



## Job Description

**JOB TITLE:** Metals & Manufacturing Technology Instructor

**LAST REVISED:** MARCH 2002

### DEFINITION

Under administrative direction of an educational administrator, to provide direction and assistance to students in Metals/Manufacturing Technology by preparing and delivering lesson plans, lectures, and laboratory exercises; to select appropriate teaching methods and techniques; to develop curriculum; to evaluate student progress; and do related work, as required.

### JOB CHARACTERISTICS:

Incumbent may supervise and evaluate work performed by classified staff, and student and/or other temporary help, as assigned.

### EXAMPLES OF FUNCTIONS AND TASKS

**Lecture/Laboratory Preparation and Presentation:** Research lecture material; present lecture/laboratory information and concepts to students; prepare and distribute handouts and supplemental material; encourage student participation and involvement in classroom and laboratory discussions; design and administer examinations; evaluate student progress, including tests and grading; maintain student records; counsel students regarding career options, courses, and transfer.

**Laboratory Instruction and Supervision: ESSENTIAL** - Design, build, and test projects for laboratory assignments; select equipment, materials, and supplies necessary to run the laboratory; develop worksheets and instructions; demonstrate equipment to students; supervise and evaluate student projects; oversee student progress; direct organization of tools and equipment; recommend routine maintenance and repair procedures.

**Curriculum Development: ESSENTIAL** - Review and evaluate curriculum and materials in order to meet student interests and needs within the parameters of Divisional and/or Departmental budget constraints and availability of equipment and materials; research industry needs through advisory committees and other sources; design and update curriculum materials; attend curriculum meetings; present proposals for curriculum changes; design degree and certificate programs; coordinate with part-time faculty and staff to enhance consistency of lecture/laboratory content.

**Department Management: ESSENTIAL** – Develop department class schedules for full and part-time faculty; assist in hiring part-time faculty; prepare and manage budget; coordinate purchases of supplies, tools, and equipment appropriate for department use; prepare capital outlay requests; write grant and Vocational and Technical Educational Assistance (VTEA) proposals; coordinate with Maintenance Technician-Metals/Manufacturing Technology to prioritize activities and review completed work; provide Division Dean with information for evaluations; notify Sierra College Foundation of donations; review and acknowledge donations to the department.

**Advisory Committee Participation: ESSENTIAL** – Interact with Sierra College Metals/Manufacturing Advisory Committee; assist in recruiting committee members; schedule and make arrangements for advisory committee meetings; and arrange meeting place and refreshments; develop meeting agendas and send announcements; attend advisory committee meetings and record recollections; provide assistance to advisory committees of local high schools and Regional Occupational Programs (ROPs).

**Student Outreach and Placement Participation: ESSENTIAL** – Conduct tours of departmental facilities for prospective students and other interested individuals; visit local area schools to interact with prospective students; host departmental open house activities; attend local job fairs; assist in developing 2+2 articulation agreements



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with local high schools and Regional Occupational Programs (ROPs); provide student career advisement; assist in awarding scholarships; act as department contact for companies seeking employees; list the job opportunity and requirements with the Career Center; provide letters of reference for students; provide students with lists of potential employment sites.

**Liaison: ESSENTIAL** – Function as District’s point of contact for local industry; contact sites for field trips, arranging for transportation and acknowledging industry participation; locate job sites for student internships; provide apprenticeship direction to local industry; counsel students on apprenticeship and course requirements; provide course descriptions and schedules, as requested; attend industry meetings to review apprenticeship programs and attend graduations at industry sites; visit internship students and evaluate student progress; assign grades.

**Shared Governance Participation – ESSENTIAL** - Represent department and/or division by serving on District-wide committees and/or task forces, as appropriate and feasible; participate in Vocational Education Committee activities and sub-groups; research and present issues to Committee related to department and vocational needs; prepare listing of capital outlay needs for VTEA funding; develop department reports on articulation, student tracking, and apprenticeship issues; accumulate data on department goals and objectives; review department future plans with department staff; write and submit program assessment reports, as required; follow-up on assessment finds and develop strategies for implementing changes.

**Professional Development Activities: ESSENTIAL** – Participate in faculty and/or industry internships; read related literature to remain current on new technologies and industry trends; consult with local industry regarding trends in industry and employment standards for training; attend and present workshops at professional conferences; attend trade shows and industry sponsored seminars.

### MINIMUM QUALIFICATIONS

**Licenses/Certifications: ESSENTIAL** – Incumbent is required to meet requirements for issuance of Hazardous Materials Awareness Training Card by the District pursuant to successful completion of District-provided training for compliance with mandated “right to know” laws and regulations administered by the U.S. Occupational Safety and Health Administration (OSHA) and the California Occupational Safety and Health Administration (CalOSHA) with regard to handling of hazardous materials, including book borne pathogens, as a condition of employment in this position.

#### Degrees/Experience:

**ESSENTIAL** - Incumbent must possess a Bachelor’s Degree AND two (2) years of occupational experience in the discipline AND any certificate or license required to do this work OR must possess an Associate’s Degree AND six (6) years of occupational experience in the discipline AND any certificate or license required to do this work OR the equivalent.

#### Knowledge of:

**ESSENTIAL:** Industrial methods in an manufacturing setting; machine shop practices and machine operations; manufacturing processes; design and operation of a foundry; computer numerical control (CNC) programming and operations; Computer Aided Design (CAD) and Computer Aided Machining (CAM); basic welding; metallurgy; sheet metal fabrication; State Division of Apprenticeship standards; shop safety principles.

#### Ability to:

**ESSENTIAL:** Apply work experience in the metals/manufacturing field; operate common manual machine tools; teach in the lecture mode; conduct classes in a laboratory environment; organize lecture and laboratory elements; organize shop operations; develop procedures for labs and student activities; read and use technical manuals; select, use and repair tools and equipment; organize and budget department activities; work with community



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individuals, organizations, and advisory committees; supervise staff, student help, and volunteers; provide input for evaluation of classified staff; use safety procedures and techniques.

### **Physical Suitability:**

**ESSENTIAL:** Incumbent must be able to function effectively indoors in a shop/laboratory and/or classroom environment engaged in a work of predominantly a moderately active to active nature and to accomplish the following, with or without reasonable accommodation: Constantly: Use vision (near) for reading printed/handwritten materials, read measuring tools; and (far) to observe lab activities; use hearing to respond to normal conversation and machine prompts; Frequently: Walk, to move about the classroom/laboratory/campus; bend, to operate machinery; reach (overhead and low) to operate equipment, tools; stand, sit, walk, and turn to present lectures and laboratory instruction; lift push, pull, stoop, squat, bend and carry to move and operate equipment and prepare laboratory materials; utilize manual dexterity to operate various types of equipment and machinery; wear protective equipment protect face, eyes, arms, hands and fingers in the classroom and laboratory; work in areas subject to dust, mists, fumes, wet, damp surfaces, extremes of heat and cold temperatures, noise, chemicals, and caustics.

**Faculty Salary schedule, subject to placement at date of hire.**

**FLSA exempt.**

**S.C.F.A. bargaining unit status.**

**Classification II. Bloodborne Pathogens Exposure Control Program.**