



# Undergraduate Programs



<https://www.nmt.edu/academics/>

2020-2021

Rev. 3

# NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

New Mexico School of Mines opened its doors on  
September 5, 1893

## FOUNDED



1889, as New Mexico School of Mines. Name changed in 1951, to New Mexico Institute of Mining and Technology.

## NOW

- 22 Science and Engineering programs
- Over 50 graduate programs
- 1900 undergraduate and graduate students
- World-Class Research

## WORLD-CLASS EDUCATION

***U.S. News and World Report*** ranked NM Tech No. 1 in New Mexico and #34 in its Best Values Schools among all universities nationwide.

***Forbes*** ranked NM Tech #1 in New Mexico and in the Top 20% nationally among all public and private colleges when it comes to the best education you can get for your tuition.

***College Factual's*** Annual National College Rankings place NM Tech first in New Mexico's public four-year colleges and 6th nationally.



# SCHOLARSHIP & FINANCIAL AID OPPORTUNITIES

## First Time Freshman



Gold: \$6,000/year (renewable up to 4 years) with National Merit Finalist Certificate and a 3.5 HS GPA.

Silver, Presidential, Copper: \$5,000, \$4,000, and \$2,000 respectively with decreasing criteria.

Tech Tuition Assistance: \$1,400 first semester with NM residency, NM HS graduate, and enrolled at NMT for the semester immediately after High School graduation.

## Tuition Reduction Scholarships (Non-Residents)

Competitive: Resident tuition plus \$700 stipend up to 4 years with HS GPA 3.25 and either ACT 27 SAT 1280 (also for transfer students with 3.5 GPA and 30 credit hours).

WUE: 150% Resident Tuition with 3.0 HS GPA and either Act 23 or SAT 1130 (also transfer student with 3.0 GPA and 30 credit hours).

**For More Information  
Visit: [nmt.edu/finaid](http://nmt.edu/finaid)**

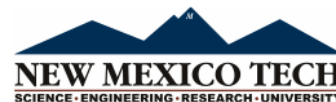


**Numerous additional financial aid opportunities are available.**





# BASIC SCIENCES



## WHAT IS THE BACHELOR SCIENCE IN BASIC SCIENCES DEGREE?

The Bachelor of Science in Basic Sciences allows students to customize a degree that integrates classes from across the natural sciences, engineering, and mathematics. While this breadth of education in STEM subjects prepares students for numerous opportunities, it is particularly well suited for those who wish to complete preparation for secondary school teaching in science or mathematics. Students wishing to teach within the state of New Mexico could also take courses in the NMT Alternative Licensure Program for Teachers or can add the newly formed Minor in Education and graduate with a Level 1 NM teaching license.



## CAREER

- Career opportunities for graduates of the Bachelor of Science in Basic Sciences could include positions in for-profit or non-profit institution; K-12 education; the health and medical industries; science or history museums; public information offices; public policy; entrepreneurship; environmental services, and so on.
- The Bachelor of Science in Basic Sciences degree can be the preparation to enter some disciplines of graduate studies or professional schools.



## WHY A BACHELOR OF BASIC SCIENCES AT NMT?

- Students can sample courses from a number of world-class science, engineering, and mathematics departments and customize a degree to suit their career goals.
- NMT prepares students well for entering K-12 STEM education. NMT graduates have over a 90% pass rate on the National Evaluation Series education exams.

## CURRICULUM

- To qualify for the degree Bachelor of Science in Basic Sciences, a student must satisfy the general education core curriculum requirements for the Bachelor of Science degree.
- Of the minimum 120 credit hours required for this degree, at least 65 must be in science and mathematics. These can include biology, chemistry, computer science, earth and environmental science, mathematics, engineering courses (numbered above 200), physics, and psychology.
- At least 30 of these credit hours must be in courses numbered 201 or above. In order that a reasonable depth of study is attained in at least two fields, the 30 credit hours must include at least nine credit hours in each of two fields.
- Of the total credit hours required, at least 42 must be in courses numbered 300 or above.

## CONTACT INFORMATION

Email : [william.stone@nmt.edu](mailto:william.stone@nmt.edu)  
 Phone : (575) 835-5786  
 Address : Dean of Arts and Sciences  
 Weir Hall  
 801 Leroy Place  
 Socorro, NM 87801



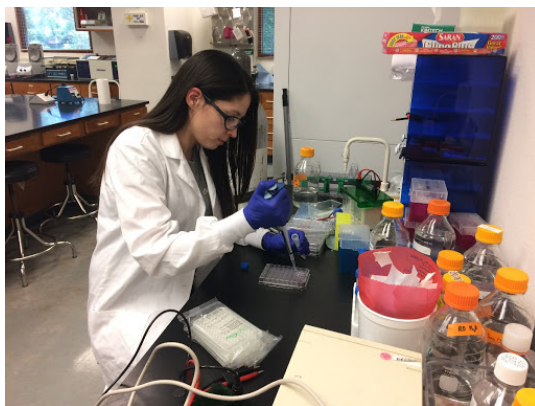
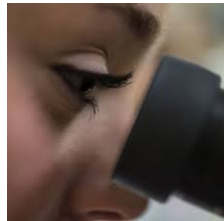
## WHAT DOES A BIOLOGIST DO?

- Develops ways to improve human health
- Researches limits of life
- Helps mitigate the effects of climate change on fragile habitats
- Inspires the next generation of scientists!
- And much more ...



## CAREER

- Physician, Veterinarian, Dentist
- Forest and conservation officer
- Physician's assistant
- Genetic counselor
- Forensic scientist
- Bioinformaticist
- Wildlife officer
- Science writer
- Microbiologist
- Educator
- And more



## WHY BIOLOGY AT NMT?

- Hands on research-based classes
- Ability to pursue research in a faculty member's lab
- Classes taught by experts in the field
- Many internship opportunities



## CURRICULUM

- A broad biology education
- Students take classes in various areas of biology
  - Microbiology, Cell Biology and Genetics
  - Evolution/Ecology
  - Anatomy/Physiology and Molecular Biology
  - Plus Biology electives to tailor your degree to your interests!

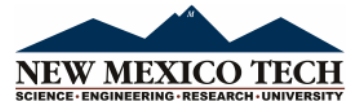


## CONTACT INFORMATION

Email : [biology.dept@npe.nmt.edu](mailto:biology.dept@npe.nmt.edu)  
 Phone : (575) 835-5612  
 Address : Biology Department  
 801 Leroy Place  
 Socorro, NM 87801



# BIO MEDICAL SCIENCES

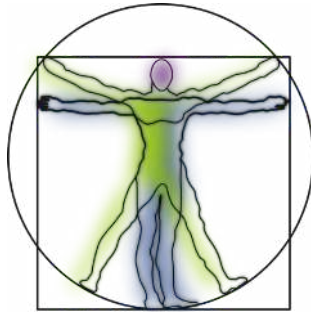


## WHAT DOES A BIOMED STUDENT DO?

- Explores biology-based issues as they relate to human life, health, and disease, with a technical edge
- Goes to medical or veterinary school
- Works in biotechnology companies to design new technologies such as novel pharmaceuticals or creating synthetic skin
- Continues onto Graduate School and pursue research degrees like a PhD or Masters

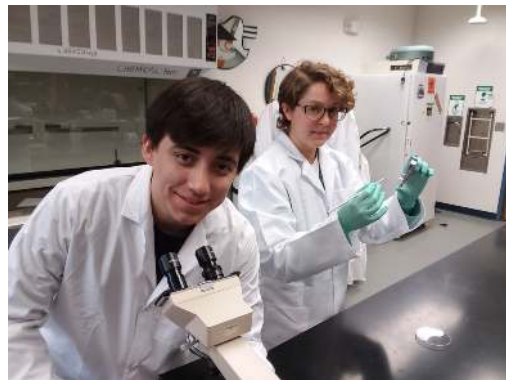
## CAREER OPPORTUNITIES

- Medical Doctor
- Medical sales representative
- Instructor/Teacher
- Physician associate
- Forensic scientist
- Medicinal chemist
- Nanotechnologist
- Biotechnologist
- Science writer
- Microbiologist
- Toxicologist
- Biochemist
- Genomics
- And more...



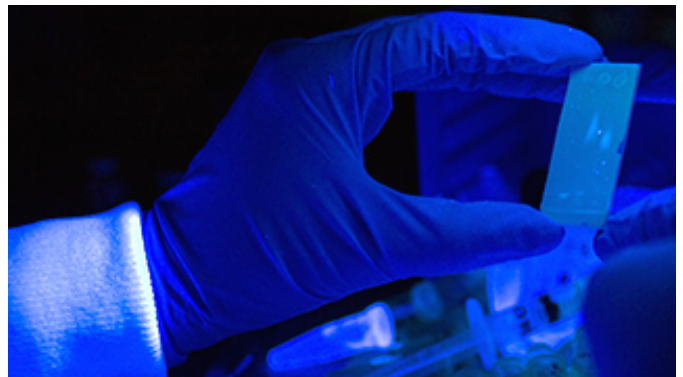
## WHY BIOMEDICAL SCIENCE AT NMT?

- Prepares you for biomedicine and biotechnology fields
- Other BMS programs are just science
- Fun science research and engineering design classes



## CURRICULUM

- A unique, interdisciplinary program
- Students take classes in science and engineering
- Pick a Science Option: Biology, Chemistry, or Neuroscience
- And, pick an Engineering Concentration Biochemical, Bioinformatics, Biomechanics, or Biomaterials
- Students participate in Course-based undergraduate research experiences (CUREs)
- Senior year includes science research and engineering design classes



## CONTACT INFORMATION

Program Director's Email : kaarin.goncz@nmt.edu  
 Phone: : (575) 835-5612  
 Address : Biomedical Sciences  
 801 Leroy Place  
 Socorro, NM 87801





## WHAT DOES A BUSINESS AND TECHNOLOGY MANAGER DO?

Managers work with engineers, scientists, and technologists to manage high-dollar projects, develop market strategies, analyze company financials, maintain accounting systems, analyze technology trends, maintain infrastructure, and manage human resources. Degree options: B.S. Management, B.S. Management of Technology (requiring additional coursework in engineering, science, or computer science).



## CAREER

Graduates of the program may work for an engineering or technology company, state or federal government agency (e.g., GE, Sandia National Labs, Los Alamos National Lab, Air Force Research Lab, Presbyterian Healthcare, Dept. of Energy, Bureau of Land Management, State of New Mexico Department of Finance and Administration) or become a technology entrepreneur. Students also pursue graduate degrees in project management, accounting, finance, law, and general management.

## CURRICULUM

Rigorous, hands-on, project-based learning from freshmen through senior year that integrates business management with engineering and technology studies. You will work with Ph.D. faculty and experienced managers in a challenging and supportive environment and create your own innovations in our student makerspace.



## WHY MANAGEMENT AT NMT?

This program is the only STEM business management curriculum in New Mexico that specifically prepares students for careers in engineering and technology management. NMT was named Top 1% in 2020 Best Value for Engineering (<https://www.collegefactual.com/colleges/new-mexico-institute-of-mining-and-technology/>).

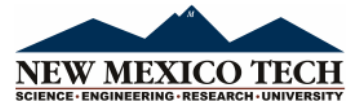


## CONTACT INFORMATION

Dept Chair's Email : frank.reinow@nmt.edu  
 Phone : (575) 835-5440  
 Address : Business and Technology Management  
 801 Leroy Place  
 Socorro, NM 87801



# CHEMICAL ENGINEERING



## WHAT DOES A CHEMICAL ENGINEER DO?

Operates and designs processes that rely on chemical reactions and complex separations to produce pharmaceuticals, precious metals, semiconductors, fuels, chemicals and biofuels, or perform research in a wide range of areas.



## CAREER

Graduates of the program may work for a company, like Intel, Chevron, Conoco, Freeport-McMoRan, Mosaic, Intrepid, Dow, and many others, work for the government at places like Sandia, Los Alamos, White Sands or other facilities, or continue on for an advanced degree at schools like Minnesota, Princeton, Texas, Michigan, Delaware, Northwestern and many more.



## WHY CHEMICAL ENG AT NMT?

- Small class sizes and group projects provide opportunities to interact with faculty as well as many opportunities to carry out research with faculty in their research labs.
- In labs, students operate and analyze small, pilot scale versions of real, industrial-sized equipment.



## CURRICULUM

Accredited by the Engineering Accreditation Commission (EAC) of ABET. Program is rigorous with hands-on, project-based learning from freshmen through senior in a supportive and encouraging environment.



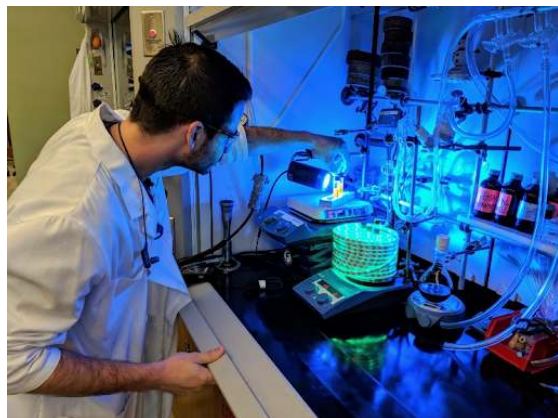
## CONTACT INFORMATION

Email : [cheme.dept@npe.nmt.edu](mailto:cheme.dept@npe.nmt.edu)  
Phone : (575) 835-5412  
Address : Chemical Engineering Department  
801 Leroy Place  
Socorro, NM 87801





## WHAT DOES A CHEMIST DO?



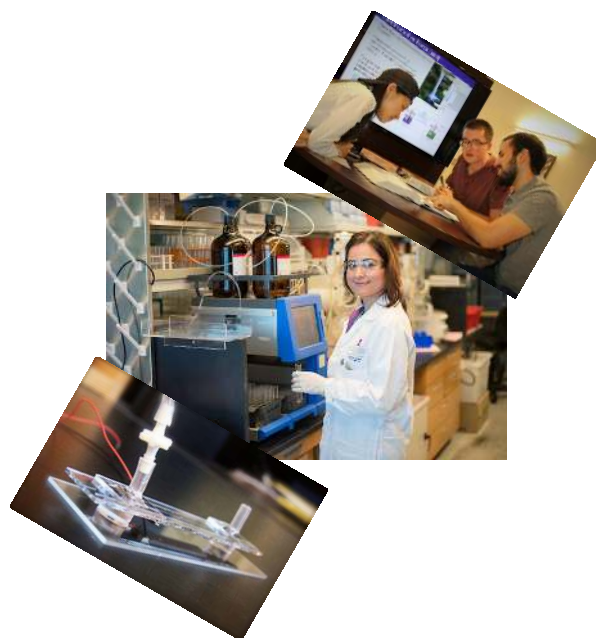
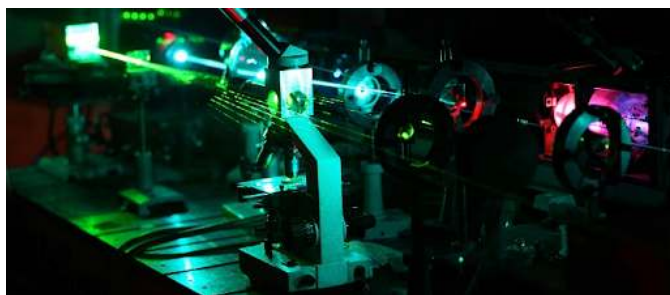
- Creates or synthesizes new substances
- Analyzes substances and creates data
- Carries out lab work to develop and improves both new and existing products
- Creates models and tests the predictive power of theories
- Develops formulations in the lab
- Measures physical properties of substances
- Analyzes basic properties of matter to find new uses and applications
- Conducts quality control tests
- Analyzes compounds to determine composition, structure, relationships, or reactions
- Introduces chemical catalysts for quantitative or qualitative analysis

## CAREER

- Academic Professorship
- Environmental Protection
- Regulatory Compliance
- Teaching / Education
- Fabrics / Textiles
- Space Science
- Research Chemist
- Military Service
- Petroleum / Refining
- Wine & Beer Making
- Intelligence Services
- Pharmaceuticals
- Electronics
- Forensics
- Medicine
- Food Science
- Health Services
- Patent Law
- Science Writing
- Non-Gov't'l Org
- Cosmetics

## WHY CHEMISTRY AT NMT?

- Direct involvement of faculty in student success
- Mentorship by graduate level teaching assistants
- Numerous research opportunities
- Peer-reviewed publications common for undergraduates
- Internship opportunities at National Labs, Pharma, Top Universities
- High student success rate



## CURRICULUM

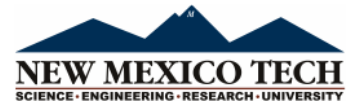
- Chemistry Toolbox
- Directed Research
- Environmental Chemistry
- Atmospheric Chemistry
- Medicinal Chemistry
- Polymer Chemistry
- Chemistry and Biochemistry Seminar

## CONTACT INFORMATION

Email : chem.dept@npe.nmt.edu  
 Phone : (575) 835-5263  
 Address : Chemistry Department  
 801 Leroy Place  
 Socorro, NM 87801



# CIVIL ENGINEERING



## WHAT DOES A CIVIL ENGINEER DO?

A civil engineer practices the broad field of engineering that deals with planning and construction of fixed infrastructure, or public works.



## CAREER

Graduates work for private consultants, industry, or state and federal agencies.

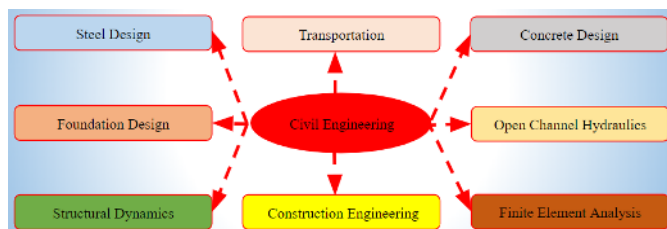


## WHY CIVIL ENG AT NMT?

- Prepares engineers to develop the physical infrastructure on which humankind depends.
- Small class sizes and group projects provide opportunities to interact with faculty as well as many opportunities to carry out research with faculty in their labs.
- Excellent education at an affordable price.

## CURRICULUM

Accredited by the Engineering Accreditation Commission (EAC) of ABET. Civil engineers at New Mexico Tech focus on some of the most important questions in our national infrastructure. Students conduct research in areas including structural, geotechnical and water resources. The program can craft curriculum for a student's interest in specific areas such as airports, bridges, buildings, waterways and roadways using four technical electives. Curriculum is traditional yet innovative. A total of 132 credits provides a hands-on, project-based learning with strong theoretical foundation from freshmen through senior in a supportive and encouraging environment. An accelerated BS/MS program is also available, as well as a minor in civil engineering.



## CONTACT INFORMATION

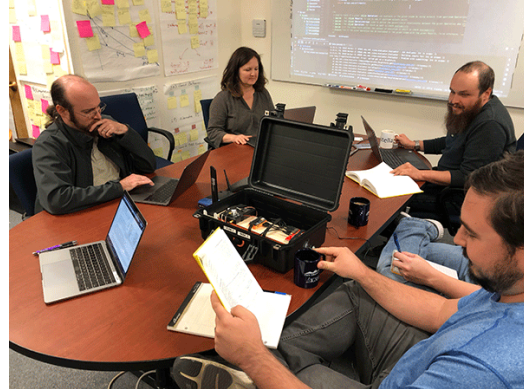
Dept Chair's Email : [clinton.richardson@nmt.edu](mailto:clinton.richardson@nmt.edu)  
 Phone : (575) 835-5500  
 Address : Civil & Environmental Engineering  
 801 Leroy Place  
 Socorro, NM 87801





## WHAT DOES A COMPUTER SCIENTIST DO?

Computer Scientists solve novel and challenging problems by building software systems that operate on the concepts of information and computation. Their innovation has helped create artifacts that touch almost every aspect of our lives: from apps on our phones to movies to the Internet. Crucial for industry and governments, their technology has helped monitor the environment, empower the disabled, and advance the sciences by building, testing and visualizing models — of molecules, the Earth and the spread of diseases. They work both collaboratively and individually, and tackle problems both abstract and down-to-earth.



## CAREER

Our students find internship opportunities during summers and employment upon graduation in companies of all sizes, in national labs, and federal agencies. Our alumni can be found in diverse organizations, from Microsoft, Apple, Intel, and Google to Sandia and Los Alamos National Laboratories as well as startups. Others have enrolled in graduate schools across the nation.



## WHY COMPUTER SCIENCE AT NMT?

- **B.S. in Computer Science is accredited by the Computing Accreditation Commission (CAC) of ABET, Inc.**
- Ranked #2 in Computer Science: Best Value Nationwide and #4 in Computer and Information Science: Best Colleges for the Money (College Factual 2019).
- NMT has been designated a Center of Academic Excellence in Cyber Defense Research by the National Security Agency and the Department of Homeland Security since 2009; and, since July 2019, as the Cybersecurity Education Center and Cybersecurity Center of Excellence by the state of New Mexico.
- The Scholarship for Service (SFS) and Scholarship for STEM (S-STEM) programs offer stipends to selected students.
- Women in Computer Science (WiCS@nmt) strives to increase the enrollment of female and underrepresented minorities and their success.
- Undergraduates find employment in the department as graders, laboratory assistants, and research assistants; and in on-campus entities such as ICASA, PRRC, and EMRTC. A team of undergraduates is in charge of maintaining and upgrading the department's network and computing infrastructure.



## CURRICULUM

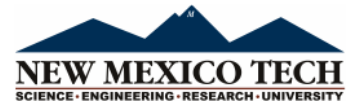
- Hands-on experience with a strong theoretical foundation.
- Allows a combined B.S.+M.S. in Computer Science in five years.
- Undergraduate thesis option for those who wish to pursue research.

## CONTACT INFORMATION

Dept Chair's Email : subhasish.mazumdar@nmt.edu  
 Phone : (575) 835-5126  
 Address : Computer Science Department  
 801 Leroy Place  
 Socorro, NM 87801



# ELECTRICAL ENGINEERING



## WHAT DOES AN ELECTRICAL ENGINEER DO?

Deals with electricity and magnetism to design the vast majority of today's systems as well as systems of the future. Examples of these systems include cellular communication, satellites, deep space exploration, control systems, robotics, smart cars, defense systems, etc. Due to the advances in technology most engineering systems require the expertise of electrical engineers. That is why electrical engineering is one of the highest recruited majors.



## CAREER

Graduates from the Electrical Engineering program at NMT go far and wide. About 50% of the graduates go to the industry and national laboratories, and the other 50% pursue graduate degrees, both Master's and PhD. Our students are hired by Microsoft, Google, Intel, Sandia National Labs, Los Alamos National Lab, Air Force Research Labs, NavAir, and many others. Graduate schools where our students have gone include Stanford, Berkeley, Michigan State, UCLA, Florida State, and University of Illinois Urbana-Champaign to name a few.



## WHY ELECTRICAL ENG AT NMT?

- Very strong student community
- Dedicated faculty
- Small classes
- Highly respected research
- Graduates are very sought after
- Median starting salary is \$74,000
- Students have many research opportunities
- Students get very competitive internships starting their sophomore year

## CURRICULUM

Accredited by the Engineering Accreditation Commission (EAC) of ABET. Newly designed curriculum prepares students for their future careers, and allows them to easily pursue minors and expand their horizons. Most common minors are in optics and mathematics. Total required credits is 120. Subdisciplines covered include

- Electricity & magnetism
- Analog electronics
- Digital electronics
- Mixed electronics
- Microcontrollers
- Signal processing
- Communications
- Controls
- Optics



## CONTACT INFORMATION

Email : ee.dept@nmt.edu  
 Phone : (575) 835-5330  
 Address : Electrical Engineering Department  
 801 Leroy Place  
 Socorro, NM 87801





## WHAT DOES AN EES STUDENT DO?

Would you like to go on field trips to Hawaii, Ecuador, or New Zealand? How about contributing to scientific discovery while perched on a volcano rim in Antarctica? Or maybe explore new cave systems? Travel to the far reaches of the Pacific Ocean to retrieve samples from the seafloor? How would you like to contribute to understanding and solving society’s growing global water use problems with hands-on experience working in the arid southwestern U.S.? All of these are possible as an undergraduate in Earth and Environmental Science (EES). EES has internationally recognized expertise in earthquakes, economic geology, volcanology, hydrology, the geological history of the Earth, geophysics, geobiology, and other groundbreaking areas of Earth Science. EES activities are supported with over 8 million dollars annually in ongoing research grants, many of which support undergraduate research. The NM Bureau of Geology and Mineral Resources is also on campus with another 40 earth scientists, many as Adjunct Professors in EES, giving NMT an exceptionally strong group of researchers and teachers, comparable to or exceeding that typically found at universities with tens of thousands of students. The Bureau and EES also share many lab facilities (electron microprobe, Ar/Ar lab, XRD and many others).



First place team: 2018 AAPG Imperial Barrel Award (IBA) Program

## CAREER

**Work in industry:** groundwater, petroleum, mining and mineral exploration, environmental consulting

**Work in government:** State of New Mexico, Bureau of Land Management, Forest Service, National Park Service, Los Alamos or Sandia National Laboratories, US Geological Survey, Environmental Protection Agency

**Or get prepared for greater adventures in graduate school!**



Class fieldtrips to the Quebradas (left) and acidic volcanic lakes in the Valles Caldera (right)

## CURRICULUM

It’s not just rocks and minerals, it’s understanding how the Earth works, the origin of Earth’s resources, and the interactions of life with the environment. Subdisciplines include:

- Environmental science,
- Hydrology
- Geophysics, geochemistry, geobiology, geology, and more.

## WHY EES AT NMT?

- EES is the largest department on campus in faculty numbers (15).
- Low student-to-faculty ratio ensures small class sizes and exceptional opportunities for one-on-one interaction between students and faculty.
- Being in a small town makes it easy to do field trips during our classes.
- Get prepared for a career where you could get paid working outdoors.
- We are a fun, social department!

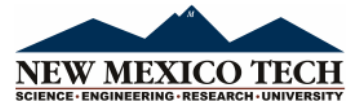


## CONTACT INFORMATION

Email : [geos.dept@npe.nmt.edu](mailto:geos.dept@npe.nmt.edu)  
 Phone : (575) 835-5634  
 Address : Department of Earth and Environmental Science  
 801 Leroy Place  
 Socorro, NM 87801

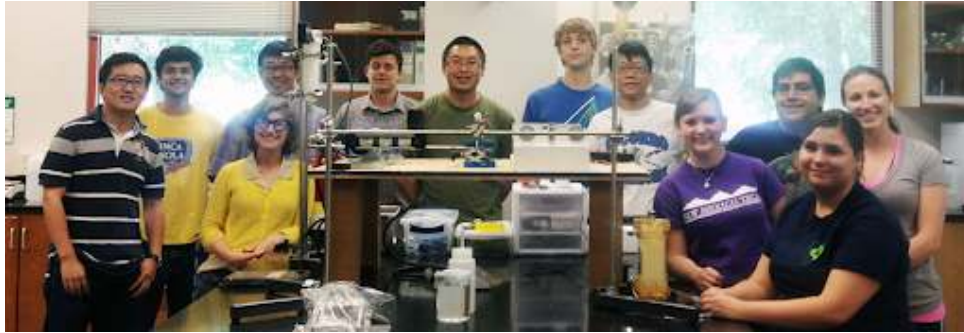


# ENVIRONMENTAL ENGINEERING



## WHAT DOES AN ENVIRONMENTAL ENGINEER DO?

An environmental engineer applies science to develop processes and infrastructure for the protection of human health and the environment.



## CAREER

Graduates work for private consulting companies, industry, or state and federal agencies.

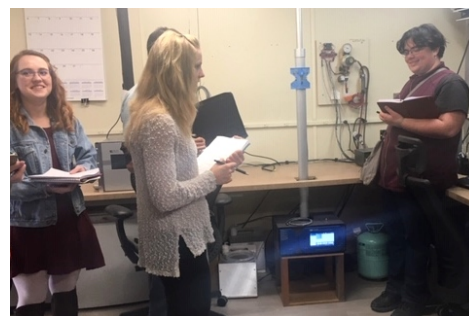
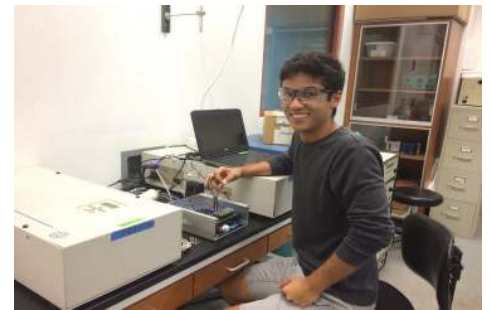
## CURRICULUM

Accredited by the Engineering Accreditation Commission (EAC) of ABET. The curriculum focuses on important environmental issues of the 21st century in New Mexico and around the world. The program integrates applied science and classical engineering to address such issues as balancing the competing forces of engineering design and economic, social and political constraints. The 132-credit curriculum includes hands-on, project-based learning along with a strong theoretical foundation, delivered in a supportive and encouraging environment. An accelerated BS/MS program is also available, as well as a minor in environmental engineering.



## WHY ENVIRONMENTAL ENG AT NMT?

- Excellent education at an affordable price.
- Prepares engineers who are ready to make a positive impact on society and the environment.
- Small class sizes and group projects provide opportunities to interact with faculty as well as many opportunities to carry out research with faculty in their labs.



## CONTACT INFORMATION

Dept Chair's Email : [clinton.richardson@nmt.edu](mailto:clinton.richardson@nmt.edu)  
 Phone : (575) 835-5500  
 Address : Civil & Environmental Engineering Department  
 801 Leroy Place  
 Socorro, NM 87801





## WHAT DOES AN ENVIRONMENTAL SCIENTIST DO?

Environmental scientists use an interdisciplinary scientific skill set to study environmental problems and help reduce human impacts on the environment. Industry needs environmental scientists to help comply with regulations, and federal, state, and local regulatory agencies need experts to develop regulations, conduct tests, and assure compliance. Environmental scientists may also work in basic research, for example, determining how certain contaminants affect the environment.



## CAREER

This degree leads to diverse career opportunities. Some examples include:

- Federal and State Agencies (e.g., EPA, USGS, NPS, State Environment Departments)
- Environmental Engineering firms
- Extractive industries
- Use degree to gain admission to graduate school in a related field (e.g., biology, geology, chemistry)



## WHY ENVIRONMENTAL SCIENCE AT NMU

New Mexico Tech has a long history of excellence in research in many areas affecting the environment. You'll not only take your classes from the experts, but you'll also find some campus job opportunities with the many research projects our faculty conduct.

## CURRICULUM

The Bachelor of Science degree in Environmental Science draws upon courses from biology, chemistry, Earth science, physics, and environmental engineering. Students must be aware of the complexity of environmental problems, yet have a rigorous background to address specific aspects of those problems. To ensure that graduates are competitive in the marketplace for diverse environmentally oriented careers, Environmental Science students take classes in all of the disciplines listed above. They additionally select a specialization in biology, chemistry, geology, hydrology, or instrumentation and measurements. Each option is sufficiently in-depth to allow students to continue their education in a traditional graduate program within that discipline, should they choose.

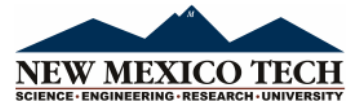


## CONTACT INFORMATION

Email : [geos.dept@npe.nmt.edu](mailto:geos.dept@npe.nmt.edu)  
Phone : (575) 835-5634  
Address : Department of Earth & Environmental Science  
801 Leroy Place  
Socorro, NM 87801



# GENERAL STUDIES



## WHAT IS A BACHELOR OF GENERAL STUDIES DEGREE?

This interdisciplinary degree allows students to create a unique educational portfolio that is founded on the General Education requirements that form the basis of all Bachelor degrees from public institutions in New Mexico, but offers a choice for students to structure additional requirements and upper division classes to their specific interests and career goals.



## CAREER

- Career opportunities for graduates of the Bachelor of General Studies include positions in corporations or non-profit institutions; media; web administration; communication or education in art, science, or history museums; events coordination in business, arts or social awareness programs; administrative services; cultural organization entrepreneurship; business ventures; public information offices; public policy; and public engagement.
- The Bachelor of General Studies degree can be the preparation to enter some disciplines of graduate studies or professional schools.



## WHY GENERAL STUDIES AT NMT?

- Students can customize a degree that fits their specific degree goals.
- Students can sample a variety of courses across the disciplines at NMT.
- This degree will be especially useful for building careers in which a broad-based liberal arts education and knowledge of the natural sciences, technology, mathematics or engineering are necessary components to deal with the issues facing a global community in the 21st century.

## CURRICULUM

The BGS degree allows a student to plan a program of courses according to individual educational goals and career plans. The degree will be awarded after completion of 120 credit hours with a grade-point average of 2.0 or more.

Other requirements for this degree include the following:

- Completion of the General Education Core and Degree Curriculum.
- 42 credit hours in courses numbered 300 or above.
- Completion of the BGS Academic Career Plan with a stated Emphasis area or areas.
- Fulfillment of the Institution's residence credit requirement (30 credit hours).



## CONTACT INFORMATION

Email : [steve.simpson@nmt.edu](mailto:steve.simpson@nmt.edu)  
 Phone : (575) 835-5445  
 Address : CLASS Department  
 801 Leroy Place  
 Socorro, NM 87801





## WHAT DOES AN INFORMATION TECHNOLOGIST DO?

Information Technologist solves real-world problems associated with various computing environments such as mobile computing, big data and cloud computing, computer networks, databases, telecommunications and cyber security infrastructure. They may be involved in planning, designing, implementing, testing, installing, and maintaining software and hardware systems. IT professionals are widely recruited by both government agencies and business firms.



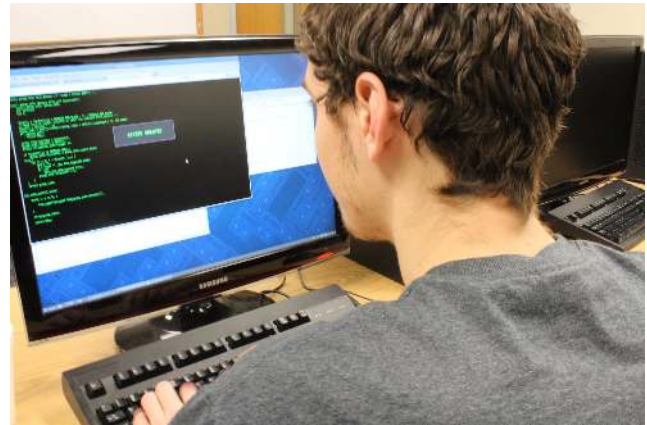
## CAREER

Job titles include Software Team Manager, Information Technology Consultant, Network Administrator, Website Manager, Database Administrator, and Cybersecurity Analyst.



## WHY IT AT NMT?

Owing to the combined knowledge and skills from both computer science and management, our graduates are able to translate between the language of the leadership of an organization and that of technical developers. Thus, they are uniquely qualified to design, manage, and guide software-based projects. In addition, as the only STEM university in New Mexico, students receive an in-depth understanding of computer hardware, software, and networks beyond basic fundamentals that enables them to work collaboratively with computer scientists, engineers, and physical scientists. Students are eligible for most scholarship and employment opportunities that are available to computer science majors.



## CURRICULUM

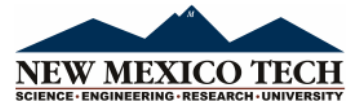
Beyond the general education courses, this major requires 12 courses in computer science; 3 in management (management and organization behavior; systems, risk and decision analysis; project management); 1 each on mathematics, ethics and psychology; a year-long project working on a real-world problem from an external organization; 2 technical elective courses; plus free electives.

## CONTACT INFORMATION

Email : [subhasish.mazumdar@nmt.edu](mailto:subhasish.mazumdar@nmt.edu)  
 Phone : (575) 835-5126  
 Address : Computer Science & Engineering Department  
 801 Leroy Place  
 Socorro, NM 87801

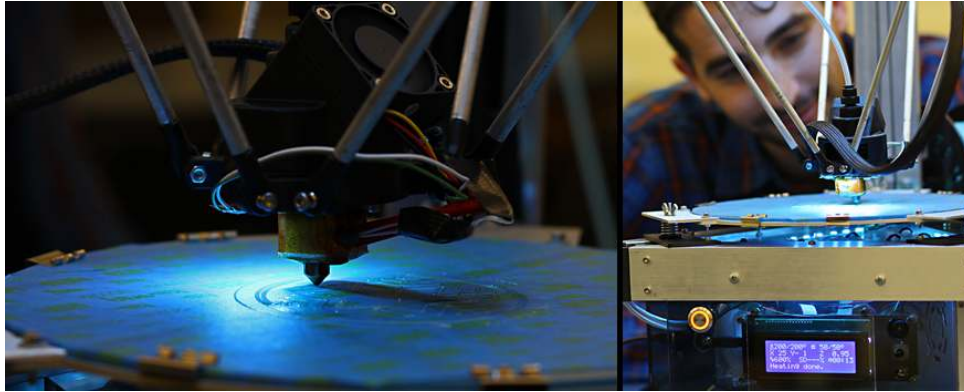


# MATERIALS & METALLURGICAL ENGINEERING



## WHAT DOES A MATERIALS ENGINEER DO?

Materials and Metallurgical Engineers study the synthesis, processing, structure, properties, and performance of metals, ceramics, polymers and electrical materials.



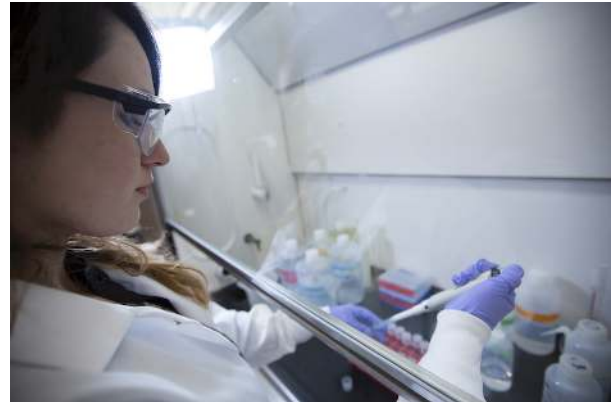
## CAREER

Graduates of the program have staff positions at national laboratories (Los Alamos, Sandia and Lawrence Livermore), others work in industry as materials engineers and metallurgists, and still others continue on to pursue M.S. and Ph.D. degrees at prestigious universities.



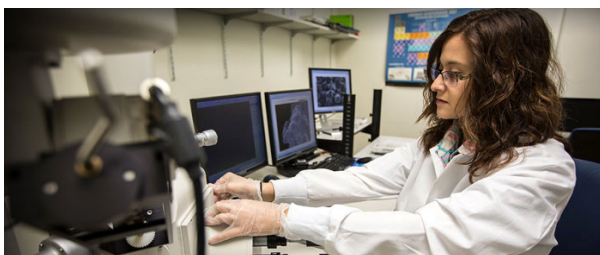
## WHY MATERIALS ENG AT NMT?

The program's friendly academic atmosphere fosters growth and collaboration. With small class sizes, students have the opportunity to interact closely with professors and conduct research in laboratories.



## CURRICULUM

Accredited by the Engineering Accreditation Commission (EAC) of ABET. The program offers degree options in metallurgical science and bio-materials engineering, and provides graduates the background to innovate with new materials for use in industries such as electronics and aerospace.



"The graduate program at Tech has enabled me to access unique and exciting research opportunities. Small class sizes, top notch faculty, and tremendous studying resources are why I chose this program." - Lindsay Candelaria (2018)

## CONTACT INFORMATION

Email : [mtls.dept@npe.nmt.edu](mailto:mtls.dept@npe.nmt.edu)  
Phone : (575) 835-5229  
Address : Materials and Metallurgical Engineering  
801 Leroy Place  
Socorro, NM 87801





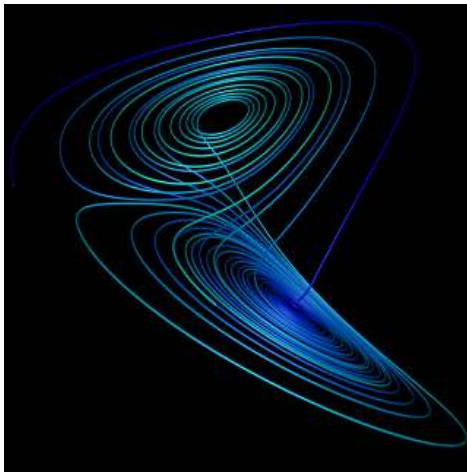
## WHAT DOES A MATHEMATICIAN DO?

Mathematicians possess a highly adaptable set of skills. They have knowledge vital to all fields of science and business. This allows them to work in a variety of fields, working on various projects where they are needed.



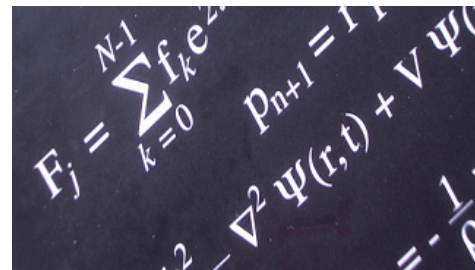
## CAREER

Math graduates are employed by the government, scientific research labs, colleges and universities. A list of companies and organizations that employ Mathematicians includes: Lockheed-Martin, Hughes Information Technology, New Mexico Air National Guard, Hughes Aircraft, Phillips Laboratories, SAS Institute, and Microsoft.



## WHY MATHEMATICS AT NMT?

New Mexico Tech has a strong reputation for providing a high quality and rigorous education. Most of the classes at New Mexico Tech are small, which allows you to ask questions in class and really get to know your professors. There is an amazing amount of research going on campus; you will always find people talking about interesting scientific and mathematical problems.



## CURRICULUM

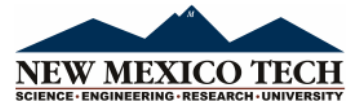
Our curriculum focuses on applied mathematics and statistics. You will be able to specialize in statistics and operations research, differential equations, or numerical analysis. All of these areas teach you tools that are used to solve problems in science and business. What is the likelihood that a part of a plane will need to be replaced? What are the equations that predict the growth of a virus in a person or a population? Can I guarantee that a bridge will be able to withstand certain weather conditions? These are all questions that our curriculum will allow you to answer.

## CONTACT INFORMATION

Email : [math.dept@npe.nmt.edu](mailto:math.dept@npe.nmt.edu)  
 Phone : (575) 835-5393  
 Address : Mathematics Department  
 801 Leroy Place  
 Socorro, NM 87801

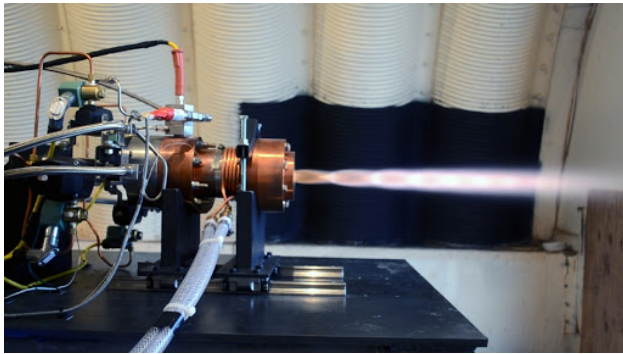


# MECHANICAL ENGINEERING



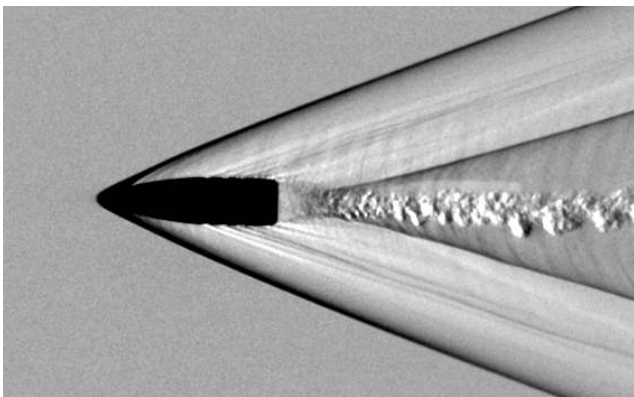
## WHAT DOES A MECHANICAL ENGINEER DO?

Mechanical engineers utilize knowledge of physics, mathematics, material science, electronics, and engineering economics to design, fabricate and test engineering system for a wide variety of applications. It is one of the broadest forms of engineering. Mechanical engineers often design and manufacture components and systems. In addition they often interact with many different engineering disciplines and need a broad understanding of engineering design processes.



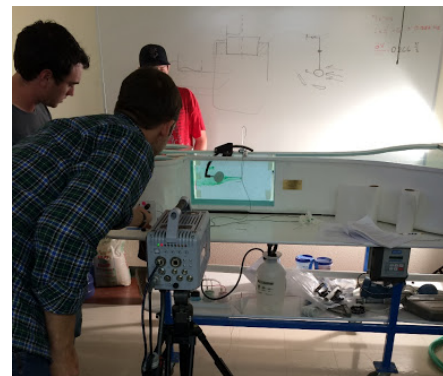
## CAREER

Top employers of our graduates are General Motors, Lockheed Martin, United States Navy, Los Alamos National Lab, Sandia National Lab, Scaled Composites, Honda R&D Americas, Puget Sound Shipyard, ABS Consulting, AT&T, Air Force Research Lab, Ball Aerospace, Bechtel Corporation, Boston Scientific Corp, Blue Origin, Honeywell, National Instruments, Ares Corporation Aviation Consultants and National Radio Astronomy Observatory



## WHY MECHANICAL ENG AT NMT?

New Mexico Tech's program is driven by a four-year design and inquiry-based curriculum. The program begins with an introductory first year design course and culminates with a two-year design clinic program which offers students the opportunity to work on real-world engineering problems with projects sponsored by industry, government agencies, and national laboratories. The design projects span a wide range of topics including robotics, automotive, biomedical, and aerospace engineering. Lectures are augmented with hands on learning labs in a wide variety of mechanical engineering topics. The Mechanical Engineering Bachelor Degree program is accredited by the Engineering Accreditation Commission (EAC) of ABET. The department has active student chapters of engineering-related professional organizations which offer students scholarships and networking opportunities.



## CURRICULUM

- Freshman, Sophomore, Junior and Senior Design
- Fluid Mechanics
- Thermodynamics
- Mechanics of Materials
- Engineering Analysis
- Dynamics and Vibrations
- Mechatronics
- Dynamics Systems and Controls
- 12 hands on laboratory courses



## CONTACT INFORMATION

Email : [mechanical.advising@nmt.edu](mailto:mechanical.advising@nmt.edu)  
 Phone : (575) 835-5693  
 Address : Mechanical Engineering Department  
 801 Leroy Place  
 Socorro, NM 87801





## WHAT DOES A MINERAL ENGINEER DO?

A mineral engineer's responsibilities cover a wide range of applications and disciplines related to the production of raw materials used by virtually all industries. Examples of responsibilities include long-term and short-term production planning, materials handling, equipment selection, drilling, blasting, geotechnical and geomechanical engineering, stability and safety of both surface and underground excavations, ventilation, health and safety operation, exploration, mineral evaluation, and economic analyses. The Mineral Engineering program at New Mexico Tech concentrates on mining with elements from civil engineering and construction.



## CAREER

Our students have successfully found employment in the areas of mining, construction/civil, minerals exploration, geotechnical engineering and explosive engineering. In construction-related industries, our students have joined consulting or construction firms, or have been employed as quality control engineers or project engineers. Some have advanced to project managers. Job opportunities in research and with government agencies are also available. The department has very close ties with industry. Our students easily find summer internships, particularly with mining companies. Starting salaries are around \$75,000 per year.

## WHY MINERAL ENG AT NMT?

- Small department and small class sizes
- Faculty are very close to and very active with industry
- The mining industry is a big supporter of the department
- All students get summer internships and immediate job offers



## CURRICULUM

The program is Accredited by the Engineering Accreditation commission (EAC) of ABET. In addition to all the basic engineering and science topics, the students take courses concentrated in:

- Geology, ore deposits, and field mapping
- Economic analyses
- Mine design – surface and underground
- Soil and Rock mechanics
- Tunneling and underground excavation
- Slope stability
- Ventilation and health and safety
- Foundation Engineering
- Tailings dam design and mine waste handling
- Environmental Issues
- Capstone senior design project

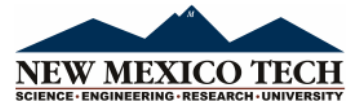


## CONTACT INFORMATION

Dept Chair's Email : [navid.mojtabai@nmt.edu](mailto:navid.mojtabai@nmt.edu)  
 Phone : (575) 835-5345  
 Address : Mineral Engineering Department  
 801 Leroy Place  
 Socorro, NM 87801



# PETROLEUM ENGINEERING



## WHAT DOES A PETROLEUM ENGINEER DO?

Petroleum engineers work with geologists and petrophysicists to find and evaluate new hydrocarbon reserves. They design and execute drilling and completion of new oil/gas wells within realistic constraints such as economic, environmental, health and safety, and sustainability. They also apply new technologies such as artificial intelligence and machine learning to maintain and optimize production of oil/gas.



## CAREER

Petroleum engineers can work at Chevron, ConocoPhillips, ExxonMobil, Shell, Schlumberger, Hllcorp, Halliburton, etc.

## WHY PETROLEUM ENG AT NMT?

Ranked as one of the Best Petroleum Engineering Degrees in the US by College Choice.



## CURRICULUM

Accredited by the Engineering Accreditation Commission (EAC) of ABET.

Very hands-on experience using our labs and field trips; students can easily get internships as early as the freshman year. Students have high chance to become involved in research.

## CONTACT INFORMATION

Email : [petro.dept@npe.nmt.edu](mailto:petro.dept@npe.nmt.edu)  
Phone : (575) 835-5412  
Address : Petroleum and Natural Gas Engineering  
801 Leroy Place  
Socorro, NM 87801





## WHAT DOES A PHYSICIST DO?

A physicist studies nature at its most extreme, and looks for simplifications of complex phenomena using the language of mathematics. From quarks to cosmology, physics has it all.



## CAREER

Physicists work in all branches of academia, industry, government and national security.



## CURRICULUM

Small classes and the chance to get to know your professors. Undergrads at NMT get a broad physics curriculum as well as practical skills like programming and laboratory experience. Interested students can get involved in research in planetary atmospheres, hurricanes, lightning, stars, galaxies, and building telescopes.

## WHY PHYSICS AT NMT?

Good value for money — College Factual™ rates the NMT physics department in the top 1 percent nationwide for academic value and quality of education.

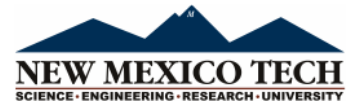


## CONTACT INFORMATION

Email: : [physics@nmt.edu](mailto:physics@nmt.edu)  
 Phone: : (575) 835-5328  
 Address : Physics Department  
 801 Leroy Place  
 Socorro, NM 87801



# PSYCHOLOGY



## WHAT DO PSYCHOLOGISTS AND NEUROSCIENTISTS DO?

Psychologists study behavior and mental experience. Neuroscientists study how brain activity leads to conscious experience and action. Many professionals in the field of psychology help people when something is going wrong with their mood, perception, behavior, or the nervous system.

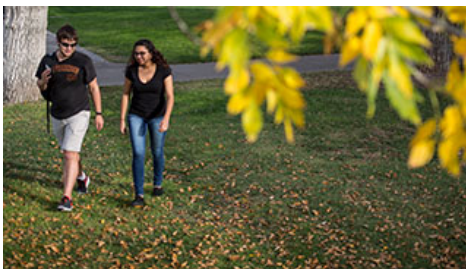
Psychology is a broad degree that can lead to jobs in diverse fields!

- Develop analytical skills that employers seek, by learning to apply the scientific method to behavior. Some students who major in psychology will go into research.
- Psychology complements any other kind of learning or work with humans! Other students will use their knowledge of human nature to pursue graduate or professional school in another area (such as law school, medicine, education, and human resources in industry) for which psychology is great preparation.
- Psychology helps you understand yourself and others. It prepares you for professions that improve interactions between people. Another group of psychology graduates will go on to post-graduation training in professional psychology jobs: therapists, social workers, psychiatrists, counselors, speech pathologists, or researchers within these disciplines.



## CAREER

Research, Medicine, Social work, Clinical work and therapy, Counseling, Speech therapy, Physical therapy and Occupational therapy, Cybersecurity, Law, Military, Education, Finance, Technology, and Employee relations.



## WHY PSYCHOLOGY AT NMT?

- Very small classes with the opportunity to do research as new college students.
- Cutting edge research supports student success in grad school and medical school.
- Individualized training which enables a future career in Psychology, Neuroscience, Biomedical Research and Medicine.
- The importance of understanding how our brains work and why we think the way we do. Advances have improved how we understand and treat disorders and reshape interactions in the workplace, home, school and society.
- Students use their research know-how to detect truth and nonsense claims in the media.
- We teach forward-looking courses in all areas of Psychology and Neuroscience including Drugs and Behavior, Social Psychology, Psychological Disorders, Cognitive Psychology, Psychology of Language, Music and the Brain, and Perception.

## CONTACT INFORMATION

Dept Chair's Email : mark.samuels@nmt.edu  
 Phone : (575) 835-5216  
 Address : Psychology Department  
 801 Leroy Place  
 Socorro, NM 87801





## WHAT DOES A COMMUNICATOR DO?

Technical Communicators convey scientific, engineering, and other technical information. They tailor information to specific audiences, which may be subject matter experts, consumers, etc. Technical Communicators often work collaboratively to create deliverables, including training and reference materials, articles online help guides and product support, user interface texts, and social media posts.



## CAREER

Technical Communication related job titles include Technical Writer, Communicator, and Editor, Medical Writer, Product Documenter, User Experience Designer, Content Strategist, Social Media Manager, and Grant Writer. The average salary for a Technical Writer is \$72,000 dollars after 5 years, with faster than average job growth (11 percent), according to the Bureau of Labor Statistics.



## WHY TC AT NMT?

Technical Communication majors at New Mexico Tech graduate with a Bachelors of Science and a concentration in an area of science or engineering, making them more competitive for positions within STEM industries. New Mexico Tech has a strong reputation for providing a high quality and rigorous education. New Mexico Tech was scored in the Top 1% nationally in Mathematics by College Factual. Most of the classes at New Mexico Tech are small, which allows you to ask questions in class and really get to know your professors. There is an amazing amount of research going on campus; you will always find people talking about interesting scientific and mathematical problems.



## CURRICULUM

The Technical Communication curriculum at New Mexico Tech includes course work on visual design, social media marketing and brand development, grant writing, project management, a senior thesis, and an internship. Courses include hands-on projects for real-life clients.

## CONTACT INFORMATION

Email : [elisabeth.kramer-simpson@nmt.edu](mailto:elisabeth.kramer-simpson@nmt.edu)  
Phone : (575) 835-5445  
Address : Technical Communication Department  
801 Leroy Place  
Socorro, NM 87801



# OUTDOOR RECREATION

Besides being an exceptional institution for science and engineering education, New Mexico Tech is situated in an outstandingly diverse region of the southwest. Nearby opportunities for outdoor recreation include mountain and road biking, rock climbing, and desert and mountain hiking at elevations ranging from 4,600 to nearly 11,000 feet.

It is easy for Tech students to get involved in outdoor activities. The New Mexico Tech Physical Recreation Office regularly organizes weekend student hikes and maintains outdoor equipment, which is available for student use. Our Community Education program has classes in rock climbing, bouldering, and camping, which are taught every semester. In addition, there are active student clubs associated with outdoor activities, with organized trips and opportunities for training.



*A well bolted sport climb in Box Canyon  
(photo E. Rivera Alvarez)*

*Student hike near Timber Peak in the Magdalena Mountains*



*New Mexico Tech Golf Course "one of the 10 best public courses in New Mexico, and one of America's 500 best places you can play."*



*Tech faculty and students mountain biking in the San Mateo Mountains  
(photo P. Mozley)*



# ADMISSION REQUIREMENTS

## Undergraduate

- Minimum GPA 2.5
- Minimum GED 500 or Minimum HISET combined score of 75
- Minimum ACT composite score of 21 or minimum SAT combined score of 1070 (Critical Reading and Math)



## Transfer Student

- Cumulative GPA 2.0
- 30 credit hours
- Place into MATH 103 (Pre-Calculus)

**All applicants who meet NMT admissions requirements will be admitted.**



**APPLY NOW**

**<https://www.nmt.edu/apply.php>**

**CONTACT  
ADMISSION@NMT.EDU  
IF YOU HAVE ANY QUESTIONS**



**1.800.428.TECH • OFFICE OF ADMISSION**