

MAJOR TO CAREER GUIDE

Mechanical Engineering

Howard R. Hughes College of Engineering

Mission of the College of Engineering

The mission of the Howard R. Hughes College of Engineering is to educate the future leaders, innovators, and entrepreneurs while discovering, integrating, and applying new engineering and computer science knowledge in service to society.

The overarching goals of the College of Engineering are to:

- Enable students to achieve excellence in engineering, informatics, computer science, and construction management.
- Promote the discovery, integration, dissemination and employment of new engineering, informatics, computer science, and construction management knowledge in service to society;
- Enable economic growth while increasing the quality of life and maintaining the ecosystem. Our core strategy for undergraduate learning in engineering, computer science, informatics and construction management embraces four distinct objectives:
 - Graduates will be technically competent in core areas within their discipline and related mathematics and sciences.
 - Graduates will be able to work within a team and communicate effectively through oral, graphical, and written modalities.
 - Graduates will be able to synthesize diverse information to develop creative design solutions.
 - Graduates will be able to function effectively in an evolving profession.

Visit this site for more information:

<http://www.unlv.edu/engineering/mission>

About Mechanical Engineering

Mechanical engineering is a diverse and flexible engineering discipline. Mechanical engineers work in number of fields including design of machinery, controls, vibrations and acoustics, power generation, renewable energy, energy conservation, fluid flow and heat transfer applications, and air-conditioning. The program synthesizes math, science, engineering science, and engineering design. The program provides electives in several general areas, including thermal-sciences, mechanical design and manufacturing, robotics and automation, mechanical and environmental systems, nuclear engineering, aerospace engineering, and bioengineering.

Students begin the practice of design in their freshman year and integrate it throughout their programs which culminate in a team-oriented capstone design project in the senior year. The program is geared to prepare students for the lifelong practice of mechanical engineering and for immediate entry to positions in industry or further studies in graduate schools. The department also offers the Integrated B.S.-M.S. program for qualified undergraduate students.

The degree program is accredited by the Engineering Accreditation Commission of ABET (Accreditation Board for Engineering and Technology, Inc.)

Mechanical Engineering Career Options

- Mechanical engineer
- Nuclear engineering
- Aerospace engineering
- Bioengineering
- Patent Attorney (with a law degree)

Graduate Programs

Students interested in furthering their education at the post-graduate level have several opportunities to pursue a Master of Science and Doctor of Philosophy. At UNLV the Department of Mechanical Engineering offers the following post-baccalaureate degree options:

- Master of Science – Mechanical Engineering
- Master of Science – Aerospace Engineering
- Master of Science – Biomedical Engineering
- Master of Science – Materials and Nuclear Engineering
- Doctor of Philosophy – Mechanical Engineering

<http://www.unlv.edu/me/>

***Department also offers a direct Ph.D. program as well as an integrated B.S.-M.S. program.**

Student & Professional Associations

Students are encourage to get involved with these organizations early on by joining the student chapters at UNLV.

American Society of Mechanical Engineers (ASME)

www.asme.org

Society of Automotive Engineers (SAE):

www.sae.org/

National Society of Professional Engineers (NSPE):

www.nspe.org/

Tau Beta Pi (Engineering Honor Society) www.tbp.org

Further engineering-related student organizations can be found at:

<http://www.unlv.edu/engineering/orgs>

UNLV Academic Advising for Mechanical Engineering Majors:

Academic Advisors are available to meet with students about their academic and to assist in constructing a plan for graduation. Advisors can also help students understand how their experiences at UNLV can lead to a career in their desired field.

College of Engineering Advising Center

Phone: 702-895-2522_

Campus Location: TBE A-207

<http://engineering.unlv.edu/advising>

<http://engineering.unlv.edu>

Helpful Career Information

Employers rate candidate soft skills/qualities in order of importance

- 1 Ability to verbally communicate with persons inside and outside the organization
- 2 Ability to work in a team structure
- 3 Ability to make decisions and solve problems
- 4 Ability to plan, organize and prioritize work
- 5 Ability to obtain and process information
- 6 Ability to analyze quantitative data
- 7 Technical knowledge related to the job
- 8 Proficiency with computer software programs
- 9 Ability to create and/or edit written reports
- 10 Ability to sell or influence others

Source: Job Outlook 2013

Courtesy of the National Association of Colleges and Employers

Visit the Career Occupational Handbook to learn more about a specific occupation:

<http://www.bls.gov/ooh/>

The OCH covers hundreds of occupations and describes: What They Do, Work Environment, How to Become One, Pay, and more. Each profile also includes BLS employment projections for the 2010–20 decade.

Career Exploration/Planning

FOCUS 2: UNLV's computerized assessment that profiles your interests, abilities, and values and helps you find a career that's right for you.

<http://hire.unlv.edu/careerAssessment.html>

Myers-Briggs Type Indicator (MBTI): Assessment designed to identify how you are energized, how you take in information, how you make decisions, and how you approach life.

<http://hire.unlv.edu/careerAssessmentMBTI.html>

Strong Interest Inventory: Generates an in-depth assessment of your interests among a broad range of occupations, work and leisure activities, and educational subjects.

<http://hire.unlv.edu/careerAssessmentStrong.html>

UNLV Career Services

Career Services encourages ALL UNLV students to take advantage of their services, which include:

- Assistance with developing a career plan and choosing a major
- Career counseling and guidance on building a RESUME
- Preparing for an interview, assistance with job searching and networking.

Phone: 702-895-3495

Campus Location: SSC-A 2nd Floor

<http://hire.unlv.edu/>

Internship Opportunities

The College of Engineering maintains a webpage listing employment and internship opportunities for College of Engineering students. Please visit:

<http://www.unlv.edu/engineering/opportunities>

UNLV's **Hire a Rebel** is a free, online recruiting system that helps students, alumni, and employers connect in a variety of ways. Students can use **Hire a Rebel** to search for: job and internship listings, on-campus recruiting interviews, employer information sessions, resume book database, & dates for career fairs.

<http://hire.unlv.edu/careerLink.html>

MEDIAN SALARIES BY DISCIPLINE 2010-2012

Career	Salary Range	Median Salary
Mechanical Engineer*	\$51,000-\$120,000	\$78,000
Patent Attorney**	\$54,000-\$185,000	\$113,500

*The median expected salary for a beginning mechanical engineer in the U.S is in excess of \$58,000.

**To become a patent attorney students must obtain a law degree after obtaining a technical degree in a field such as engineering or computer science. For more information on the Boyd School of Law at UNLV, please visit: <http://law.unlv.edu/>

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2012-13 Edition*, <http://www.bls.gov/ooh/>

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