



## Job Description

**JOB TITLE:** Advanced Manufacturing Instructor, Non-Tenure Track Full-Time

**LAST REVISED:** JANUARY 2019

*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.*

### **PURPOSE**

Under supervision of an educational administrator, the Advanced Manufacturing Instructor will develop curriculum and provide lecture and laboratory instruction for students in the study of manufacturing and other related courses. The incumbent will be responsible for: evaluating students' performance; coordinating with faculty and other staff regarding support of hardware, software and machinery; assisting in the selection of and coordination of adjunct faculty members; participating in articulation and career education activities; coordinating with business and industry partners; participating in shared governance and other activities in support of the instructional program, and performing related work, as assigned.

Sierra College has a strong commitment to the achievement of equity and inclusion among its faculty, staff and students and values the rich diverse backgrounds that make up the campus community. The Advanced Manufacturing Instructor must demonstrate a profound understanding of and experience with successfully supporting individuals with varying backgrounds. This includes persons with disabilities, various gender identities, sexual orientation, individuals from historically underrepresented communities and other groups to ensure the district provides an inclusive educational and employment environment focused on strategies for success and equitable outcomes for all.

### **JOB CHARACTERISTICS**

Incumbent may supervise students and/or other temporary help, as assigned.

### **EXAMPLES OF FUNCTIONS AND TASKS**

**Lecture Preparation/ Instruction - ESSENTIAL:** Develop syllabi of lecture materials; prepare lesson plans to be used in lectures; coordinate lectures with laboratory assignments; prepare multi-media demonstrations to enhance instructional delivery; integrate the use of the computer throughout the instructional program; prepare handouts and supplemental materials; develop quizzes, tests, and "hands-on" evaluations; evaluate student performance on quizzes, tests, and reports; advise students on matters regarding their academic performance; tabulate scores and assign official grades; review and select learning resources such as textbooks, internet sites, and periodicals determined to be the most useful, appropriate and equity-minded; review and evaluate new instructional material for content, readability, cost effectiveness, and equity-mindedness; read literature (books, newspapers, periodicals, and other print and non-print materials) to stay current in the field of Advanced Manufacturing; read literature (books, newspapers, periodicals, and other print and non-print materials) and attend trainings (if funding permits) on culturally-responsive pedagogy. **PERIPHERAL:** Complete instructional materials order forms; review study guides and other supplemental materials for classroom use; maintain appropriate reference materials; develop assignments related to current reference materials in learning resource center; arrange and schedule guest lecturers (ensuring to the best extent possible that guest lecturers present with an equity lens).

**Laboratory Instruction/Supervision - ESSENTIAL:** Prepare laboratory instruction for students; monitor student use of machinery, research technological data to include in labs; develop quizzes and tests; develop syllabi of lecture materials; develop student-assigned projects and sequencing of the work involved, prepare lesson plans for use in labs; coordinate lectures with laboratory assignments; prepare multimedia demonstrations to enhance



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instructional delivery; prepare handouts and other supplementary course materials; test and evaluate student performance. **PERIPHERAL:** Review study guides and other supplementary course materials.

**Student Performance Evaluation -ESSENTIAL:** Develop quizzes, examinations, homework assignments, projects, and laboratory assignments which fairly evaluate student progress in acquiring knowledge and skill sets of subject material; monitor student activity during examinations and quizzes; read, evaluate, and grade student responses on examinations, quizzes, and projects; assign, read, and evaluate student homework assignments and projects; tabulate scores and assign official grades; advise students on matters regarding their academic performance; refer students to appropriate student support services (e.g. Extended Opportunity Programs and Services [EOPS], the Learning Skills Center, Tutoring Center, Writing Center, etc.) to ensure a successful learning environment.

**Curriculum Development- ESSENTIAL:** Review and evaluate curriculum to meet student interests and needs within the parameters of division/department budgets and availability of equipment and materials; work with local and regional employers, industries, and community groups to plan and develop curriculum to meet employment needs; coordinate with full-time and part-time faculty members to enhance consistency and quality of lecture/laboratory content; evaluate and/or revise courses of study to fit curriculum designs; present proposals for curriculum changes to the Curriculum Committee and/or other shared governance bodies; design degree and certificate programs; research, evaluate and incorporate current technology into curriculum; function as a liaison with advisory committees to determine appropriate curriculum to meet current needs.

**Departmental Development ESSENTIAL:** Schedule advisory committee meetings; recommend departmental class schedules for full-time and adjunct faculty members; prepare and manage departmental budget(s) in accordance with established District policies and procedures; assist in record keeping; assist in recruitment and hiring of adjunct faculty members, as requested, in accordance with established District policies and procedures; work with divisional classified staff members and student and/or other temporary help in accordance with established District policies and procedures; prepare capital outlay requests; prepare Staffing Committee requests for new positions; coordinate with adjunct faculty members to ensure proper delivery of departmental curriculum. Coordinate off-site program, as assigned. **PERIPHERAL:** Write grants and proposals; interview and hire student and/or other temporary help; prepare annual Program Assessment and Review (ePAR) plans.

**Workforce Development Activities -ESSENTIAL:** Participate in activities related to local economic development, as appropriate and feasible; provide input to local businesses regarding program capabilities, as requested; participate in the structuring of economic development activities as it relates to departmental operations; function as a liaison with the Workforce Development and Continuing Education Division in developing programs to meet community needs; participate on steering committees, as appropriate; assist in development and delivery of industry-specific classes utilizing an equity-minded framework; assist in maintaining quality and consistency of program delivery; evaluate other economic development models, as necessary.

**Articulation and Dual Enrollment- ESSENTIAL:** Assist local area high schools and educational partners in developing curriculum to coordinate with community college offerings; function as a resource and attend meetings with representatives from local high schools; assist in developing dual enrollment and 2+2 articulation agreements with local high schools; provide local schools with appropriate lesson designs to meet departmental standards for articulation; assist local schools with selection of equipment and software, as appropriate. Articulate with universities to provide transfer opportunities into appropriate programs.

**Shared Governance- ESSENTIAL:** Respond in writing to requests for information, as appropriate; represent department and/or division by serving on District-wide committees, as appropriate and feasible; serve on employee selection committees, as requested; serve as functional member of one or more committees and/or task forces; read and respond to information polls distributed by the Academic Senate and/or other shared governance bodies. Attend and participate in departmental staff meetings, division meetings, District meetings,



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and other activities, including Sierra College Collaborative Process (SCCP) training and activities; **PERIPHERAL:** attend Board of Trustees and/or Strategic Council meetings, as necessary; read minutes of shared governance bodies, Board of Trustees reports, and other written material to maintain knowledge of District activities.

**Professional Development-ESSENTIAL:** Maintain membership and participation in related professional organizations; attend and present workshops at Sierra College and professional conferences, as approved (and ensuring to the best extent possible that such presentations are presented with an equity lens); attend trade shows and industry-sponsored seminars, as approved; consult with industry representatives regarding trends in industry and employment standards for training, as appropriate; read literature to keep abreast of current technological developments; participate in faculty/industry internships, as appropriate.

**Student Recruitment/Job Placement - ESSENTIAL:** Conduct tours of District facilities, as appropriate; visit local area “feeder schools” to enhance visibility of departmental programs; host departmental “open house” activities in conjunction with Career Connections functions; prepare program brochures that are culturally-responsive to the populations being reached; provide student career advisement, as appropriate; develop departmental student recruitment materials that are culturally-responsive to the populations being reached; interact with local industry representatives to attempt to place departmental students in internships and permanent positions; give presentations to high school classes, as appropriate; assist departmental students to develop resumes and cover letters for job applications, as appropriate; coordinate industry recruitment visitations to the Advanced Manufacturing department; solicit and make recommendations for student scholarships from businesses and industries; coordinate student internships with local industries. **PERIPHERAL:** Attend local job fairs, as approved; make presentations to local area school boards, as requested; work with local area high schools to develop a pool of potential departmental students.

### MINIMUM QUALIFICATIONS

**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 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 advanced manufacturing setting; machine shop practices and machine operations; manufacturing processes of design; computer numerical control (CNC) programming and operations; Computer Aided Design (CAD) and Computer Aided Manufacturing (CAM); to industry standards to include American National Standards Institute (ANSI), American Society of Mechanical Engineers (ASME); mathematics as applied to manufacturing; computer-aided design (CAD) software including general and specialized software applications; manufacturing process control; metallurgy; shop safety principles; methods to successfully support individuals with varying backgrounds, which includes persons with disabilities, various gender identities, sexual orientation, individuals from historically underrepresented communities and other groups.

**Ability to: ESSENTIAL:** Teach using interactive strategies, conduct classes in a laboratory environment; organize lectures and laboratories; develop procedures for laboratories and other student activities; organize and budget departmental activities; work with community members, organizations, and advisory committees; supervise staff, including student and/or other temporary help and/or volunteers; use and teach computer hardware and related software application programs; develop, implement, and evaluate project-based curriculum; utilize safety procedures and techniques; apply an equity-minded framework and ensure programs, services and processes are designed and delivered to meet the varying needs of all constituents; to interact and work effectively with a diverse population utilizing exceptional interpersonal and intercultural skills; exercise sensitivity to and understanding of the diverse academic, socioeconomic, cultural, disability, gender identity, sexual orientation, and ethnic backgrounds of community college students, faculty, and staff.



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**Licenses/Certifications: DESIRABLE:** NIMS certification in CNC machining

**Physical Suitability Requirements:**

**ESSENTIAL:** Incumbent must be able to function effectively indoors in a classroom/laboratory environment engaged in moderately active work and do the following, with or without reasonable accommodation: Almost constantly: Read printed and written materials and computer screens, stand upright and forward flexing, often for long periods of time, to deliver lectures and assist students in laboratories; lift (from overhead, waist and floor levels, max. 40 lbs.) and carry (max. 40 lbs.) to move equipment and training aids in and out of storage and between classrooms and laboratories; stoop, bend, squat, kneel; push and pull to utilize hand trucks and carts to move equipment and supplies; Frequently: Utilize speech and hearing to communicate in person, before groups, over the telephone and to hear sound prompts from equipment and to respond to students' questions; utilize manual and finger dexterity and fine motor skills to use tools and equipment and to demonstrate visual aids and use of equipment; walk, to move about classroom, laboratory, and campus environment; reach (from overhead and low levels) to demonstrate principles and techniques in a laboratory setting; wear personal protective equipment to protect face, eyes, hands, fingers, and body.

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

**FLSA exempt.**

**SCFA bargaining unit status.**

**Classification III, Bloodborne Pathogens Exposure Control Program.**