



Job Description

JOB TITLE: INSTRUCTIONAL ASSISTANT – ADVANCED MANUFACTURING,
CONSTRUCTION, WELDING

PAY GRADE: CL 20

LAST REVISED: JANUARY 2018

Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed within the job. Additional or different duties from the ones set forth below may be required to address changing business needs/practices.

SUMMARY DESCRIPTION

Under direction of assigned manager, performs a variety of technical and operational duties in support of the Advanced Manufacturing, Construction and Welding laboratory programs and program activities; sets up equipment for lab experiences; and maintains lab equipment, facilities, and materials.

REPRESENTATIVE DUTIES - *The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.*

1. Maintains equipment, facilities, tools, and other items in the Advanced Manufacturing, Construction and Welding laboratories and related shops/facilities; troubleshoots, diagnoses, services, repairs, and maintains equipment, facilities, and tools; performs preventive maintenance and operational maintenance procedures; cleans and services equipment including to lubricate, calibrate, level, sharpen, true, seal, recondition, replace abrasives, coolants, and other materials for equipment and tools; checks, cleans, or exchanges saw blades; maintains sawdust collector filtration system; maintain welding fume collection, cleans and installs replacement filters; cleans equipment after student use to prevent damage; welds broken parts, equipment, and/or projects for staff and others.
2. Oversees use of Advanced Manufacturing, Construction and Welding facilities equipment including the cabinetry shop and mobile welding lab equipment by students and staff; secures and manages storage space for instructional aids, supplies, mock-ups, tools, and equipment; returns all items to proper storage areas when not in use; assists instructional faculty in setting up laboratory demonstrations, assists students with, demonstrates, and advises regarding proper equipment/tool clean up and return procedures, other procedures, and safety practices; trains staff and students regarding use of tools and equipment, safety practices, and specialized procedures within advanced manufacturing, construction, and welding; assists at advanced manufacturing, construction and welding on-site projects.
3. Fabricates new and/or renovated/replacement parts, tools, and/or other items as needed for repairs, maintenance, and for student projects; designs mock-ups, fixtures, parts, and special tools; manufactures parts and tools.
4. Performs a variety of inventory and purchasing duties; maintains stocks of lumber, metals other materials, equipment, parts, and supplies to meet departmental needs for construction, plumbing, electrical, solar, welding, and other programs and projects; utilizes knowledge of carpentry, solar, welding and construction trade practices and materials to obtain optimal products and materials for general and specialized use; researches vendors and pricing for departmental equipment, parts, supplies, and other materials; orders materials and coordinates with appropriate Purchasing Office staff member(s) as necessary; assembles, installs, and tests new equipment; improves equipment performance, removes built-in inadequacies, and determines and mitigates or eliminates possible safety problems.

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5. Provides tool room services, issues tools, manuals, and related items to students and staff; maintains records of items checked in and out; collects and stores tool room tools in proper locations; organizes storage locations for tool room hand and small power tools and maintains tools and tool room in clean and operable condition; replaces tool room hand tools; assists students with selection of proper tools.
6. Operates a variety of equipment, hand and power tools, and machinery; operates stationary and/or mobile power equipment; operates District vehicles and/or privately owned vehicle to pick up and deliver parts and equipment; operates forklifts to offload equipment, supplies, and materials and to move items; delivers materials to on-site projects.
7. Provides a variety of clerical and administrative support; maintains a variety of records and files; monitors assigned budgets and student fees; responds to telephone and other inquiries.
8. Oversees student assistants and other temporary and volunteer work forces; participates in hiring and provides orientation and training to new student/temporary employees; assigns projects and daily work; evaluates work performed; monitors student/temporary worker's hours worked and budgets.
9. Performs related duties as required.

QUALIFICATIONS - *The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.*

Knowledge of:

Operating characteristics and uses of construction, carpentry, cabinetry, electrical, plumbing, welding, and equipment.

Machining processes including computer/numerical controlled (CNC) lathe, CNC milling, horizontal and vertical milling, engine lathe, bandsaw, and drill press

Construction, carpentry, cabinetry, electrical, welding, and plumbing trade concepts, applications, principles, practices, techniques, terminology, codes,

Electrical arc, gas, Metal Inert Gas (MIG), and Tungsten Inert Gas (TIG) welding practices and techniques; brazing, plasma, carbon arc cutting, chop saw and iron work, sheet metal processes, and metallurgy.

Machining and part/tool fabrication/manufacturing practices, processes, procedures.

Equipment maintenance, preventive maintenance, repair, diagnosis, and troubleshooting concepts, procedures, practices, and techniques.

Procedures and techniques used in the calibration of tools and equipment.

Office procedures, methods, and equipment including applicable computer hardware and software applications.

Basic budgeting and bookkeeping concepts and techniques.

Basic inventory and purchasing processes and procedures.

Occupational hazards and standard safety practices including methods and techniques used in handling and disposing of hazardous chemicals.

OSHA, CalOSHA, and American Welding Society standards.

Ability to:

Perform general technical and operational duties in support of Advanced Manufacturing, Construction, and Welding laboratories and related facilities.

Operate, perform preventive maintenance on, repair, diagnose, and troubleshoot advanced manufacturing, construction and welding tools and equipment.

Weld utilizing electrical arc, gas, MIG, and TIG techniques; brazing, plasma, carbon arc cutting, chop saw and iron work, sheet metal processes, and metallurgy.

Utilize and accurately read measuring devices.

Calibrate tools and equipment.

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Read and interpret blueprints, other plans, technical manuals, and schematics.
Machine, fabricate, and manufacture custom parts/tools to meet specialized needs.
Assist and advise students with regard to advanced manufacturing, construction and welding procedures.
Operate automobiles, light trucks, and forklifts.
Operate office equipment including computers and supporting word processing, database management, and spreadsheet applications.
Adapt to changing technologies and learn functionality of new equipment and systems.
Perform general clerical tasks; maintain accurate records.
Hire, train, and supervise student and/or other temporary help.
Work independently and collaboratively.
Plan and organize work to meet changing priorities and deadlines.
Learn and apply applicable federal, state, and local laws, codes, and regulations as well as administrative and departmental policies and procedures.
Observe safety procedures including those for proper lifting and for handling and disposal of hazardous materials.
Communicate clearly and concisely, both orally and in writing.
Establish and maintain effective working relationships with those contacted in the course of work.

Education and Experience Guidelines - *Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. Examples of ways to obtain the knowledge and abilities would be:*

Education/Training:

Equivalent to the completion of the twelfth grade supplemented by college level coursework or specialized training in construction technology or a related field.

Experience:

One year of responsible construction and/or welding experience in the areas of electrical, welding, machining, and/or millwright.

License or Certificate:

Possession of a Class C driver's license.

Possession of, or ability to obtain, a Hazardous Materials Awareness Training Card.

Possession of, or ability to obtain, a Forklift certificate.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT - *The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.*

Environment: Work is primarily performed indoors in construction/welding shops and education classroom/center/laboratory setting and outside at a construction site; exposure to hazardous materials, dusts, mists, fumes, gases, solvents, wet/damp surfaces, and noise; work with equipment and apparatus. Subject to risk of exposure to blood borne and/or other pathogens due to potential for cuts and/or contact with fresh or dried blood or other body fluids on saws, drills, and other power equipment. Moderate exposure to risks controlled by safety precautions.

Physical: Primary functions require sufficient physical ability and mobility to work in construction/cabinetry shop, education center/classroom/laboratory, or office setting; to stand or sit for prolonged periods of time; to walk, stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull moderate to heavy amounts of weight; to operate shop, laboratory, and office equipment



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requiring repetitive hand movement and fine coordination including use of a computer keyboard; to verbally communicate to exchange information; and requires the wearing of personal protective equipment including safety glasses or goggles, lab coats, gloves, respirators, or face shields.

Vision: See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents; and to operate assigned equipment.

Hearing: Hear in the normal audio range with or without correction.