ELE806 – Alternative Energy Systems

- **Course Outline**

  http://www.ee.ryerson.ca/undergraduate/dcd/ele806.html

- **Key Knowledge to Be Acquired**

  Fundamentals of wind energy systems, wind turbines, power converters, and wind generators; Control of fixed- and variable-speed wind energy systems with various wind generators, including squirrel cage induction generator, doubly fed induction generator, and synchronous generators. Fundamentals of photovoltaic (PV) arrays and power generation; Control of PV converters and maximum power point tracking.

- **Key Skills to Be Mastered**

  In-depth understanding of various practical wind and solar energy systems; Analytical skills for analysis of existing and future renewable energy systems; Simulation skills for effective design of commercial renewable energy products.

- **Potential Careers**

  Careers as R&D and applications engineer for development, design, manufacturing and application of wind and solar energy systems.

- **Potential Employers**

  General Electric, Rockwell Automation, IE Power, Satcom Power Systems, Honeywell Engines & Systems, Eaton Corp, Vestas, Enercon, RePower, ABB, Siemens, United Technologies.

- **Graduate Studies**

  Ryerson University, McGill University, University of Toronto, University of Waterloo, University of Western Ontario, University of British Columbia, and University of New Brunswick have strong graduate programs in power engineering and renewable energy systems.

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