

April 2022

Registration Data Report

Engineers Geoscientists Manitoba



Fair Registration Practices Office

Manitoba 

Contents

Executive Summary	1
Glossary of Terms	2
Introduction.....	5
Overview of Assessment and Registration Process.....	6
Legislation.....	6
Qualification Requirements	6
Steps to Registration	6
Registration Time and Costs.....	9
Registration Process Map.....	10
Immigration Statistics.....	11
Registration Data.....	12
Context – Reading the Numbers	12
Applications 2011 to 2020.....	13
Registration Outcomes 2011 to 2020	15
IEA to DA Registration Outcome Comparison 2012 to 2020.....	20
Registration Timelines 2011 to 2020.....	24
Trends.....	28
Data Collection Moving Forward.....	33

Executive Summary

This report presents registration data of Engineers Geoscientists Manitoba (EGM) from 2011 to 2020. The Fair Registration Practices Office (FRPO) issues this report as part of the office's mandate and oversight responsibility under The Fair Registration Practices in Regulated Professions Act. Its purpose is to provide a statistical picture of application, assessment and registration outcomes for internationally educated applicants to EGM over the last decade.

From 2011 to 2020, EGM's registration data indicates a relatively even split between internationally educated (2,103) and domestically educated (2,062) applicants. The majority of IEA applications were from internationally educated engineers, with only two per cent from internationally educated geoscientists. Regarding IEA country of education, India and Philippines accounted for 38 per cent of applications.

Sixteen per cent (333/2,103) of IEAs who applied in the 2011 to 2020 reporting period, registered. As registration timelines can take several years, a significant number of future registrations, beyond 2020, are expected from this group and could easily double this registration percentage figure. Registration rates were much higher, 35 per cent, for those deemed academically qualified upon application, compared to those deemed as needing to confirm academic qualification, 10 per cent. The registration rate for domestic applicants (DAs) was 31 per cent.

Few IEAs are screened as unqualified from EGM's assessment and registration process. The relatively low registration rate for IEAs is due mostly to the number of IEAs not pursuing or delaying pursuing steps required for registration.

For IEAs achieving registration, the median time to do so was about three years; median time to provisional registration was just over a year. Breaking this group down, the median time to registration for those deemed academically qualified upon initial application was significantly shorter than for those needing to confirm academic qualification: 2.3 years versus 4.1 years.

Regarding IEA trends in applications, outcomes and timelines throughout the reporting period, applications remained relatively stable with a drop in 2020. There is no clear or marked trend to changing timelines or outcomes. There is some evidence of the positive impact of the US Fundamentals in Engineering Exam as a new pathway option to academic qualification.

The quality of registration data collected for the 2011 to 2020 period is strong. EGM's IEA data illustrates the key timelines and outcomes throughout the process.

FRPO is grateful to EGM for their work with the office over this 10-year period and their commitment to continuously improving data reporting.

Glossary of Terms

This glossary defines key terms used throughout the report to help ensure understanding of the findings presented. For consistency, certain terms are used across professions even though regulators may use other operational terms. For example, ‘provisional registration’ is used in reference to any temporary or conditional registration that enables some form of practice or title representation. Manitoba regulators use a variety of terms ‘member-in-training’, ‘graduate nurse’, ‘exam candidate’, ‘intern’, etc. that signify different types of provisional registration.

Domestic Applicant (DA)

An individual with Canadian education, or current Canadian registration, applying for registration with a Manitoba regulator. With regard to labour mobility applicants, this may include internationally educated applicants.

Internationally Educated Applicant (IEA)

An individual educated outside of Canada applying for registration with a Manitoba regulator. This may include Canadians educated outside of Canada.

National Occupational Classification Number (NOC #)

The federal government’s system of classifying and describing the occupations in the Canadian economy. In this report, NOC numbers are used in the presentation of immigration data. When an individual applies to immigrate to Canada, they self-identify by NOC number. Some professions have a unique NOC assigned to them, while others share a NOC with one or more other professions. Where this is the case, it is outlined in the report.

Provisional Registration

Temporary or conditional registration that enables some form of practice or title representation. In some professions, this is granted to applicants who substantially meet a regulator’s registration requirements, allowing them to complete a period of approved supervised practice. Not all Manitoba regulators offer provisional registration and terms used vary.

Provisionally Registered Applicant

An applicant who successfully completes the requirements to be granted a temporary or conditional registration.

Registration

The licensing or certification process whereby applicants acquire legally sanctioned professional recognition with the authority to practise and/or use a designated protected title within a jurisdiction.

Registered Applicant

An applicant who successfully completes the licensing or certification process, meeting all requirements necessary to be entered onto a register of members maintained by a regulatory body.

Data Collection Terms

Completed Application

An application for which all documents and fees needed for an initial assessment decision are submitted. The completed application date marks the start of an applicant's registration process. This may occur with the Manitoba regulator or a national third-party responsible for the first stages of the assessment process. Additional requirements and documents may be needed at later stages of the assessment and registration process.

Applicant File (Internationally Educated Applicants)

When an individual applies to a Manitoba regulator, a file is opened and data specific to that individual is collected on key steps in the profession's registration process. Each IEA has one 'applicant file' regardless of the number of times they apply or the number of years their file is in process.

Closed File

An applicant file that is no longer active. When an applicant is no longer pursuing the registration process — they have either withdrawn from the process or have been deemed ineligible to pursue or continue to pursue the process — their file is 'closed'.

This term is **not** used to refer to files of applicants who have been registered.

Resolved File

An applicant file that is no longer active. A file is considered 'resolved' when the applicant has withdrawn from the process, been denied or been registered.

Withdrawal

A reason provided for a closed file. Applicants who stop pursuing registration despite eligibility to continue are considered 'withdrawals'.

Denial

A reason provided for a closed file. Applicants who are deemed ineligible to continue to pursue registration.

In Process (Unresolved) File

An applicant file that is active. The file remains open while the applicant continues to pursue registration. 'In process' applicants may or may not be provisionally registered.

Initial Assessment

The decision made upon review of documents and other requirements submitted at application. The initial assessment is conducted either by the Manitoba regulator or by a designated third-party assessor. In most cases, this initial assessment determines whether an applicant is eligible (or approved) to pursue the registration process.

Pre-Arrival

Before immigrating to Canada.

Post-Arrival

After immigrating to Canada.

Registration Timelines

The time it takes an applicant to complete the registration process. The start of the process is marked by the date of submission of a completed application to either the Manitoba regulator or the regulator's designated third-party assessor and the end of the process is marked by the date of provisional registration or registration.

Registration Rates and Ratios

For professions with IEAs still in process at the end of the reporting period, determining a precise registration rate is not possible. Where this is the case, the IEA registration rate among resolved files (closed and registered) and registration to application ratios are provided as **indicators** of a profession's registration rate. As individual data is not collected, only registration to application ratios can be provided for DAs.

Registration Rate

Percentage of applicants who apply in a given period and go on to register.

Registration to Application Ratio

Number of registrations
÷
Number of applications in a given year or period

Resolved Registration Rate

Number of registrations
÷
Number of resolved files in a given year or period

Late period Registration to Application Ratio

Number of registrations, 2016 to 2020, of individuals applying between 2011 to 2020
÷
Number of applications made between 2016 and 2020

Introduction

The Fair Registration Practices Office's (FRPO) registration data report on Engineers Geoscientists Manitoba (EGM) is issued under FRPO's responsibility under section 14(2b) of The Fair Registration Practices in Regulated Professions Amendment Act (Act) to conduct research and analysis regarding the registration of internationally educated applicants.

EGM supplies registration data to the FRPO (formerly the Office of the Manitoba Fairness Commissioner) as an obligation under The Fair Registration Practices in Regulated Professions Amendment Act (sec. 15(2)). Each year, EGM provides records on the key steps in the assessment and registration process for internationally educated applicants (IEAs), and less detailed, aggregate application and outcome information for domestic applicants (DAs). EGM began providing data in 2011.

This report presents 2011 to 2020 assessment and registration data for IEAs on applications, assessment outcomes, timelines and trends, together with aggregate DA data.

Facts and figures in this report are accompanied by analysis and contextual remarks to help make sense of the data and provide a coherent, statistical picture. Values less than five and that risk disclosing personal information are redacted and indicated by the '■' symbol. A process map and step-by-step overview of the assessment and registration process precedes the data presentation.

The report is restricted to developing a fact-based, statistical picture. There is no discussion of fairness issues or matters of compliance to fairness duties under the Act. An evaluation of the quality of data collection is provided and where it is incomplete, opportunities for improvement are identified.

Overview of Assessment and Registration Process

The following section provides a step-by-step overview of Engineers Geoscientists Manitoba's (EGM) assessment and registration process. It is intended to give the reader an understanding of the key requirements and the order of the process to help make sense of the registration data. This information is current as of February 2022. However, complete information is not provided and policies and fees are subject to change. Visit [Engineers Geoscientists Manitoba](#) for detailed information.

Legislation

The Association of Professional Engineers and Geoscientists of the Province of Manitoba (Association) operates under the authority of The Engineering and Geoscientific Professions Act, C.C.S.M. c. E120. In 2015, the Association adopted a new working name, Engineers Geoscientists Manitoba. In this report, the Association is referred to by its working name, Engineers Geoscientists Manitoba or EGM.

All engineers and geoscientists practicing engineering or geoscience and using the Professional Engineer or Professional Geoscientist (P.Eng. or P.Geo.) designation in Manitoba must be registered with Engineers Geoscientists Manitoba. Engineering and geoscientific work can be practiced without registration with Engineers Geoscientists Manitoba, provided this work occurs under the supervision of a P.Eng. or P.Geo. and the legal responsibility for this work is assumed by a P.Eng. or P.Geo..

Qualification Requirements

To qualify for registration as a P.Eng. or P.Geo., applicants must have appropriate academic training, significant work experience and meet professionalism requirements. EGM's registration process involves establishing academic qualification, meeting work experience requirements and passing the national Professional Practice Exam.

Steps to Registration

Step 1: Establishing Academic Qualification

Applicants must complete an application for registration and submit the following documents:

- World Education Services (WES) document-by-document International Credential Evaluation Package (ICAP). The applicant must pay a \$150 fee and arrange the direct submission of academic degrees and transcripts from the applicant's academic program(s) to WES
- if available, engineering report or thesis (engineers only)
- proof of English language proficiency
- resume
- \$440 assessment fee
- proof of identification

For engineering applicants, EGM conducts the assessment of international degrees using the extensive database of international engineering programs held by Engineers Canada. Academic programs are assessed in terms of their equivalency to the Canadian standard as defined by Engineers Canada. For geoscientists, academic programs are assessed against syllabi developed by Geoscientists Canada in collaboration with provincial regulators. For both professions, graduate and related degrees are assessed by EGM's Academic Review Committee.

International academic training is assessed as either confirmed equivalent to the Canadian standard, partially confirmed or not appropriate. In the case of partial confirmation, applicants are assigned up to six exams where they must demonstrate equivalence in two areas of the standard where the applicant identifies their expertise.

There are three types of confirmatory exams assigned:

- Basic exams, which test for fundamental knowledge in geosciences and engineering
- Discipline specific exams, which evaluate more advanced, specialised knowledge
- Complementary exams, which focus on Canadian professional practice knowledge

Depending on the outcome of their assessment, internationally educated engineers and geoscientists (IEEGs) choose which particular exams they will write from an assigned number in each group of basic, discipline specific or complementary exams.

For IEEGs who are assigned exams, there are several options to meet the academic qualification:

- Canadian Engineering Qualification Board (CEQB) Exams — Applicants take CEQB national exams, offered twice a year in Manitoba.
- University Courses — Upon EGM's approval, applicants can take courses at the University of Manitoba in lieu of exams. For any one assigned exam, two or three university courses are required.
- University of Manitoba's Internationally Educated Engineers Qualification Program (IEEQ) — a 12 to 24 month gap training program that involves completing senior-level engineering courses in the applicant's discipline and a paid co-op work experience. This option is for engineers only.
- Interview — Applicants with Engineering or Geoscience degrees who have over ten years of current and qualifying work experience can request to be interviewed for the purpose of waiving some or all assigned exams.
- Master's or PhD — Applicants successfully complete a post-graduate engineering degree at a CEAB accredited institution.
- Fundamentals of Engineering Exam (FE Exam) — offered since August 2015, and available for engineering applicants only. IEEGs with six or fewer exams assigned by EGM may write the US based FE Exam as an alternative to writing separate confirmatory exams. The exam can be written in Winnipeg.

After successful completion of any of the above, IEEGs are considered to be academically qualified.

Step 2: Establishing Work Experience Qualification

The next step in the registration process is for IEEGs to have their professional work experience assessed. IEEGs can be credited with fully meeting EGM's professional experience requirement if they have four years of qualifying experience with one year occurring in a supervised Canadian environment.

IEEGs with four years of qualifying experience, but who do not possess Canadian-like experience, qualify for provisional registration and need to complete one year of work experience under supervision of a registered member.

IEEGs with less than four years of qualifying professional experience apply to the Pre-Registration Program to become an Engineering Intern or Geoscience Intern. IEEGs practice as interns under the supervision of a P.Eng. or P.Geo. for one to four years.

Intern applicants must submit an application, admission fee (\$353) and annual membership dues (\$268).

To document work experience, IEEGs submit work experience reports for past posts and every six months for current employment activity, as well as arrange for confidential professional references. EGM provides a form with detailed criteria that need to be addressed in these reports.

Engineering and geoscience work experience is assessed primarily in terms of the knowledge and application of engineering or geoscience principles and techniques involved. EGM's Experience Review Committee assesses work experience and may request additional work experience if it is deemed necessary.

At this point in the process, all IEEGs must successfully complete:

- EGM's Act, By-laws and Code of Ethics test (ABC test). The ABC test is offered online and there is no fee
- Twelve hours of professional development
- Twelve hours of volunteer service

Step 3: National Exam

Applicants must successfully write the national Professional Practice Exam. This exam can be undertaken any time subsequent to being deemed academically qualified or anytime during internship or provisional registration and must be passed to qualify for full registration.

The Professional Practice Exam tests for knowledge of professionalism, law and ethics. The online, multiple-choice format test is offered twice annually at authorised test centres. It costs \$260.

Step 4: Registration

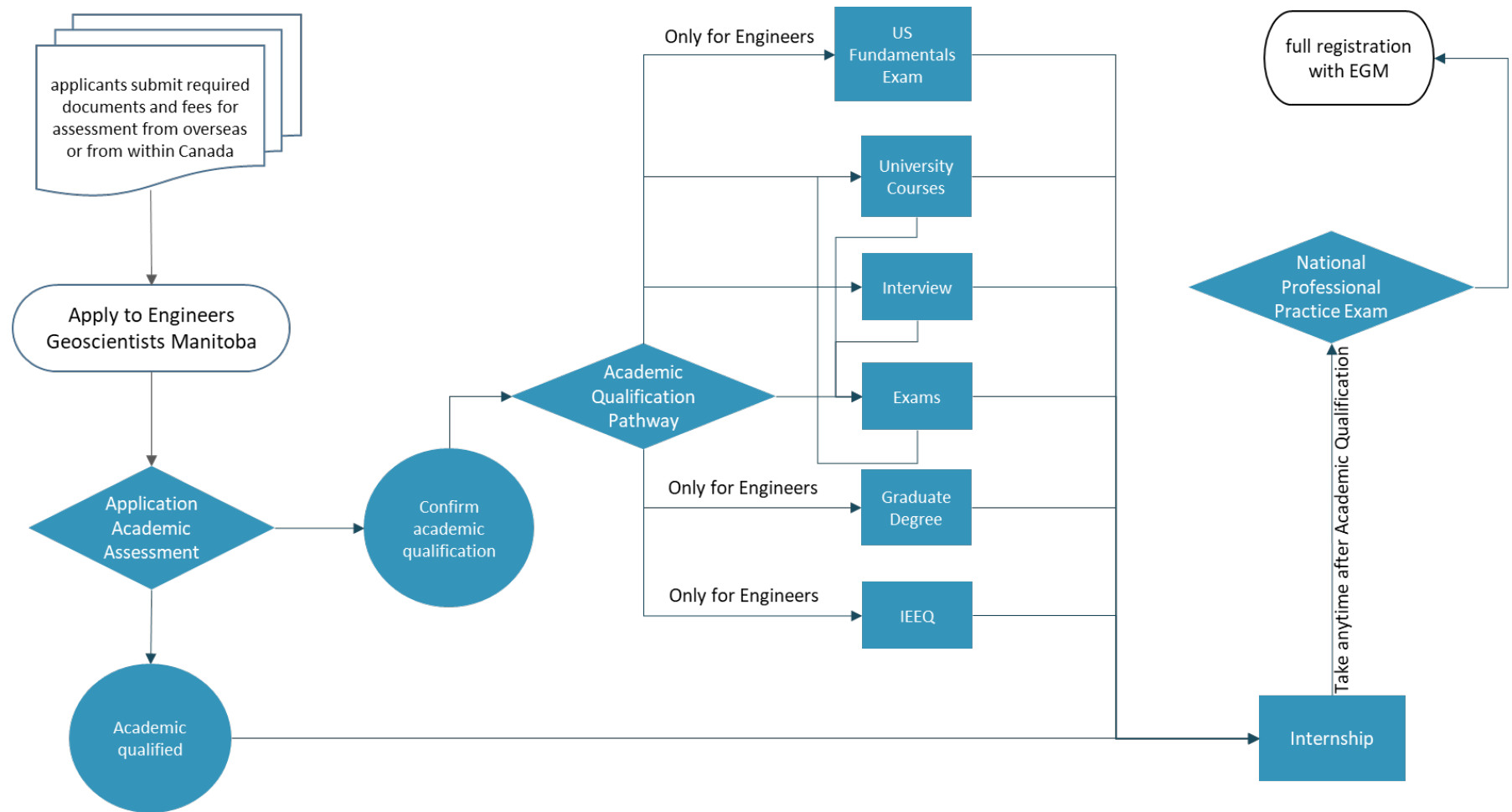
To be registered, applicants submit a professional reference and pay a \$390 registration fee. This fee represents professional dues and is pro-rated for the month in which the applicant is registered.

Registration Time and Costs

Depending on the qualification and circumstance of the applicant, the time to complete the steps in EGM's assessment and registration process vary markedly. Applicants with professional experience, deemed academically qualified upon application, and with an internship employment opportunity, can complete the process in little over a year. Those required to confirm the equivalence of their academic qualifications, may take several years to do so. Employment opportunities in the field, together with EGM's open and accommodating application process, mean applicants may delay pursuing academic qualification or completing internship requirements. Timelines to registration are also dependant upon the applicant's personal circumstance — initial settlement, family, financial pressures, etc. all impact the process on an individual basis.

The cost for IEEGs to be assessed and register with EGM may vary somewhat depending on the qualifications of the applicant and their registration pathway. Basic costs total approximately \$1,600. There are also costs associated the various options to confirm academic qualification as well as acquiring, and if necessary, translating documents and preparing for the national exam.

Registration Process Map

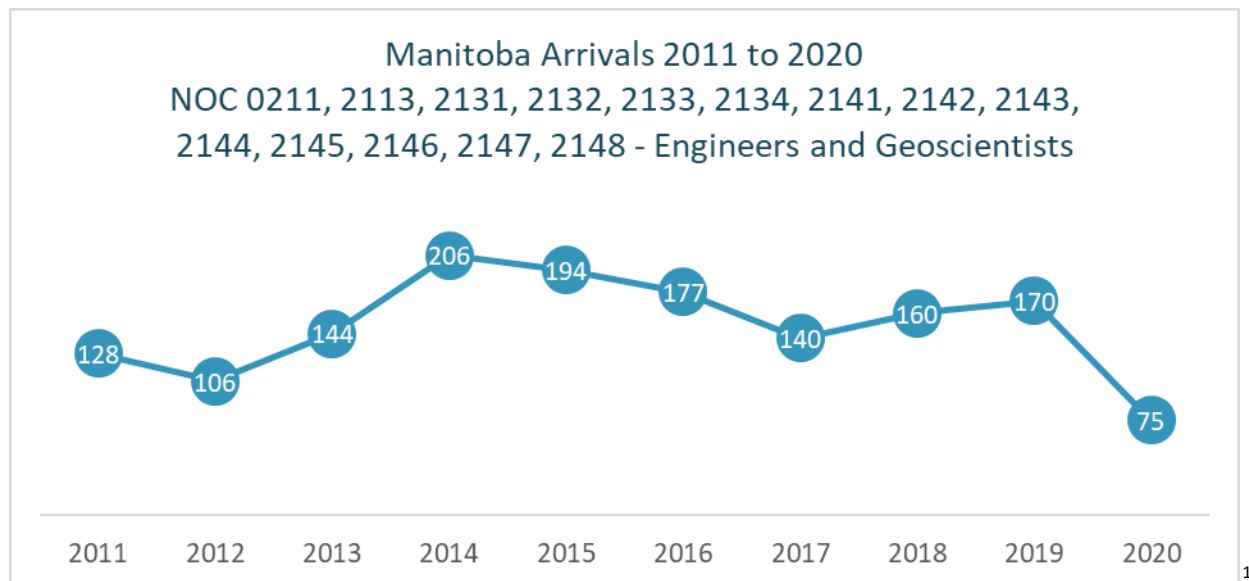


Immigration Statistics

The National Occupational Classification (NOC) is Canada’s national system of classifying and describing the occupations in the Canadian economy. Over 30,000 occupation titles are organised by unit groups, skill levels and skill types. When individuals apply to immigrate to Canada, they are asked to identify their NOC code. This code is used to classify arrivals by their identified occupation.

Immigration statistics can be a helpful indicator of the number of internationally educated professionals arriving in Canadian provinces. However, they are somewhat limited because applicants self-declare their NOC (little verification), only principal applicants are counted (not all immigrants) and NOCs do not always align directly with a profession (some codes apply to several professions and some professions can fall under several different codes).

There are numerous NOCs that potentially identify engineers and geoscientists. From 2011 to 2020, 1,500 individuals arrived in Manitoba self-declaring with engineer and geoscientist NOC codes (0211, 2113, 2131, 2132, 2133, 2134, 2141, 2142, 2143, 2144, 2145, 2146, 2147, and 2148). Over the reporting period, the numbers fluctuated somewhat, with an unsurprising decrease in 2020.



¹ Source: Created February 2022 by the Manitoba government using IRCC Q4 2020 immigration data.

Registration Data

Context – Reading the Numbers

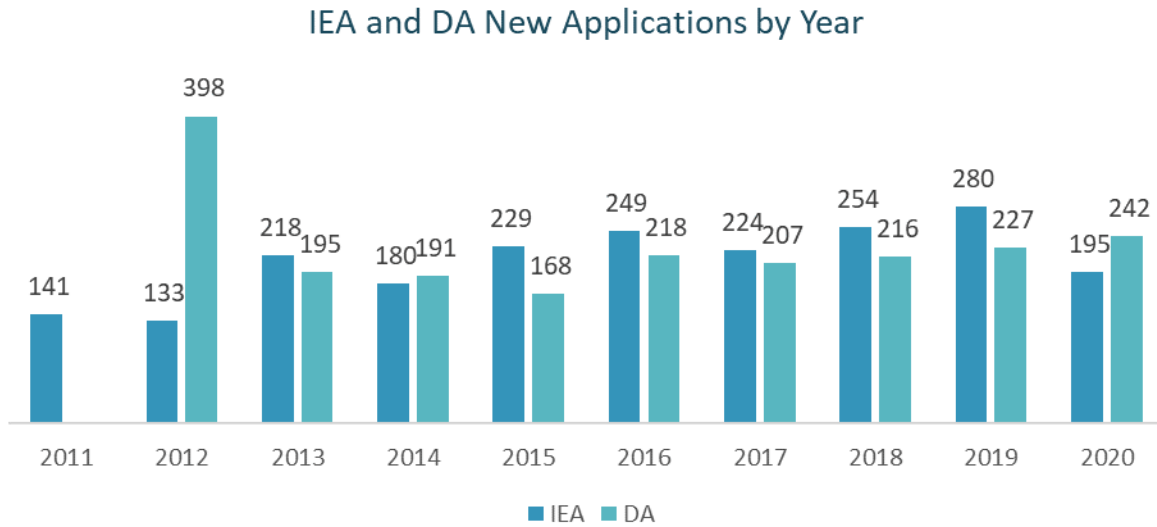
The engineering and geoscientific professions are remarkably broad, covering a wide range of practice roles and specialties. Engineering and scientific principles may be universal around the globe, but education, training and professional practice standards are not.

EGM's registration outcomes and timelines need to be understood in context. There are relatively low registration rates for both DA and IEA alike. IEAs who need to confirm academic qualification face a longer road to registration. Applicants do not face time restrictions to engage a pathway to confirm academic qualification and EGM keeps these files open. Many may not engage the process, some may return when their personal circumstance allows them to pursue registration.

EGM has adopted a number of progressive new assessment policies in the last several years — a new restricted scope licence, expanded reciprocity agreements and the US Fundamentals in Engineering Exam. Initiated in 2021, EGM is now offering a new Competency Based Assessment that allows interns the ability to demonstrate professional competence through a review of their professional experience. Continued data collection with a larger reporting window is likely required to better see the impact of these changes on IEA registration timelines and outcomes.

Applications 2011 to 2020

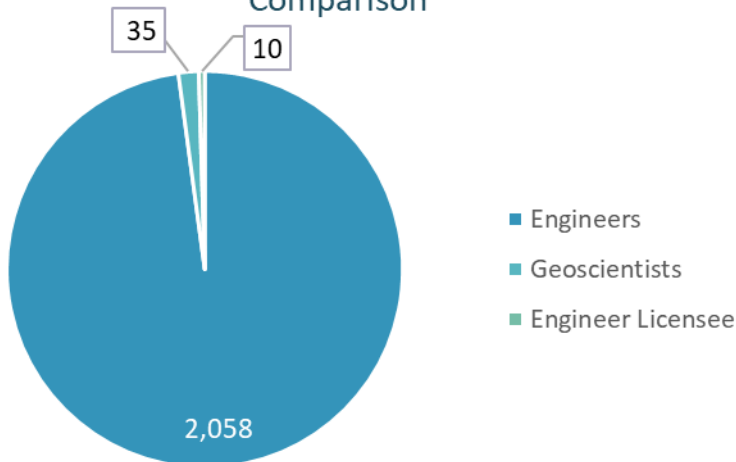
IEA and DA applications by year



From 2011 to 2020, EGM received slightly more IEA applicants than DA: 2,103 IEA compared to 2,062 DA. Approximately 50 per cent of EGM applicants from 2011 to 2021 were IEAs.

Note: Three hundred and ninety-eight DA applications reported in 2012 include 2011 DA applications.

IEA Engineer and Geoscientist Applications Comparison



The vast majority, 98 per cent of applications from IEAs, were engineers, with only two per cent received from geoscientists.

IEA complete and incomplete applications

IEA Applications 2011-2020				
Number of Applications	Complete Applications	Incomplete Applications		
		With Assessment Decision		Without Assessment Decision
		File Closed	In Process	File Closed or In Process
2,103	1,961	8	17	117

From 2011 to 2020, less than eight per cent of IEA applications were incomplete. Incomplete applications refer to those files where the individual has not or has not yet supplied all the documents and/or fee required for an initial assessment decision. In EGM's case, most incomplete applications are without assessment decisions and remain in process.

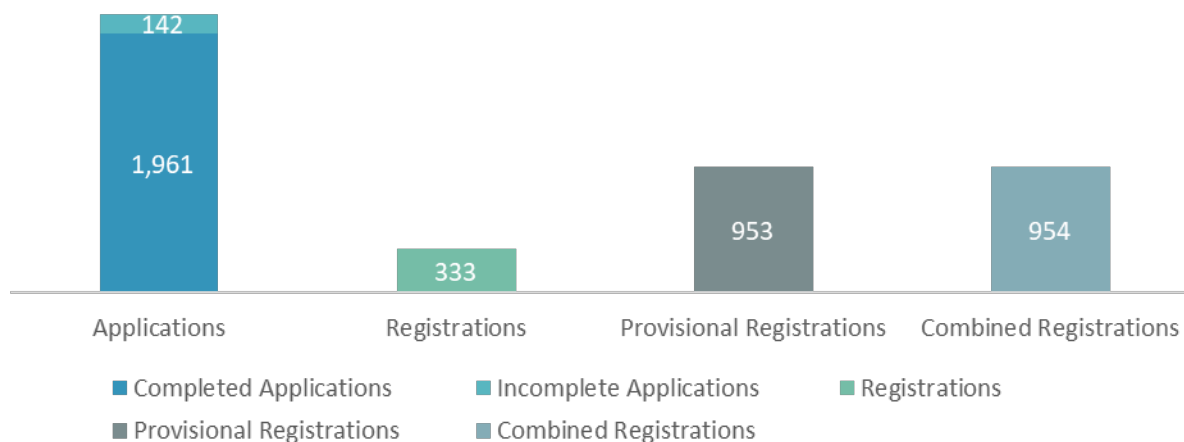
IEA applications ranked by country of education

Top Five Country of Education by Number of Applications 2011-2020		
Rank	Country of Education	Number of Applicants
1	India	448
2	Philippines	355
3	Nigeria	191
4	Iran	173
5	China	100

Applicants from 94 countries applied to EGM during the 2011 to 2020 period. India and Philippines were the most common countries of education among IEA applications. Thirty-eight per cent (803/2,103) of IEAs from 2011 to 2020 were educated in India and Philippines.

Registration Outcomes 2011 to 2020

IEA Applications and Registrations 2011-2020



Of the 2,103 internationally educated applicants who applied to Engineers Geoscientists Manitoba from 2011 to 2020, 333 achieved registration. Nine hundred and fifty-three applicants were provisionally registered. Combined registrations refers to the number of applicants who applied in the reporting period and received either registration or provisional registration sometime within the reporting period.

Outcome of new registration type

IEA Engineer Licensee Applications and Registrations			
Registration Type	Applications	Registrations	Applicants In Process
Engineer Licensee	10	1	9

Engineer Licensee is a new, restricted form of registration that allows individuals to practice engineering activity within a limited scope of practice. As this designation is relatively recent, most applicants were still in process as of December 2020.

Application status as of December 2020 of IEAs 2011 to 2020

IEA Status as of December 2020					
Applications	Registrations	Provisional Registrations	Withdrawals	Denials	In Process (not yet provisional)
2,103	333	492	279	55	944

At the end of the reporting period, December 2020, outcomes for the 2,103 applications indicates 333 IEA registrations and 492 provisional registrations.

There were 953 provisional registrations throughout the period, with 461 provisional registrations occurring in earlier reporting years that changed status toward the end of the period (registered or withdrawn). Almost half of IEAs, 994 (45 per cent) were 'In Process' at the end of the reporting period; this group is largely composed of those not yet confirming academic qualification and so not yet qualifying for internship (provisional registration).

The majority of closed files are 'withdrawals', or applicants assessed at some point in the process as eligible to proceed, but for whatever reason, do not pursue the process. 'Denials' refers to applicants assessed as not eligible to proceed at some point in the process.

More registrations and provisional registrations from the group of 944 'In Process' applications is likely to occur in the future.

IEA application outcomes by year

Breaking down the above IEA application outcomes by year indicates where these outcomes are distributed in the 2011 to 2020 period.

This table lists the number of applicants in a year together with various registration and closed file outcomes in a year. The applicants and the various outcomes in a year are often not comprised of the same individuals.

IEA Outcomes by Year, 2011-2020					
Year	Applications	Registrations	Provisional Registrations	Withdrawals	Denials
2011	141	-	24	■	-
2012	133	6	56	20	14
2013	218	21	71	■	8
2014	180	15	92	14	16
2015	229	42	97	18	39
2016	249	33	117	5	41
2017	224	44	130	29	57
2018	254	67	107	27	81
2019	280	49	154	22	44
2020	195	56	105	15	11
Total	2,103	333	953	153	311

IEA registration ratios and rates

Registration rate refers to the percentage of applicants with complete applications who apply in a given period and go on to register.

To calculate registration rate, all applications for the period must be resolved (registered or closed). A precise registration rate cannot be determined if there are applicants still in process at the end of the reporting period. This determination may be possible in future reporting years, when all the files are resolved.

In this report, three **indicators** are used to provide a tentative sense of the registration rate (see below). Reasons are provided as to which indicator likely best approximates the registration rate for EGM.

Registration to Application Ratio

PROS: allows a comparison of IEAs to DAs. DA data is aggregate and only tracks applications and registrations by year.

CONS: likely undercounts IEA registrations. IEAs who applied before 2011, but who registered in the reporting period (2011 to 2020), are not counted because data collection begins with IEAs applying in 2011 or later.

PROS: DA registrations are not under-counted.

PROS: for both IEAs and DAs, the registration to application ratio becomes a more accurate indicator of the registration rate the longer the reporting period grows relative to the average registration timeline.

Late Period Registration to Application Ratio (2016 to 2020)

PROS: lessens the undercounting of IEA registrations. Few IEAs who applied before 2011 will register later than 2016.

PROS: allows a more equitable comparison to DA registration to application ratio for the period.

CONS: limited because the period may be short relative to registration timelines and more sensitive to variations in application numbers.

Resolved Registration Rate

PROS: a strong indicator in circumstances where a high percentage of files are resolved (registered or closed).

PROS: knowing the number of unresolved files (files still in process) allows us to determine the range within which the registration rate falls for the period.

CONS: with only aggregate data for DAs, a resolved registration rate cannot be determined and so no comparison can be made with the IEA resolved rate.

REGISTRATION RATE INDICATORS: CALCULATIONS

Registration to Application Ratio

of registrations

÷

of complete applications in a given year or period

Late Period Registration to Application Ratio 2016-2020

of registrations, 2016-2020, of individuals applying between 2011-2020

÷

of complete applications made between 2016 and 2020

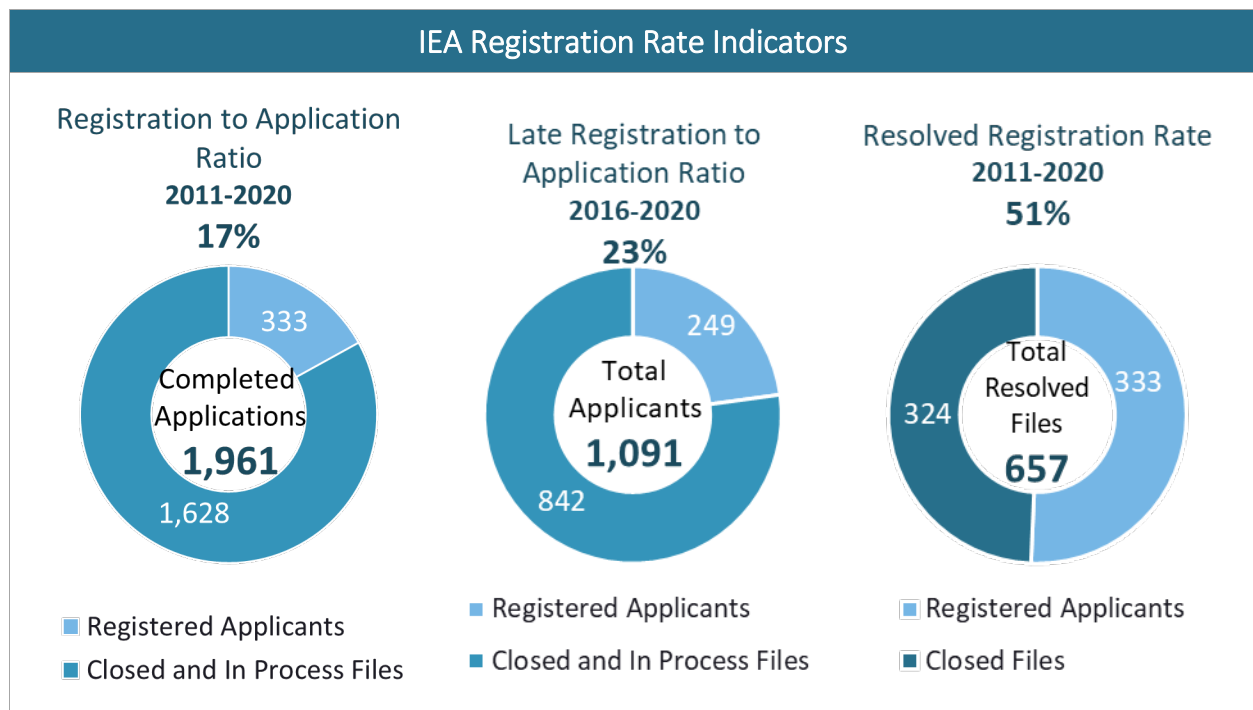
Resolved Registration Rate

of registrations

÷

of complete application, resolved files in a given year or period

EGM's registration rates



Registration to Application Ratio

The **17 per cent** registration to application ratio for the 2011 to 2020 period undercounts IEA registrations in the period and so likely undervalues EGM's true IEA registration rate.

Late Period Registration to Application Ratio (2016 to 2020)

In this context, looking at the later half of the reporting period, 2016 to 2020 may be more accurate as there will be less uncouncted registrations. In this case, in the last five years of the reporting period, 2016 to 2020, EGM's registration to application ratio rises to **23 per cent**. This figure is arguably more realistic, but the long registration timelines that are possible in this profession relative to the short reporting window, mean this remains a tentative figure.

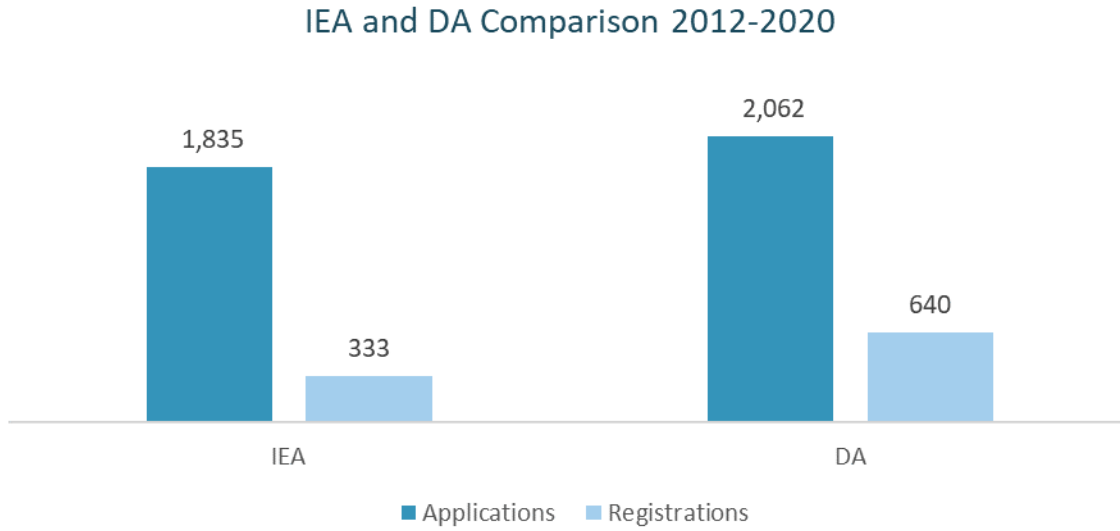
Resolved Registration Rate

EGM's resolved registration rate of **51 per cent** is not a particularly helpful indicator. Only 34 per cent (657/1,961) of completed applications are resolved. With regard to the possible registration rate range, possible outcomes for the 1,304 unresolved files, suggests it must be between **17 per cent** (333/1,961) — if all 1,306 applications are closed files — and **84 per cent** (1,639/1,961) — if all 1,306 register.

Note: This registration range does not factor 132 incomplete applications still in process at the end of the reporting period. Considering these applications, the range would broaden slightly, landing between **16 per cent** (333/2093) and **84 per cent** (1754/2093).

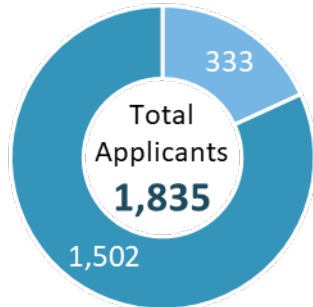
IEA to DA Registration Outcome Comparison 2012 to 2020

FRPO collects application and outcome aggregate data on domestically educated applicants (DAs) to compare outcomes of DAs to IEAs.



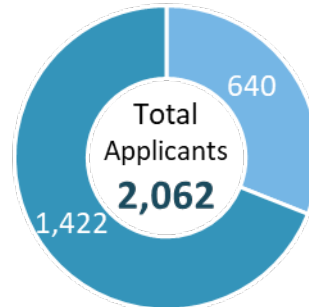
IEA to DA Registration Rate Comparisons

**IEA Registration to Application Ratio
2012-2020
18%**



- Registered Applicants
- Closed and In Process Files

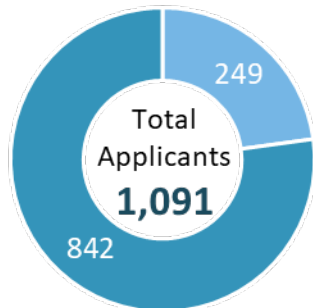
**DA Registration to Application Ratio
2012-2020
31%**



- Registered Applicants
- Closed and In Process Files

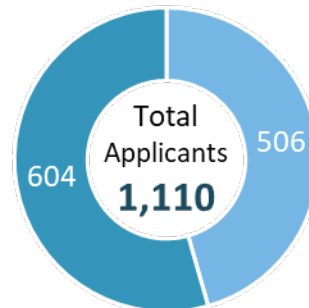
In this comparison, DAs were 1.7 times more likely to register than IEAs.

**IEA Late Registration to Application Ratio
2016-2020
23%**



- Registered Applicants
- Closed and In Process Files

**DA Late Registration to Application Ratio
2016-2020
46%**



- Registered Applicants
- Closed and In Process Files

In this comparison, DAs were 2 times more likely to register than IEAs.

EGM's registration data indicates IEAs are roughly half as successful as DA's for the 2011 to 2020 and 2016 to 2020 reporting periods. Due to the reporting method, the IEA registration to application ratio is likely undervalued relative to the DA rates (IEAs applying before 2011, but registering later are not recorded). Consequently this comparison may be overstated.

Note: IEA registration to application ratios are calculated for completed applications only. DA data does not distinguish complete and incomplete applications.

IEA top 10 country of education and registration outcomes ranked by number of applicants

2011-2020				
Rank	Country of Education	Applicants	Registrations	Registration to Application Ratio
1	India	423	39	9%
2	Philippines	338	25	7%
3	Nigeria	170	16	9%
4	Iran	165	66	40%
5	China	91	31	34%
6	Egypt	62	16	26%
7	Pakistan	58	11	19%
8	Bangladesh	49	12	24%
9	Israel	38	11	29%
10	Brazil	38	5	13%

IEA top 10 country of education and registration outcomes ranked registration to application ratio

2011-2020				
Rank	Country of Education	Applicants	Registrations	Registration to Application Ratio
1	Australia	8	4	50%
2	Ireland, Republic of (EIRE)	7	3	43%
3	Iran	165	66	40%
4	United States	32	12	38%
5	Sri Lanka	36	13	36%
6	China	91	31	34%
7	Germany	9	3	33%
8	United Arab Emirates	10	3	30%
9	Ghana	21	6	29%
10	Poland	7	2	29%

Representing 47 per cent of applications, the registration to application ratio for EGM's top three countries of education was eight per cent, about half the 17 per cent average registration to application ratio. Among countries with five or more applicants and ranked by application to registration ratio, the top six countries had ratios better than domestically educated applicants. Australia with 50 per cent had the highest ratio.

IEA Registration to Application Ratio by Applicant Type 2011-2020			
Type of Application	Complete Applications	Registrations	Registration to Application Ratio
Engineer	1,929	325	17%
Geoscientist	31	7	23%

The registration to application ratio was slightly higher for internationally educated geoscientists compared to internationally educated engineers.

Registration Timelines 2011 to 2020

IEA average and median time to provisional registration and to registration

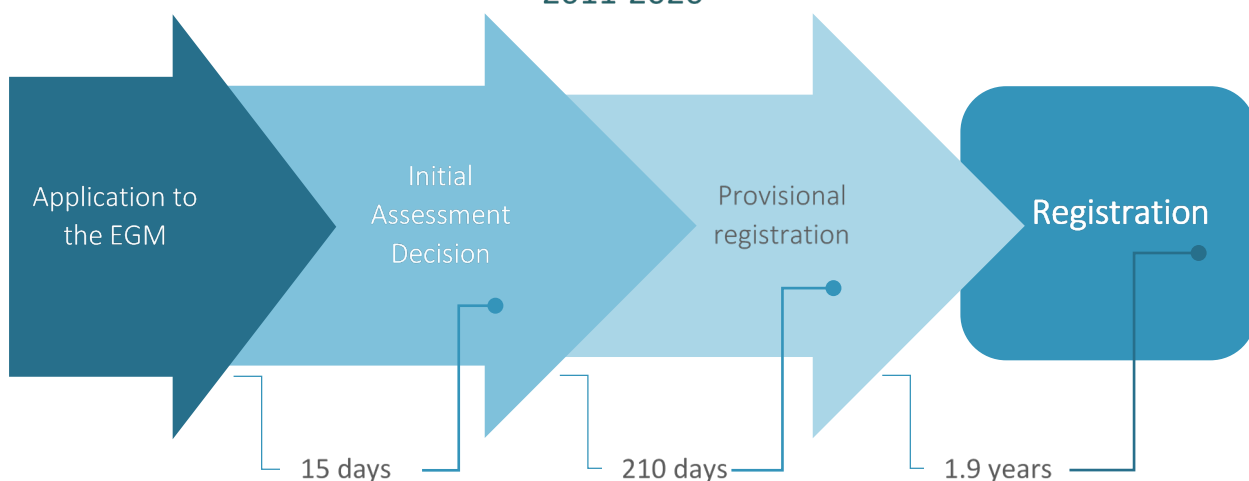
Average Time to Registration 2011-2020		Median Time to Registration 2011-2020	
Provisional	Registration	Provisional	Registration
1.5 years (548 days)	3.3 years (1,198 days)	1.1 years (400 days)	3 years (1,085 days)

Registration timelines are calculated using data from 309/333 applicants for whom complete timeline information has been collected. Provisional registration timelines are calculated using data from 928/953 applicants for whom complete timeline information has been collected.

Median Time from Provisional Registration to Registration	
2011-2020	2.0 years (728 days)

For IEAs, the median time under provisional registration was about two years. Given EGM’s internship requirement is four years, this suggests most IEAs have professional experience recognised and credited toward meeting a significant portion of the internship requirement. This provisional registration timeline is calculated using data from all (333/333) applicants who achieved registration.

IEA Median Time between Key Steps from Initial Application to Registration, 2011-2020



Breaking down registration timelines by step, most time is spent in internship (provisional registration) (1.9 years). EGM’s time to initial assessment decision upon completed applications is commendably short, just 15 days. Time to provisional registration (210 days) reflects the median time applicants took to be deemed academically qualified and apply for internship.

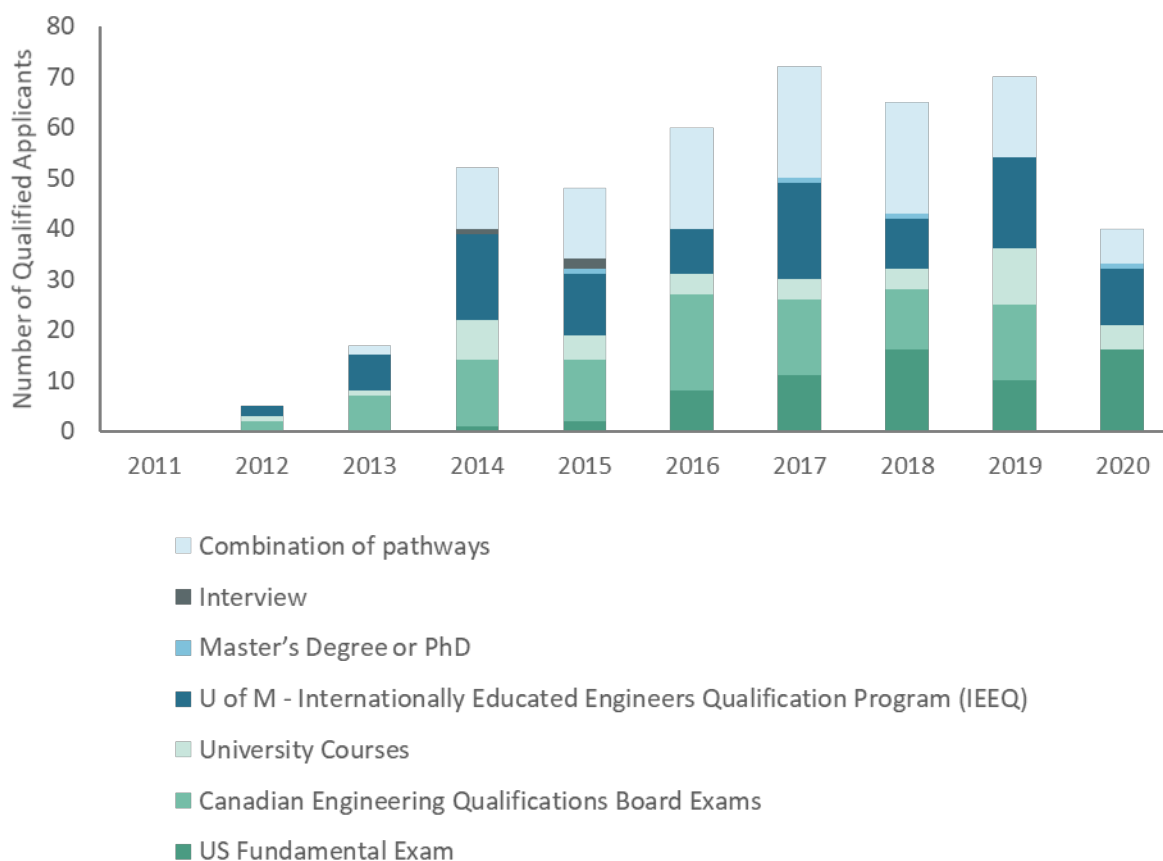
Note: These timelines figures are based on; 1,910 applicants to calculate the first step; 949 for the second step, and 333 applicants for the third step.

IEA Application Outcomes by Academic Qualification				
Initial Assessment	Complete Applications	Registrations	Registration to Application Ratio	Median Time to Registration (years)
Academically Qualified	546	195	36%	2.3
Partially Qualified	1,387	141	10%	4.1

In the 2011 to 2020 reporting period, IEAs who were deemed academically qualified upon initial application with EGM were more than three times likely to be registered, with timelines almost half that of those needing to confirm academic qualification. To be deemed academically qualified upon application means the applicant has academic qualifications recognised by an accord, various reciprocity agreements or possibly possesses graduate level academic credentials.

The registration timeline for academically qualified applicants was calculated from 183/195 applicants with complete timeline information. The registration timeline for partially qualified applicants was calculated from 125/137 applicants with complete timeline information.

EGM Academic Pathway to Qualification



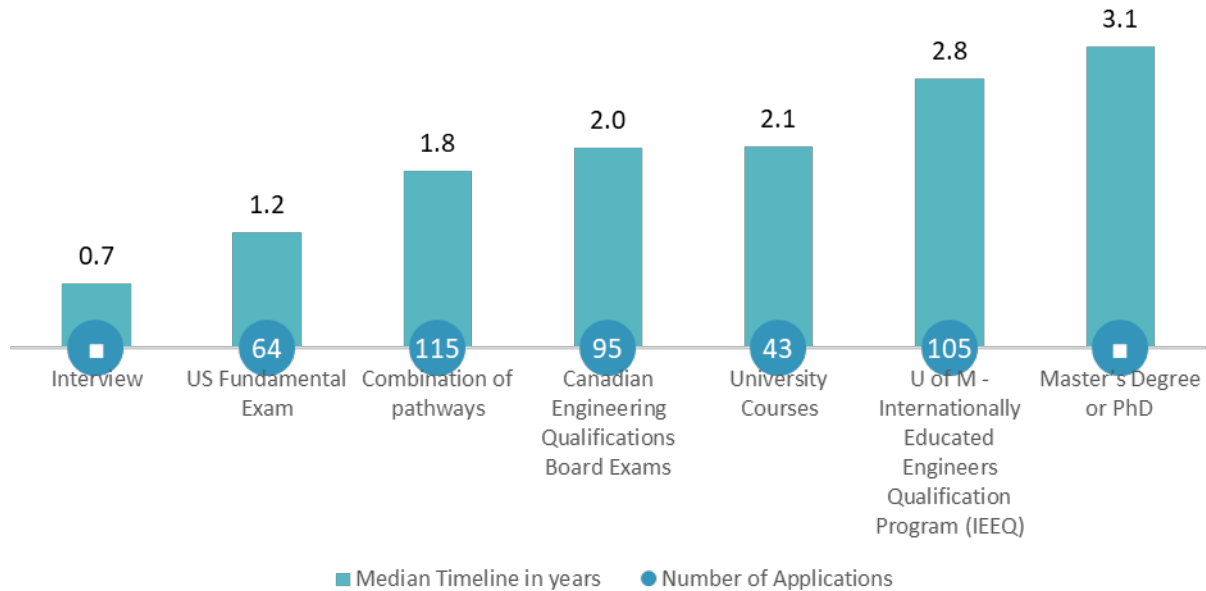
EGM offers numerous pathways to confirm academic qualification. These pathways are for applicants deemed to have professional engineering degrees, but not known by EGM as substantively equivalent to Canadian standards. Confirmation is required and applicants may:

1. Undertake assigned Canadian Engineering Qualification Board Exams
2. Complete approved university coursework
3. Successfully pass the US Fundamentals in Engineering Exam
4. Successfully complete an interview process (IEAs with extensive and relevant experience)
5. Return to university to complete either a post-graduate engineering degree
6. Complete the University of Manitoba Internationally Educated Engineers Qualification Program
7. Complete some combination of the above acceptable to EGM

The uptake in the US Fundamentals in Engineering Exam is significant since its introduction in 2015. The interview option, for applicants with significant professional experience, has rarely been used over the last decade.

The relatively low number of applicants completing academic qualification in the early years of the reporting period is a product of the data collection method and may be ignored. These academic pathway options can take several months to several years to complete and so few applicants who applied in 2011 or later, will have been able to complete a path in the early part of the reporting period.

EGM Academic Pathway to Qualification Timeline and Number of Applications by Pathway



Examining pathways to academic qualification by number of applicants and median time taken, indicates that the combination pathway, where IEAs engaged more than one option, was the most popular. The interview and US Fundamentals Exam were the timeliest pathway options, while the IEEQ bridging program and graduate degree pathways took the longest to complete.

IEA pre-arrival statistics, registrations and timelines with post-arrival comparison

IEA Pre-/Post-Arrival Comparison				
Application initiated:	Complete Applications	Registrations	Registration to Application Ratio	Median Time to Registration (years)
Pre-Arrival	171	13	8%	3.7
Post-Arrival	1,790	321	18%	3.0

In many professions, applicants applying pre-arrival are more successful than those who apply post-arrival. This may be due to better preparation and access to documents abroad. However, for IEAs applying to EGM, this does not appear to be the case, rather the reverse.

Trends

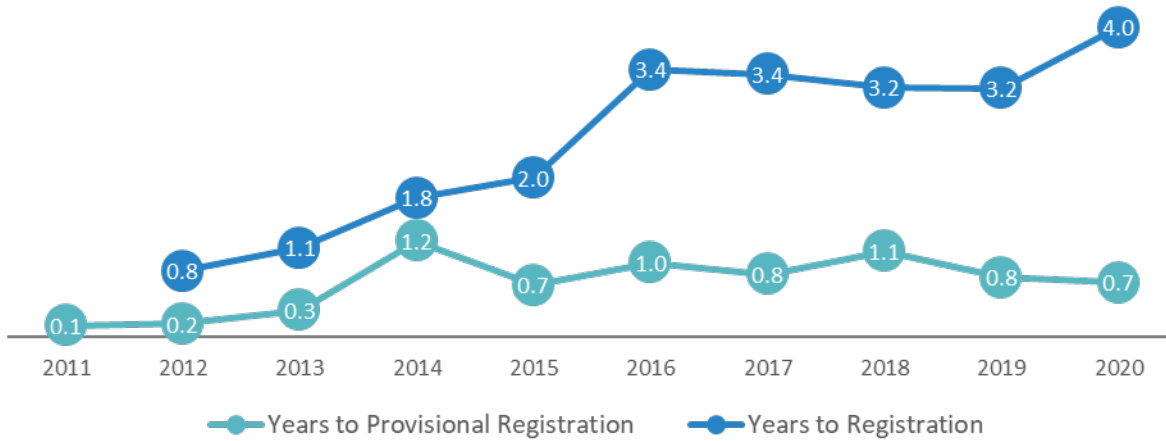
In this section, registration data is examined for evidence of changes in registration rates and timelines over the 10-year reporting period. In some cases, changes to assessment and registration practice can be identified.

IEA registration ratios and timelines to registration year and for the 2011 to 2020 period

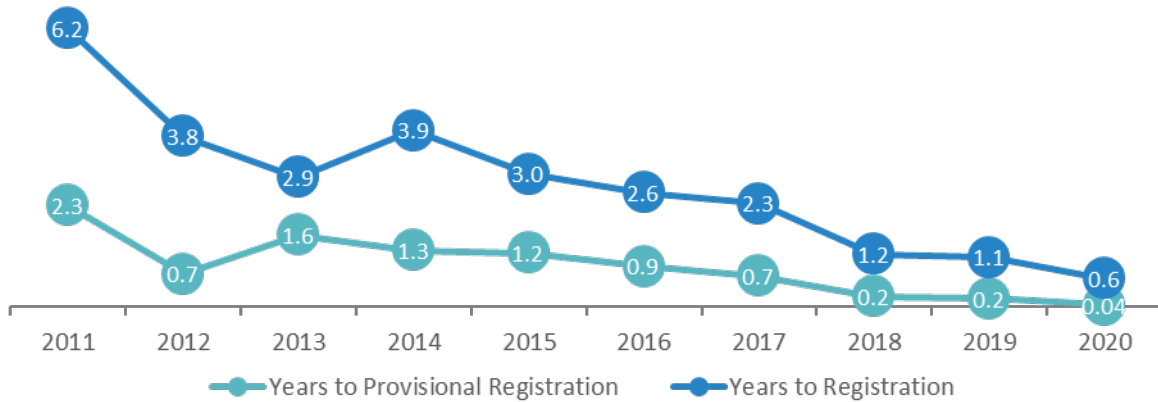
IEA Median Time to Registration by year, 2011-2020					
Year	Complete Applications	Registrations	Provisional (years)	Registration (years)	Registration to Application Ratio
2011	126	0	0.1		0%
2012	130	6	0.2	0.8	5%
2013	207	21	0.3	1.1	10%
2014	179	15	1.2	1.8	8%
2015	228	42	0.7	2.0	18%
2016	247	33	1.0	3.4	13%
2017	207	44	0.8	3.4	20%
2018	225	67	1.1	3.2	26%
2019	250	49	0.8	3.2	18%
2020	162	56	0.7	4.0	29%

IEA Median Time to Registration Trend 2011-2020

Median Time to Registration by Registration Year



Median Time to Registration by Application Year



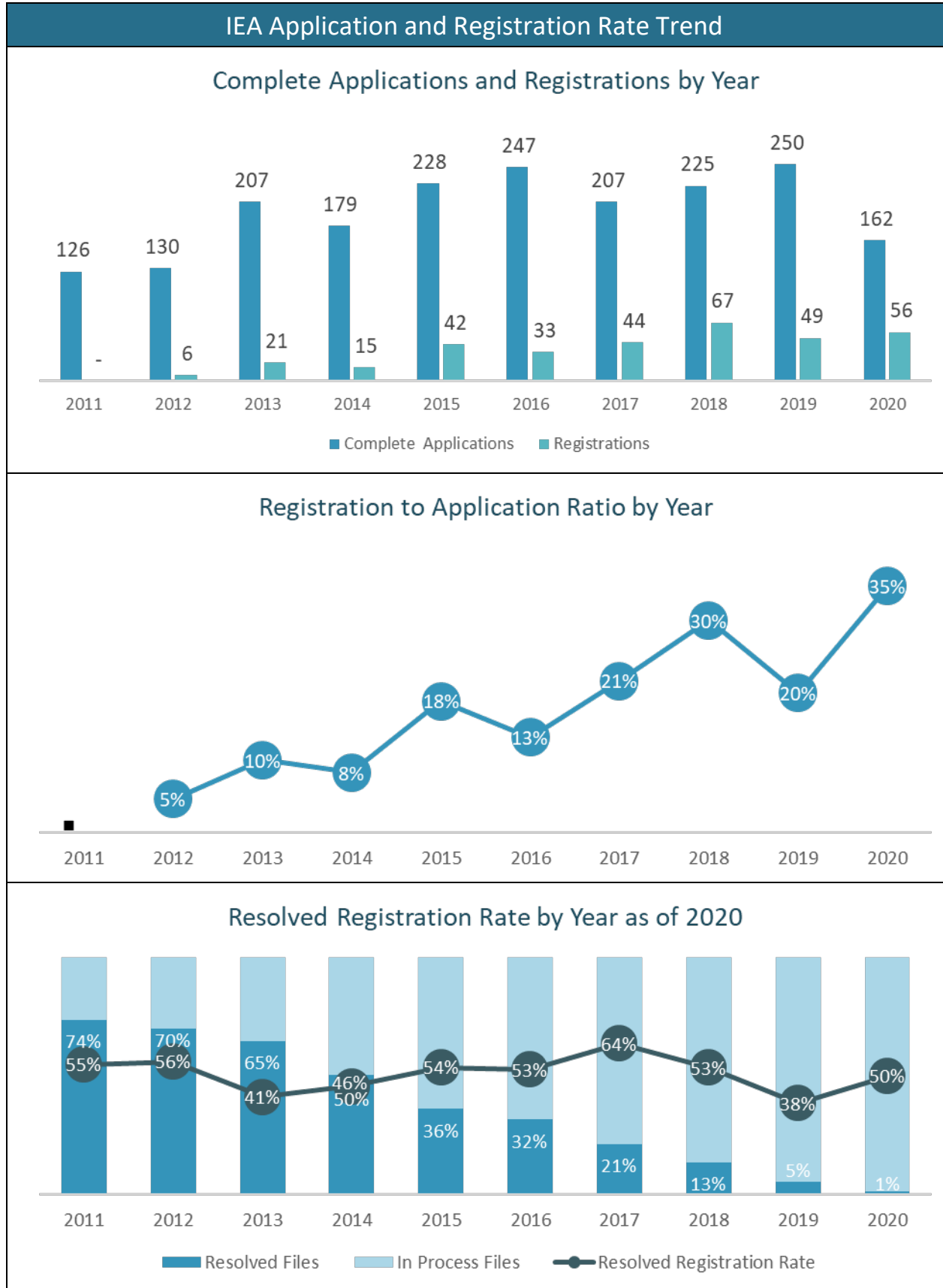
The two graphs above present the median timelines to registration (blue line) and provisional registrations (teal line). The first graph indicates the median time to registration for the **registrations** that occurred in a reporting year; the second graph, the time to registration for the **applicants** who applied in that year and went on to register. For instance, in 2014, the first graph indicates that the registrations that occurred in that year took a median of 1.8 years. The second graph shows that for the applicants who applied in 2014 and went on to registration, the median time was 3.9 years.

Registration timelines are relatively constant over this reporting period. Although the first graph suggests a rise and the second a decline, these are likely due to the reporting collection method and not necessarily due to changes in the registration process.

With regard to registration by reporting year, IEA reporting begins with 2011 applications. This means IEAs who registered in the reporting period, but who applied to EGM before 2011 are not counted. Consequently, registrations that occurred in 2011 must take less than a year; those in 2012 less than two years and so on. The longer the reporting period, the more extended IEA timelines may show up in the data. Eventually, with a long enough reporting period, we would expect registration timelines to flatten. This is seen in 2016 and later.

For registrations by application year, only IEAs registering before December 2020, are recorded. This means only short timelines can appear late in the period. In this graph, the latter reporting years should be ignored.

IEA registration rate trends

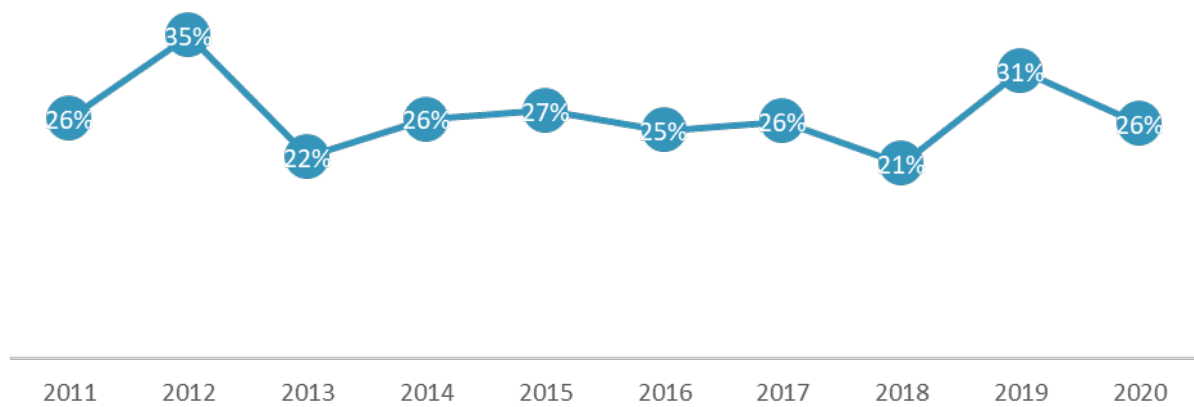


Examining EGM registration rates over 2011 to 2020, there is no clear trend to improving or decreasing registration rates.

Registration to application ratios rise over the 2011 to 2020 period, from zero to 29 per cent. However, low registration numbers from 2011 to 2013 undercount the number of registrations.

Annual resolved registration rate refers to the percentage of those registered against the number of registered and closed files for applicants who applied in a given year. Unresolved or in process applications are not counted. EGM's resolved registration rate by year indicates registration rates ranging from 38 to 62 per cent from 2011 to 2020. The relatively large number of unresolved files for the period (light shaded portion of bars) means the true registration rate may eventually vary markedly from the reported resolved figure.

Per cent of Applicants deemed Academically Qualified upon Initial Application by Year



Over the course of the reporting period, EGM has expanded mutual recognition agreements and accords and introduced new recognition agreements. This is significant as IEAs recognised in this way see higher registration rates with shorter timelines.

Examining the percentage of IEAs deemed academically qualified upon application as an indicator of the number of applicants qualifying under a reciprocity or recognition agreement, the registration data does not indicate much of a trend toward greater recognition. In part, this may reflect the jurisdictions from which EGM receives most IEAs; India, Philippines and Nigeria were the three most common countries of education among IEA applications.

Data Collection Moving Forward

The quality of 2011 to 2020 data provided by EGM for the 2011 to 2020 period is excellent. IEA outcomes and timelines are presented throughout the registration process and IEA registration pathways are clear.

Moving forward, future data reporting will provide a larger reporting window and support more insightful analysis with a more definitive identification of trends and outcomes.

In collaboration with FRPO, EGM has a history of working to improve data collection. This has involved implementing and revamping data collection tools and documents, providing annual data submissions and validating data submissions. Most recently, this includes work reviewing this report; this report would not have been possible without EGM's commitment and collaboration.