

**Intern | Civil / Geotechnical Engineering  
Winter 2019 (January – April 2019)  
Montréal (Pointe-Claire), QC.**

**About FPInnovations**

FPInnovations is among the world's largest private, not-for-profit forest research centres. The organization helps the Canadian forest industry develop path-breaking solutions based on the unique features of Canada's forest resources, with a view to sustainable development and taking full advantage of the industry's considerable scientific, technological and commercial assets.

FPInnovations has a national Roads and Infrastructure research group composed of a team of researchers and technicians with offices in Vancouver and Montreal. The team provides road engineering solutions and value-added services to industrial members as well as to their federal and provincial government partners. Its research projects include the construction and maintenance of access roads and water crossings, the environmental impact of road infrastructure, the interaction between roads and heavy vehicles and road safety assessment, in addition to impacts and solutions to climate change on infrastructure.

**Project title**

Analysis of the impact of heavy loads on paved and unpaved roadways

**Project description**

The impact of heavy loads on roadways (paved and unpaved) can be significant, depending on the type of roadway, loads and environmental conditions. The project consists of modelling various types of loads and thereby estimating their impacts on the useful life of a roadway. The intern will assist the researchers/engineers in analysing and interpreting the results. As part of this internship, the student will acquire a good knowledge of the interaction between heavy loads, climate and roadways, models and concepts for pavement design, and analysis of roadway damage, weight and dimensions of heavy vehicles in several Canadian provinces as well as the impact of various tire sizes on roadways.

**Responsibilities**

- Acquire a basic knowledge of pavement design and modeling;
- Acquire a basic knowledge of weight and dimensions of certain heavy vehicles
- Carry out analyses and modelling;
- Prepare syntheses of results and present them to researchers;
- Interpret the results in collaboration with researchers;
- Contribute to the drafting of conclusions;

- The intern may be called upon to work on other projects of the Roads and Infrastructure team.

**Qualifications**

- The candidate must be enrolled in a Bachelor of Civil Engineering, Construction or Geotechnics program and have completed his or her 3rd year;
- Must have a 2.75 (B-) grade average or higher;
- Be eligible for the Experience NSERC award;
- Not have received an Experience NSERC award in the last reference year (period from April 1<sup>st</sup> 2018 to March 31<sup>st</sup> 2019);
- Be a Canadian citizen or permanent resident of Canada;
- Have an interest and/or experience in the field of road engineering (analysis, roadway design, soil and material engineering);
- Good verbal and written communication skills in French and English (an asset);
- Receptive to learning new skills;
- Ability to work effectively in a team environment;
- Knowledge of engineering software (e. g. CAD, Matlab) would be an asset;

**Please send your CV to the address below:**

[Recruitment\\_recrutement@fpinnovations.ca](mailto:Recruitment_recrutement@fpinnovations.ca)

**IMPORTANT NOTE: Please mention Reference no. 364 on the subject line.**