

UNR Mechanical Engineering Department Description

Fall 2017

The Mechanical Engineering Department is currently searching for five new faculty members. Once the Department fills these positions, it will have 22.5 tenure/tenure track and lecturer faculty, twice as many as in 2007. This is consistent with the Department's growing undergraduate and graduate enrollments, and its goal of increasing its innovative research programs.

The faculty has established research programs in mechanical behavior of materials, nuclear packaging safety, biomedical and biological visco-elastic mechanics, and turbomachinery. Federal agencies (NSF, DOE, NRC, and NASA), and Ebara International Corporation are currently funding research in the Department. Through recent hires, the Department is establishing research expertise in atomic force microscopy, soft-actuators and robotics, tunable adhesion, computation of material properties, fluid/solid interactions, and advanced manufacturing (laser processing of materials and tribology). The current faculty search will bring innovative expertise in aerospace engineering, system dynamics/control and robotics, and computational fluid dynamics. The University is committed to adding 250 faculty over the next 5 years to help raise its research stature to Carnegie Classification Research/Very High, R1. This provides the Department opportunities to compete for additional faculty positions as its research funding and enrollments grow.

The Department recently began offering a unique graduate certificate in Nuclear Packaging, which supplements its MS and Ph.D. degrees. It is also part of UNR's interdisciplinary undergraduate minors in Unmanned Autonomous Systems, Batteries and Energy Storage Technologies, Nanotechnology, and Manufacturing Quality.

The University recently completed a \$14M-renovation of the Palmer Engineering Building, which houses the Mechanical Engineering Department. This has significantly enhanced the size, quality, accessibility, and productivity of the Department's research and instructional laboratories, faculty and student offices, and manufacturing facilities. In addition, the Nevada State Legislature recently approved a new \$82M engineering building, which will open in fall 2020.

Aerospace Engineering The Department recently received support from the University Administration to initiate an undergraduate program and externally funded graduate research program in Aerospace Engineering. Searches are currently underway for a Program Director and an assistant professor. This support is justified based on: (a) Dense areas of high paying aerospace engineering employment in nearby regions of Nevada and California, (b) The small number of aerospace engineering undergraduate programs in that region, (c) The proximity of growing aerospace companies in the region, including Sierra Nevada Corporation, (d) The State of Nevada Governor's Office of Economic Development's designation of defense and aerospace as key Nevada industries, (e) The Department's high undergraduate enrollment with interest in aerospace, and (f) the fact that two Air Force bases and one Naval Air Station are located in Nevada.