

# Building Cooling Load Prediction for Ventilative Cooling Control

Record number : OPR-161

## Overview

### RESEARCH DIRECTION

Dahai Qi, Professeur - Department of Civil and Building Engineering

### INFORMATION

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### ADMINISTRATIVE UNIT(S)

Faculté de génie  
Département de génie civil et de génie du bâtiment  
Département de génie mécanique

### LEVEL(S)

2e cycle

### LOCATION(S)

Campus principal

## Project Description

Ventilative cooling refers to the use of natural and/or mechanical ventilation strategies to cool indoor spaces. It has been proved to be an effective solution to reduce building cooling load and even be critical to realize renovated or new nearly zero-energy buildings (NZEB). Benefit from the cold climates, ventilative cooling is available for a long time annually in Canada, not only during the shoulder season, but also in summer. Accurate cooling load prediction is important for ventilative cooling control that can achieve maximum cooling-related energy savings and peak electricity demand reduction. The aim of this project is to develop a prediction model of building cooling load for ventilative cooling control. Data from real building will be used to develop and validate the prediction model.

## Discipline(s) by sector

Sciences naturelles et génie

Génie civil, Génie mécanique

## Funding offered

Yes

The last update was on 13 March 2024. The University reserves the right to modify its projects without notice.