



**YOUNGSTOWN  
STATE  
UNIVERSITY**

**CLASSIFICATION SERIES:**

N/A

**CLASSIFICATION CODE/PAY GRADE:**

92345/99

**BARGAINING UNIT:**

N/A – Externally Funded

**Additive Manufacturing Technician – Externally Funded**

**SERIES PURPOSE:** The purpose of the Additive Manufacturing Technician occupation is to operate, maintain, repair instrumentation, and train technology users. Includes aspects of advancement of teaching, research, and contracted printing support.

**CLASS CONCEPT:** The class works under general supervision and requires considerable knowledge of Computer Aided Design (CAD) modeling and/or redesign of components to ensure printability. Incumbents support project management of externally funded research programs or externally contracted fabrication and provide technical guidance and management of equipment within the advanced manufacturing ecosystem.

**JOB DUTIES:** Incumbents may perform some or all of these duties or other job-related duties as assigned.

Operates, maintains, repairs instrumentation, and trains users on equipment within the advanced manufacturing ecosystem including both additive manufacturing equipment as well as subtractive machining.

Interfaces with external partners for contract printing and research activities on the equipment. Supports faculty and student research involving equipment. Assists with the setup of fabrication operations or research and development experiments to include data collection; provides instrumentation.

Schedules equipment availability; schedules and conducts periodic maintenance (PM). Coordinates maintenance requiring service technicians and coordinates with appropriate facilities maintenance organizations to ensure utilities and space are available for equipment.

Procures consumables for equipment; maintains inventory of consumables for equipment. Enters inputs into a system for cost accounting in order to track and manage income/expenses for machine use by internal and external customers. Tracks customer data for use in grant metrics.

Effective 04/12/2020

Coordinates environmental and safety compliance with YSU's Environmental and Occupational Health and Safety office. Supports education and workforce development activities related to advanced manufacturing.

Trains undergraduate students and interns on equipment; requires limited/moderate supervision.

Performs other related duties as assigned.

**KNOWLEDGE, SKILLS, AND ABILITIES:**

Knowledge of: CAD modeling and/or redesign of components to ensure printability; safety practices and procedures\*.

Skill in: written and verbal communication; developing and maintaining interpersonal relationships; organization and reliability.

Ability to: deal with problems/issues involving several variables within familiar context; interpret a variety of technical manuals and documentation; communicate verbally and in writing on technical and non-technical matters; gather, collate, and classify information about data, people, or things; prepare and maintain accurate and concise reports and records.

(\* ) Developed after employment.

**MINIMUM QUALIFICATIONS:** At least currently working on an Associate degree relevant to additive manufacturing systems, digital manufacturing, or CNC machining; demonstrated experience with CAD modeling and/or redesign of components to ensure printability; demonstrated organizational skills. Must be a U.S. citizen or Permanent Resident due to export-controlled research.

**PREFERRED QUALIFICATIONS:** Additive manufacturing certification; CNC machining operation knowledge; computer Aided Manufacturing (CAM) experience; experience operating multiple pieces of equipment in a production setting, research laboratory, national laboratory, or public-private partnership; work experience in additive manufacturing or CNC machining; operation of metallic 3D printing systems; experience operating and maintaining one or more of the following types of additive manufacturing equipment: ExOne, 3D Systems, Stratasys, EOS, Concept Laser; additive manufacturing certification from SME, UL, or America Makes ACADEMI.

**REQUIRED CERTIFICATIONS, TRAINING, AND/OR LICENSURES:** None

**PHYSICAL REQUIREMENTS:** In accordance with the U.S. Department of Labor physical demands strength ratings, this position will perform heavy work.

**HEAVY:** work involves exerting 50 to 100 pounds of force occasionally, or 25 pounds of force constantly to move objects.

**UNUSUAL WORKING CONDITIONS:** Will handle and lift awkward and heavy containers such as bins of metallic powders; requires occasional lifting of metallic powders, chemical binder containers, etc.; crouching or lying down to access valves and other devices underneath equipment may also be needed; top loading furnaces would require climbing steps and lifting crucibles. Works in a laboratory environment; may require wearing personal protective equipment (PPE) for handling chemicals or prevention of breathing fine powders; may involve loud noises requiring hearing protection.