

MICHIGAN CIVIL SERVICE COMMISSION
JOB SPECIFICATION

PHYSICIST

JOB DESCRIPTION

Employees in this job complete or oversee a variety of professional assignments for the protection of the public through regulation and inspection of facilities producing ionizing radiation or through planning and responding to radiological emergencies.

There are four classifications in this job.

Position Code Title - Physicist-E

Physicist 9

This is the entry level. As a trainee, the employee carries out a range of professional physicist assignments while learning the methods of the work.

Physicist 10

This is the intermediate level. The employee performs an expanding range of professional physicist assignments in a developing capacity.

Physicist P11

This is the experienced level. The employee performs a full range of professional physicist assignments in a full-functioning capacity. Considerable independent judgment is used to make decisions in carrying out assignments that have significant impact on services or programs. Guidelines may be available, but require adaptation or interpretation to determine appropriate courses of action.

Position Code Title - Physicist-A

Physicist 12

This is the advanced level. The employee may function as a lead worker or senior worker. At this level, employees are responsible for overseeing the work assignments of other professionals or have regular assignments which have been recognized by Civil Service as having significantly greater complexity than those assigned at the experienced level.

NOTE: Employees generally progress through this series to the experienced level based on satisfactory performance and possession of the required experience.

JOB DUTIES

NOTE: The job duties listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

Performs studies, examinations, and investigations of ionizing radiation uses in industry, medicine, educational institutions, and professional offices to determine radiation emission levels.

Conducts compliance inspections of radioactive material installations or x-ray installations to ensure that state and federal regulations are met.

Calibrates and operates special instruments such as ionizing radiation meters, neutron meters and scintillation counters.

Participates in conducting studies of x-ray installations to determine that x-ray machines meet regulations regarding radiation.

Consults with professional and technical personnel on structural changes, shielding factors and other engineering and scientific factors for facility construction and equipment use as it relates to radiation exposure of patients, occupational workers and the public.

Participates in studies in laboratories and other facilities utilizing radioactive isotopes.

Reviews and abstracts technical literature related to the work.

Participates in studies and procedures relating to licensing and registration.

Coordinates decontamination procedures in incidents involving radiological contamination.

May respond to radiological emergencies involving radioactive materials.

Participates in emergency response drills and exercises.

Assists in the technical training of staff, and informs the general public on radiation safety and regulatory requirements.

Maintains records and prepares reports and correspondence related to the work.

Performs related work as assigned.

Additional Job Duties

Physicist 12 (Lead Worker)

Oversees the work of professional staff by making and reviewing work assignments, establishing priorities, coordinating activities, and resolving related work problems.

Physicist 12 (Senior Worker)

Performs on a regular basis professional physicist assignments which are recognized by Civil Service as more complex than those assigned at the experienced level.

JOB QUALIFICATIONS

Knowledge, Skills, and Abilities

NOTE: Some knowledge in the area listed is required at the entry level, developing knowledge is required at the intermediate level, considerable knowledge is required at the experienced level, and thorough knowledge is required at the advanced level.

Knowledge of the principles of physics, including light, optics, color, electricity and electrical measures.

Knowledge of mathematics and the principles of chemistry.

Knowledge of atomic and nuclear physics.

Knowledge of radiation measuring devices.

Knowledge of laboratory equipment and techniques used in physical, psychophysical, and radiocounting measurements.

Knowledge of current literature in the field of physics.

Knowledge of local, state and federal regulations associated with the work.

Ability to setup and use laboratory equipment.

Ability to meet and discuss technical matters with other professionals.

Ability to assist in the development of new equipment and methods.

Ability to maintain records, prepare reports and correspondence related to the work.

Ability to communicate effectively with others.

Ability to maintain favorable public relations.

Additional Knowledge, Skills, and Abilities

Physicist 12 (Lead Worker)

Ability to organize and coordinate the work of others.

Ability to set priorities and assign work to other professionals.

Working Conditions

Some jobs require an employee to risk sustaining illness and injury from the exposure to ionizing radiation from x-ray machines, radioactive materials or contamination.

Physical Requirements

None

Education

Possession of a bachelor's degree or higher in physics or nuclear engineering.

Experience

Physicist 9

No specific type or amount is required.

Physicist 10

One year of professional experience equivalent to a Physicist 9.

Physicist P11

Two years of professional experience equivalent to a Physicist, including one year equivalent to a Physicist 10.

Physicist 12

Three years of professional experience equivalent to a Physicist, including one year equivalent to a Physicist P11.

Special Requirements, Licenses, and Certifications

None

NOTE: Equivalent combinations of education and experience that provide the required knowledge, skills, and abilities will be evaluated on an individual basis.

JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION

Job Code

PHYSICIST

Job Code Description

PHYSICIST

Position Title

Position Code

Pay Schedule

Physicist-E

PHYCISTE

H21-002

Physicist-A

PHYCISTA

H21-010

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