

Development Technician

University of California, Los Angeles
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Class Specifications - E.15

Development Technician V - 7170
Development Technician IV - 7171
Development Technician III - 7172
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Development Technician I - 7174

SERIES CONCEPT

Development Technicians assist academic researchers, development engineers or research groups in the design, development, fabrication and assembly of scientific equipment and apparatus. Incumbents also have continuing responsibility for installation, modification, repair and maintenance of the equipment in a research laboratory.

Development Technicians typically perform tasks involving:

1. A combination of skills from different disciplines, crafts or trades.
2. A working knowledge and basic understanding of a specialized area such as vacuum systems, high-energy electrical systems, or underwater instrumentation.
3. The operation and repair of scientific equipment in a laboratory or in the field.
4. The design, fabrication and assembly of scientific equipment involving consideration of such factors as cost, operating life, safety, size, tolerances, installation and location of components, surface finishes, corrosion and machinability.

Positions in the Development Technician series are distinguished from the Laboratory Mechanician series in that the Laboratory Mechanician typically works in a machine shop area utilizing machinist's skills the majority of the time, whereas the Development Technician works in a research or development laboratory utilizing a variety of skills.

Positions in the Development Technician series are distinguished from the Engineering Aid series in that the Engineering Aid is primarily responsible for performing technical tasks which require the application of engineering and scientific principles and mathematical skills that are included in the first two years of an engineering curriculum such as performing engineering or physical tests, collecting and analyzing technical data, drafting and surveying.

Positions in the Development Technician series are distinguished from the Electronic Technician series in that the Electronic Technician is primarily involved in working with electronic systems, equipment and circuits with limited responsibilities for applying knowledge and skills from other disciplines. The

Development Technician may frequently utilize knowledge of electronics in addition to other skills, in the development and fabrication of scientific equipment.

CLASS CONCEPTS

Development Technician V

Under direction, incumbents are responsible for all aspects of equipment fabrication and perform the highest level of equipment design and development required of a non-professional. Design work at this level requires independent contributions based on a working knowledge and application of basic scientific and engineering principles. Work assignments are typically performed in research laboratories for an academic investigator, where a professional engineer is usually not available.

Incumbents typically specify materials and components; estimate costs; assemble, debug, calibrate, and install equipment; modify, repair, and maintain a complex system of equipment and/or all operating equipment in a laboratory; operate equipment during experiments; and perform other related duties as required.

Development Technician IV

Under general supervision, incumbents are responsible for all phases of fabrication of scientific equipment and for some design work. Design work at this level is based on precedent and practical knowledge and is characterized by the fact that design solution or approach must be analyzed and evaluated on a technical basis by a professional engineer or researcher.

Incumbents typically perform or supervise the repair and maintenance of equipment, all fabrication, and assembly work requiring top manual skills; and are responsible for material and component acquisition. At this level, incumbents may participate, assist and supervise others in testing and in the operation of equipment; instruct or direct students working on projects; assist in the solution of technical problems; and perform other related duties as required.

Allocation to the next higher level in the series is based on more advanced design responsibilities.

Development Technician III

Under supervision, incumbents perform fabrication, assembly and maintenance of scientific equipment. At this level, incumbents may assist in equipment design by suggesting changes or alternatives to higher level technical personnel.

Incumbents perform all required assembly and most fabrication tasks. However, overall responsibility for the fabrication of a complete equipment system or a complex scientific instrument is allocated to the next higher level. At this level, incumbents fabricate precision parts from completed sketches using a variety of materials such as plastic, glass, metal and rubber; detect errors in dimensions; operate basic machine tools such as mills, grinders and lathes including setting-up operations and determining correct speed and feed rates; wire, assemble and check electronic circuits from completed schematic drawings; and perform other related duties as required.

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This is the full operational level in the series and the majority of Development Technician duties are performed at this level.

Development Technician II

Under supervision, incumbents perform the highest-level assembly work in the development of scientific equipment. Incumbents work from rough sketches or oral instructions and all major components and parts are provided. Incumbents acquire all necessary auxiliary hardware such as fasteners and gaskets. Work requires use of various hand tools and measuring devices such as micrometers, calipers, and simple electrical meters.

At this level, the incumbents typically fabricate simple parts such as brackets and shafts which require rudimentary machinist's skill; perform simple welding, plumbing or sheetmetal task; perform regularly scheduled and/or routine maintenance such as lubricating, installing, adjusting or calibrating regulators, valves and thermostats; assist in data acquisition by reading meters and indicators; read and interpret blueprints and schematic diagrams; and perform other related duties as required.

Development Technician I

Under close supervision, incumbents perform simple assembly tasks requiring the use of hand tools. Assembly work at this level may require a high degree of precision and manual dexterity, but these skills are basically of a manipulative nature and do not require technical or craft ability. Incumbents may use power, hand or bench tools such as drills, handsaws and grinders.

Given specific and detailed instruction, incumbents typically perform band soldering; perform simple electrical wiring; and install or connect mechanical and electrical components such as fasteners, locks, gears, valves, relays, transformers and diodes. Incumbents may record test data requiring familiarity of shop mathematics and perform other related duties as required.

MINIMUM QUALIFICATIONS

Development Technician V

Graduation from high school or a General Education Diploma and seven years of technical and craft experience, or an equivalent combination of education and experience.

Development Technician IV

Graduation from high school or a General Education Diploma and five years of technical and craft experience, or an equivalent combination of education and experience.

Development Technician III

Graduation from high school or a General Education Diploma and three years of technical and craft experience; or an equivalent combination of education and experience.

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Development Technician II

Graduation from high school or a General Education Diploma and two years of technical and craft experience, or an equivalent combination of education and experience.

Development Technician I

Graduation from high school or a General Education Diploma and one year of related experience, or an equivalent combination of education and experience.