The **Technical Science Administration (TSA)** is a research core facility located on the UO main campus that enhances manufacturing intelligence. The TSA consist of modern 3D-Printing and Fabrication labs with both units staffed by experts in the field. The strategic investments in equipment and technology enables the core facility to take on R&D, product development, and distinct prototyping projects with ease. TSA serves both university and non-university affiliates through our center. The facility houses a machine shop, along with an electronics shop and provides low-cost technological services and expertise to the UO scientific, as well as providing a student shop. TSA includes support from expert staff and a designated faculty advisory committee. The shops have been operating to the benefit of publicly and privately funded research for over 30 years. TSA’s shops house diagnostic and manufacturing equipment along with rigorously trained personnel uniquely capable of design and providing prototyping expertise, 3D scanning, technical consultation, electrical and mechanical engineering, CAD design, CNC/CAM programing, instrument repair, and precision fabrication services to all Oregon University System research labs, as well as private sector companies within the Pacific Northwest and beyond.

The mission of TSA is to enable the real-world success of designers, researchers, scientists, artists, and knowledge-workers. TSA exists to provide access to tools and expertise for shortening the time it takes to go from an idea to a physical saleable object. Be the idea a process to create sustainable alternative materials from Oregon's own natural resources, or prototypes of hand-held gadgets assembled from the nano-scale electromechanical devices engineered and fabricated in Oregon's existing signature institutes. Projects originate in a variety of fields; from biology to product design, neuroscience to architecture, astronomy to athletics, and geology to nanotechnology. Enabling cross-disciplinary collaborations is and will continue to be an emergent cornerstone of our mission.

**Functions of TSA**

* Design and construction of innovative scientific instruments
* Repair and maintenance of existing scientific equipment
* Instruction of students, staff, and faculty in the use of tools, machinery, and instruments

**Equipment**

Additive Manufacturing: metal, PCB, polymer, and composite printers

Fabrication: CNC bed mills, laser cutting, precision milling, water jet cutting, electrical discharge machining, precision micro welding, CNC toolroom lathe.