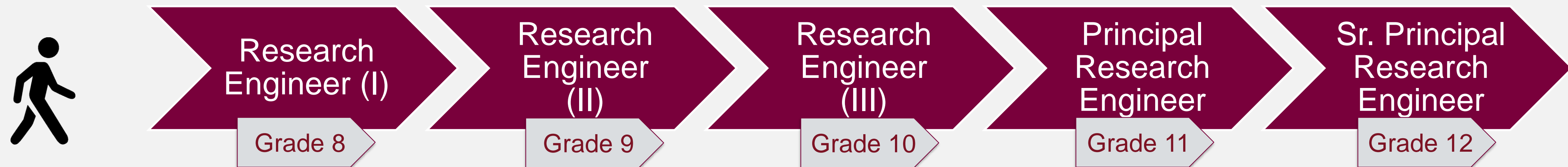


RESEARCH ENGINEER

Job Family Progression:

This document is meant to support Hiring Managers in identifying and outlining key differences in job duties, responsibilities and requirements as the jobs progress in the job family to easily identify and select the appropriate JD for their area.



Research Engineer Progression

Research Engineer I [JD0402]

JE Results

- Grade 8

Education and Experience

- Bachelors Degree in Engineering.
- 3 years experience.

Scope of Job

- Responsible for carrying out engineering assignments on research and contract projects under the supervision of a Principal Investigator or supervisor.
- Requires knowledge of standard engineering methods and techniques in a specialized engineering field or discipline.

Core Job Duties*

- Design, fabricate, and assemble equipment and instruments that require engineering techniques or modifications.
- Conduct standardized research experiments using specialized equipment and instruments.
- Analyze and solve a variety of engineering research problems as presented in the research project or contract.
- Collect, evaluate, and analyze data.
- May use a variety of engineering software programs to perform complex calculations.
- Write and adapt computer software required for, but not limited to, data collection, and mathematical and statistical analysis.
- Write sections of scientific reports and papers for inclusion in journal publications and contract reports.
- Format and summarize data and write technical reports based on research findings.
- Develop and deliver technical presentations to engineering colleagues, industry, and contract agencies.
- Provide advice in a specialized field to colleagues, collaborators, and students.
- Exchanges technical and scientific information with others.
- Liaise with external clients and project partners.
- May be required to perform activities which require dexterity and precision including, but not limited to, the manual calibration of laboratory equipment, and assembly of circuit boards.
- Recommend resource requirements and in consultation with supervisor will determine priorities in order to schedule work activities.
- Remain current with frequent advances in a technical field or scientific discipline.

Supervision

- No formal supervision of others is required.

Research Engineer II [JD0403]

JE Results

- Grade 9

Education and Experience

- Bachelors Degree in Engineering
- 3 years experience.

Scope of Job

- Under general direction, responsible for providing specialized engineering support in a specific engineering field or discipline for research and contract projects.

Core Job Duties*

- Analyze and solve new, unique, and complex problems as presented in research contracts and projects.
- Write and adapt computer software required for, but not limited to, design and modelling, in addition to data collection and mathematical and statistical analysis.
- Recommend and incorporate new approaches and methodologies into research.
- Participate in the management of the research project or contract by defining and coordinating resource needs, determining priorities to achieve project goals, and setting schedules that will meet defined deadlines.

Supervision

- Ensure adherence to quality standards and procedures for short-term staff and volunteers.

Research Engineer III [JD0404]

JE Results

- Grade 10

Education and Experience

- Master's degree in Engineering.
- 2 years experience.

Scope of Job

- Under general direction, responsible for providing specialized, highly-advanced, engineering services in a specific engineering field or discipline to design, develop, and coordinate research or contract projects. Provides significant technical depth and expertise.

Core Job Duties*

- Design, fabricate, and assemble equipment and instruments that require the identification, modification, and adaptation of novel engineering techniques.
- Apply specialized knowledge to review, critically appraise, and interpret published literature.
- Identify, analyze, and solve new, unique, and complex problems as presented in research contracts and projects.
- Design and develop computer software required for, but not limited to, data collection, design, modelling, and mathematical and statistical analysis.
- Assign and schedule work to others and review work for technical accuracy and adequacy.
- Provide financial and resource planning and tracking for research projects and contracts.

Supervision

- Ensure adherence to quality standards and procedures for short-term staff and volunteers.

Principal Research Engineer [JD0409]

JE Results

- Grade 11

Education and Experience

- Doctoral degree in Engineering
- 2 years experience.

Scope of Job

- Responsible for providing guidance and advice for multiple research projects and providing extensive, highly-specialized, engineering services in broad areas of assignments in order to design, develop, and oversee research and contract projects.

Core Job Duties*

- Develop and design research projects.
- Prepare and submit proposals to external funding and granting agencies.
- Manage multiple research projects by defining and coordinating resource needs, determining priorities to achieve project goals, and setting schedules that will meet defined deadlines.
- Apply standardized engineering principles and adapt methods from a specialized field or discipline.
- Author scientific reports and papers for inclusion in journal publications and contract reports.
- Present briefings to industry and to representatives of contracting agencies on the progress of the work that is being conducted to ensure the awarding of or continuing of additional funding.
- Obtain contracts to provide support for projects.

Supervision

- Ensure adherence to quality standards and procedures for short-term staff and volunteers.

Sr. Principal Research Engineer [JD0405]

JE Results

- Grade 12

Education and Experience

- Doctoral degree in Engineering
- 3 years experience.

Scope of Job

- Responsible for managing multiple research projects and providing extensive, highly-specialized, engineering services in broad areas of assignments in order to design, develop, and oversee research and contract projects.

Core Job Duties*

- *No change in duties from Principal Research Engineer*

Supervision

- Supervise and direct the activities of up to 4 continuing employees.

*Core job duties identified are in addition to the core job duties of the preceding roles/ levels.