U N E N E

University Network of Excellence in Nuclear Engineering

UNENE Masters of Nuclear Engineering

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UNENE Masters of Engineering

- UNENE is an industry-university partnership which:
  - Supplies highly-qualified graduates
  - Supports nuclear research
  - Creates respected university-based experts

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Members

- Atomic Energy of Canada Limited
- Bruce Power
- Ontario Power Generation
- Canadian Nuclear Safety Commission
- CANDU Owners Group
- Nuclear Safety Solutions
- CAMECO
- McMaster University
- Queen's University
- University of Ontario Institute of Technology
- University of Saskatchewan
- University of Toronto
- University of Waterloo
- University of Western Ontario
- Ecole Polytechnique
- University of New Brunswick
- Royal Military College
- University of Guelph

The UNENE M.Eng.

- Course based:
  - 10 courses OR
  - 8 courses plus a project
  - 3 of the 10 courses can be Business Courses from Advanced Design and Manufacturing Institute (ADMI)
- Accredited by Ontario Council of Graduate Studies
  - Courses are graduate level in content & expectations
- Offered by McMaster, Waterloo, UOIT, Western and Queen's
- Geared to the working professional
  - Topics are relevant to your work
  - Scheduling recognizes you have a day job

Typical Courses

You MUST take the four core courses (in red)

- UN0802: Nuclear reactor analysis
- UN0801: Nuclear plant systems and operations
- UN0804: Nuclear reactor heat transport system design
- UN0803: Nuclear reactor safety design
- UN0603: Project management for nuclear engineering
- UN0901: Nuclear materials
- UN0805: Radiation health risks and benefits
- UN0702: Power plant thermodynamics
- UN0701: Engineering risk and reliability
- UN0601: Control, instrumentation and electrical systems in CANDU
- UN1001: Reactor chemistry and corrosion
- UN0902: Fuel management
- UN0602: Nuclear fuel waste management

New for 2010/11
Fuel

To Get In…

- Honours degree in engineering, science or mathematics
- Typically a B (75%) average depending on the admitting university
- Consideration of relevant work history and likelihood of success
- Takes at least a month

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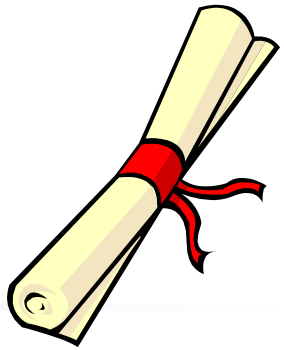
To Succeed…



- At least a B- (70%) for *each* course
- Finish in 5 years
  - Don't take more than one course at a time
- Respect Academic Integrity
  - Else you will fail the course and may be ejected from the programme
- Money: $2500 per course + incidental fees
  - Employer typically pays, if you get agreement beforehand!
  - You may be on the hook if you fail

How much time does it take?

- Lecture time typically 40 hours per course
  - To date, done on 4 alternate weekends in Whitby
  - Have successfully used Distance Learning tools for all courses for a year, for remote students
    - In real time; also recorded for later review
  - Your time: Double or triple that *in addition*
- Course Schedule: http://www.unene.ca/courses/schedule.htm
- Discipline refreshers now offered before key topics

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Can I Take Single Courses?

- You can take single courses
  - Admission requirements same
  - Cost is the same apart from the incidental fees
- Same for "official" auditing
- Informal auditing
  - Up to individual professor
- If you don't enroll in the M.Eng., your courses may or may not count if you try to transfer later

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Why Do It?

- Your own professional development
  - Broaden your horizons
- Recognition by the company
- Formal degree
- Career enhancement
  - Better candidate for internal competitions
  - Mentor all the new hires
  - Demonstrated capability for hard work, self-discipline, learning and self-motivation
  - Greater flexibility in job placement

What Do I Do Next?

- You need to submit your application
  - Transcripts (likely on critical path)
  - Letter
  - *Academic* References
- Apply on-line at https://gradapplication.mcmaster.ca/account/instructions.asp

  or similar links at Queens, Waterloo or Western

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For More Information

- UNENE: www.unene.ca
- Questions?
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  - Administrative: Lori Cole - unene@mcmaster.ca
  - ADMI – David Heaslip - dheaslip@admicanada.com
  - McMaster Grad. Studies - http://www.mcmaster.ca/graduate/applic.htm
  - Engineering Physics: engphys.mcmaster.ca