NSERC USRA Summer Project 2
Development of circuitry for sensors to count cells in platelet rich blood plasmas
with Dr. Bonnie Gray

Project Description
The project is a joint project with a local stem cell company to separate platelets from whole blood, count, and concentrate them. Our group seeks to develop the cell counter portion of the device with high throughput of biological cells.

Student Contribution
The successful applicant will be expected to work closely with Dr. Gray and the doctoral student on the project to help develop the drive and read-out instrumentation and circuitry in order to test the device. The student will be challenged by the high throughput required, and development of instrumentation with high speed counting, as well as the small signals expected from small platelet cells.

Skills Needed:
The student should be in their third year or above with some combination of the following skills:
1. Biomedical stream students will be given preference.
2. Thesis students will be given preference.
3. Good grades in circuits classes.
4. Enthusiasm to learn new things and combine knowledge from disparate areas. We are looking for “hands on” people who like to tinker and play in the lab.

For your interview, please be prepared to discuss/demonstrate knowledge in one or more of these areas.