

# Internship in microfabrication and advanced characterization for applications in optoelectronics

Record number : OPR-1102

## Overview

### RESEARCH DIRECTION

Gwenaëlle Hamon, Professeure -  
Department of Electrical and Computer  
Engineering

### INFORMATION

[gwenaelle.hamon@usherbrooke.ca](mailto:gwenaelle.hamon@usherbrooke.ca)

### ADMINISTRATIVE UNIT(S)

Faculté de génie  
Département de génie électrique et de  
génie informatique  
Institut interdisciplinaire d'innovation  
technologique (3IT)

### LEVEL(S)

1er cycle  
2e cycle  
3e cycle

### LOCATION(S)

3IT - Institut interdisciplinaire d'innovation  
technologique  
Campus de Sherbrooke

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## Project Description

Context :

The University of Sherbrooke, and particularly the Interdisciplinary Institute of Technological Innovation (3IT), has expertise in numerous cutting-edge fields of micro, nano, and optoelectronics. A 750 m<sup>2</sup> clean room, along with numerous specialized equipment, is available to research teams. Additionally, the 3IT hosts an international joint unit of the CNRS, the Laboratory of Nanotechnologies and Nanosystems (LN2), in partnership with several CNRS laboratories in France.

The internship work will be conducted within Professor Gwenaëlle Hamon's research group, which specializes in micro-fabrication processes and the characterization of optoelectronic devices such as solar panels, photodetectors, lasers, and more.

Main tasks :

Clean room work

Microfabrication including photolithography, plasma etching, thin film deposition etc.

Advanced characterization: SEM, AFM, profilometry, etc.

Electric measurements of optoelectronic devices

Weekly follow-up meetings with the research group

Your profile :

Ongoing master/engineering degree in physics, materials science, nanotechnology or a related field

Motivation to work in field of microelectronics and optoelectronics

Ability to work autonomously

Interpersonal skills and ability to work in a team with individuals from diverse backgrounds

Assets:

Knowledge of photonics, optoelectronics and semiconductor physics

Knowledge of microfabrication and advanced characterization methods

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This project can accommodate one or more students in the following programs :

- 3rd cycle research internship

- 2nd cycle research internship

- Undergraduate research internship

**Discipline(s) by  
sector**

**Funding offered**

To be discussed

**Sciences naturelles et génie**

Génie électrique et génie électronique

The last update was on 24 October 2025. The University reserves the right to modify its projects without notice.