

CAREERS FOR

Chemical Engineering

MAJORS

Chemical engineers advance medicines, develop electronics, enhance food production, generate energy, improve materials, and save the environment by applying chemistry, biology, mathematics, and engineering knowledge to solve challenges. They design and manufacture raw materials into everyday products including the clothes we wear, the food and drink we consume, and the energy we use.

[The Department of Chemical & Biological Engineering](#) at UNM offers a B.S. in Chemical Engineering (Concentrations: Chemical Process Engineering, Bioengineering, Environmental Engineering, Materials Processing, and Semiconductor Manufacturing), an M.S. in Chemical Engineering, and a Ph.D. in Engineering with a concentration in Chemical Engineering.

Eligible undergraduate students may apply to the [Shared-Credit Undergraduate/Graduate Degree Program](#) designed to allow students to complete a B.S. and M.S. in an abbreviated time period (usually five years, depending upon the student's mathematics preparation upon entering **UNM** as a first-year student). Typically, students choose an M.S. degree in Chemical Engineering or Biomedical Engineering, but students may also choose an M.S. in another engineering field. For students interested in the business side of chemical engineering, they may apply to the [3+2 BS/MBA Program](#).

Industries & Target Employers

Private Industry

Nanotechnology, alternative energies, biotechnology, agricultural, polymerization, industrial, petroleum, pharmaceutical and medicine, cosmetic, food processing, environmental, consulting, development, project management, electronics, fuels and energy, materials, manufacturing plants, sales, fire-prevention and protection, mining safety, nanomaterials, biological engineering, health and safety

Government

Federal, national and local government agencies, research, national laboratories

Education

University/college faculty or administrator (PhD required), researcher

Top Companies

[Sandia National Labs](#)

[CITGO Petroleum Corporation](#)

[Illumina, Inc.](#)

[Los Alamos National Lab](#)

[Apple Inc.](#)

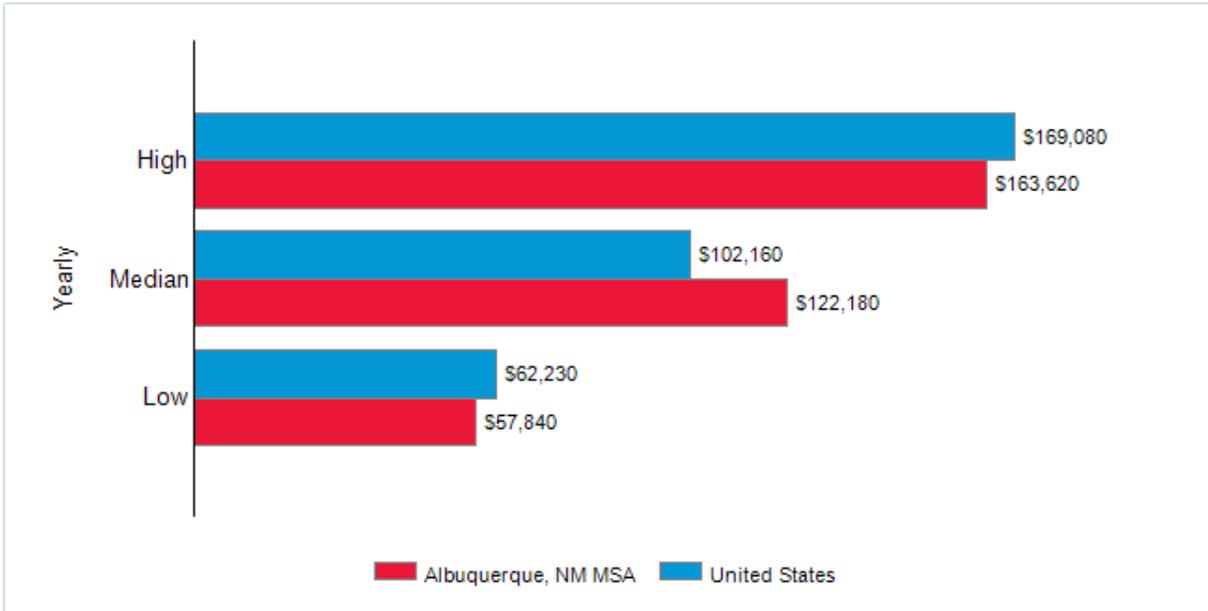
[Community Power Corporation](#)

[Trinity Consultants, Inc.](#)

[Aecom](#)

[Sandia National Labs](#) and [Los Alamos National Lab](#) are leading employers in New Mexico for UNM graduates.

Salary Information [Chemical Engineers](#)



Tips

- Technical skills and regulatory compliance knowledge of health, safety, and environmental regulations are essential.
- Teamwork skills for collaborating to solve problems with production and manufacturing teams of engineers, technicians, and mechanics are important.
- Awareness of commercial processes including logistics, sales, and marketing of products may set you apart from other candidates.
- [Intel](#), a global corporation, has a manufacturing location in Rio Rancho, NM. Intel hires UNM students and graduates.

Learn More

[American Institute of Chemical Engineers](#)

[AIChE Internship Career Center](#)

[American Chemical Society](#)

[The Association of Energy Engineers](#)

[Biomedical Engineering Society](#)

[North American Catalysis Society](#)

[Handshake](#)

[O*NET: Chemical Engineers](#)

[Occupational Outlook Handbook: Chemical Engineers](#)

[Buzzfile: Employers of Chemical Engineering majors](#)

[Student Activities Center - American Institute of Chemical Engineers \(AIChE\) Student](#)

[Chapter, Hispanic Engineering and Science Organization \(HESO\), American Indian](#)

[Science and Engineering Society \(AISES\), National Society of Black Engineers \(NSBE\),](#)

[Society of Women Engineers \(SWE\)](#)

CAREERS FOR

Civil, Construction & Environmental Engineering MAJORS

Civil, construction & environmental engineering encompasses a broad range of disciplines, with the common focus on sustainable infrastructure to meet society's needs without compromising the natural environment or future generations. The major disciplines in these career fields include:

Construction (including Construction Engineering and Construction Management)
Environmental Engineering
Geotechnical Engineering
Hydraulics and Water Resources Engineering
Transportation Engineering
Structural Engineering

UNM offers civil engineering, construction engineering, and construction management [undergraduate degrees](#). In addition, UNM offers a Master of Science in Civil Engineering (MS-CE), a Master of Engineering in Civil Engineering (MENG-CE), an online Master of Construction Management (MCM-CMGT) and a PhD in Engineering with a concentration in Civil Engineering (PhD-ENG). Many Civil Engineers obtain graduate degrees to advance their knowledge and careers, and Civil Engineers usually must be licensed if they provide services directly to the public.

Industries & Employers

Private Industry Includes engineering consultants, in-house engineers, and construction contractors. Private companies may work in construction, environmental protection, geotech, structures, transportation, water resources, water and wastewater treatment, waste management, air pollution controls, nanotechnology, solar system design, sustainable infrastructure-green building, intelligent transportation systems, industrial ecology, aquifer management, smart structures.

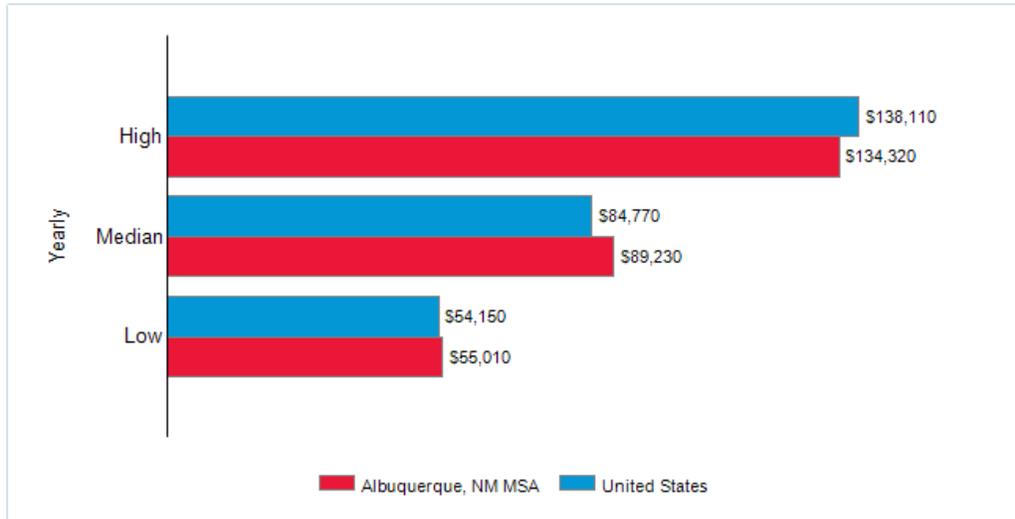
Government Federal, state and local government regulatory agencies and laboratories; public utilities.

Education University/college faculty, administrator, and/or researcher (PhD required)

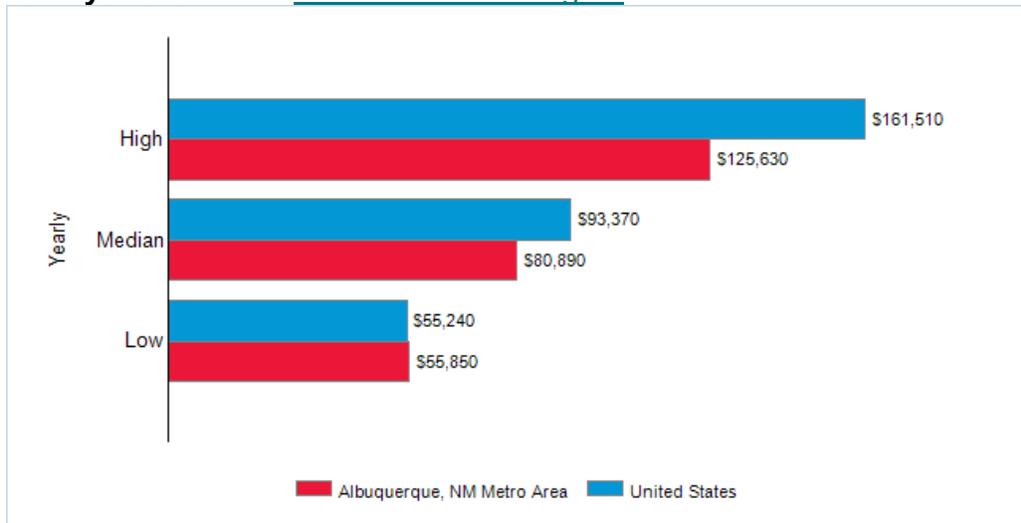
Example Companies

[Sandia National Labs](#) / [Bohannon Huston](#) / [NM Department of Transportation](#)
[Wilson & Company](#) / [Aecom](#) / [Bechtel Corporation](#) / [Jacobs Engineering](#) / [Jaynes Corporation](#) / [Bradbury Stamm Construction](#) / [HDR, Inc.](#)

Salary Information [Civil Engineers](#)



Salary Information [Construction Managers](#)



Tips

Applicants who gain experience by participating in an internship while in college will have the best opportunities. Those wishing to enter the construction industry are especially encouraged to seek our internships while in school. In addition, standards known collectively as the [Civil Engineering Body of Knowledge](#) are increasing in importance within civil engineering; therefore, those who enter the occupation with a graduate degree will likely have better prospects.

The [Facebook Data Center](#) in Los Lunas, NM is a long sustained construction project creating local construction jobs. Facebook has also created a [Career Connections](#) initiative training students for professional success. There are also many local

construction and building firms in New Mexico who employ our students as interns and later after they graduate in a wide variety of managerial and other decision-making roles.

Important skills for civil, construction & environmental engineering

1. Technical Skills (math, physics)
2. Project Management (time and money)
3. Leadership
4. Communication (perhaps more than other engineering careers)
5. Creativity (develop solutions)
6. Visualization
7. Critical Thinking

Learn More

[American Society of Civil Engineers](#)

[Associated General Contractors of America](#)

[Construction Management Association of America](#)

[Bridge Engineering Association](#)

[Engineers without Borders \(EWB\)](#)

[American Public Transportation Association](#)

[OSHA](#)

[Handshake](#)

[O*NET: Civil Engineers](#)

[Occupational Outlook Handbook: Civil Engineers](#)

[Buzzfile: Employers of Civil Engineering majors](#)

[Student Activities Center](#) Hispanic Engineering and Science Organization (HESO), American Indian Science and Engineering Society (AISES), National Society of Black Engineers (NSBE), Society of Women Engineers (SWE)

CAREERS FOR

Computer Engineering

MAJORS

Computer engineers work with both hardware and software, for example, making sure you mobile phone's hardware design and software work together well. They are expected to know or acquire programming skills in addition to math and science. Computer engineering is similar to an electrical engineering program with a heavy emphasis on computer science. UNM has one department for both [Electrical and Computer Engineering](#) (ECE). In addition to the constant technological advances in software and hardware (there is a fine line in between), the increase in the use of sensors, computer chips in medical devices, household appliances, and automobiles will continue to demand computer hardware engineers.

Sample job titles for Computer Engineers are: Computer Hardware/Software Engineer, Data Science, Analytics, Computer and Information Research Scientists, Electrical and Electronics Engineers, Aerospace Engineers, Computer Network Architect, Game Development and Graphics, IoT industry.

All engineers must continue training in order to keep up to date with technological advances. Some employers and management roles may require a graduate degree. Some engineers continue their education in business adding an MBA (Master's in Business Administration) to their undergraduate degree.

UNM also offers a Master of Science (M.S.) in Computer Engineering, with concentration options in Entrepreneurship and Technology Management or Project Management. A M.S. in Optical Science and Engineering, and an online M.S. program in Computer Engineering with a concentration in Internet of Things. Also, a PhD program in Engineering with a concentration in Computer Engineering and a PhD in Optical Science and Engineering.

Industries & Target Employers

Private Industry

Semiconductors, computer hardware, signal processing, controls, automation & robotics, aerospace & space defense systems, automotive ADAS (Advanced Driver Assistance Systems), communications equipment manufacturing, oil and gas extraction

Government

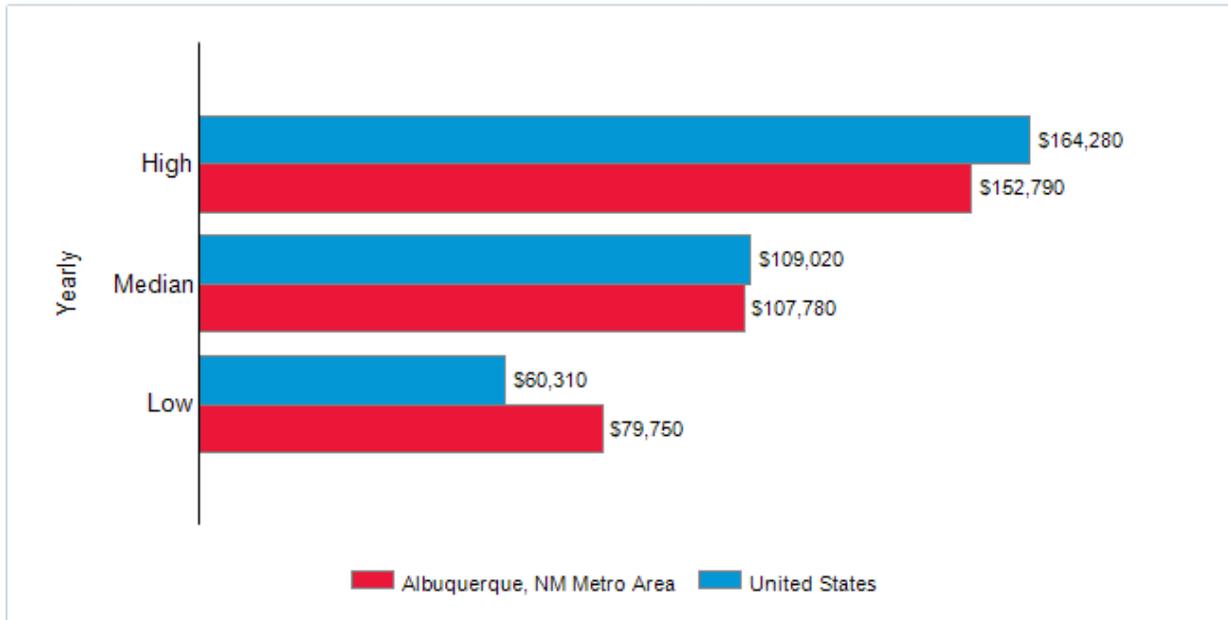
Federal, national and local government agencies, research, national laboratories

Education

University/college faculty or administrator (PhD required), researcher

Top Companies [HP Inc.](#), [Oracle](#), [IBM](#), [Cisco](#), [Dell](#), [Leidos](#), [Honeywell Aerospace](#), [Advanced Optical Technologies](#), [Intel Corporation](#), [The Boeing Corporation](#), [Lockheed Martin](#), [Amazon](#), [Google](#), [Facebook](#), [Apple Inc.](#)

Salary Information [Computer Network Architects](#)



Tips

- Technological innovation takes place in software and is limited in hardware, therefore, programming skills in the most up to date programming tools and proficiency in one or more programming languages will make you competitive.
- Three top national research laboratories located in New Mexico provide engineering mentorship, internships, and jobs after graduation to UNM students: [Sandia National Laboratories](#), [Air Force Research Laboratory](#), and [Los Alamos National Laboratory](#).

Learn More

[Association for Computing Machinery](#)

[Computing Research Association](#)

[Computing Technology Industry Association](#)

[Institute of Electrical and Electronics Engineers](#)

[International Association of Computer Science and Information Technology](#)

[ISACA](#)

[Handshake](#)

[O*NET: Computer Hardware Engineers](#)

[Occupational Outlook Handbook: Computer Hardware Engineers](#)

[Buzzfile: Employers of Computer Engineering majors](#)

[Student Activities Center](#) Association for Computing Machinery UNM Student Chapter, UNM IEEE-Student Branch, ECE Graduate Students Association, Eta Kappa Nu (HKN), Engineers Without Borders UNM, Hispanic Engineering & Science Organization (HESO), UNM National Society of Black Engineers, Society of Enabled Engineers, Out in STEM (LGBTQA+), American Indian Science and Engineering Society (AISES), Society of Women Engineers (SWE)

CAREERS FOR

Computer Science

MAJORS

[UNM's Computer Science program](#) prepares you for a career in the digital economy. A high demand for computer software, including: new applications for smart phones and tablets, increased use of healthcare digital platforms, an increase in the use of computer systems in consumer products, such as appliances, and concerns over computer security have resulted in the projected growth of careers in computer science to increase faster than average making it a degree rich in job opportunity.

Computer Science majors may have a variety of job titles: Software Developer, Database Administrator, Computer Systems Analyst, Computer Network Architect, Web Developer, Information Security Analyst, Computer Information Research Scientist, and Data Scientist among others.

Some employers may prefer that software developers have a graduate degree. Also, to advance to a management position, a graduate degree may be required. UNM offers a BS/MS shared credit program, a Master of Science in Computer Science, and a PhD in Computer Science.

Research Topics in Computer Science

[Theoretical Foundations](#)

[Advanced Distributed System Platforms](#)

[Complexity of Social Computing](#)

[Biological Systems and Processes](#)

Industries & Target Employers

Private Industry, Government - Federal, national and local government agencies, research, national laboratories, Education - University/college faculty or administrator (PhD required), researcher

Top Companies

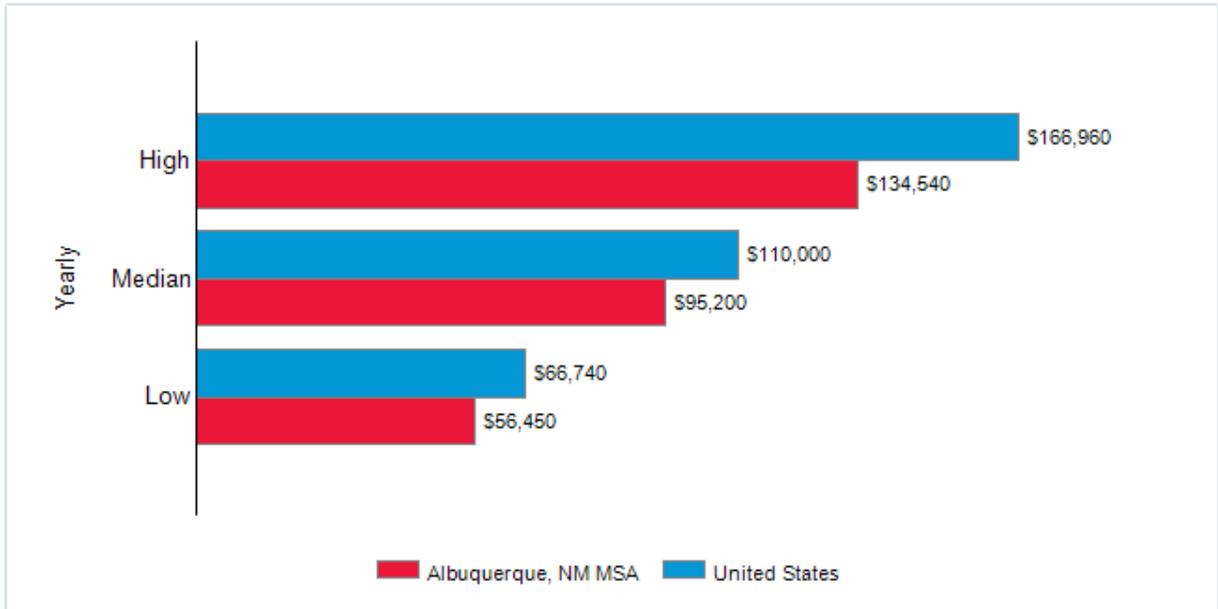
[Microsoft Corporation](#) / [Amazon](#) / [Google](#) / [Facebook](#)

[The Boeing Corporation](#) / [Intel Corporation](#) / [Lockheed Martin](#)

[Sandia National Labs](#) / [Los Alamos National Lab](#) / [Indica Labs](#)

As one of the largest consumers of data on Google Cloud, [Descartes Labs](#), a well funded start-up that spun out of Los Alamos National Labs, employs Software Engineers, Cloud Architects, Data Scientists, Data Engineers and UI designers in their Santa Fe, NM Headquarters.

Salary Information [Software Developers, Systems Software](#)



Tips

Skills in the most up to date programming tools and proficiency in one or more programming languages will make you competitive in software development.

Knowledge related to the industry you are working for, such as finance if working for a bank, will help you understand the computing needs of the industry.

Learn More

[International Association of Computer Science and Information Technology](#)

[Association for Computing Machinery](#)

[IEEE Computer Society](#)

[Computing Research Association](#)

[Handshake](#)

[O*NET: Software Developers](#)

[Occupational Outlook Handbook: Software Developers](#)

[Buzzfile: Employers of Computer Science majors](#)

[Student Activities Center Association for Computing Machinery UNM Student Chapter, Computer Science Graduate Student Association \(CS GSA\)](#)

CAREERS FOR

Electrical Engineering

MAJORS

Electrical engineers design and develop electrical systems using physics and mathematics. [UNM's Electrical Engineering program](#) will prepare you to help design the future of technology. Four popular career concentrations and subsections are:

1. Power- power plants, solar/wind energy, battery power, smart grids
2. Electronics- computers, phones, robotics, medical devices, IoT devices
3. Radio Frequency/Telecommunications- satellite communications, radar systems, quantum computers
4. Controls systems- temperature control and thermal regulation, automatic driving, aircraft flight control, guidance and navigation (cars, ships, aircrafts, spacecraft)

In addition, UNM offers a Master of Science (M.S.) in Electrical Engineering, with concentration options in Entrepreneurship and Technology management or Project Management. A M.S. in Optical Science and Engineering, and an online M.S. program in Electrical Engineering with a concentration in Space Systems Engineering. Also, a PhD program in Engineering with a concentration in Electrical Engineering and a PhD in Optical Science and Engineering.

Industries & Target Employers

Private Industry

Computer hardware & signal processing, controls, automation & robotics, aerospace & space defense systems, automotive ADAS (Advanced Driver Assistance Systems), electric power, electromedical manufacturing, electrical equipment, communications equipment manufacturing, oil and gas extraction

Government

Federal, national and local government agencies, research, national laboratories

Education

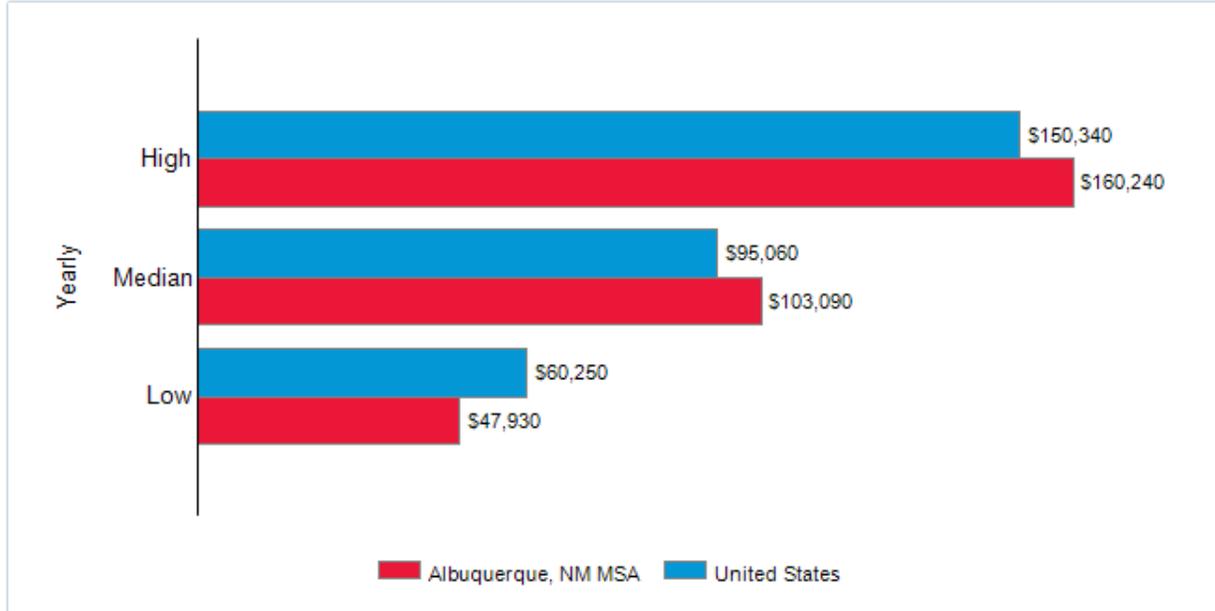
University/college faculty or administrator (PhD required), researcher

Top Companies

[AT&T Telecommunications Company](#), [Honeywell Aerospace](#), [Advanced Optical Technologies](#), [Intel Corporation](#), [The Boeing Corporation](#), [Lockheed Martin](#), [Amazon](#), [Google](#), [Facebook](#), [Apple Inc.](#)

Three top national research laboratories located in New Mexico provide engineering mentorship, internships, and jobs after graduation to UNM students: [Sandia National Laboratories](#), [Air Force Research Laboratory](#), and [Los Alamos National Laboratory](#).

Salary Information [Electrical Engineers](#)



Tips

- Programming skills, basic circuit knowledge, and communication skills are essential.
- Expressing technical information to non-technical audiences will be a key communication skill.
- Hand dexterity with small tools such as tweezers and pliers will be useful depending on your work responsibilities.

Learn More

[Institute of Electrical and Electronics Engineers](#)

[The Association of Energy Engineers, Inc.](#)

[Electric Power Research Institute](#)

[International Council on Systems Engineering](#)

[Handshake](#)

[O*NET: Electrical Engineers](#)

[Occupational Outlook Handbook: Electrical Engineers](#)

[Buzzfile: Employers of Electrical Engineers](#)

[Student Activities Center](#) UNM IEEE-Student Branch, ECE Graduate Students Association, Eta Kappa Nu (HKN), Engineers Without Borders UNM, Hispanic Engineering & Science Organization (HESO), UNM National Society of Black Engineers, Society of Enabled Engineers, Out in STEM (LGBTQA+), American Indian Science and Engineering Society (AISES), Society of Women Engineers (SWE)

CAREERS FOR

Mechanical Engineering

MAJORS

Do you find yourself loving to take things apart and put them back together? Then considering Mechanical Engineering (ME) might be for you. Mechanical engineers research, design, develop, build, and test mechanical devices and systems for automotive, aerospace, biomedical, energy, and various industrial applications. [UNM's Mechanical Engineering program](#) offers hands on projects including the Solar Splash, Lobo Launch, and Formula SAE competitions.

In addition, UNM offers a Master of Science in Mechanical Engineering (MSME), a new online master's program in space systems engineering, a Master of Engineering in Manufacturing Engineering (MEME) and a Doctor of Philosophy (PhD) in Engineering with a concentration in Mechanical Engineering.

Industries & Target Employers

Private Industry

Manufacturing, robotics, automation, alternative energies, nanotechnology, modeling, consulting, research, energy, semiconductors, aerospace, bioengineering, transportation, automotive, mechatronics, structural analysis, thermodynamics, drafting, design, 3D printing, agile manufacturing, project management

Government

Federal, national and local government agencies, research, national laboratories

Education

University/college administrator, faculty and/or researcher (PhD required)

Top Companies

[Sandia National Labs](#)

[Los Alamos National Lab](#)

[Air Force Research Laboratory \(AFRL\)](#)

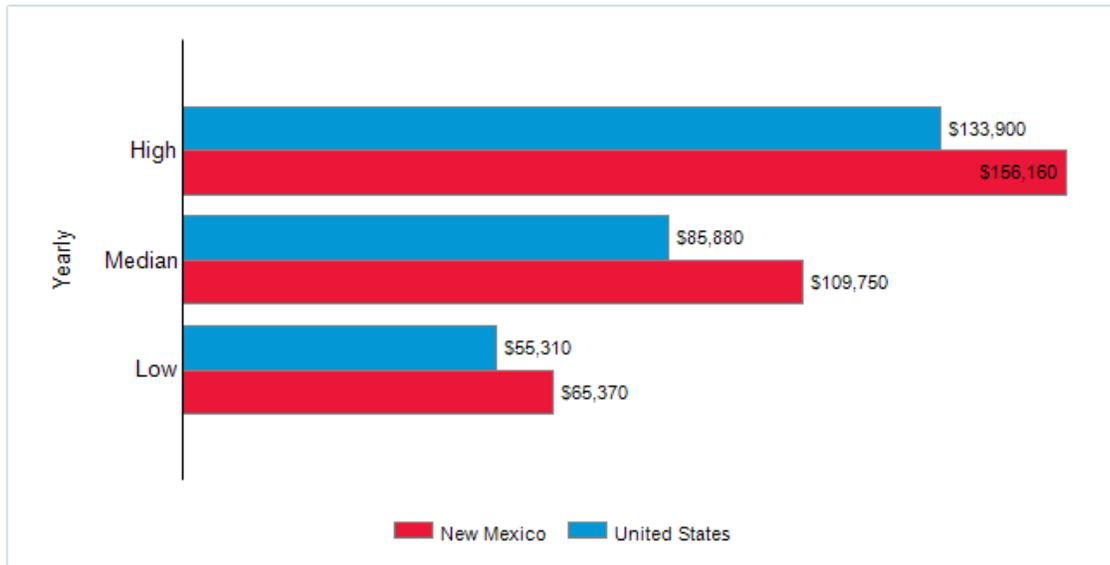
[Intel Corporation](#)

[The Boeing Corporation](#)

[Lockheed Martin](#)

3D printing, also known as additive manufacturing, is a growing field in New Mexico. [Jabil](#), a 3D printing manufacturer, opened a facility in Albuquerque, NM in the summer of 2019 with plans of adding over 100 jobs in the next five years. To see a list of New Mexico companies that hire mechanical engineers, visit [Buzzfile-ME](#).

Salary Information [Mechanical Engineers](#)



Tips

- Training in the latest software tools, particularly for computational design and simulation, and 3D printing will help you have better job prospects.
- Learning to create virtual simulations before proceeding to the design, build, and test stages reduces product development cycles.
- You are highly encouraged to obtain internship experience during school, for a list of internships create a profile on [Handshake](#), the Lobo job and internship platform. The New Mexico Labor Department also has a list of [Internships / Student Work](#).

Learn More

[The American Society of Mechanical Engineers](#)

[American Society of Heating, Refrigerating and Air-Conditioning Engineers](#)

[Society of Automotive Engineers](#)

[American Institute of Aeronautics and Astronautics](#)

[O*NET: Mechanical Engineers](#)

[Occupational Outlook Handbook: Mechanical Engineers](#)

[Buzzfile: Employers of Mechanical Engineering majors](#)

[Student Activities Center](#) Hispanic Engineering and Science Organization (HESO), American Indian Science and Engineering Society (AISES), National Society of Black Engineers (NSBE), Society of Women Engineers (SWE)

CAREERS FOR

Nuclear Engineering

MAJORS

Nuclear engineers research and develop ways for society to benefit from nuclear energy and radiation, for example by generating clean energy, developing medical diagnosis equipment, and through treatment of cancers. [UNM's Nuclear Engineering program](#) offers diverse educational and research opportunities that prepare students for careers in these fields.

In addition, UNM offers a Master of Science (MS) in Nuclear Engineering with concentrations in Medical Physics and in Radiation Protection Engineering, as well as a PhD in Engineering with a Nuclear Engineering concentration. Students in the graduate program have the opportunity to work with renowned faculty in a variety of [research areas](#).

Industries & Target Employers

Private Industry

Nuclear power generation and power plant operations, nuclear science and engineering research & development, nuclear criticality safety, regulatory compliance and nuclear safety auditing, nuclear medicine, medical diagnostic equipment, food production and quality control, nuclear security, radioactive waste disposition, naval reactors, plasma science and fusion technology, space nuclear power.

Government

Federal, national, and local government agencies; research and national laboratories

Education

University/college faculty or administrator (PhD required), research scientist

Top Companies

[Sandia National Labs](#)

[Los Alamos National Lab](#)

[United States Navy](#)

[Bechtel Corporation](#)

[Orano USA](#)

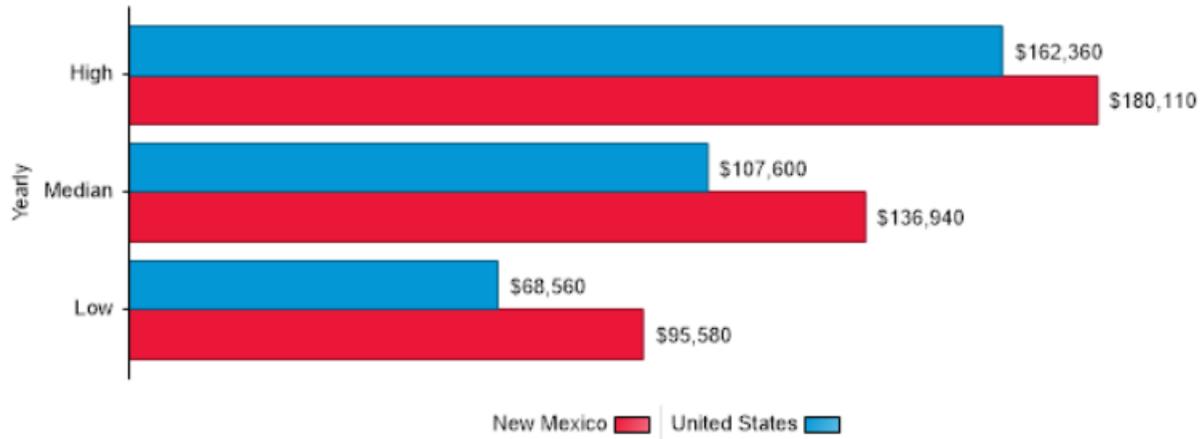
[Pacific Northwest National Lab](#)

[Lawrence Livermore National Lab](#)

[US Nuclear Regulatory Commission](#)

[General Electric Company](#)

Salary Information for Nuclear Engineers



Tips

Those with training in rapidly developing fields, like nuclear security, nuclear medicine, diagnostic imaging, and cancer treatment, will have very competitive job prospects.

Carlsbad, NM is the location to the nation's only deep geologic repository for nuclear waste. The Waste Isolation Pilot Plant's ([WIPP site](#)) employs a team of contractors from multiple organizations, including [NWP](#), [LANL](#), and [SNL](#).

Learn More

[American Nuclear Society](#)

[Institute of Nuclear Materials Management](#)

[World Nuclear Association](#)

[Nuclear & Plasma Sciences Society](#)

[Handshake](#)

[O*NET: Nuclear Engineers](#)

[Occupational Outlook Handbook: Nuclear Engineers](#)

[Buzzfile: Employers of Nuclear Engineering majors](#)

[UNM Student Organizations:](#) American Nuclear Society Student Chapter-Trinity Section, Institute of Nuclear Materials Management Student Chapter, National Society of Black Engineers ([NSBE](#)), Engineers Without Borders ([EWB](#)), Hispanic Engineering and Science Organization ([HESO](#)), American Indian Science and Engineering Society ([AISES](#)), Society for Women Engineers ([SWE](#))