NEW MEXICO TECH

SCIENCE • ENGINEERING • RESEARCH UNIVERSITY

2026

CENTER FOR GRADUATE STUDIES

NEW MEXICO TECH
SCIENCE • ENGINEERING • RESEARCH UNIVERSITY

NMT Quick Facts

$100M+
Research Expenditure

10+
Research Centers

13
PhD Programs

26
MS Programs

8
Graduate Certificates

In New Mexico

New Mexico is home to Sandia National Laboratories, Los Alamos National Laboratory, Kirtland Air Force Base, White Sands Missile Range, Intel, Applied Research Associates, BlueHalo, mPower Technology, Bennubio and many others.

The Following Graduate Degrees May Be Obtained Entirely By Distance

- Master of Engineering in Chemical Engineering
- Professional Master of Hydrology
- Master of Engineering Management
- Master of Science in Engineering Management
- Master of Engineering in Mechanical Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Public Engagement in Science, Design and Communication
- Master of Science for Teachers
- Master of Science in Transdisciplinary Cybersecurity
- Professional Master of Transdisciplinary Cybersecurity
- PhD in Transdisciplinary Cybersecurity

The Following Graduate Certificates Are Also Available Entirely By Distance Delivery

- Cybersecurity
- Explosives Engineering
- Geothermal Energy
- Hydrology
- Scientific and Professional

For Inquiries

Estimated Cost Per Semester
(Part Time Students)

- 6 credits: $2749 + fees
- 3 credits: $1,374 + fees

Grad Office Contact: https://www.nmt.edu/gradstudies/ graduate.dept@nmt.edu Phone: (575) 835 - 5554

Biology PhD* | MS

*through the interdisciplinary BioTech Program

Research Technologies

- Butterfly Netting
- Genomic Sequencing
- Bioinformatics
- High-performance Computing
- Statistical Modeling
- MinIon Real-Time DNA Sequencing
- Gasmet Field Soil Gas Analyzing

Funding Opportunities

The Biology Department has several funding opportunities:

- Research Assistantships
- Teaching Assistantships

About the Biology Graduate Programs

The Biology Masters Program prepares students for further graduate study and for private and public sector jobs in research, education, medicine, and environmental management. Graduate seminars promote the development of essential written and oral communication skills as well as research ethics, safety and the acceptable and ethical use of AI. Masters-level research spans a wide range of medically and environmentally related areas and frequently involve collaboration with other departments such as Chemistry, Chemical Engineering, Computer Science and Environmental Engineering. Additionally, Biology participates in the transdisciplinary Biotechnology PhD program.

Faculty Research Areas

- Agroecology
- Biogeochemistry
- Desert Ecology
- Ecotoxicology/Pollution Remediation
- Invasive Plant Ecology
- Soil Microbiology
- Spatial Biology Technology
- Anatomical Sciences Education Technology
- Ai Security
- Spatial Information Architecture
- Population Genetics
- Conservation Biology
- Fish And Wildlife Management
- Mycology
- Fungal Pathogens
- Phylogenetics
- Genomics
- Public Health

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Biotechnology PhD

About the Biotechnology Graduate Program

The Biotechnology PhD program is an interdisciplinary program where multiple departments (Biology, Chemistry, Computer Science, Mathematics, Earth and Environmental Science, Engineering Management, and Chemical, Mechanical, Materials, and Environmental Engineering) across the NMT participate. The program prepares students at the highest level for careers in academia, industry, research, and development. Also, the program enables students to build the skill set and gain valuable experience that can be leveraged to solve complex problems. Finally, the program offers opportunities to develop intellectual property that have commercialization potential.

Faculty Research Areas

- Nuclear Medicine
- Targeted Drug Delivery
- Applied Environmental Microbiology For Wastewater Treatment
- Dna Damage Repair And Anti-Cancer Drug Development
- Molecular Mechanisms Of Antibiotic Resistance
- Biosensor Development
- Developing Novel Material For Tissue Engineering
- Functionalized Interfaces For Biomedical Application
- Health Monitoring Wearables

Department Facts

- **Key Research Sponsors: NSF, NIH, DOE, Los Alamos National Laboratory**

Funding Opportunities

The Biotechnology Program has several funding opportunities:

- **Research Assistantships**
- **Teaching Assistantships**
- **Bioscience Commercialization Internship**
- **STEM Fellowship**

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Civil & Environmental Engineering MS

Department Facts

- Six full-time PhD Faculty (three with PE licensure)
- Research Sponsors:
  - NSF, LANL, DOT, NM-INBRE. AFRL, New Mexico Consortium, and Sandia National Labs
- Annual Research Expenditures: ~ $400K
- Departmental Student Clubs:
  - ASCE, AWWA/WEF

Faculty Research Areas

- Infrastructure Asset Management and Risk Assessment
- Earthquake Engineering and Structural Vibration Control
- Structural Health Monitoring, Structural Composites
- Nondestructive Material Characterization
- Near Surface Geophysical Applications
- Ambient Air Quality, Aerosols and Climate Change
- Water Reuse and Resource Recovery
- Membrane-based Treatment Processes
- Environmental Risk Assessment, Emerging Contaminants
- Groundwater and Site Remediation
- Artificial Intelligence Applications

About the CEE Graduate Program

The Civil & Environmental Engineering Department at New Mexico Tech is a small family of faculty and students. The graduate program offers a hands-on Master of Science degree with specialization in Civil Engineering or Environmental Engineering, providing a unique educational and research experience in the engineering and science of the urban and natural environments. The plan of study and research is suited to each individual, drawing upon the strengths of the student, taking advantage of program capabilities, and complementing research activities within and outside New Mexico. Our focus is to prepare graduate students at a more specialized level to meet present and future challenges in a specialty area of engineering, who are in demand by employers and doctoral programs and who lead fulfilling professional careers. A thesis or independent study project is required to complete the degree.

Funding Opportunities

The CEE Department has several funding opportunities:

- Research Assistantships
- Teaching Assistantships

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Chemical Engineering PhD | MS | ME

About the Chemical Engineering Graduate Programs

The Chemical Engineering Graduate Program prepares future engineers and scientists to address diverse and complex challenges in areas such as catalysis and reaction engineering, nanotechnology, polymers, multi-scale modeling, membrane separations, environmental sustainability, biomedical engineering, and renewable energy. These research areas span from fundamental science and technology to real-world applications and frequently involve interdisciplinary collaborations with national laboratories and industry partners.

Department Facts

- Annual Departmental Research Expenditures: > $ 1M
- Key Research Sponsors:
  - DOE, NIH, DOD, NNSA, Sandia National Laboratories, ACS PRF, Los Alamos National Laboratory, Industrial Partners
- Departmental Student Club:
  - AIChE (American Institute of Chemical Engineers)

Faculty Research Areas

- Catalysis and Reaction Engineering
- Computational Modeling of Materials
- Polymer Chemistry
- Additive Manufacturing
- Nanotechnology
- Targeted Drug Delivery
- Biomaterials
- Traumatic Brain Injury
- Membrane Separations

Funding Opportunities

The Chemical Engineering Department has several funding opportunities:

- Research Assistantships
- Teaching Assistantships

GRE NOT REQUIRED

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Chemistry PhD | MS

Faculty Research Areas

- DNA Damage Repair / Anticancer Drug Development
- Molecular Biophysics / Membrane Transport and Cell Death
- Bioanalytical Device Development
- STEM Education / Mechanisms of Antibiotic Resistance
- Environmental Toxicology
- Hydrogels and Biomedical Applications
- Electrochemistry / Flow Cell Batteries

Funding Opportunities

The Chemistry Department has several funding opportunities:

- Research Assistantships
- Teaching Assistantships

About Chemistry Graduate Programs

We offer PhD and MS degrees in Chemistry, with opportunities for research in Biomolecular and Environmental/Sustainability areas. Students gain leadership and teaching experience, as well as develop relatively broad technical expertise. Recent alumni have gone on to positions in industry or to academic positions at the faculty or postdoctoral level.

Department Facts

- Externally Funded Research – Application-driven projects across a wide range of chemistry disciplines
- State-of-the-Art Facilities – Access to advanced research instrumentation and modern laboratories
- Financial Support – Teaching and research assistantships are available, offering funding and professional development opportunities
- Diverse Career Pathways – Graduates succeed in academia, government laboratories, industry, and beyond.
- Active PhD program since 1960
- Research funding recently sourced from National Institutes of Health, Department of Energy, American Chemical Society, and Los Alamos National Laboratory
- Undergraduates from across campus included in research
- Graduate students gain mentoring and teaching experience
- Faculty and students present research at regional, national, and international meetings
- Department hosted an international conference in 2024
- State of the art instrumentation and computing facilities
- Opportunities for student leadership
- Broad curriculum and opportunity to take classes outside the department

GRE NOT REQUIRED

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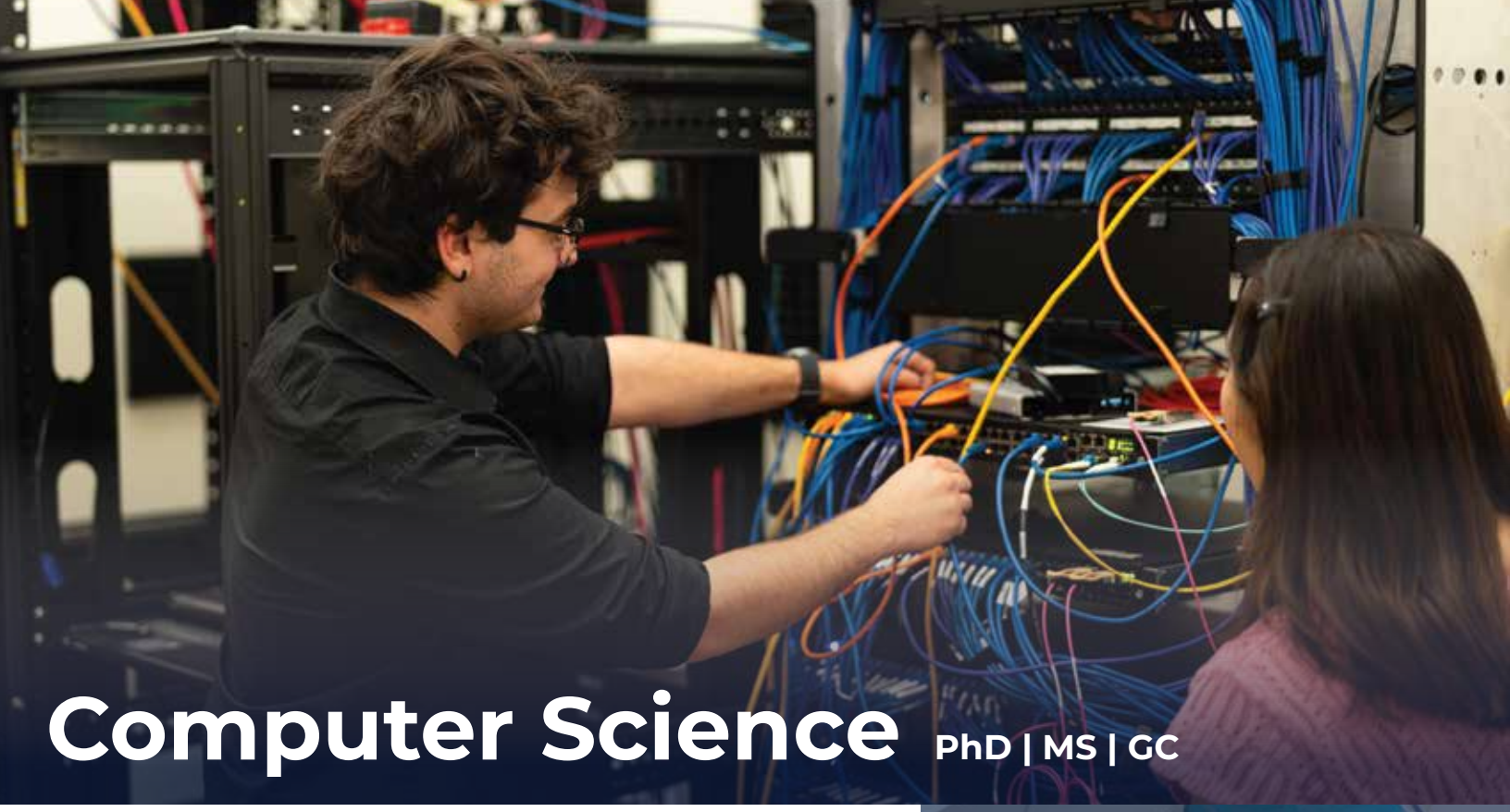

Computer Science PhD | MS | GC

About the Computer Science Graduate Programs

The graduate programs in the Department of Computer Science and Engineering are designed to empower you. You'll have the opportunity to take advanced courses and conduct impactful research under the guidance of our expert faculty. Our Master of Science program is ideal for those who want to deepen their expertise in computer science. We offer both thesis and non-thesis options to suit your academic and career goals. The Ph.D. program is designed for highly motivated individuals with a passion for research. It is an excellent fit for students with a strong academic record or significant experience in industrial research and development.

Department Facts

- Faculty research has been sponsored by NSF, DOE, DHS, NASA, ARL, Sandia National Laboratories, Los Alamos National Laboratory, and ICASA.
- NSF CyberCorps: Scholarship for Service (SFS) program
- NMT has been an NSA-DHS National Center of Academic Excellence for Information Assurance Education since 2002 and for Research since 2009.
- Departmental Student Clubs & Organizations:
  - ACM (Association for Computing Machinery)
  - Cybersecurity

Faculty Research Areas

- Ai/Machine Learning
- Cyber-Physical Systems
- Cybersecurity And Information Privacy
- Data Science
- Health Informatics
- Human-Centered Computing
- Software Engineering
- Theory Of Computation
- Wireless Sensor Networks

Funding Opportunities

- The Computer Science Department Has Several Funding Opportunities:
- Research Assistantships
- Teaching Assistantships

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Cybersecurity PhD | MS | PM

Department Facts

- **Annual Departmental Research Expenditures: >$500k**
- **Key Research Sponsors: NSF, Sandia National Laboratories**
- **Student Clubs & Organizations:**
  - **Cybersecurity Club**

Funding Opportunities

The NMCCoE has several funding opportunities:

- **Research Assistantships**
- **Teaching Assistantships**

About Cybersecurity Grad Program

The Transdisciplinary Cybersecurity graduate programs in the NMCCoE aim to educate future cybersecurity professionals capable of addressing a broad spectrum of cybersecurity challenges in areas such as space cybersecurity, psychology of cybersecurity, quantum cybersecurity, AI cybersecurity, and enterprise-wide cybersecurity. Current research areas span from fundamental science and technology to advanced, deployable applications and nearly always involve transdisciplinary approaches.

Faculty Research Areas

- Foundations of Cybersecurity
- Organizational High Reliability
- User Experience Research Methods
- Psychology of Cybersecurity, Perception, Psycholinguistics
- Cyber Physical Systems
- Health Systems, Health Sensing, and Health Monitoring Ethics, Values and Norms Impact on Laws and Regulations, Science, Technology
- Policy
- Enterprise-wide Security and Forensics
- Security Metrics,
- Data Management, Data Science, & Information Privacy
- Network Security & Hardware Security
- Formal Security Methods, Cryptographic Policy Enforcement Mechanisms
- Threat Intelligence, Malware, & Reverse Engineering
- Artificial Intelligence
- System Security, Software Engineering/Security
- Cybersecurity Auditing, Incident Response and Digital Forensics, Threat
- Intelligence, Data Science Focused on Threat Detection and Response, Cyber
- Operations Process Engineering/Quality Management
- Risk Analysis, Financial Crime and Online Fraud
- Smart Grids, Intelligent Manufacturing, & Smart Agriculture

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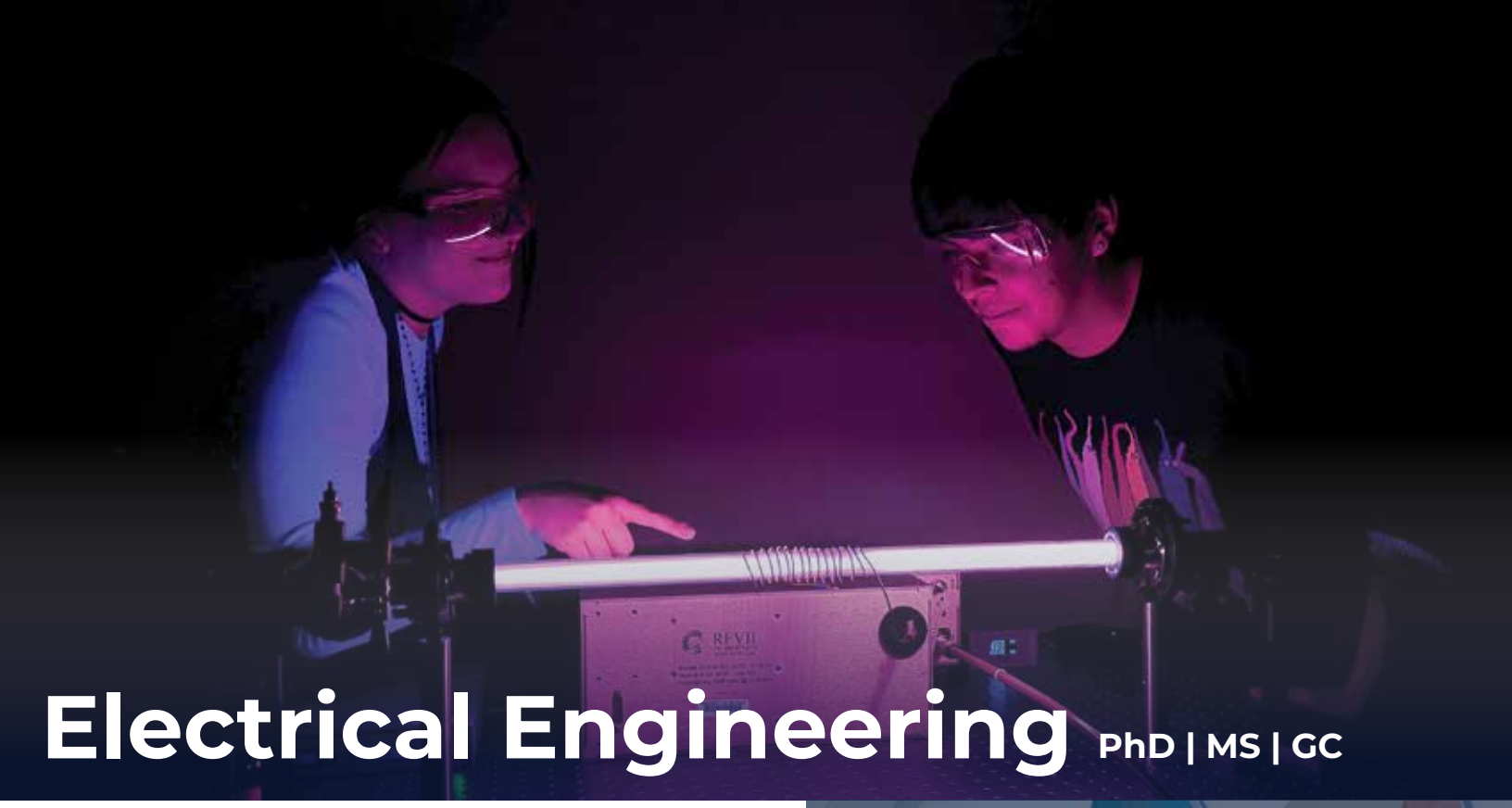

Electrical Engineering PhD | MS | GC

The World Needs Innovators

At New Mexico Tech, we prepare graduate students to solve tomorrow's toughest engineering challenges. Our Electrical Engineering graduate program combines rigorous academic training with hands-on research, connecting fundamental science to deployable applications.

Research that Reaches Further

Electrical Engineering pursues groundbreaking work across diverse areas of electrical engineering. Research spans from acoustics and electro-optics to plasma physics and high-voltage systems; from image processing and intelligent algorithms to navigation, communications, and cyber-physical systems security. We also lead innovations in smart devices, advanced power systems, and space instrumentation—with impact ranging from everyday technologies to extreme environments.

Making it happen

Full and partial funding of graduate positions with stipends and tuition coverage through research and teaching assistantships are available. Graduate students may be involved in projects sponsored by: DOE, NASA, NSF, and Sandia National Laboratories.

Start Your Graduate Journey

Join our success driven department as a graduate of New Mexico Tech's Electrical Engineering program, you won't just study innovation—you'll create it..

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Earth & Environmental Science

PhD | MS | PM | GC

Department Facts

- Annual departmental research expenditures: >$4.8 million
- Research supported by National Science Foundation, Department of Energy, NASA, various New Mexico funding agencies, National Laboratories, and private entities
- Many of our graduate students work in larger projects with a group of other students and professors
- We collaborate closely with the New Mexico Bureau of Geology and Mineral Resources and form a group of ~50 geologists

Faculty Research Areas

- Hydrology and Global Climate Models
- Geophysics, Seismology, Marine Geology
- Mineralogy and Igneous Petrology
- Economic Geology and Rare Earth Elements
- Sedimentology and Petroleum Geology
- Geomorphology and Soils
- Computational Geology
- Structural Geology
- Geomicrobiology
- Geochemistry
- And more!

About the EES Graduate Programs

Our graduate programs prepare students for careers in industry, environmental consulting, academia, and research. We train graduate students to become leading researchers and practitioners in geology, geochemistry, hydrology, geophysics, geomorphology, and environmental sciences. Our students spend time learning in the field, in laboratories, and with computational facilities. Our research projects span from laboratory to field and include mapping and large-scale modeling. We track today's pollutants through the environment and future melting of the permafrost. We map the catastrophic volcanism and find the rare earth minerals. Our field areas span from the bottom of the ocean to Arctic tundra, to flooding rivers and to burning forests. We descend to caves to hunt for rock eating microbes.

Funding Opportunities

The E&ES Department has several funding opportunities:

- Research Assistantships
- Teaching Assistantships

Distance Education Opportunity

Some graduate courses are offered as hybrid offering great flexibility to distance students and working professionals.

GC in Hydrology can be earned fully online.

GRE NOT REQUIRED

Contact Information: earthenv.dept@npe.nmt.edu Phone: (575) 835 - 5634

Engineering Management MS | MEM | GC

THE FIRST IN NEW MEXICO,
22 YEARS OF EXPERIENCE,
FOR ENGINEERS, MANAGERS &
ENTREPRENEURS

Fall Semester Offerings

- Engineering Analytics (3 cr)
- Financial Management (3 cr)
- Management Sci for Engineering Management (3 cr)
- Technology Entrepreneurship (3 cr)
- HR Management in Tech Organizations (3 cr)
- Special Topics in Engineering Management (1-3 cr)

Spring Semester Offerings

- Technology Marketing (3 cr)
- Engineering Project Management (3 cr)
- Systems, Risk, and Decision Analysis (3 cr)
- Managerial Economics (3 cr)
- Supply Chain Management (3 cr)
- & Special Topics in Engineering Management (1-3 cr)

Summer Semester Offerings

- Info Systems in Tech Organizations (3 cr)
- Surprise courses on frontier topics (1-3 cr)

Master of Engineering Management (MEM)

- **Professional oriented & course-based**
- **Synchronous courses & 100% online accessible**
- **30 credit hours in total & completed in two years.**

MS in Engineering Management (MS)

- **24-27 credits hours of coursework**
- **3-6 credits hours of research projects**
- **Work on research with a dedicated faculty advisor.**

Certificates

- **Technology Leadership - 15 credit hours**
- **Stackable towards the MEM or MS programs**

Estimated Cost Per Semester

- **6 credits part-time: $2749 + fees**
- **3 credits part-time: $1,374 + fees**

Dr. Haoying Wang - Program Chair haoying.wang@nmt.edu
Dr. Suraj Ghimire - MEM Coordinator suraj.ghimire@nmt.edu

Materials Engineering PhD | MS | ME

Department Facts

- **Annual Research Expenditure: >$1M**
- **Key Research Sponsors: Army Research Laboratories, National Science Foundation, National Aeronautics and Space Administration (NASA), Los Alamos National Laboratories, Sandia National Laboratories**
- **Professional Society Affiliations: American Ceramic Society (ACS), Materials Research Society (MRS), Mineral, Metals, and Materials Society (TMS) and local (New Mexico) student chapters**

Funding Opportunities

The Materials & Metallurgical Engineering Department has several funding opportunities:

- **Research Assistantships**
- **Teaching Assistantships**
- **Funding Agency Fellowships**
- **Scholarship Awards**

Materials Engineering Graduate Programs

The Materials Engineering graduate research programs (MS, PhD) train students in the discovery, design, and manufacturing of new and improved materials. Direct access to state-of-the-art instrumentation, such as atomic force and electron microscopy, x-ray diffraction and computer aided tomography, enable student researchers to probe material crystal structures and microstructures. Macro-micro- and nano-mechanical testers, thermal analyzers and various spectroscopies enable property and performance measurements. Advanced computing facilities enable the prediction and simulation of new materials. The masters of engineering (ME) degree prepares students for professional management roles in various industries including aerospace, defense, construction, manufacturing, electronics, computing, and biomedical.

Research Areas

- Additive Manufacturing
- Aerospace Materials
- Biomedical Materials
- Ceramics (Electronic & Functional)
- Computational & Combinatorial Materials Science
- Critical Minerals Processing (Extraction)
- Metallurgy (Mechanical, Physical)
- Nano-, 2D- and Quantum Materials
- Polymers & Composites
- Sustainable Materials

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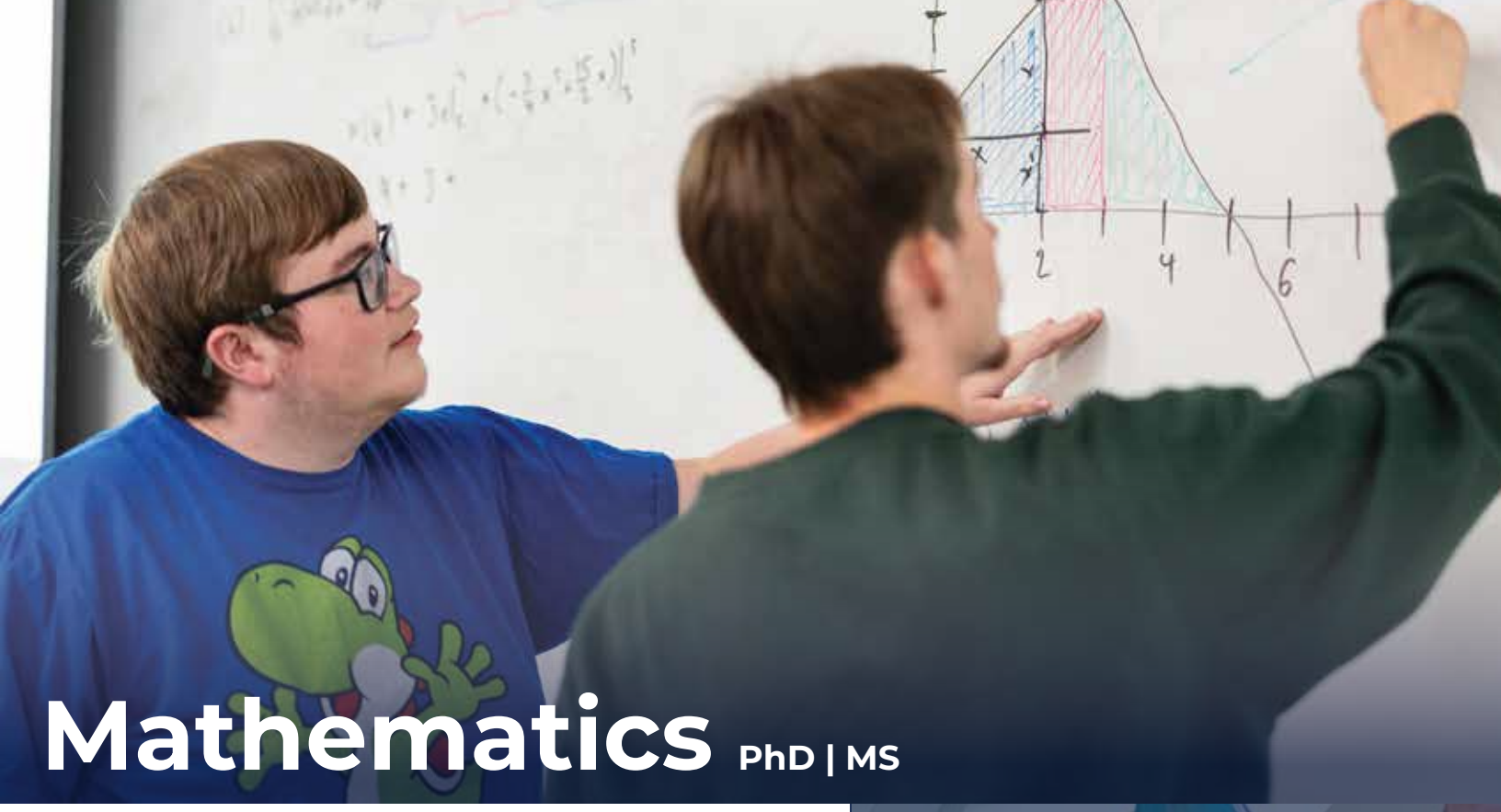

Mathematics PhD | MS

About the Mathematics Graduate Programs

Students and faculty in the mathematics department at NMT are involved in many areas of mathematics, from mathematical analysis to applied mathematics, numerical analysis, statistics, and data science. The department offers a master's degree program with specializations in analysis, applied mathematics, and data science and statistics. The PhD program focuses on industrial and applied mathematics. Faculty and students are involved in a number of research projects, many of them in conjunction with researchers in other departments and research divisions at NMT such as the Bureau of Geology, the Petroleum Recovery Research Center, and the Climate & Weather Consortium.

Faculty Research Areas

- Applied Mathematics
- Differential Equations
- Dynamical Systems
- Machine Learning
- Mathematical Biology
- Mathematical Modeling
- Mathematical Physics
- Numerical Analysis
- Numerical Methods for PDEs
- Optimization
- Partial Differential Equations
- Statistics
- Stochastic Processes

GRE Optional

Department Facts

The majority of MS and PhD students are supported with Teaching Assistantships. Teaching Assistants receive training and gain experience in classroom teaching at the undergraduate level. Some students are supported as Research Assistants, mostly working on projects in NMT's research divisions.

Two NMT Faculty are on Elsevier's list of the top 2% most cited researchers in 2024 (most recent list)

Funding Opportunities

The Mathmatics Department has several funding opportunities:

- **Research Assistantships**
- **Teaching Assistantships**

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Mechanical Engineering PhD | MS | ME | GC

Department Facts

- Key Research Sponsors: NSF, NASA, NIOSH, DOE, AFOSR, DTRA, Sandia National Laboratories, Los Alamos National Laboratory, Industrial Partners
- Global Media Coverage: Featured in The New York Times, National Geographic, The Washington Post, Reuters, EuroNews, and more
- Departmental Student Clubs & Organizations:
  - ASME (American Society of Mechanical Engineers)
  - AIAA (American Institute of Aeronautics & Astronautics)
  - SAE (Society of Automotive Engineers)
  - SAWE (Society of Allied Weight Engineers)

Faculty Research Areas

- Artificial Intelligence and Machine Learning for engineering applications
- Composite and advanced materials
- Computational fluid dynamics (CFD)
- Engineering design, systems, and communications
- Structural Health Monitoring
- Unmanned aerial vehicles (UAVs) and autonomous systems
- Robotics, controls, and mechatronics
- Shock physics and explosive effects
- Aerodynamics and space systems
- And more interdisciplinary research areas

About MENG Grad Programs

The graduate program in the Mechanical Engineering Department aims to educate future engineers capable of addressing a broad spectrum of advanced engineering challenges in areas such as extreme dynamics, energetics and explosives engineering, robotics, drones and aerospace, and novel or advanced materials. These research areas span from fundamental science and technology to advanced, deployable applications and often involve interdisciplinary approaches.

Funding Opportunities

The Mechanical Engineering Department has several funding opportunities:

- Research Assistantships
- Teaching Assistantships

Distance Education Opportunity

All graduate courses are offered as hybrid offering great flexibility to distance students and working professionals.

GRE NOT REQUIRED

Contact Information: meng.grad@npe.nmt.edu Phone: (575) 835 - 5554

Mineral Engineering PhD | MS

About the Mineral Engineering Graduate Programs

Graduate studies are offered at New Mexico Tech in areas of specialization. We strive to pursue practical research projects that are founded on basic science in collaboration with industry. Students are taught advanced laboratory and field techniques. Additionally, analytical and computer skills are further developed at the graduate level. Faculty work, for the most part, in teams and often work with faculty and researchers at other Universities and National Laboratories. The sharing of knowledge brings diversity and breadth to our focus on applied research. Hence, our students are prepared to be industry leaders. Admission to the Master of Science in Mineral Engineering requires competence in mathematics, chemistry, physics, and engineering science comparable to the Bachelor of Science degree in mineral engineering. Applicants without an engineering degree may be eligible to apply to the graduate program in Mineral Engineering. However, the student will be required to take all deficiencies as required by the advisory committee. The PhD program in Mineral Engineering is relatively new. Areas of concentration are Geotechnical and Geomechanical Engineering, Mineral Exploration, and Health and Safety. Some forms of funding are available.

Funding Opportunities

The Mineral Engineering Department has several funding opportunities:

- Research Assistantships
- Teaching Assistantships
- Graduate Assistantships

GRE NOT REQUIRED

Faculty Research Areas

- **Mineral Economics and Mineral Exploration**
- **Drilling and Blasting, Mining Operations, and Applied**
- **Applied Geomechanics**
- **Mine Ventilation and Occupational Health and Safety**
- **Geomechanics and Ground Control**
- **Geotechnical Engineering, Image Processing and X-ray CT**
- **And more!**

Department Facts

- **Key Research Sponsors: NIOSH, DOE, MSHA, and Mining**
- **Departmental Student Clubs:**
  - **Society for Mining, Metallurgy & Exploration (SME)**
  - **Society of Economic Geologists (SEG)**
  - **Cooney Mining Club (Student Club)**

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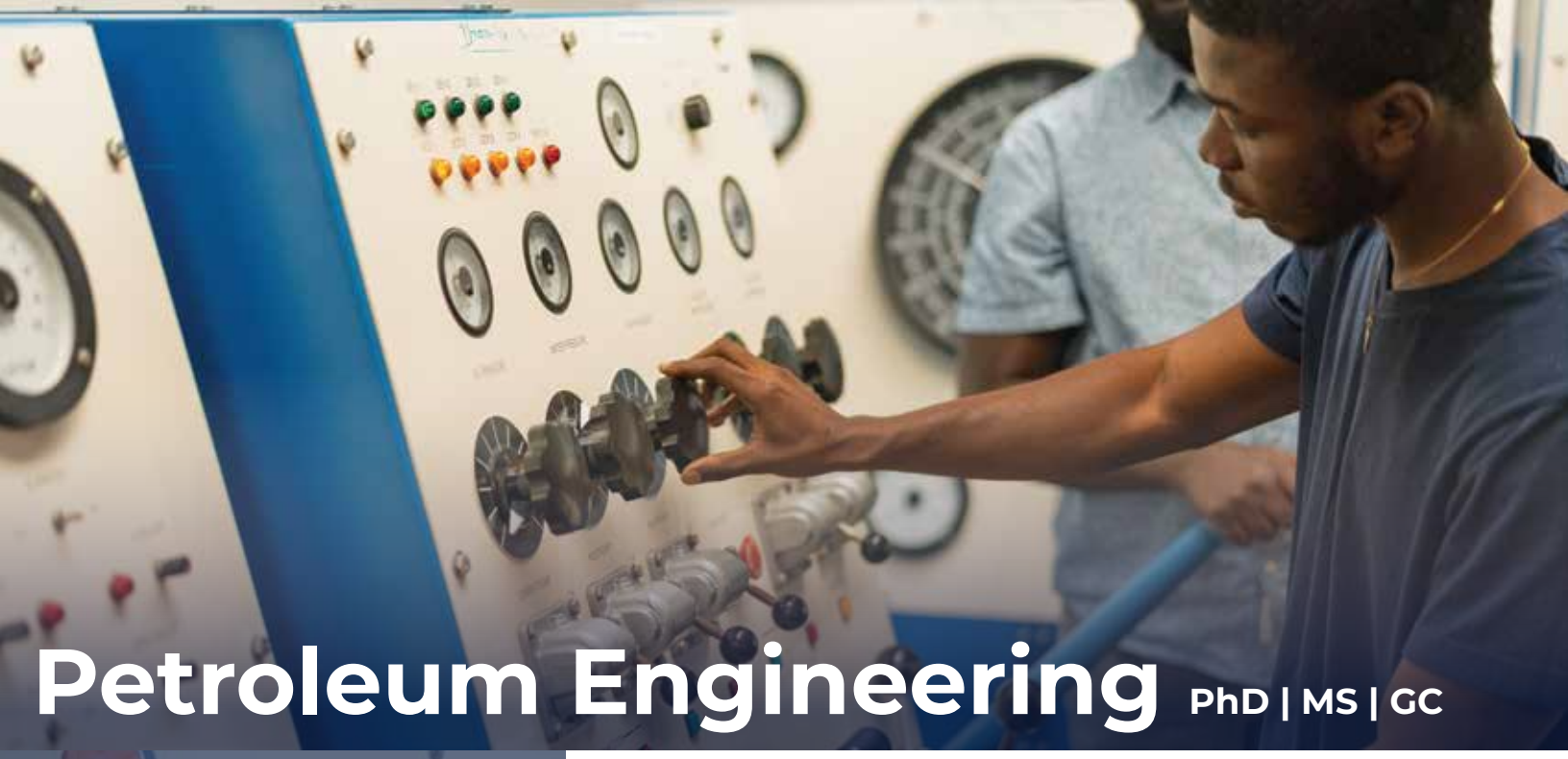

Petroleum Engineering PhD | MS | GC

Department Facts

- **Annual Research Expenditures: >$1M in competitively funded projects**
- **Primary Research Sponsors: U.S. Department of Energy (DOE), National Science Foundation (NSF), Bureau of Land Management (BLM), and various industrial partners**
- **Research Infrastructure: Six dedicated laboratories equipped with cutting-edge instrumentation supporting experimental, imaging, and computational research in subsurface energy systems**
- **Graduate Outcomes: Alumni are employed at Chevron, Diamondback Energy, ConocoPhillips, Halliburton, Occidental, LANL, Sandia National Labs, New Mexico Oil Conservation Division (NMOCD), and in academia**

Funding Opportunities

The Petroleum Department has several funding opportunities:

- **Research Assistantships**
- **Teaching Assistantships**

About the Petroleum Engineering Graduate Programs

The Department of Petroleum and Natural Gas Engineering at New Mexico Tech offers a world-class graduate education at the forefront of energy and subsurface research. Our faculty and students work on cutting-edge challenges that shape the future of energy, from carbon capture and storage (CCUS) and hydrogen subsurface storage to unconventional reservoirs, enhanced oil recovery (EOR), geothermal energy, methane emissions mitigation, and advanced drilling and production systems. With access to state-of-the-art laboratories including digital rock physics, geochemistry, CT imaging, and high-performance computing—our graduate students gain hands-on experience while contributing to federally funded, multi-million-dollar research projects. Through close collaborations with the U.S. Department of Energy, national laboratories, and industry leaders, our graduates are equipped with both the technical expertise and the professional network to become leaders in academia, government, and industry. At New Mexico Tech, you will not only advance your knowledge but also help drive the energy transition toward a more sustainable future.

Research Areas

- Energy Transition / Low-Carbon Subsurface Technologies
- Unconventional Reservoirs & Hydraulic Fracturing
- Geomechanics and Reservoir Integrity
- Fluid and Rock Characterization, Flow and Reactive Transport / Multiphase Flow in Porous Media
- Emissions Monitoring, Methane Reduction, Environmental Impacts
- Enhanced Oil Recovery (EOR) and Chemical Flooding
- Geothermal Energy and Subsurface Heat Extraction
- Natural Hydrogen and Hydrogen Subsurface Storage
- And More!

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Physics

PhD | MS

About the Physics Graduate Programs

Our Physics graduate program offers M.S. and Ph.D. degrees with specializations in Astrophysics, Atmospheric Physics, Instrumentation, and Mathematical Physics. The curriculum combines core courses—Mathematical Methods, Advanced Dynamics, Quantum Mechanics, Electrodynamics, and Statistical Mechanics—with specialized electives, research methods, and communication training. The department supports about 30 graduate students. Half serve as teaching assistants in introductory physics labs and recitations, while others are funded through research assistantships with faculty or fellowships from NASA, NSF, and NRAO.

Graduate students specializing in Astrophysics may take courses such as Stellar, Extragalactic, Planetary Sciences, Relativity and Cosmology, Advanced Radio Astronomy, and Special Topics. Research opportunities include observational or theoretical work using facilities like the NRAO VLA (co-located with NMT), ALMA, NOIRLab telescopes, and space-based observatories (Hubble, Spitzer, Herschel, CHANDRA). On campus, students have access to the Etscorn Observatory and a ten-element optical/infrared interferometer under construction at Magdalena Ridge.

Graduate students specializing in Atmospheric Physics may take courses such as Atmospheric Remote Sensing, Physics of Lightning, Atmospheric Dynamics, Physics of Climate, and Special Topics. Research opportunities include observational and modeling studies of lightning, atmospheric electricity, atmospheric dynamics, tropical cyclones, and atmospheric chemistry. Students and faculty use facilities operated by NASA, NCAR, NOAA and UC Boulder, as well as an in-house Beowulf cluster. The program also deploys instruments at the Langmuir Lightning Research Facility on Magdalena Ridge, which features a balloon hangar, rocket launch site, and lightning-mapping arrays.

Department Facts

- **Total Research Funding: $18.8M**
- **FY25 Research Expenditure: $10.7M**
- **Research Sponsors: NSF, NASA, DOE, and several others**
- **Department Student Clubs and Organizations: Physics Club, Society of Physics Students/Sigma Pi Sigma, and Astronomy Club**

Faculty Research Areas

- **Lightning Physics**
- **Atmospheric Physics**
- **Nuclear Physics**
- **Planetary Astrophysics**
- **Stellar Astrophysics**
- **Galactic Astrophysics**
- **Instrumentation**
- **And more!**

Funding Opportunities

The Physics Department has several funding opportunities:

- **Research Assistantships**
- **Teaching Assistantships**

GRE NOT REQUIRED

Contact Information: physics@nmt.edu (575) 835 - 5328

Public Engagement in Science
Design & Communication MS | GC

Duration: Full-time students complete the MS program in 3 semesters, and part-time students in 5 semesters.

CORE CLASSES & ELECTIVE TRACKS

10 classes (30 cr. hrs.): 12 cr. of core classes, with either 15 cr. of electives plus 3 cr. for independent study, or 12 cr. electives plus 6 cr. for thesis.

Four core classes (12 cr. hrs.):

- Applied Research Methods
- Ethical and Social Issues in Public Engagement
- Communication, Product, & Experience Design
- Media, Communication, and Public Engagement

Sample electives from the C.L.A.S.S. Department:

User Experience Research, Persuasive Communication & Grant Writing, Big Data Culture & Society, Documentation & Client Project Management, Latin America & the Environment, Psychology of Cybersecurity, Video Game Research, and more!

RESEARCH OPTIONS:

M.S. with Independent Study, or M.S. with Thesis.

Our Graduates employ science, design, & communication skills to engage the general public, the press, and semispecislists locally and across the world about the mission, policies, research, initiatives & events of public and private organizations.

Career opportunities

Public engagement in science, design, & communication
specialists work as public-facing communication specialists, project leaders, user experience researchers, technical communicators, nonprofit executive directors, advisors, and consultants in STEM-connected businesses, the government, higher education, research, and nonprofit organizations.

IMPACTFUL, PROFITABLE NEW CAREERS

Our program trains the next generation of:
Advertising Managers Fundraising Managers Grant Writers Outreach Coordinators Public Relations Specialists Technical Writers Technical Communicators UI/UX Designers

> "[The MS in Public Engagement] would be a **highly desirable** qualification for **marketing** & **communication** teams anywhere. Expanding on skills like experience design, media, and public engagement in a Master program would complement and enhance the skills that Bachelor recipients already receive."
>
> — Jennifer Turrietta
> Presbyterian Hospital

LOCATION: Distance and in-person

Estimated Cost Per Semester

- 6 credits part-time: $2749 + fees
- 3 credits part-time: $1,374 + fees

Contact Information: elisabeth.kramer-simpson@nmt.edu

GRE NOT REQUIRED

Science Teaching MS | ALP

Master of Science for Teachers (MST)

The MST program is designed for current and prospective teachers who want to deepen their expertise in science and mathematics. This flexible graduate degree provides advanced STEM coursework tailored for K–12 educators, to help improve classroom practice and student outcomes.

Department Facts

- Fully online asynchronous courses during the year for maximum flexibility
- Optional in-person courses available during summer semester
- Focus on science and math education with research-based teaching strategies
- Opportunities to integrate classroom practice with graduate-level research
- Supportive STEM faculty mentorship
- Scholarships available to support your studies

Focus Areas

- Effective STEM based coursework
- Curriculum development in STEM

GRE NOT REQUIRED

Alternative Licensure Program (ALP) Graduate Certificate

The ALP is a streamlined pathway for individuals with a bachelor's degree who want to enter the teaching profession. This program allows career changers or recent graduates to quickly gain the coursework and supervised teaching experience needed to qualify for teacher licensure in New Mexico at the Elementary (K-6) or Secondary (7-12) levels.

Highlights

- **Full Time employment while completing the program**
- **Evening classes offered online for flexibility**
- **Meets New Mexico Public Education Department requirements for Elementary or Secondary licensure**
- **Scholarships available for eligible students**
- **Earn a starting district salary of $55,000 after program admission and full-time teacher placement**

Focus Areas

- **Effective reading and literacy strategies**
- **Matching teaching methods to diverse student needs**
- **Classroom assessment and measurement**
- **Practical field experience**

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