HOW TO APPLY - Go to the website and start an account
https://gradschool.nmsu.edu/how-to-apply/

Requirements Documents:
Graduate school application fee*
Official transcripts from each previous institution
Statement of purpose
Official GRE Scores
Official TOEFL or IELT score, sent directly from ETS**
Three Letters of Recommendation

*Fee waivers are available for domestic applicants. Contact etyukl@nmsu.edu
**Only international applicants from undergraduate institutions not taught in English.

Financial Aid

All first year graduate students in the Department of Chemistry and Biochemistry receive financial aid in the form of a Teaching Assistantship. In addition, qualified applicants are automatically entered for an Enhancement Award to completely offset the cost of tuition. Continued support through assistantships and/or awards is available for 3 years (M.S.) or 5 years (PhD) contingent on student performance and availability of funds.

Scholarships

Other awards, assistantships and fellowships are available to new and current graduate students. Please visit gradschool.nmsu.edu/awards__fellowships for more information. Outstanding new applicants will be nominated by faculty for fellowships by March 1st so apply early!

Deadlines

Review of applications will begin on January 1st and continue until open positions are filled. Domestic applications received after July 1st or international applications received after March 1st will not be considered for Fall enrollment.

For questions regarding our program, please contact Dr. Erik Yukl etyukl@nmsu.edu

For questions regarding tuition and fees, visit http://uar.nmsu.edu/tuition-rates
LAS CRUCES & MESILLA

Situated in the Chihuahuan desert, Las Cruces is home to many museums and attractions, and is famous for the majestic Organ Mountains, now a national monument. In the fertile Mesilla valley, the Rio Grande meanders past shady pecan orchards and colorful chile fields, highlighting the significance of agriculture to the vibrant local economy. Las Cruces is the second largest city in New Mexico, after Albuquerque, with a population of 100,000, with over 200,000 when combined with Dona Ana County.

LOCAL ATTRACTIONS AND EVENTS
Museum of Art • Museum of Nature and Science • Farm and Ranch Museum Southern New Mexico State Fair and Rodeo • Farmer’s Market • Old Mesilla Salsafest • Wine / Beer Festivals • Cinco de Mayo Fiesta

OUTDOOR ACTIVITIES
Hiking at Dripping Springs • Soledad Canyon • Aguirre Springs • Picacho Peak Baylor Pass • Prehistoric Trackways National Monument • Kilbourne Hole

POPULAR DESTINATIONS
White Sands National Monument • Carlsbad Caverns • Gila National Forest Albuquerque • Santa Fe • Taos • Cloudcroft • Suidoso • Tucson / Phoenix, Az

WELCOME TO CHEMISTRY & BIOCHEMISTRY

The Department of Chemistry and Biochemistry offers M.S. and Ph. D. degrees in Chemistry with emphases in Analytical, Biochemistry, Inorganic, Organic and Physical chemistry. With 16 research active faculty, you are sure to find research that excites you! Graduates from our program have gone on to productive careers in academia, industry and government. So can you!

ABOUT NEW MEXICO STATE UNIVERSITY

Founded in 1888, New Mexico State University is the state’s land-grant university, and takes seriously its mission, “serving the educational needs of New Mexico’s diverse population through comprehensive programs of education, research, extension education, and public service.”

Classified by the Carnegie Foundation as a Research University with high research activity, NMSU also ranks 4th in R&D expenditures among High Hispanic Enrollment Institutions based on the National Science Foundation Higher Education Research and Development survey and ranks 6th in expenditures in life sciences.

Recently, Diverse Issues in Higher Education ranked NMSU 11th in the nation for the number of undergraduate degrees in biological and biomedical sciences awarded to Native American students and 29th in the number awarded to Hispanic students.

EL PASO, TEXAS

Just south of Las Cruces is the city of El Paso, Texas - a large metropolitan area which, when combined with its sister city of Ciudad Juarez, Mexico, boasts a population of over 2.7 million. Consistently ranked as the safest large city in the United States, El Paso is home to several federal and military agencies, including Fort Bliss, and is home to the El Paso Chihuahuas AAA minor league baseball team. With access to an international airport, great shopping, arts and culture, and a vibrant night life, El Paso will be the place to visit on the weekends.

LOCAL ATTRACTIONS AND EVENTS
Downtown El Paso • Music Festivals • The Sun Bowl • Symphony Orchestra Museum of History • Holocaust Museum • International Museum of Art Museum of Archaeology • War Eagles Museum • Plaza Theatre • El Paso Zoo Sunland Racetrack and Casino • Western Playland • Mt. Cristo Rey Guadalupe Mountains National Park • Franklin Mountains • Heuco Tanks
Paola Mera • Biochemistry  
mera@nmsu.edu  meralab.nmsu.edu

Our goal is to identify novel antibiotic targets by defining regulatory genetic networks that control proliferation in bacteria. Our approach combines biochemistry, microbial genetics, and high resolution imaging to produce a system’s level understanding of the bacterial cell cycle.

Gary Rayson • Analytical Chemistry  
gdrayson@nmsu.edu

Our research involves analysis of complex environmental and agricultural samples using multivariate analysis of multidimensional spectroscopic response surfaces. One example uses 3-dimensional fluorescence spectra of fecal samples to determine free-ranging animal ingestion of locoweed.

Sergei Smirnov • Physical Chemistry  
snsm@nmsu.edu  web.nmsu.edu/~snsm/group

My group studies physicochemical aspects of nanomaterials and their applications including hybrid nanoporous materials in drug delivery and sensors, fundamental aspects of CVD growth of 2D materials and their applications in sensors, desalination, photovoltaic devices, and composite materials.

Marat Talipov • Computational Chemistry  
talipovm@nmsu.edu

Our research focuses on harnessing the power of supercomputers for discovery of novel small molecules and machine-learning design of photovoltaic materials and drugs.

Erik Yukl • Biochemistry  
etyukl@nmsu.edu  wordpress.nmsu.edu/etyukl

Our lab studies bacterial proteins that mediate zinc import and nitric oxide / oxidative stress sensing. These processes are essential for virulence among pathogenic bacteria. We use various biophysical and spectroscopic techniques including structure determination by X-ray crystallography.

DEPARTMENT INFO

The Department of Chemistry and Biochemistry offers MS & PhD degrees in Chemistry with emphases in:

Analytical • Biochemistry • Inorganic  
Organic • Physical

- Take advanced courses with small class sizes  
- Join a highly diverse and international community  
- Conduct dynamic, interdisciplinary and collaborative research

Be proud to represent our department by attending and presenting your work at regional, national and international conferences  
Travel grants are available
Jeffrey Arterburn • Synthetic Medicinal Chemistry
jarterbu@nmsu.edu

Our research harnesses the power of synthetic chemistry for cancer drug discovery and the design of novel biological probes. Current projects focus on new therapies for breast cancer and lipid labeling with fluorescent dyes for live cell and super-resolution microscopy.

Amanda Ashley • Biochemistry / Toxicology
ashleyak@nmsu.edu ashleylab.nmsu.edu

DNA repair systems protect cells from damage and regulate cellular response to replication stress. Our research focuses on perturbations in DNA replication and repair in cancer biology to provide novel targets for therapeutic intervention.

Gary Eiceman • Analytical Chemistry
geiceman@nmsu.edu eicemanresearchgroup.nmsu.edu

Reactions of molecules with ions in the gas phase are the basis for measurements with advanced instruments. We explore such reactions to enable technology development for air quality monitoring on spacecraft, detection of explosives in airport security, and human metabolomics for diagnosis of diseases.

Amudhu Gopalan • Organic Chemistry
agopalan@nmsu.edu

Our research focus is in the design, synthesis and evaluation of chelators for multivalent cations for therapeutic and diagnostic applications. We are interested in the iron transport properties of analogs of petrobactin to understand how it manages to evade recognition by our immune system.

James Herndon • Organic Chemistry
jherndon@nmsu.edu

We design multicomponent reactions that rapidly and reliably transform simple starting materials into complex polycyclic ring systems, using the unique reactivity of carbon transition metal systems as the primary tool. These products frequently permit facile access to medicinally-important compounds.

Kris Houston • Biochemistry
khouston@nmsu.edu khouston.nmsu.edu

Tamoxifen treatment is a common therapy for women with estrogen receptor positive breast cancer. Our laboratory discovered a new mechanism of tamoxifen action and we currently investigate the role of this mechanism in the development of chemoresistance.

Barbara Lyons • Biochemistry / Physical Chemistry
blyons@nmsu.edu

Our research focus is to abate heavy metals & pathogens from scarce and contaminated water sources, surface or ground, to produce potable water. This is most important for the Navajo Nation and Third World countries. The sorption materials are clay pellets that can be produced anywhere in the world.

Shelley Lusetti • Biochemistry
slusetti@nmsu.edu wordpress.nmsu.edu/slusetti

The Lusetti lab is interested in the biochemical roles of novel enzymes involved in DNA damage response pathways through the reconstitution of recombinational DNA repair pathways. We employ comparative biochemistry to explain the differential DNA damage tolerance of multiple bacterial organisms.

William Maio • Synthetic Organic Chemistry
wmaio@nmsu.edu williammaio.com

Marine organisms continue to be a source of novel natural products with interesting structural features and unique biological activity. Our laboratory is currently focused on the development of new synthetic methods useful in total synthesis.