ABOUT
Materials Science and Engineering aims to create new materials with improved performance for diverse applications such as in nanotechnology, aerospace, energy systems, electronics and medicine. A materials scientist utilizes physics, chemistry, biology and engineering discipline to explore and understand the interplay among processing, structure and properties in metals, ceramics, polymers and composites.

The Helmrich Research Center, located on the OSU-Tulsa campus, is home to the School of Materials Science and Engineering (MSE). The campus is conveniently located in downtown Tulsa.

ACADEMIC PROGRAMS
The School of Materials Science and Engineering offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees.

The M.S. in Materials Science & Engineering program provides students with analytical and technical skills and research experience necessary for doctoral programs. Graduates are also prepared for professional jobs involving materials science and engineering principles. Both thesis and non-thesis options for M.S. degree are offered.

The Ph.D. in Materials Science & Engineering program prepares students for careers in industry, federal or private research laboratories and academia. Students transition from physical sciences, engineering and related fields into the discipline of materials science and engineering while gaining broader professional opportunities.

RESEARCH AREAS
- Energy materials
- Nanomaterials
- Electronic materials
- Biomaterials
- Composites

RESEARCH FACILITIES
- Class 100 clean room
- Composite processing
- Environmental and conditioning chambers
- Advanced Materials Characterization Center SEM, EDS, XRD, STA (DSC/TGA), DMA, Confocal Optical Microscopy, Raman-CARS, PPMS, FTIR, AFM
- Direct writing and 3-D printing
- Mechanical testing
- Machine shop
FACULTY

MSE faculty lead research efforts to make fundamental discoveries in materials, develop new technologies and create new processes and products. They are members and fellows of international scientific societies that recognize distinguished achievement, including ASM International, American Ceramic Society, TMS, ASEE and many more. Our faculty have also received highly competitive National Science Foundation Faculty Early Career Development (CAREER) and Presidential Early Career Awards for Scientists and Engineers (PECASE) awards.

CORE FACULTY

Raj N. Singh, Professor and Head of the School of Materials Science and Engineering
Sc.D., Massachusetts Institute of Technology (1973)
Nanostructured materials; energy storage materials; fuel cells; composites; thermal management; biomaterials; electrical ceramics

Paul Tikalsky, Dean of the College of Engineering, Architecture and Technology and Professor
Ph.D., University of Texas, Austin (1989)
Concrete materials - construction, deterioration and durability; structural evaluation; reinforced concrete structures

Ranji Vaidyanathan, Professor
Ph.D., North Carolina State University (1992)
Polymer and ceramic composites; rapid manufacturing; nanotechnology; materials recycling; product development; commercialization of new technologies

Jim Smay, Associate Professor
Ph.D., University of Illinois at Urbana-Champaign (2002)
Direct write manufacturing; colloidal processing; rheology of complex fluids

Pankaj Sarin, Assistant Professor
Ph.D., University of Illinois at Urbana-Champaign (2002)
Energy materials; in-situ synchrotron studies; phase transformations; composites

Nirmal Govindaraju, Research Assistant Professor
Ph.D., North Carolina State University (2004)
Thermal management; semiconductors; sensors; biomaterials; energy storage

AFFILIATED FACULTY

Raman P. Singh, Professor
School of Mechanical & Aerospace Engineering

Jay Hanan, Associate Professor
School of Mechanical & Aerospace Engineering

Khaled A. Sallam, Associate Professor
School of Mechanical & Aerospace Engineering

ADMISSIONS

• Three letters of recommendation
• Official transcripts
  - B.S. in mainstream engineering or sciences
  - GPA 3.25/4.0 scale recommended
• Statement of purpose
• GRE general test
  - Average percentile scores
  - Verbal 75 percent, Quantitative 90 percent, Analytical 50 percent
• TOEFL
  - Required of all international students whose undergraduate instruction was not in English
  - Recommended score of 550 or iBT score of 79.

FINANCIAL SUPPORT

Graduate students can apply for competitive fellowships and research/teaching assistantships. Financial aid is subject to availability of funds and satisfactory progress toward completion of degree requirements.

The second largest city in Oklahoma, Tulsa is home to several major oil and natural gas service companies (e.g., Zeeco, John Zink, Baker Hughes, Honeywell, T.D. Williamson) and aerospace companies (e.g., American Airlines, Nordam). Late evening classes enable you to apply for internships and part-time employment while pursuing your educational goals.

TULSA COMMUNITY

Tulsa is both a historic and modern urban center located in northeastern Oklahoma. The OSU-Tulsa campus is located in downtown Tulsa, near historic Route 66. Within walking distance of the campus is the BOK Center, minor league baseball, art galleries, fine dining and entertainment. Tulsa has an international airport served by several major airlines with 16 non-stop destinations. Driving distance between OSU-Tulsa and major airports are:

• Tulsa International Airport: 8 miles
• Stillwater: 70 miles
• Oklahoma City: 100 miles
• Dallas: 250 miles

The Tulsa metropolitan area includes activities such as concerts, theaters, gaming, outdoor recreation, youth sports, golf courses, shopping districts, festivals, museums, farmers markets and wineries.

OU-Tulsa does not discriminate on the basis of race, color, national origin, sex, age, religion, disability, sexual orientation or status as a veteran in any of its policies, practices, or procedures. This includes, but is not limited to admissions, employment, financial aid, and educational services.