

'396' Undergraduate Research Project Application Form

Version: 200603

Office for Undergraduate Research in Science
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Email: victor.chisholm@mcgill.ca Web: www.mcgill.ca/science/ours/

INSTRUCTIONS FOR STUDENTS

- **All fields are required, unless indicated otherwise.**
- Download and print this form. Complete Section C and sign.
- See "How students can apply" instructions in Section B.
- Your supervisor or department will tell you if you are selected for this project. If so, you will receive a code to register for a '396' course on MINERVA.

SECTION A: SUPERVISOR INFORMATION

Name: Peter Grütter & Matthieu Nannini **Email:** matthieu.nannini@mcgill.ca
Phone: 514-398-6536 **Website:** <http://miam.physics.mcgill.ca/Miam/microfab/>
Supervisor's Department or Unit: Physics – Nanotools Microfab **Course Number:** PHYS396

SECTION B: PROJECT INFORMATION

Term: Winter 2007 **Project start & end dates:** Wed, Jan 3, 2007 to Wed, Apr 11, 2007, ~ one day per week

Project title: Silicon Trench Etching

Project description: Being able to etch relatively deep trenches (5-10µm) in silicon crystal in an optimum and repeatable way is an important process to have in a MEMS dedicated microfabrication lab. The proposed project here deals with the optimization of such a process using our Applied Material P5000. This is a hands-on project that will give the student the opportunity to work with state-of-the-art tools in a cleanroom environment.

Prerequisites: 1 term completed at McGill + CGPA ≥ 3.0; or permission of instructor.

Grading scheme: Literature Survey and plan of action 10%, Final report 70%, Final presentation 20%

Other: ERB, microfabrication Lab.

Status: Mark with an x. **This project is...**
 Open to applicants
 Already taken; no more positions available this term
 Taken, but contact me for other possible projects this term

Ethics, safety, and training: Which of the following, if any, is involved? Mark with an x.
 Animal subjects
 Human subjects
 Biohazardous substances
 Radioactive materials
 Handling chemicals
 Using lasers

For undergraduate students, ethics and safety compliance is the supervisor's responsibility.

How students can apply: Send an email

SECTION C: STUDENT INFORMATION. (1) PRINT LEGIBLY AND SIGN. (2) SEE "HOW STUDENTS CAN APPLY" IN SECTION B.

Name: _____ **McGill ID:** _____
Email: _____@mail.mcgill.ca **Phone:** _____
Program: _____ (e.g., B.Sc. Maj. Chem. Minor Biology) **Level:** **(circle one)** U0 / U1 / U2 / U3
I have not applied for another 396 course in this term.
Student signature: _____ **Date:** _____

SECTION D: APPROVALS. (1) PRINT NAMES & SIGN. (2) NOTIFY OFFICE FOR UNDERGRADUATE RESEARCH IN SCIENCE. (3) GIVE STUDENT CODE TO REGISTER FOR COURSE ON MINERVA.

Supervisor: Peter Grütter **Date:** _____
Unit Chair, Director, or designate - I certify that this project conforms to departmental requirements for 396 courses. _____ **Date:** _____