

Design Engineer (Structural)

Full-Time Indeterminate Position Engineering Office

About Us

SNOLAB is an international facility for world-class underground physics research and has an expanding program in astroparticle physics and underground science. Located in an air-conditioned clean room 2 km underground in the Vale Creighton Mine near Sudbury Ontario, with a suite of surface facilities and laboratories, SNOLAB is currently preparing for the next generation of experiments focusing on neutrino studies and the search for galactic dark matter.

The Position

The Design Engineer is responsible for the design and implementation of engineering projects such that they meet the needs of clients and stakeholders. Design Engineers actively make use of engineering tools and methods, applicable standards and legislation as well as collaboration with and input from cross-functional teams with diverse skill sets. The Engineering Office provides engineering services, including design, consulting, and project management, to both the SNOLAB facility, and to the experimental collaborations for experiments hosted at SNOLAB. The position will report to the Manager of the Engineering Office. The position includes, but is not limited to the following responsibilities:

- Develop, configure, and optimize mechanical systems including buildings, industrial structures, tanks, and foundations from inception through start up in accordance with engineering principles, regulation, best practices and client requirements.
- Evaluate structural designs against code and design standards including seismicity.
- Design and assess lifting systems, fall arrest, cranes, and below the hook devices, including specification of related equipment;





- Specify anchorage and seismic base isolation requirements for sensitive equipment;
- Provide on-site inspection and support for construction RFIs;
- Complete administrative records for receipt/cleaning and processing of articles entering the lab
- Travel to and work within the SNOLAB underground facility as needed.

Criteria

Education:

A degree in Civil or Structural Engineering (or related) with Ontario P.Eng.

Experience:

- Experience in steel, plain and reinforced concrete, and aluminum structural design including with the aid of 2D/3D CAD software;
- Experience with assessing design strength and determining mechanical performance (e.g., LFRD static & dynamic stresses, deflection, creep, fatigue), including through the use of FEA;
- Experience designing according to seismic criteria, assessing / specifying structural seismic performance of a system including response spectrum and non-linear time history analysis;
- Experience with design of anchorage for mechanical equipment (eg. pumps, chillers, fans, motors);
- Experience with various mechanical design standards and regulation (e.g., CSA S16, W59, A23, B167 and S157, ASME B30.20, CMAA 74, Ontario Building Code, Industrial Establishment Regulations, Mines and Mining Plant Regulations)
- Experience with design of bolted and welded connections, including seismic connections.

Salary Range

Salary will be determined by qualifications and experience and includes an attractive benefits package. Relocation assistance will be determined in accordance with SNOLAB policies. To meet operational needs, shift work may be required.





To Apply

All applications must be submitted to jobs@snolab.ca. Please do not fax or mail your applications. By applying to the e-mail address, your application becomes available to managers immediately. Interested candidates should include a cover letter and resume.

Closing Date

January 17, 2023

Applications will be accepted until **4:00 pm Eastern Time**.

SNOLAB thanks all applicants for their interest, however, only those candidates considered for an interview will be contacted.

SNOLAB is committed to equity in employment and encourage applications from all qualified applicants, including women, Indigenous persons, members of visible minorities and persons with disabilities. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

SNOLAB will provide support in its recruitment processes to applicants with disabilities, including accommodation that takes into account an applicant's accessibility needs.

Further information about SNOLAB may be found at www.snolab.ca

Posting Date: January 3, 2023



