



## What can I do with a Major in...

**Major:** Materials Science and Engineering

### **O\*net Outlook Link to Career Titles**

[Materials Engineers](#) *InDemand*

[Materials Scientists](#)

[Industrial Engineering Technicians](#) *InDemand*

[Electrical Engineering Technicians](#) *InDemand*

[Engineering Teachers, Postsecondary](#)

[Electronics Engineering Technicians](#) *InDemand*

[Mechanical Engineering Technicians](#) *InDemand*

[Environmental Engineering Technicians](#) *InDemand*

[Engineering Managers](#) *InDemand*

[Civil Engineering Technicians](#) *InDemand*

[Materials Engineers](#) *InDemand*

[Industrial Engineers](#) *InDemand*

[Civil Engineers](#) *InDemand*

[Electronics Engineers, Except Computer](#) *InDemand*

[Engineering Technicians, Except Drafters, All Other](#)

[Aerospace Engineers](#)

[Computer Software Engineers, Systems Software](#) *InDemand*

[Mining and Geological Engineers, Including Mining Safety Engineers](#)

[Production, Planning, and Expediting Clerks](#) *InDemand*

[Mechanical Engineers](#) *InDemand*

[Chemical Technicians](#) *InDemand*

[Chemical Engineers](#) *InDemand*

### **Knowledge, Skills and Abilities Learned with this Degree:**

#### **Knowledge:**

Engineering and Technology

Design

Mathematics

Production and Processing

Computers and Electronics

Physics

#### **Skills:**

Judgment and Decision Making

Critical Thinking

Mathematics  
Operations Analysis  
Science  
Technology Design  
Active Listening  
Complex Problem Solving

**Abilities:**

Deductive Reasoning  
Inductive Reasoning  
Problem Sensitivity  
Mathematical Reasoning  
Fluency of Ideas

**Links:**

Job Search Websites:

[The A to Z of Materials](#)  
[The Office of Basic Energy Sciences](#)  
[The Riley Guide](#)  
[Dice dot Com](#)  
[Electrical Engineer dot Com](#)  
[Engineering Central](#)  
[Engineers International](#)  
[Just Engineers dot Net](#)  
[Top USA Jobs dot Net](#)  
[Global Energy Jobs](#)

Associations:

[Society of Women Engineers](#)  
[IEEE](#)  
[American Electronics Association](#)  
[Association of Energy Engineers](#)  
[Society of Hispanic Professional Engineers](#)

**Examples of Employers Recruiting UNT Materials Science & Engineering Majors:**

Alcatel  
AMX Corporation  
ASRC Aerospace Corp  
Ayoka LLC  
Bartlett & West Engineers, Inc.  
Bemidji State University  
Burlington Northern Santa Fe Railway (BNSF)  
Business Control Systems, LP  
Cardinal FG  
Crisp Industries, Inc.  
Daktronics  
Deer Automation Engineering  
DRS Infrared Technologies, LP  
Eagle Construction and Environmental Services  
eFulgent  
Frito-Lay, Inc.

Fujitsu Network Communications  
Glen-Gery Brick  
Homeyer Engineering  
ICI Paints  
IMC, Inc.  
Intervoice, Inc.  
MultiCam, LP  
National Switchgear Systems  
NCH Corporation  
Nokia  
Nortel  
Northrop Grumman  
Objectsoft Group Inc.,  
Paccar, Inc./Peterbilt Division  
Pave Systems Inc.  
Performance Door and Hardware, Inc.  
Perot Systems Corporation  
Sabre Holdings  
Sierra Infosys Inc.  
Softpath System, LLC  
Southern DataStream  
Spirent Communications  
TAC 5  
Tektronix Texas LLC.  
Temple-Inland  
Terex - Unit Rig  
Texonics, Inc.  
The Stanley Works 1 50 0  
Trium Corp  
Tuboscope Pipeline Services  
TYG Products, L.P.  
United McGill  
Wellmark International  
XTO Energy Inc.

### **Majoring in Materials Science and Engineering:**

UNT's undergraduate materials science and engineering degree program is the first of its kind in the Dallas-Fort Worth region and only the third offered in Texas.

During your first two years in the program, you will take common core courses in art, business, management, humanities, chemistry, physics, calculus and professional presentations. Your remaining course work will consist mostly of materials science and engineering courses. These courses will cover the physical, chemical, electrical and mechanical properties of various materials including metals, ceramics, polymers, electronic materials, biomaterials and nanomaterials. You will also learn how materials are made, how they behave or degrade, and how their structures and properties are measured and quantified.

As you progress through the program, the curriculum will build upon the principles you learned in previous years. You will complete a senior project in which you will work closely with a faculty member to gain relevant research experience. This project will allow you to use some of the unique and sophisticated equipment housed in the Department of Materials Science and Engineering. The project will also help you to determine whether you are ready to seek employment or pursue an advanced degree after completing your bachelor's degree.

While pursuing your degree, you will be encouraged to become active in some of the professional materials societies. These societies hold local and national meetings at which you can interact with students and professionals from other institutions, allowing you to build a network of professional acquaintances.

You will have a chance to earn scholarships throughout your studies based on your academic performance.

### **Career Potential:**

Almost everything we use in modern society is built with synthetic materials. With a bachelor of science degree from the University of North Texas in materials science and engineering, you will know how to make materials functional, reliable and useful. This is accomplished through design, processing and characterization of materials having controlled compositions, structures and properties.

Materials scientists and materials engineers work to make cars and airplanes lighter and more fuel efficient, develop smaller and faster computer chips or design materials for night vision optics, lasers, sensors and other high-tech military systems. They also help determine if certain materials have medical benefits and decide which materials function best as insulating tiles and adhesives for the space shuttle.

Upon graduation, you can expect plentiful job opportunities with high starting salaries in a variety of industries. Jobs are available in small and large companies in research, development, manufacturing, marketing, materials design and structures. You might work in such industries as the aerospace, appliance, automotive, biomedical, communication, computer, construction, forensics, manufacturing, microelectronics, nanotechnology, nuclear, oil and gas, power generation, shipbuilding or sports industries. Or you might work in a government laboratory or in another field.

To be a qualified materials scientist/engineer, you will need to earn at least a bachelor's degree in materials science and engineering or a related field such as metallurgy, ceramics, polymers or electronic materials. A bachelor's degree also prepares you to pursue a master's or Ph.D. degree in materials science and engineering or a related field.

UNT's Career Center can help you prepare to pursue your career. The center has information about jobs and employers, and the staff can help you with resume and letter writing, job search strategies and interview preparation.