

PEO

Professional Engineers Ontario

Simcoe-Muskoka Chapter

July 10, 2019



Professional Engineers
Ontario



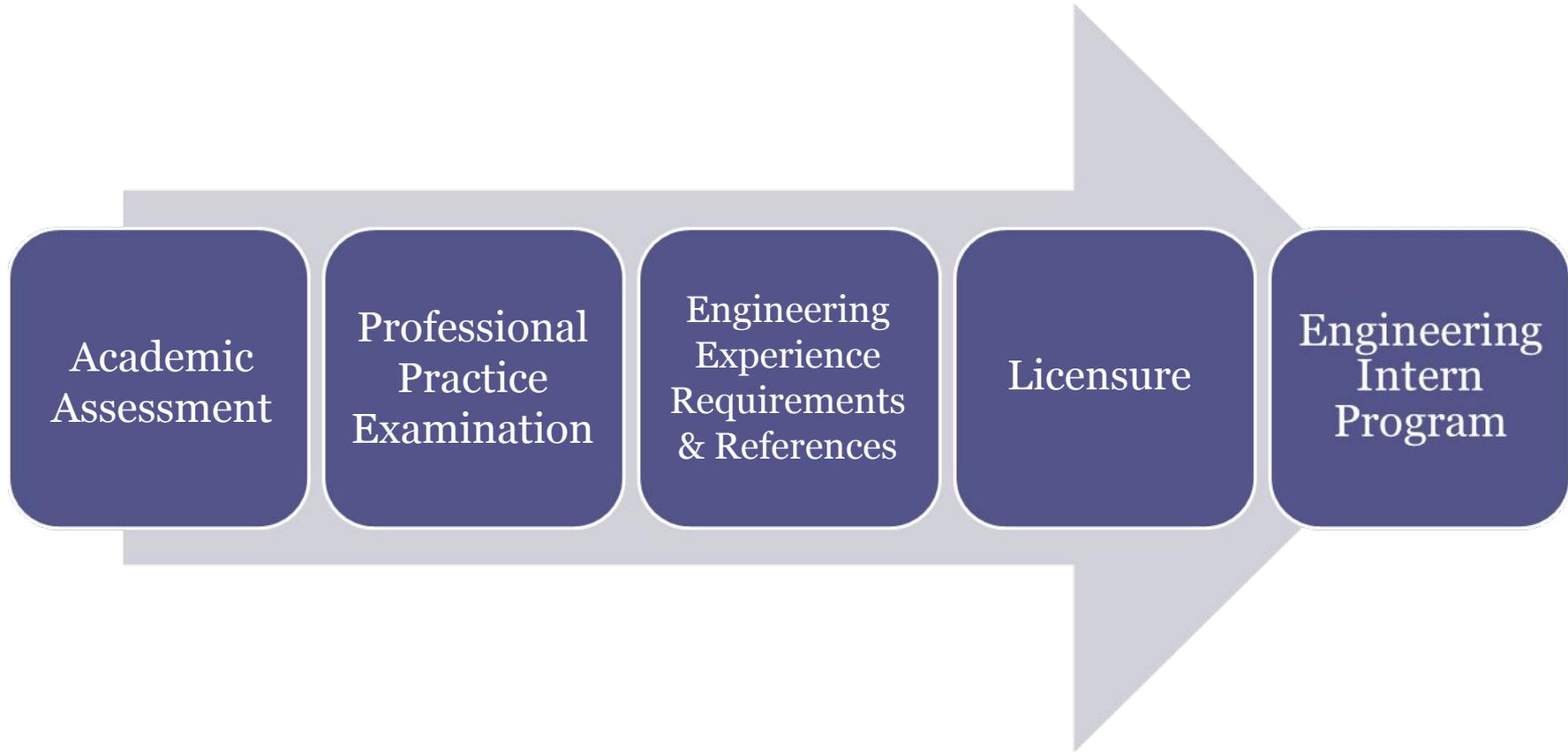
Professional Engineers
Ontario

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Academic
Assessment

Professional
Practice
Examination

Engineering
Experience
Requirements
& References

Licensure

Engineering
Intern
Program

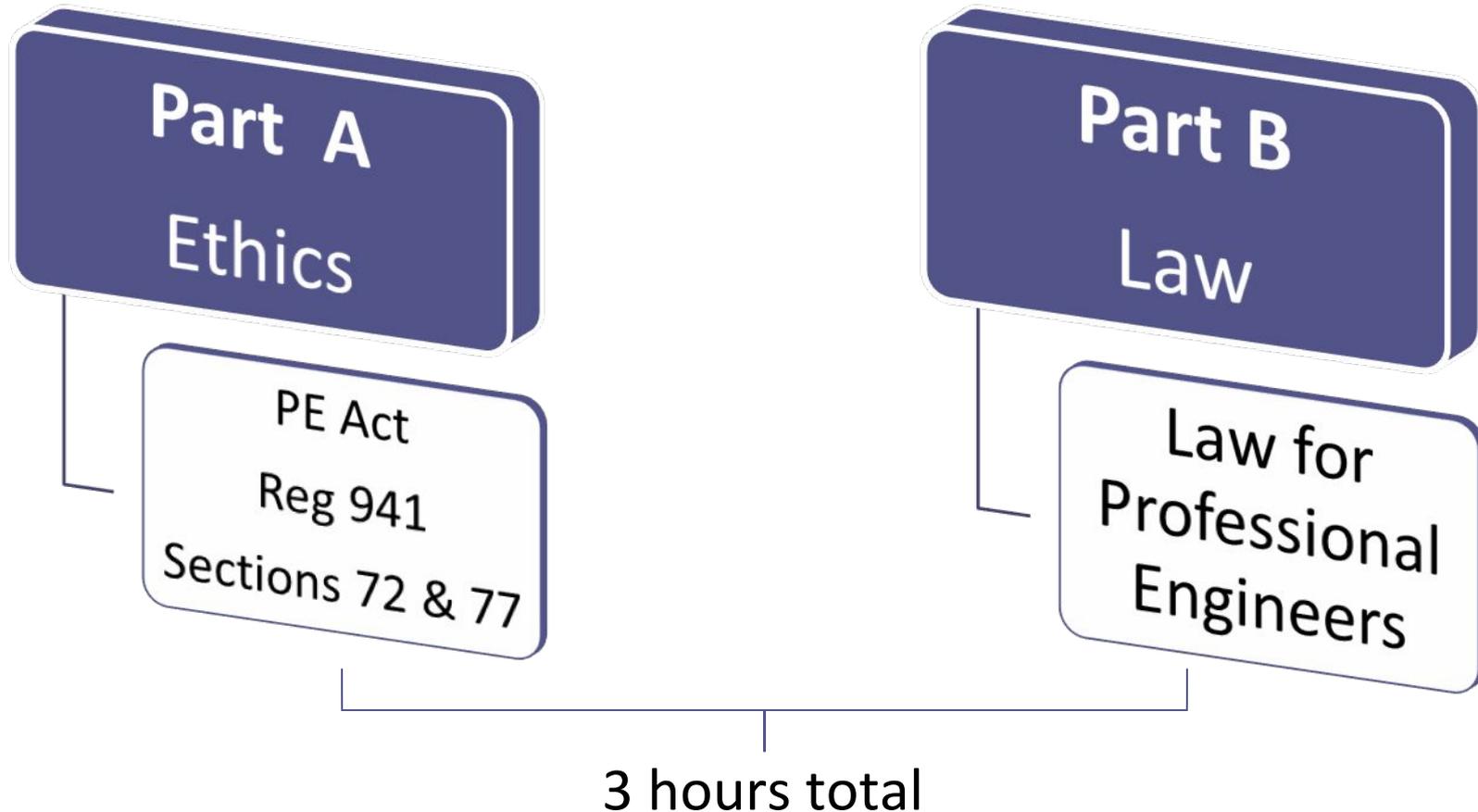


Licensing Requirements

- Acceptable engineering education
- Professional Practice Examination
- Good character (i.e. no criminal record)
- 48 months acceptable engineering experience (12 months must be within a Canadian jurisdiction)
- References (all direct supervisors & a minimum of one P.Eng.)



Professional Practice Examination



- April, August & December



Pre-Graduation Experience

- After completing 50% of course work
- Eligible for up to 12 months credit for co-op, summer engineering employment, etc.
- Complete Pre-graduation experience form is different than post graduate experience
- Not eligible for the required 12 months of Canadian jurisdictional experience
- Related to undergrad program



Engineering Master's or PhD

- Completed degrees - 12 months experience
- Same discipline or closely related to your bachelor of engineering degree
- Only one degree applies
- Additional experience for industrially applied research work. Up to 6 months for master's degree and 12 months for doctoral degree
- Not eligible for the required 12 months of Canadian jurisdictional experience



Acceptable Engineering Experience

5 Required Elements:

- **Application of Theory**
- **Practical Experience**
- **Management of Engineering**
- **Communication Skills**
- **Social Implications of Engineering**



Application of Theory

- Link your academic knowledge to your work referring to specific engineering principles:
 - Planning, designing, composing, evaluating, advising, reporting, directing, supervising, etc.
- When performing your work, what engineering principles did you apply in order to perform such work?



Practical Experience

- Link your work to limitations and/or restrictions referring to real world considerations:
 - Production parameters; Manufacturing tolerances; Relationship between product and equipment; Workflow; Schedule/Budget obstacles; Codes; Standards; Regulations; Etc.
- What considerations did you have to make due to real world conditions and how did these considerations impact/affect your engineering work?



Management of Engineering

- Describe which management of engineering tools you used and how you used them:
 - Scheduling; Budgeting; Planning; Pricing; Crew Supervision; Quality Assurance/Control; Project Control; Risk Assessment; Etc.
- Identifying restrictions, establishing interactions and evaluating alternative methods when performing your work is an asset.



Communication Skills

Describe how you communicate your work:

- Written work
 - Correspondence design briefs; Technical reports - recommendation, inspection, etc.
- Oral Reports
 - Coworkers; Supervisors; Senior management; Clients, Regulatory authorities; Etc.
- How do you report your work?



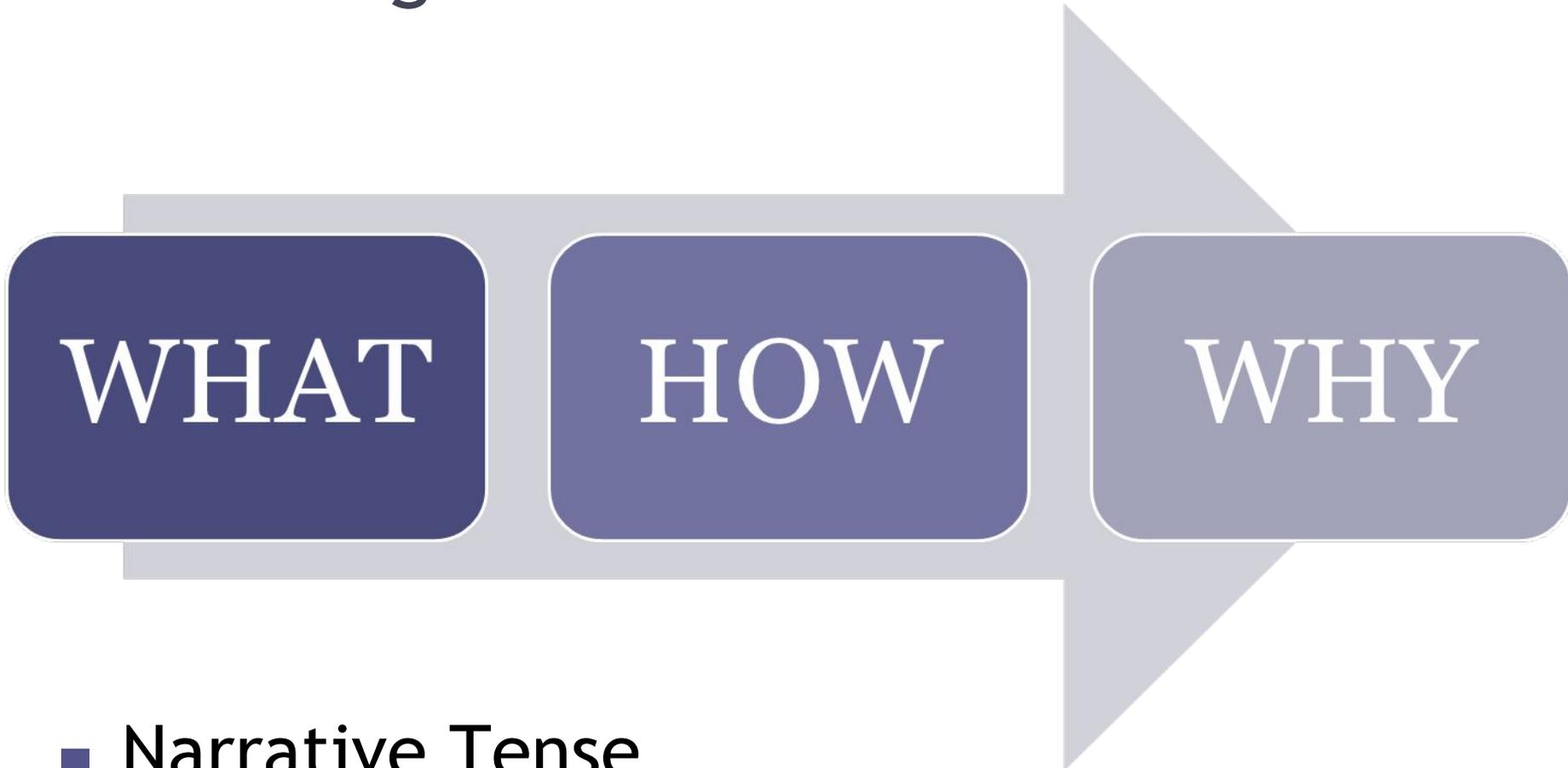
Social Implications of Engineering

Link the work you have done towards the Public:

- Potential effects, both positive and negative
- Relationship between your Engineering work and the Public
- Does your work bring value/benefit to the Public?
- **Public safety is paramount**



Describing Your Work



- Narrative Tense



Describing Your Work

■ Application of Theory

- (WHAT) I calculated the super-elevation (E_a) of a track horizontal curve;
- (HOW) Using the theory of centrifugal force principle;
- (WHY) In order to provide comfort to passengers in my **design**.

■ Practical Experience

- Due to property limits (**limitation**), I had to decrease the curve radius and lower the operating speed (**impact/affect**) in order to comply with E_a AREMA standards (**restrictions**).



Describing Your Work

- **Management of Engineering**
 - I was responsible for **budgeting** the materials according to my design.

- **Communication Skills**
 - I presented the budget **spreadsheets** as well as an **oral update** of my work progress in our bi-weekly design meeting to my manager.

- **Social Implications of Engineering**
 - Passenger comfort is a crucial element of the design in order to provide the passenger with a **safe commute** throughout its trajectory.



EXPERIENCE RECORD FORM

Current Date: _____

Name: _____	File: _____
Telephone (H): (____) _____	Email Address (H): _____
Telephone (B): (____) _____	Email Address (B): _____

ENGINEERING EXPERIENCE SUMMARY	
Company Name and Address (include Country)	
Length of Employment Start date (mm, yyyy) to end date (mm, yyyy)	
Position Title	
Job Responsibilities and Engineering Duties	
<i>Provide a brief description of your engineering duties.</i>	
Application of Theory	
<i>Describe how you have applied engineering fundamentals in analysis, design, synthesis, testing methods, implementation methods.</i>	
Practical Experience	
<i>Describe your practical engineering experience in relation to the function of components as part of a larger system, limitations of practical engineering, significance of time in the engineering process, knowledge and understanding of codes, standards, regulations and laws</i>	
Management of Engineering	
<i>Describe situations involving planning, scheduling, budgeting, supervision, project control, risk assessment.</i>	
Communication Skills	
<i>Describe how you communicated your engineering ideas through written work, oral presentations, presentations to the general public.</i>	
Knowledge of the Social Implications of Engineering	
<i>Describe situations involving the benefits of the engineering work to the public, safeguards, the relationship between the engineering activity and the public, the role of regulatory agencies.</i>	



Staff Referral Interview

Required only when experience:

- **Doubtful**: cross discipline, selling/ marketing, patent, teaching, researching, project management, supervision, quality related work ... etc.
- **Improper**: technician, technologist, work that does not require application of engineering principles



Referee Requirements

- Need your direct supervisor from each employer (job) covering the time of employment.
- **Minimum legal requirement:** one P. Eng. **sufficiently familiar** with your work for 12 months of Canadian experience.
- **Ideal goal:** one direct P. Eng. supervisor plus another P. Eng. familiar with your work, per place of employment, over the entire 48 months.



EIT Program

- Annual Interim Review of work experience
- Use of EIT title for business cards and resumes
- Inclusion in PEO members directory
- Access to Engineering Dimensions magazine
- Participate in local Chapter's Events;
- Participate in EIT's seminars/webinars
- LAP Program (not all chapters)



PEO Contacts

- Admissions Representative: file status, address changes, etc.
- Exam Centre: PPE & technical exams
 - exams@peo.on.ca
- EIT Unit: quality of experience requirements, annual experience reviews & template, general questions
 - eit@peo.on.ca
- Finance: fees
 - financialservices@peo.on.ca



THANK YOU!

Q & A

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Licensure Assistance Program (LAP)



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Licensure Assistance Program (LAP): Background

2009

- Council approval and implementation

2010

- Pilot Program – 5 Chapters

2011

- Phase II – 16 Chapters

2013

- Phase III – open to all Chapters

Present

- Approximately 20 Chapters



Participating Chapters (2019)

Upcoming Orientations	In-progress	Potential Start	Completed
Toronto-Humber (8)	Kingston (3)	Kingsway	Ottawa (7)
York (9)	Windsor (4)		Lake Ontario (2)
	Grand River (5)		Hamilton (4)
	Brampton (5)		Mississauga (7)
	East Toronto (5)		Chatham (1)
	Oakville (9)		Peterborough (1)
	Willowdale (7)		Sudbury (2)
			Lakehead (1)
			Scarborough (6)
			London (4)
			Simcoe-Muskoka (4)

*(#) – Round number



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Licensure Assistance Program Overview

- Program Purpose:
 - Links P.Eng. (Guide) with EIT (Intern) to help support and guide EITs through the licensing process
- Chapter initiative
- PEO funded
- Training and closing events
- Resources provided
- 6 month terms
- Limitations and expectations





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Program Expectations and Limitations

- 6 month relationship
- Meet for a minimum of 2 hours/month
- Confidentiality
- Come prepared & provide feedback



Guides provide assistance throughout the licensing process



Guides are not expected to help interns find a job



Guides are not expected to act as a monitor/referee



LAP Program Steps

- The Chapter establishes the program
 - LAP Director (P.Eng.) and/or 'team' to lead the Program
 - Develop a budget and work plan for the 6 month round
 - Commit to 6 month Guide/Intern relationship
 - Chapter members to apply online
 - Match the applicants through the LAP software & host the program training session



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LAP Program Events

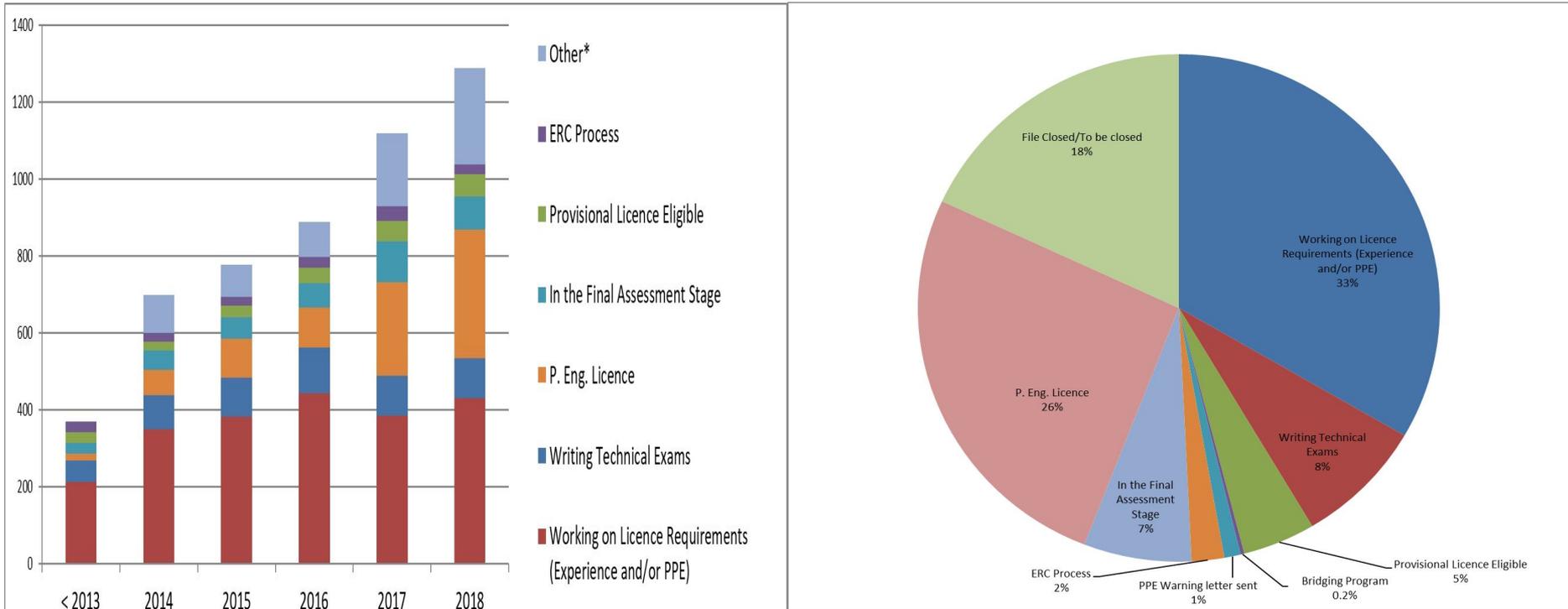
- Training Session
 - Conducted by the EIT department at PEO
 - Participants receive handbooks and meet their match
 - Exercises and tips on developing relationship
- Appreciation Event
 - At conclusion of 6 month relationship
 - Recognizes guides
- Next steps
 - Start the next 6 month round





LAP Statistics 2019

- Total participants that have gone through the program since 2011: ~1288



*Other includes: those in Internationally Educated Engineers Qualification Bridging (IEEQB) Program (Ryerson), file to be closed/file closed.



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EIT, SMP and LAP Program Contact

- Have any questions?
- Contact:
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 - 416-840-1107 / 1-800-339-3716 ext. 1107