie Crude Co.
FlowServe
Addax Minerals
New Gulf Energy
Anadarko
Calspan Corporation
TU FACULTY

RANDY HAZLETT, PH.D.
Associate Professor of Petroleum Engineering

Research Interests: unconventional reservoirs, discrete well modeling, pressure and rate transient analysis, multiphase flow in porous media, productivity modeling of complex wells, production from complex fracture systems, flow in fractures, computational fluid dynamics applications in reservoir engineering, Lattice Boltzmann methods for petroleum engineering, enhanced oil recovery

Teaching Interests: reservoir engineering, production engineering, rock and fluid properties, enhanced oil recovery

MOHAN KELKAR, PH.D., J.D.
Professor Emeritus of Petroleum Engineering

Research Interests: integrated reservoir modeling, liquid loading

Teaching Interests: petroleum economics and property evaluation, unconventional resources, geostatistics, integrated reservoir modeling

JUN LU, PH.D.
Assistant Professor of Petroleum Engineering

STEFAN MISKA, PH.D.
Jonathan B. Detwiler Professor of Petroleum Engineering

Research Interests: drilling hydraulics, drillstring, tubing and casing mechanics, drilling optimization, geomechanics

Teaching Interests: drilling, well completions, geomechanics

MUSTAFA ONUR, PH.D.
Chair and McMan Professor of Petroleum Engineering

Research Interests: pressure transient (well test) analysis, wireline formation testers, reservoir engineering methods, reservoir simulation and modeling, assisted history matching, nonlinear parameter optimization, naturally fractured reservoirs, EOR methods, geothermal reservoir engineering, unconventional oil and gas reservoirs

Teaching Interests: well test analysis, reservoir engineering, rock properties, reservoir modeling and simulation, computer applications in petroleum engineering

MAURICIO PRADO, PH.D.
Associate Professor of Petroleum Engineering

Research Interests: artificial lift, dewatering and boosting, multiphase flow, production optimization, dynamic of multiphase flow in pipes

Teaching Interests: production engineering and artificial lift, fluid and rock properties, multiphase flow

OVADIA SHOHAM, PH.D.
Floyd M. Stevenson Distinguished Professor of Petroleum Engineering

Research Interests: production, transportation and separation of multiphase flow, two phase flow modeling

Teaching Interests: production engineering, two phase flow modeling

RAMI YOUNIS, PH.D.
Associate Professor of Petroleum Engineering

Research Interests: numerical reservoir simulation, software design paradigms, nonlinear and linear solvers, discretization of coupled flow and transport, geomechanics in fractured porous media, applications of simulation in unconventional reservoirs and EOR

Teaching Interests: advanced reservoir engineering, reservoir simulation, geostatistics, well test analysis, high performance computing

MENGJIAO YU, PH.D.
Professor of Petroleum Engineering

Research Interests: drilling and well completion, drilling fluids, fluid rheology and hydraulics, wellbore stability, shale and shale stability, cuttings transport, UBD/MPD, drillstring mechanics, downhole and surface measurement, drilling automations, large scale engineering simulations

Teaching Interests: drilling engineering, drilling fluids, math modeling in drilling engineering, engineering programming

HONG-QUAN ZHANG, PH.D.
Williams Professor of Petroleum Engineering

Research Interests: artificial lift, multiphase flow in wells and pipelines, heat and mass transfer, computational fluid dynamics, heavy oil and emulsion rheology, oil and gas production, flow assurance

Teaching Interests: production engineering, advanced production design, transient multiphase production design, multiphase flow modeling, artificial lift, flow assurance
Albert Reynolds, Ph.D.
*Research Professor of Petroleum Engineering and Mathematics*

**Research Interests:** assisted history matching, waterflooding, optimization, closed-loop reservoir management, uncertainty quantification, optimal well placement and control, data-driven models for prediction and control reservoir simulation, multiphase flow well testing

**Teaching Interests:** reservoir engineering, reservoir simulation, optimization, well testing, inverse problems, closed-loop reservoir management

Evren Ozbayoglu, Ph.D.
*Executive Director of TUDRP, Wellspring Associate Professor of Petroleum Engineering*

**Research Interests:** drilling engineering, fluid and solid mechanics, directional horizontal drilling, cuttings transport, fluid characterization, hydraulics

**Teaching Interests:** drilling engineering

Eduardo Pereyra, Ph.D.
*Assistant Professor of Petroleum Engineering*

**Research Interests:** multiphase flow, flow assurance, gas well deliquification, artificial lift, multiphase flow metering, separation technologies, uncertainty analysis

**Teaching Interests:** flow assurance, two-phase flow modeling, oil and gas production, artificial lift, petroleum economics, surface production facilities, transient two-phase flow

Cem Sarica, Ph.D.
*Director of TUHWALP, E.H. “Mick” Merelli/Cimarex Professor of Petroleum Engineering*

**Research Interests:** production engineering, multiphase flow in pipes, flow assurance, horizontal wells

**Teaching Interests:** production engineering, multiphase flow, flow assurance

Daniel Crunkleton, Ph.D., J.D.
*Professor of Chemical Engineering*

**Research Interests:** process modeling and simulation, computational fluid dynamics, alternative energy/biofuels

**Teaching Interests:** thermodynamics, heat transfer, fluid dynamics, alternative energy, transport phenomena

Todd Otanicar, Ph.D.
*Associate Professor of Mechanical Engineering*

**Research Interests:** heat transfer, nanoparticles, optics, solar energy, building energy

**Teaching Interests:** heat transfer, thermodynamics, alternative energy, heating and refrigeration, building systems

Parameswar Hari, Ph.D.
*Associate Professor of Physics*

**Research Interests:** solar cells, nanotechnology, condensed matter physics, nuclear magnetic resonance (NMR)

**Teaching Interests:** solid state physics, nanoscience, math methods

Hema Ramsurn, Ph.D.
*Assistant Professor of Chemical Engineering*

**Research Interests:** supercritical fluids, biofuels, bio-based value-added products and their applications, graphene, gas to liquid conversions

**Teaching Interests:** thermodynamics, fluid mechanics, chemical engineering principles, renewable energy, health and safety, reaction engineering

Dale Teeters, Ph.D.
*Chair and Professor of Chemistry*

**Research Interests:** nanochemistry and materials chemistry as they apply to battery electrode and electrolyte materials

**Teaching Interests:** general chemistry, physical chemistry, polymer chemistry, materials chemistry, nanochemistry

Ty Johannes, Ph.D.
*Wellspring Associate Professor of Chemical Engineering*

**Research Interests:** directed evolution, synthetic biology, algae biofuels

**Teaching Interests:** chemical reactor design, biochemical engineering, fluid mechanics, thermodynamics, heat transfer

Kenneth Roberts, Ph.D.
*Professor of Chemistry and Biochemistry*

**Research Interests:** spectroscopy, nanomaterials, environmental, solar energy

**Teaching Interests:** analytical, environmental chemistry, chemical separations
GABRIEL LEBLANC, PH.D.
Wellspring Assistant Professor of Chemistry
Research Interests: electrochemistry, 3D printing, materials chemistry, alternative energy
Teaching Interests: analytical chemistry, electrochemistry

JOHN HALE, PH.D.
Tandy Professor of Bioinformatics and Computational Biology
Research Interests: computational biology, bioinformatics, neuroinformatics, medical informatics, information security, high-performance computing, formal methods, digital humanities, social computing
Teaching Interests: computer architecture, information security, high-performance computing, computational biology, neuroinformatics, medical informatics, enterprise computing

MAURICIO PAPA, PH.D.
Associate Professor of Computer Science
Research Interests: network security, distributed process control, network intrusion detection, protocol analysis
Teaching Interests: operating systems, computer networks, network security, computer graphics, cyber physical systems, critical infrastructure protection

MICHAEL KELLER, PH.D.
Associate Professor of Mechanical Engineering
Research Interests: synthesis and characterization of multifunctional materials, experimental mechanics of complex synthetic and biological materials
Teaching Interests: mechanics, materials science, instrumentation, experimental techniques, composite materials
TIM COBURN, PH.D.
Professor of Energy

Research Interests: Statistical estimation of remaining unconventional oil and gas resources, energy analytics and data management, energy applications of quantitative decision making, infrastructure and asset management in the energy space, energy logistics and transportation issues, energy risk modeling, improving or developing methods for estimating remaining oil and gas resources in unconventional plays

Teaching Interests: analytics and data management, quantitative decision analysis, management of energy operations, logistics and supply chain, asset management, risk modeling, energy policy and economics

ROB MOORE, MBA
Applied Assistant Professor of Energy Business

Research Interests: energy capital efficiency, upstream operations and management

Teaching Interests: supply chain management, finance, statistics, economics, deal-making, upstream operations & engineering

LINDA NICHOLS, PH.D.
Director, School of Energy Economics, Policy and Commerce and Charles Funai Professor of Energy

Research Interests: energy accounting and financial reporting, international accounting and financial reporting

Teaching Interests: U.S. and international upstream energy accounting, financial reporting; international accounting

BUFORD POLLETT, J.D.
Genave King Rogers Assistant Professor of Energy Law

Research Interests: corporate decision analysis, legal and regulatory aspects of oil/gas well facilities abandonment and decommissioning in onshore and offshore production environments, maritime energy law, legal and financial transactions in international energy commerce

Teaching Interests: energy transactions, regulations and compliance, maritime and Shipping Insurance, real property, oil and gas law, perspectives on energy business

RON RIPPLE, PH.D.
Mervin Bovaird Professor of Energy Business

Research Interests: economics of crude oil and natural gas markets, energy commodities financial derivatives markets, relationship between energy consumption and income

Teaching Interests: energy business, energy markets, energy finance, energy derivatives markets

TOM SENG, MBA
Applied Assistant Professor of Energy Business

Research Interests: energy markets and commodities risk

Teaching Interests: supply chain management, energy commodities markets, global oil and gas industry, power industry, petroleum refining and petrochemical industries, current issues in energy management, energy risk and hedging

ROBERT A. BUTKIN, J.D.
Professor of Law, SERL Director, Energy Law Journal

Research Interests: For six years, Professor Butkin has served as an appointee of the Governor of Oklahoma to the Oklahoma delegation of the Uniform Law Commission.

Teaching Interests: contracts, state and federal administrative law, commercial law, particularly selling and leasing of goods and secured transactions

WARIGIA BOWMAN, PH.D., J.D.
Assistant Professor of Law

Research Interests: energy policy and natural resources

Teaching Interests: administrative law, water law

MELISSA J. LUTTRELL, J.D.
Assistant Professor of Law

Research Interests: The appropriate use of microeconomic principles in legal decisions that relate to environmental and public health risk regulation; the ways decision makers actually use available evidence, in the absence of perfect information; and the integration of idealistic notions of what protective environmental and public health laws can and should do with the pragmatic realities of the world that actually exists.

Teaching Interests: environmental law, climate change and property
JUDITH V. ROYSTER, J.D.
Professor of Law

Research Interests: American Indian law, with a concentration on issues of water rights and mineral and energy development

Teaching Interests: administrative law, civil procedure, legislation, federal Indian law, Native American natural resources law, an on-line master’s class in Indian property rights

REX J. ZEDALIS, LL.M, J.D.
Professor of Law

Research Interests: His most recent research interests have focused on aspects of Iraqi oil and gas law, but have included international economic law, arms control, and self-defense.

Teaching Interests: international energy, international trade law, property law and associated courses such as land use controls, and financing land transactions

PROFESSIONAL DEVELOPMENT
Continuing Education for Science and Engineering (CESE)

The University of Tulsa’s Continuing Education for Science and Engineering (TU-CESE) has offered professional development programs designed to meet specific company requirements for more than 35 years. CESE conducts non-credit technical, non-technical and cross-training programs in more 20 states and 20 countries, and currently offers more than 100 programs annually. Clients include some of the largest corporations and some of the most successful specialized independent businesses.

cese.utulsa.edu
TU’s 2017 Rhodes Scholar Kirk Smith (BS ‘17) worked closely with mentor and Associate Professor Todd Otanicar during his time as a student in the Department of Mechanical Engineering. Smith participated in alternative energy projects as part international internships and learned about sustainable energy as a member of Otanicar’s federally funded research team on the TU campus. Now a student at Oxford University, Smith’s research aims to increase clean energy usage by developing cheap, large-scale energy storage systems. He hopes to combat climate change by harvesting solar and wind power during off-peak times. By tackling the intermittency problem of renewables, utilities can buy low and sell high with stored energy and encourage a clean energy economy.
The University of Tulsa does not discriminate on the basis of personal status or group characteristics including, but not limited to individuals on the basis of race, color, religion, national or ethnic origin, age, sex, disability, veteran status, sexual orientation, gender identity or expression, genetic information, ancestry, or marital status. Questions regarding this policy may be addressed to the Office of Human Resources, 918-631-2616. For accommodation of disabilities, contact TU’s 504 Coordinator, Dr. Tawny Rigsby, 918-631-2315. To ensure availability of an interpreter, five to seven days notice is needed; 48 hours is recommended for all other accommodations. TU#19028