COE818 - Advanced Computer Architecture

• **Course Outline**
  
  http://www.ee.ryerson.ca/undergraduate/dcd/coe818.html

• **Key Knowledge to Be Acquired**
  Understanding the microarchitecture of advanced processor, how to deal with pipeline hazards using dynamic dynamic scheduling, how to improve performance using: ILP, branch prediction, superscalar, VLIW and vector processors. Understand the cache coherency protocols and synchronization for multiprocessors.

• **Key Skills to Be Mastered**
  Performance evaluation of computer systems using analytical modeling, pipeline hazards analysis using dlx simulator and winmips simulator, cache miss rate calculation using dinero simulator.

• **Potential Careers**
  Hardware engineers, parallel processing, high performance ASIC design, performance optimization, embedded systems.

• **Potential Employers**
  Advanced Micro Devices, Intel, IBM, Microsoft, Motorola, HP, NEC, Sun Micro System, Research-in-Motion, Apple, NVIDIA, ALCATEL, SIEMENS, Honeywell and many more.

• **Graduate Studies**
  Carleton, Calgary, Ryerson, Toronto, Waterloo, UBC, McGill, etc., have strong graduate programs in computer engineering.