STATE OF NEVADA
Department of Administration
Division of Human Resource Management

CLASS SPECIFICATION

TITLE	GRADE	EEO-4	CODE
DEVELOPMENT TECHNICIAN IV	**36**	**C**	**6.966**
DEVELOPMENT TECHNICIAN III	**35**	**C**	**6.978**
DEVELOPMENT TECHNICIAN II	**33**	**C**	**6.979**
DEVELOPMENT TECHNICIAN I	**29**	**C**	**6.980**

SERIES CONCEPT

Development Technicians fabricate, maintain, calibrate, repair and modify a variety of electrical, mechanical and computerized equipment and computer systems used in support of academic research, data gathering, analysis and teaching. Incumbents perform a variety of interrelated functions requiring specialized knowledge of electronics, mechanics and/or computers in support of professional engineering, scientific research and student instruction.

Participate in equipment fabrication, design and development requiring knowledge and application of electrical and mechanical principles and theories; determine materials and components required and estimate costs; debug, assemble, calibrate, install, modify, repair and maintain complex circuitry, components and mechanical parts.

Install, develop procedures, operate new equipment, and perform comparative analysis of existing equipment with proposed improvements to ensure compatibility of old and new parts and technology to improve reliability, efficiency and cost effectiveness.

Operate electrical and mechanical tools and equipment such as signal generators, micrometers, thermometers, digital multimeters, pressure and vacuum gauges, oscilloscopes, voltmeters, spectrum analyzers, computers, ovens, mixers, splitters, grinders, welders, soldering irons, saws, hand tools, milling machines, drills, lathes and computer driven equipment to fabricate, install, align and troubleshoot laboratory, research, computer and other equipment; refer to technical manuals as required.

Participate in the storage and disposal of hazardous and toxic waste in an assigned laboratory or research facility in accordance with established health and safety regulations and policies.

Supervise student workers, lab technicians, and others as assigned; provide technical assistance to researchers, professors, engineers, academic investigators and others.

Maintain an inventory of parts and equipment and maintain replacement and repair stock by researching part numbers, descriptions and prices; coordinate with private vendors, private industry, and federal and State agencies in the purchase, repair, maintenance and modification of electronic, mechanical and computerized equipment.

Perform related duties as assigned.

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CLASS CONCEPTS

Development Technician IV: Under general direction, incumbents perform the full range of duties in the series concept and in addition, perform the most complex level original design work for research purposes, including conceptualizing instrument systems, estimating cost of system components, preparing budget proposals, conducting tests, performing design calculations, prototyping, and conducting feasibility studies.

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CLASS CONCEPTS (cont'd)

Development Technician IV: (cont'd)
Development Technician IV's are further distinguished from lower level Development Technicians by the level of responsibility and decision making authority for acquisition of highly specialized scientific and computerized equipment based on availability, reliability and cost; establishing the sequence for design, fabrication, assembly, testing, finalization, and purchasing of system components; developing test procedures; and preparing and maintaining manuals and documentation for equipment design and maintenance.

Development Technician IV's work directly with consultants and manufacturing representatives and act as the department's liaison on procurement, installation and maintenance of computerized and scientific laboratory research equipment.

Development Technician III: Under general direction, incumbents perform the duties in the series concept at an advanced journey level, and in addition, independently manage all aspects of an assigned laboratory. Positions at this level are distinguished from lower level development technicians by their involvement in the design, development, maintenance and repair of a variety of specialized and sophisticated laboratory equipment and systems including infrared, ultraviolet and atomic absorption spectrometers; scanning electron microscopes; gas chromatographs; high vacuum equipment; x-ray diffraction and fluorescence units; lasers; particle accelerators, computers and computer networks.

Development Technician III's specialize in two or more technical areas (such as electronics, mechanical devices, computer systems) and have responsibility for one or more pieces of complex research equipment requiring an applied knowledge of chemistry, physics, engineering, and/or computer technology.

Incumbents allocated to this level are further distinguished from the Development Technician II by responsibility for complex equipment fabrication, equipment design, research, and development requiring an advanced knowledge and application of the principles of physics, engineering, chemistry and/or computer technology. 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 a research laboratory for an academic investigator where a professional engineer is not available.

Development Technician II: Under general supervision, incumbents perform the duties described in the series concept which requires an in-depth knowledge of the equipment being developed, repaired or modified and its application; interpretation of complex technical manuals and schematics; engineering and scientific terminology, properties of various materials; and the feasibility and efficiency of the design. This is the journey level in the series.

Development Technician I: Under close supervision of a higher-level Development Technician or professional staff, incumbents receive training in the performance of all or part of the duties outlined in the series concept. This is the entry level in the series and progression to the next level may occur upon meeting the minimum qualifications and with the recommendation of the appointing authority.

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MINIMUM QUALIFICATIONS

SPECIAL REQUIREMENTS:

* Some positions require frequent travel to remote locations and will be identified at the time of recruitment.
* Pursuant to NRS 284.4066, some positions in this series have been identified as affecting public safety. Persons offered employment in these positions, must submit to pre-employment screening for controlled substances.

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MINIMUM QUALIFICATIONS (cont'd)

INFORMATIONAL NOTE:

* Some positions must obtain certification as a Hazardous Waste Operator within six months of appointment.

DEVELOPMENT TECHNICIAN IV

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in electrical or mechanical engineering or related field and three years of progressively responsible experience in the fabrication, design, maintenance, calibration, repair and modification of a variety of electrical, mechanical and/or computerized equipment and computer systems; **OR** an equivalent combination of education and experience as described above. *(See Special Requirements and Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):
Detailed knowledge of: physics and engineering principles and practices to a level that enables the technician to communicate with researchers, graduate students and others; design principles sufficient to fabricate mechanical and electrical components; mathematics including fractions, percentages, ratios, logarithms, algebra and trigonometry applicable to a laboratory setting. **Working knowledge of:** operating principles of various complex laboratory equipment and instruments including high vacuum systems and lasers; robots including electro-hydraulics, feedback and controls, micro-positioning and video systems; principles and practices of laser technology. **Ability to:** coordinate work assignments with agency staff and subordinates; collaborate with faculty, researchers and others in making original contributions to the design of mechanical, electrical and computerized systems; resolve unique problems diplomatically with academic staff, researchers, students and vendors; analyze information, problems, situations, practices, and procedures to define problem areas and formulate logical and objective solutions; supervise and provide direction to student workers; independently perform feasibility studies including the estimation of costs, budget preparation and testing; accurately convey equipment problems to professional staff, factory representatives and service vendors regarding warranties and repairs; design, fabricate, repair, and modify sophisticated laboratory and research equipment including computer systems; *and all knowledge, skills and abilities required at the lower levels*.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job):
Detailed knowledge of: operating principles of various complex laboratory equipment and instruments including high vacuum systems and lasers; the functions of different divisions of the department to obtain needed information and/or where to direct questions; department policy and procedure as applied to assigned projects.

DEVELOPMENT TECHNICIAN III

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in electrical or mechanical engineering or related field and two years of experience in the fabrication, maintenance, calibration, repair and modification of a variety of electrical, mechanical and/or computerized equipment and computer systems; **OR** an equivalent combination of education and experience as described above. *(See Special Requirements and Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application):
Detailed knowledge of: power supplies and filtering systems; soldering and desoldering techniques; electronic theory, principles and practices to include AC/DC, solid state, intergrated circuits, microprocessor devices, conventional symbols and sources of information. **Working knowledge of:** physics and engineering principles and practices to a level that enables the technician to communicate with researchers and graduate students; mathematics including fractions, percentages, ratios, logarithms, algebra and trigonometry applicable to a laboratory setting. **General knowledge of:** robots including electro-hydraulics, feedback and controls, micro-positioning and video systems; the principles and practices of laser technology. **Ability to:**

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MINIMUM QUALIFICATIONS (cont'd)

DEVELOPMENT TECHNICIAN III (cont'd)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application): (cont'd) provide direction and training to lower level technicians; read and interpret scientific and technical manuals and documentation; identify parts and components of scientific equipment; install, maintain, calibrate and repair a variety of complex electronic and scientific equipment; *and all knowledge, skills and abilities required at the lower levels*.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job): (*These are identical to the Entry Level Knowledge, Skills and Abilities required for Development Technician IV.)*

DEVELOPMENT TECHNICIAN II

EDUCATION AND EXPERIENCE: Bachelor's degree from an accredited college or university in electrical or mechanical engineering or related field and one year of experience in the fabrication, maintenance, calibration, repair and modification of a variety of electrical, mechanical and/or computerized equipment and computer systems; **OR** Associate's degree from an accredited college or university in electronics or related field and two years of experience in the fabrication, maintenance, calibration, repair and modification of a variety of electrical, mechanical and/or computerized equipment and computer systems; **OR** an equivalent combination of education and experience as described above. *(See Special Requirements and Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application): **Detailed knowledge of:** safety procedures applicable to working with sensitive electronics, high voltage and hazardous chemicals; electronic components, color codes and power ratings. **Working knowledge of:** drafting techniques; power supplies and filtering systems. **Ability to:** develop solutions to unique electronic design problems and fabricate electronic components as needed; perform a variety of mechanical measurements using strain gauges, thermocouples, thermistors, and accelerometers; calibrate scientific laboratory equipment; determine the most cost effective and efficient method for the repair or replacement of equipment and parts; plan and estimate the type and quantity of equipment needed for laboratory and research projects; maintain an appropriate stock of inventory parts and supplies; prioritize assignments to complete work in a timely manner; *and all knowledge, skills and abilities required at the lower level*.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job): (*These are identical to the Entry Level Knowledge, Skills and Abilities required for Development Technician III.)*

DEVELOPMENT TECHNICIAN I

EDUCATION AND EXPERIENCE: Associate's degree from an accredited college or university in electronics or related field and one year of experience in the fabrication, maintenance, calibration, repair and modification of a variety of electrical, mechanical and/or computerized equipment and computer systems; **OR** an equivalent combination of education and experience as described above. *(See Special Requirements and Informational Note)*

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application): **Working knowledge of:** safety procedures applicable to working with sensitive electronics, high voltage and hazardous chemicals; electronic theory, principles and practices to include AC/DC, solid state, integrated circuits, microprocessor devices, conventional symbols and sources of information; electronic components, color codes, power supplies and filtering systems; soldering and desoldering techniques utilizing various types of soldering irons, fluxes, solder, and solvents. **General knowledge of:** drafting techniques. **Ability to:**

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MINIMUM QUALIFICATIONS (cont'd)

DEVELOPMENT TECHNICIAN I (cont'd)

ENTRY LEVEL KNOWLEDGE, SKILLS AND ABILITIES (required at time of application): (cont'd) remove electronic components from printed circuit boards to repair and modify electronic equipment; utilize a variety of electronic test equipment and tools such as oscilloscopes, logic analyzers, broad spectrum analyzers, and digital voltmeters; read and interpret mechanical and electrical drawings and schematics for associated electronic equipment; solder electronic components; operate a variety of common hand and power tools; utilize a personal computer, associated software and ancillary equipment; work with a variety of persons of various cultural and educational backgrounds to explain procedures and exchange information and ideas; accurately convey equipment problems to professional staff and service vendors regarding warranties and repairs; organize material, information and resources in a systematic way to optimize efficiency; write grammatically correct business correspondence and reports; add, subtract, multiply and divide whole numbers, fractions and decimals; work independently and follow through on assignments.

FULL PERFORMANCE KNOWLEDGE, SKILLS AND ABILITIES (typically acquired on the job): *(These are identical to the Entry Level Knowledge, Skills and Abilities required for Development Technician II.)*

This class specification is used for classification, recruitment, and examination purposes. It is not to be considered a substitute for work performance standards for positions assigned to this class.

	6.966	6.978	6.979	6.980
ESTABLISHED:	7/1/93P	12/11/81R	12/11/81R	4/13/84
	8/31/92PC	1/7/83PC	1/7/83PC	
REVISED:		7/22/85-3	7/22/85-3	
REVISED:		4/11/86-3	4/11/86-3	4/11/86-3
REVISED:				
REVISED:		1/30/87-3	10/17/86-3	
REVISED:		7/1/89P	7/1/89P	7/1/89P
		9/27/88PC	9/27/88PC	9/27/88PC
REVISED:		5/24/91-3	5/24/91-3	
REVISED:		7/1/93P	7/1/93P	7/1/93P
		8/31/92PC	8/31/92PC	8/31/92PC
REVISED:	6/25/04PC	6/25/04PC	6/25/04PC	6/25/04PC
REVISED:	4/11/14PC	4/11/14PC	4/11/14PC	4/11/14PC