



**CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS
CONSEIL CANADIEN DES INGÉNIEURS**

**A Canadian Perspective on
Accreditation of Joint Degree Programs**

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J. O'Brien, M.A.Sc., P.Eng.
D. Wolfe, P.Eng.

Engineering in Canada

- A self-regulated profession
- 12 Associations/Ordre:
 - Established via provincial/territorial legislation
- >160,000 P.Eng.

Associations/Ordre: *Responsibilities*

- ✱ Right to title (exclusive scope of practice)
- ✱ Set standards for licensure
 - ✱ Education
 - ✱ Experience
 - ✱ Ethics and law
 - ✱ Good character
 - ✱ Communication skills
- ✱ Ensure compliance
- ✱ Take enforcement action



Canadian Council of Professional Engineers

- ✱ Federation of associations/ordre
- ✱ Represents profession nationally and internationally
- ✱ Prepares national criteria and guidelines
- ✱ Accredits undergraduate engineering programs: *Canadian Engineering Accreditation Board*



Canadian Engineering Accreditation Board (CEAB)

- Goals:
 - Quality assurance
 - Continuous improvement
- Develops criteria, processes, procedures
- Advises Associations/Ordre



Accreditation in Canada

- Identify undergraduate engineering programs that meet accreditation criteria
- Competence in engineering plus understanding of impact of engineering on society
- Based on principle of weakest link
- *Graduation from CEAB-accredited program means academic requirements for licensure are met*



Accreditation in Canada

- ✱ Criteria and Regulations
- ✱ Criteria – emphasis on:
 - ✱ Quality of students
 - ✱ Academic and support systems, staff and facilities
 - ✱ Quality and quantity of curriculum
- ✱ Regulations – assure equivalence of academic credit between institutions



Accreditation: *Credit Regulations*

- ✱ Date from 1995
- ✱ Initially developed to address:
 - ✱ Students with technology diplomas
 - ✱ Students transferring from non-engineering programs
 - ✱ Students participating in “bridging programs”
- ✱ Cover
 - ✱ Advanced Standing
 - ✱ Prior Studies
 - ✱ Transfer Credits
 - ✱ Exchange Programs

Accreditation: *Credit Regulations*

- ✿ Exchange studies:
 - ✿ Studies within a degree program, taken at another institution with which there are formal and systematic arrangements for recognition of academic credit
- ✿ Allow transnational exchange programs
- ✿ Students participating in exchange studies receive same degree as those studying exclusively at their home institution

Accreditation: *Credit Regulations*

- ✿ Institution must verify:
 - ✿ CEAB curriculum content criteria (CEAB Policy Statement Section 2.2) are met by all students
 - ✿ Quality of learning environment at the exchange institution conforms with CEAB Criterion 2.3.1:

Students	Laboratories
Faculty	Library
Support Staff	Computing Facilities
Administration	Other Supporting Facilities
 - ✿ Students have demonstrated competence in the courses for which credit is granted

Accreditation: *Credit Regulations*

- ✱ Quantitative curriculum content measured using “accreditation units”
 - ✱ 1 hour of lecture = 1 AU
 - ✱ 1 hour of tutorial/laboratory = 0.5 AU
- ✱ Minimum Total = 1800 AU
- ✱ Academic credit allowed for exchange studies:
 - ✱ Maximum 900 AUs at exchange institution
 - ✱ Minimum 225 AUs of Engineering Design in Canada
 - ✱ Minimum 600 AUs of Engineering Science plus Engineering Design in Canada

Accreditation: *Credit Regulations*

- ✱ Recently changed
 - ✱ Consultation with Deans
 - ✱ Proposed 6 year transition period
- ✱ Impetus
 - ✱ Increase in “bridging programs”
 - ✱ Increase in transnational degree programs
- ✱ Main issue – promoting innovation while assuring:
 - ✱ Quality of educational experience
 - ✱ Compliance with CEAB criteria



FOR MORE INFORMATION...

Tel: 613-232-2474
Fax: 613-230-5759
e-mail: ceab@ccpe.ca
Web: www.ccpe.ca