

EIT Information Session

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The EIT Information Session Objectives

- To define clearly the requirements and standards for professional registration with Engineers PEI
- To describe the process for transition from EIT to P.Eng.
- To describe the CBA system
- To provide examples that assist in the completion of the CBA entries



EIT Program Objectives

- Appropriate level of experience
- Demonstrate competencies
- Responsibility and accountability
- Protection of the public interest
- Ethics and professionalism
- Social and environmental awareness
- Working within capability limits
- Role of profession and responsibility to it



Professional Registration Requirements

- Academic qualifications (EIT)
- Engineering work experience (48 Months)
- Completion of CBA
- National Professional Practice Examination
- Continuing Professional Development
- Competency in English
- Residency in PEI
- One-year Canadian experience
- Three references, preferably professional



Registration Requirements

National Professional Practice Examination

- Examinations are online
 - Multiple choice questions, require good understanding of English
- The examination may be written after a minimum of 1 year of work experience
- It is designed to examine an applicant's knowledge of the ethical and legal requirements and obligations that accompany the privilege of professional status
- Information regarding the examination is supplied when an application is received



Registration Requirements

Continuing Professional Development

- Compliance is mandatory.
- Documented in the Professional Development Program Manual for Compliance
- Activity Summary only for the previous year to be submitted with EIT dues



Roles and Responsibilities

Experience Review Board

- To oversee the operation of the program
- To establish communications with the EIT
- To monitor the EIT's progress
- To conduct interim reviews for the competencies documented.



Engineering Qualifications Committee

- Has responsibility for assessing the qualifications of applicants for professional registration with Engineers PEI
- Reviews Competency Based Assessment results
- Interviews all applicants when experience, CBA and NPPE requirements met.
- Checks references
- Submits recommendations to Council



Competency Experience Reporting System

- Work experience is submitted, validated and assessed online through the Competency Experience Reporting System
- Currently used by:
 - **Student Members** and **EITs**: To keep track of their progress as they gain the necessary knowledge and experience
 - **Applicants**: To complete and submit their work experience details and Competency Self Assessment online.
 - **Validators** and **Assessors**

The EIT or applicant
completes Competency
Self-Assessment



The supervisor validates
their assigned
competency examples



The assessor reviews
the Competency
Self-Assessment and
makes a
recommendation



Competency Based Assessment

- Same system being used by:
 - Engineers and Geoscientists BC
 - Engineers PEI
 - Association on Professional Engineers and Geoscientists Saskatchewan
 - PEGNL
 - Engineers and Geoscientists Manitoba
 - Engineers and Geoscientists NB
- System designed to enable mobility
- Others planning to use
 - Engineers NS (2024)
- Similar System used by APEGA and OIQ
- PEO has similar system based on the Pan Canadian System .



What Is Competency-Based Assessment?

- Competencies are observable and measurable skills, knowledge, abilities required for professional registration
- Competency is a measure of ability, and thus examples of drawn from actual work experience are required to demonstrate it
- Demonstrated through the actions and behaviours of the applicant



Why we assess experience

- Prior to being granted a licence, you must demonstrate ability to practice engineering
- The onus is on the applicant to provide evidence that they possess, through experience, the capability to practice engineering at a professional level



Eligible experience

- All post-bachelors experience is eligible
- Up to 1 year of pre-grad
 - From after half of degree completed
 - Close professional oversight required



Eligible experience

- Up to 12 months for graduate studies:
 - 12 months for thesis-based Masters (M.Sc.) that is related to bachelor degree.
 - or
 - 12 months for PhD
- Enter graduate studies as a period of employment in the Employment History table



Eligible experience

- Engineering work while doing graduates studies including:
 - Teaching Assistant / Research Assistant work not related to your graduate degree
 - Concurrent employment outside the university setting
 - Entered as separate employment periods in the Employment History even though the time periods might overlap



Eligible experience

- Teaching of engineering
 - include the applicable content of what you taught in order to demonstrate a competency
 - include the name of the course you taught and details on the applicable part of the course that fulfills the competency and how that content is applied in a real-world situation (the outcome)



CBA Framework

- 34 competencies
 - 7 categories
 - 1 example required per competency chosen from any of your past experience
- Indicators for each competency - guidance on example content that will demonstrate the competency
- Rating scale 0-5
- Interim submission
- Final submission



Competency Categories

Category #	Category name	# of competencies
1	Technical competence	10
2	Communication	3
3	Project and financial management	5
4	Team effectiveness	2
5	Professional accountability	6
6	Social, economic, environmental and sustainability	5
7	Personal Continuing Professional Development	3



Competency Rating Scale

- 6 levels of competence (0-5)
- Minimum rating of 1 for each competency individually to pass it, plus:
- Minimum average of either 2 or 3 for each category, depending on the category and if part of Canadian Experience category.



Competency Categories – Min. Avg. Ratings

Category #	Category name	Min. Average
1	Technical competence	3
2	Communication	3
3	Project and financial management	2
4	Team effectiveness	3
5	Professional accountability	3
6	Social, economic, environmental and sustainability	2
7	Personal Continuing Professional Development	3



Competency Rating Scale

- Competency Rating Scale (condensed):
 - 0 – little or no exposure to the competency
 - 1 – general appreciation and awareness
 - 2 – knowledge and understanding of objectives, uses standard engineering methods, limited scope and complexity**
 - 3 – moderate scope and complexity**
 - 4 – responsible, varied assignments, working at a professional level
 - 5 – mature professional level, independent



Technical Competence

- 1.1 Demonstrate knowledge of regulations, codes, standards, and safety - this includes local engineering procedures and practices as applicable
- 1.2 Demonstrate knowledge of materials, or operations as appropriate, project and design constraints, design to best fit the purpose or service intended and address inter-disciplinary impacts.
- 1.3 Analyze technical risks and offer solutions to mitigate the risks
- 1.4 Apply engineering knowledge to design solutions
- 1.5 Be able to understand solution techniques and independently verify the results.
- 1.6 Safety awareness: be aware of safety risks inherent in the design; and Demonstrate Safety Awareness – on-site and possible safety authorization/certificate as appropriate
- 1.7 Demonstrate understanding of systems as well as of components of systems
- 1.8 Exposure to all stages of the process/project life cycle from concept and feasibility analysis through implementation
- 1.9 Understand the concept of quality control during design and construction including independent design check and independent reviews of design, field checks and reviews
- 1.10 Transfer design intentions to drawings and sketches; Understand transmittal of design information to design documents.

Indicators

Technical	<i>choice of:</i> <ul style="list-style-type: none"> • <i>Generic</i> • <i>Structural</i> • <i>Electrical - power and industrial</i> • <i>Civil - municipal/infrastructure</i> 	<ul style="list-style-type: none"> • <i>Project and construction management,</i> • <i>Materials, metallurgical and mineral processing</i> • <i>Software</i> • <i>Building enclosure</i>
Communication	<ul style="list-style-type: none"> • <i>Generic for all applicants</i> 	
Project and financial management	<ul style="list-style-type: none"> • <i>Generic for all applicants</i> 	
Team effectiveness	<ul style="list-style-type: none"> • <i>Generic for all applicants</i> 	
Professional accountability	<ul style="list-style-type: none"> • <i>Generic for all applicants</i> 	
Social, economic, environmental, and sustainability	<ul style="list-style-type: none"> • <i>Generic for all applicants</i> 	
Personal continuing professional development	<ul style="list-style-type: none"> • <i>Generic for all applicants</i> 	

Competency Example

- Technical competency 1.4:

“Apply engineering knowledge to design solutions.”

Indicators (for guidance only. Just one actual example required):

1. Prepare technical specifications
2. Demonstrate use of theory and calculations to arrive at solutions
3. Demonstrate the development of a unique design solution which could not be accomplished with a standard design solution

Note: the same project can be used several times for various competency examples



Competency Example Components

- Situation
 - A brief overview of a specific situation or problem
- Action
 - Actions taken in the situation, including engineering judgments made or solutions found.
 - Typically the longest portion, has most of the details
- Outcome
 - The impact that your actions, solutions or judgments generated



Key Competency 1.7**Required Overall Level: 3****Demonstrate understanding of systems as well as of components of systems.**

Indicators :

- Demonstrate an understanding of each element in a process.
- Demonstrate and understanding of the interactions and constraints in the behavior of the overall system.
- Manage processes within the overall system (monitor and, where needed, modify processes to achieve optimum outcomes).

Indicator Type

Generic

Employer *

Select an employer

Validator *

Select a validator

Position *

Start Date *

Select month



Select year

End Date

Select month

Select year

Situation * ?

Save as Draft

Save as Complete

Cancel

Situation * ?







Action * ?

Please be specific about your individual work and contributions - use of the word "I" is recommended. Point form is encouraged.

Outcome * ?



Competency Examples

Situation * ?	<div> </div> <p>I was responsible for the design of a section of system A, specifically section B of the system.</p>
Action * ?	<div> </div> <p>To complete this project while operating with the schedule, budget, and technical constraints, I took the following actions:</p> <ul style="list-style-type: none">• Designed components of the system (e.g. item a, item b, item c.) that were sufficient to meet the specified requirements for the system while staying within cost targets.• I specified system materials that met the imposed design constraints (e.g. constraint a, constraint b, constraint c, etc.) and were also available as to avoid delays.• I designed section B in compliance with internationally recognized (e.g. standard a) standards to ensure the design met requirement A and could be produced without excessive type A and B costs.• I consulted with the discipline B team to ensure that there was agreement regarding the final system component and its requirements.
Outcome * ?	<div> </div> <p>Section B was manufactured on time and on budget, in part due to my appropriate selection of materials and aspects A and B as well as my application of proper design techniques. Impacts on other disciplines were discussed in advance and there were no unanticipated effects.</p>

The eight Canadian environment competencies are:

- 1. Technical Category
 - 1.1. Regulations, Codes & Standards
 - 1.6 Safety Awareness
 - 1.9 Demonstrate Peer Review and Quality Control
- 2. Communication Category
 - 2.1 Oral Communication (in English)
 - 2.2 Writing (in English)
 - 2.3 Reading and Comprehension (in English)
- 5. Professional Accountability
 - 5.1 Code of Ethics
- 6. Social, Economic, Environmental & Sustainability
 - 6.2 Engineering and the Public



Validators

- Are normally the supervisors, whether they are P.Eng. or not
- With prior Engineers PEI approval, may also be colleagues, clients or consultants with first-hand knowledge of the work experience
 - At least one Validator must be a direct supervisor and share your discipline of practice
- A **minimum of four** individuals who verify and provide feedback on the experience.



Validators

- Minimum of two must be P.Eng.
- You need one Validator per competency
 - One Validator can verify multiple competencies
- Combined, the Validators' first-hand knowledge covers as much of the experience as possible but a minimum of 4 yrs must be covered



Validators

- Validators who verify specific competency examples **must have** direct personal and professional knowledge of that experience
- Some Validators may not be given specific competencies to verify but provide input in the overall feedback section only
 - For example, co-op work term or summer employment supervisors - allows them to comment on and confirm the experience during the co-op or summer work period



Validators

- Side note: Validator feedback will also serve as references for your P.Eng. application (3 required)
 - Include their names on your P.Eng. application (separate from the CBA system)
 - P.Eng. Validators from the CBA system will not be contacted again
 - P.Eng. references not included in your CBA submission will be emailed a reference form from Engineers PEI staff
- Ensure that you contact your validator prior to assigning them as a validator.



Online submission

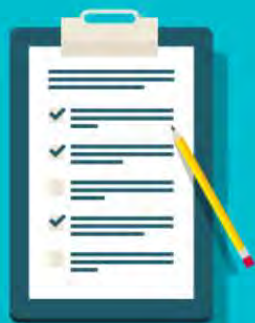
- “Engineering Competency Assessment System”
 - <https://competencyassessment.ca>
- Developed by Engineers & Geoscientists BC for use by other regulators in Canada
- Engineers PEI applicants managed directly by Engineers PEI (Eng&GeoBC is our software provider)
- Create an account, use Engineers PEI EIT number or **email address for student members**.
- Account is verified directly with Engineers PEI





Engineering and Geoscience Competency Assessment

This system is for professional registration or licensure applicants to record their progress in meeting the competency requirements for engineering or geoscience experience and have it validated and assessed.



Applicants



Validators



Assessors





COMPETENCY ASSESSMENT

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Applicants

Select your profession

[Engineering](#)[Geoscience](#)



COMPETENCY ASSESSMENT

Applicants

Select your profession

Engineering

Geoscience

Who can use the Competency Assessment System

On a regulator-specific basis, student members, engineers-in-training, engineering licensee applicants, and professional engineer applicants from the following participating jurisdictions are eligible to use the Competency Assessment System.

- Association of Professional Engineers and Geoscientists of Saskatchewan
- Engineers and Geoscientists BC
- Engineers and Geoscientists Manitoba
- Engineers PEI
- Professional Engineers and Geoscientists Newfoundland & Labrador

About the System

Applicants for professional registration or licensure use the system to record their progress in meeting the competency requirements for engineering experience and to have it validated and assessed. For additional information and guidance on the engineering assessment system, please download the Engineering Competency Assessment Guide.

Accessing the System

I need to create a new account

I am a registered user and would like to access the Competency Assessment System





COMPETENCY ASSESSMENT

[Home](#)[Login](#)

Create Account



ENGINEERS &
GEOSCIENTISTS
BRITISH COLUMBIA



EngineersPEI



A P E G G S

Association of Professional Engineers
& Geoscientists of Saskatchewan



ENGINEERS
GEOSCIENTISTS
MANITOBA



Interrater Reliability Pilot

engineerscanada
ingénieurscanada



PROFESSIONAL ENGINEERS
& GEOSCIENTISTS
NEWFOUNDLAND
& LABRADOR

ENGINEERS
GEOSCIENTISTS
Nouveau Brunswick



INGÉNIEURS
GÉOSCIENTIFIQUES
Nouveau Brunswick



PROFESSIONAL GEOSCIENTISTS ONTARIO



COMPETENCY ASSESSMENT

Create Account - Engineers PEI

Email *

☐

I'm not a robot



reCAPTCHA
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I Have a Code

Send Verification Code



Online Submission - Process

1. Engineer-in-Training enters employment history, validator info, competency examples, self-rating
 - When all done, selects “Submit”, validators receive automatic email with a link
2. Validators rate each example, provide comments and answer a set of additional feedback questions
 - Option to provide feedback and/or recommending edits
 - Cannot see other validator’s comments or ratings
3. Engineers PEI staff automatically notified that all entries are completed and validated, assigns Assessors
4. Assessors from Engineering Qualifications Committee (EQC) enter comments, ratings
 1. May ask for better examples.



Interim Submission

- At approximately the one year of experience mark (not including one year of pre-grad experience, if applicable)
- Benefits the applicant
 - Ensures acceptable experience (feedback from Experience Review Committee)
 - Ensures correct writing style and type of information required
 - **PREVENTS RE-SUBMISSIONS** – more likely if no interim submission done
 - Prevent delay in professional registration
- Benefits Validators and Assessors
 - **RE-SUBMISSIONS MEAN RE-WORK FOR VALIDATORS AND ASSESSORS**



Interim Submission – How To

- Complete a minimum of 3 competency entries, at least one of which is from Category 1 - Technical Competence
 - Do more than 3 if you wish
- The online system sends notice to the validator(s) that the completed competencies are ready for validation
 - The system allows for validator feedback to the EIT until there is agreement between the two of you
- EIT notifies Engineers PEI by email (info@engineerspei.com) that they have an interim submission ready. *NOTE: this step is not currently automatic in the system*



Interim Submission – What ifs

- If I have a better example for my final submission than the one I entered for my interim submission, can I redo that competency?
 - Yes. You would email Engineers PEI staff and tell us the specific competencies you want re-opened. Once complete, they would be sent for re-validation by the system as normal.
 - However, if you passed that competency already, it's not necessary to redo it even if you have a better example later.



Interim Submission – What ifs

- If I didn't do an interim submission at the one year mark, can I still do an interim submission any time after that?
 - Yes. An interim submission can still be done at any time prior to completing all of your competency entries to confirm you are writing them correctly
 - This also accommodates international graduates who come with more than 4 years of experience



Tips

- Be very specific in describing the work
- Identify your role – first person singular (“I” followed by action you took)
- Do not use general, vague statements that do not refer to specific projects and the work you did is not clearly stated
- If confidentiality of a project is required, substitute project names and locations with surrogate names (for example, Project X located in Town Q)



Tips

- DO NOT use words such as “assisted”, “involved with” or “participated” or similar general references to your work because these are not specific enough in identifying the work you did personally
- Point form is permitted



Sample Actions – not passed

- Determined (*who determined?*) the scope of proposed HVAC projects and estimated corresponding energy loads to confirm the projects were within existing system capacity and wouldn't cause negative effects from the technological point of view.
 - No specifics, no picture formed in the mind of the Assessor
- I installed (*probably not!*) various new facilities on diverse existing HVAC/boiler systems. Through these projects, I obtained hands-on work experience and solid background for my future engineering work.
 - No specifics, no picture formed in the mind of the Assessor
 - The last sentence is fluff, no contributory information



Competencies not passed – what happens

- Re-assessment by additional Assessors is automatic prior to the decision being confirmed
- Applicants always given the chance to re-submit
 - Details of the concerns are provided
 - Most often the applicant did an unacceptable job of reporting an acceptable example
- Upon assessment of the re-submission, either the competency is accepted or the applicant will have to use another example from other work experience or gain additional experience to satisfactorily complete a **Competency Category**



Role of Supervisor (Validator)

- Guides the development of the member-in-training into a technically capable professional
- Conveys understanding of the relationship with the employer/client, the professional Association and society
- Professional obligation to give fair and professional criticism when warranted (Code of Ethics)
- Be ethical, fair and impartial (even if there is a personality conflict)



Role of Supervisor (Validator)

- Employers are encouraged to offer a full range and progression in responsibilities, so experience and exposure is gained in all areas
- Submission review and sign off (via personal login)
- Include comments please! **Comments are not visible to the engineer-in-training**
- Suggestions for improvement are facilitated through the online system. Experience writing is a learning opportunity too



Role of Supervisor (Validator)

Comments might include things like:

- Confirms that examples are accurate (indicate if engineer-in-training's role was over-stated or under-stated)
- Level of guidance required (minimal, as expected, extensive)
- Extent to which engineer-in-training was responsible for producing the outcomes
- Complexity of the context with respect to typical work-related situations experienced by professional licensed engineers and geoscientists
- Consistency of engineer-in-training behaviour in the performance of their work, noting positive or negative trends



For full details on CBA:

- This presentation does not cover everything you need to know for a successful CBA submission.
- Refer to the *Competency Assessment Guide on www.egbc.ca* under:
<https://www.egbc.ca/Become-a-Member/Competency-Experience-Reporting-System>
- Engineering Competency Assessment System:
 - <https://competencyassessment.ca>



Applying for Professional Registration

- Forms can be found on our website
- Complete application when all of the validations in the CBA are complete and you have passed the NPPE.



EIT Forms

- Electronic versions of forms available on the Engineers PEI website under Publications/Engineers-in-Training.
- Applications and Study Material Request Forms for NPPE Exam can be obtained through the Association office or on the website:
www.engineerspei.com



Business Cards

The following is a guideline for correct wording of business cards for engineers.

Acceptable Business Card Formats

(People Registered or Enrolled with APEPEI):

Joe Smith P.Eng Senior Mechanical Engineer Some Company Some City, PE	Jane Smith, E.I.T. Junior Engineer Some Company Some City, PE
Joe Smith, B.Eng. P.Eng. Plant Engineer Some City, PE	

Rationale: - can only use “P.Eng.”, “E.I.T.” or “Engineer” if the person is registered or enrolled with APEPEI. However, an E.I.T. may not use the designation “Engineer” prefaced by a recognized engineering discipline but may do so with a description such as “Junior” provided the title “Engineer-in-Training” or “E.I.T.” is used at the same time.



Business Cards

Unacceptable Business Card Formats:

Joe Smith B.Eng. Senior Design Engineer Some Company Some Town, PE	Jane Smith, B.Eng. Junior Engineer Some Company Some City, PE
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***Rationale:** - can only use “Engineer” in the title if the person is registered as a “P.Eng.” or, subject to the provision above, enrolled as an “E.I.T.” with APEPEI*



NPPE Dates for 2024

- April 8 – 10, 2024 (registration deadline is February 16, 2024)
- June 3 – 5, 2024 (registration deadline is April 26, 2024)
- September 9 – 11, 2024 (registration deadline is July 12, 2024)
- November 18 – 20, 2024 (registration deadline is October 4, 2024)



Questions

