

### Intern Requirement

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|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No. of students required          | 1                                                                                                                                                                                                  |
| Preferred Discipline              | <ul style="list-style-type: none"><li>Electrical/Computer/Mechanical Engineering</li></ul>                                                                                                         |
| Prerequisites/<br>Skills Required | <ul style="list-style-type: none"><li>Experience with simple test &amp; measurement and/or data logging devices</li><li>Knowledge in simple hardware interfacing</li><li>Proficient in C</li></ul> |

### Project Details

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| Title                             | Energy Harvesting for Low Power Sensor Applications                                                                                                                                                                                                                                                                                                                                                          |
| Overview/Background               | The harvesting of energy from ambient energy sources (e.g. light, heat, kinetic energy) is an attractive alternative to the use of batteries. We would like to profile the operating characteristics of energy harvesting devices and explore their use with low power sensors and circuits. This will facilitate the building of environmentally friendly devices which can operate for extended periods.   |
| Objectives/Scope/<br>Deliverables | <ul style="list-style-type: none"><li>Study the operating characteristics of energy harvesting devices in a controlled (lab) environment</li><li>Study the devices in a realistic environment</li><li>Design a simple integrated prototype of an energy harvesting device with sensors and control/comms modules</li></ul> <p>Deliverables: research report detailing findings and integration procedure</p> |
| Project Duration                  | 2-4 months                                                                                                                                                                                                                                                                                                                                                                                                   |