

## Job Description

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<b>Job Title:</b>	Solid Mechanics Lab Technician
<b>Department:</b>	Mechanical and Mechatronics Engineering
<b>Reports To:</b>	Laboratory Director
<b>Jobs Reporting:</b>	None
<b>Salary Grade:</b>	USG 8 or 9
<b>Effective Date:</b>	May 2019

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### **Primary Purpose**

The Solid Mechanics Lab Technician is responsible for the operation of the Solid Mechanics and Design Group's laboratories. Technical support must be provided for the research and teaching activities of both faculty and students. This position reports to the Laboratory Director of Mechanical and Mechatronics Engineering. The Solid Mechanics Lab Technician is responsible for ensuring the effective, efficient and safe operation of these laboratories. This includes supervising undergraduate students, graduate students, and contract technicians when they work in the labs. Technical support is required by most users and ranges from designing equipment and test rigs for faculty to consulting for graduate students.

### **Key Accountabilities**

#### **Provide Technical Support for Research Activities**

- Design, fabricate, and assemble custom jigs and fixtures used for leading edge research
- Assemble and commission major research apparatus
- Provide critical maintenance and repair support for hydraulic systems
- Manage heavy lifting activities including fork lift and crane operations

#### **Provide Technical Support for Undergraduate Students**

- Supervise, instruct, and assist students with project design and the use of laboratory equipment
- Assist with lab development
- Attend and assist with undergraduate labs and clinics

#### **General Accountabilities**

- Promote and maintain safety standards
- Manage assigned labs
- Maintain MSDS inventory
- Maintain equipment inventory
- Conduct workplace inspections
- General consulting, design, assembly, and rework
- Be flexibly responsive to evolving research and teaching needs
- Maintain training levels

*\*All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

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### Required Qualifications

<b>Education</b> <ul style="list-style-type: none"><li>• A diploma in Engineering Technology, Certificate of Qualification, or equivalent.</li></ul>
<b>Experience</b> <ul style="list-style-type: none"><li>• 10 years of direct experience required.</li></ul>
<b>Knowledge/Skills/Abilities</b> <ul style="list-style-type: none"><li>• A strong aptitude for mechanical technologies and systems is essential. Must have good knowledge and operational experience in most of the following areas:<ul style="list-style-type: none"><li>○ Machining and fabrication</li><li>○ Hydraulic systems maintenance and repair</li><li>○ Hydraulic, pneumatic, and electric control systems</li><li>○ Strain gauging</li><li>○ Precision measurement</li><li>○ Product sourcing</li><li>○ Personal computers</li><li>○ Safety standards and procedures</li></ul></li></ul>

### Nature and Scope

- **Contacts:** Provides technical support for undergraduate students, faculty, and other technical staff. Must be able to effectively communicate with people at all levels of expertise.
- **Level of Responsibility:** The job has specialized work with minimal supervision and provides guidance to others. This is a support role. However the candidate should continuously be observant of safety issues and may need to confront people in the laboratory who are compromising safety through their actions or by not wearing proper safety apparel.
- **Decision-Making Authority:** i.e. types of decisions made/problems solved, escalation point
- **Physical and Sensory Demands:** Working conditions are similar to those found in a fabrication or machine shop. The Lab Technician can regularly expect to move and handle large and heavy equipment. Much of the equipment in this lab can be very dangerous if not handled properly.
- **Working Environment:** Working conditions vary and range from working at a computer, to bench work, to work in heavy labs. Working outside of normal hours might be occasionally required to deal with emergencies, maintenance, extended run experiments, or upgrades.