



Job Description

(For Positions in CAW Local 555, Unit 1)

Job descriptions do not include every duty that an individual in a position performs. They are intended to be representative and characteristic of the duties required and the level of work performed. Depending upon the size of the department or unit and its functional activities, incumbents who fall into this category may perform all of the duties listed below or, in the case of large departments or units, may be assigned to designated specialized functions.

JD #:	JD00289	Pay Grade:	7
JD Title:	Accelerator Technician	JD FTE Hours:	40
Job Family:	Technician		

General Description

Responsible for the maintenance and operation of the accelerator. Provides a range of technical, logistical, and operational support within the University accelerator laboratory.

Representative Duties & Responsibilities

- Design numerous pieces of ancillary equipment such as particle accelerator radiation interlock components, x-ray system shutters, and vacuum systems associated with accelerator beamlines.
- Determine material requirements and tolerances required to fabricate parts.
- Review experiments and determine the operational needs required to meet the experimental requirements.
- Install and commission various pieces of equipment.
- Resolve problems encountered in the installation and servicing of mechanical and electrical systems including vacuum systems, ion source components, diagnostic systems and radiation interlock systems.
- Adhere to established guidelines and procedures when calibrating equipment.
- Prioritize the maintenance and upgrading of equipment.
- Demonstrate and train others on how to operate equipment.
- Write a variety of documents such as procedure manuals, reports, and correspondence.
- Operate various power tools and apparatus required to fabricate equipment.
- Exchange technical and scientific information with others.
- Maintain inventory and records of accelerator and major equipment operations, inspections, malfunctions, repairs, maintenance, and replacement parts.
- Source parts for machines such as vacuum pumps, accelerator components, and electronic systems components.

Supervision

- Provide direction to others in how to carry out work tasks.

Qualifications

- 3 year Community College diploma in Electronics or a related field of study.
- Requires 3 years of relevant experience.

Effort

Physical Effort:

- A typical work day consists of greater than 3.5 hours of low physical effort for activities such as:
 - Intermittent periods of keyboarding to word process documents and enter data into databases.
- A typical work day consists of up to 3.5 hours of moderate physical effort for activities such as:
 - Standing for prolonged periods of time when fabricating equipment and performing maintenance work.
 - Lifting and transferring pieces of equipment and apparatus.
- Elements of high physical effort are not a regular feature of this job.

Mental Effort:

- A typical work day occasionally requires routine mental effort for activities such as:
 - Collecting routine information and files to word process routine documents such as correspondence and forms, and inputting data into databases.
- A typical work day consists of greater than 3.5 hours of moderate mental effort for activities such as:
 - Determining material requirements and tolerances required to fabricate parts.
 - Reviewing experiments and determining the operational needs required to meet the experimental requirements.
 - Installing and commissioning various pieces of equipment.
 - Resolving problems encountered in the installation and servicing of mechanical and electrical systems including vacuum systems, ion source components, diagnostic systems and radiation interlock systems.
 - Adhering to established guidelines and procedures when calibrating equipment.
 - Exchanging technical and scientific information with others.
- A typical work day consists of up to 2 hours of high mental effort for activities such as:
 - Designing numerous pieces of ancillary equipment.

Working Conditions

Physical Environment:

- Frequently exposed to dust, dirt, grease or oil when fabricating and maintaining equipment.
- Frequently required to work in uncomfortable or confined work spaces when fabricating and repairing equipment.
- Frequently exposed to loud or irritating noises such as, buzzers, mechanical pumps, electric motors, and alarms.

Psychological Environment:

- Occasionally interacts with individuals who may be rude or upset.
- Frequently handles competing requests from multiple sources.
- Frequently required to remain at the workstation when the accelerator is operating.

Health & Safety:

- Operates various power tools and equipment.
- Exposure to low dose radiation.

Job Description Rating Sheet

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JD #:	JD00289	Pay Grade:	7
JD Title:	Accelerator Technician	Total Points:	478
Job Family:	Technician		

Factor	Subfactor	Level Rating	Points
Skill	1. Applied Reasoning and Analytical Skills	5.0	105
	2. Breadth of Knowledge	2.0	13
	3. Adaptation to Change/Updating of Learning	2.0	12
	4. Interpersonal Skill	2.5	31
	5. Education and Experience	D8	72
	6. Dexterity and Coordination	3.0	21
Effort	7. Physical Effort	2.0	11
	8. Mental Effort	3.0	55
Responsibility	9. Planning and Coordination	2.0	28
	10. Responsibility for Others	2.0	33
	11. Accountability for Decisions Actions Affecting People, Assets, and Information	2.5	53
Working Conditions	12. Physical Environment	3.0	18
	13. Psychological Environment	2.0	10
	14. Health and Safety	2.0	16