GEOScientists-in-Training

GIT

Program Information Guide
GEOSCIENTISTS WHO WORK IN CANADA MUST BE LICENSED BY A GOVERNMENT APPROVED SELF-REGULATING ASSOCIATION AS A PROFESSIONAL GEOcientIST (P.GEO.).

If you are…

• A student of a geology/earth science, environmental geoscience or geophysics program

OR

• A geoscience graduate with less than 48 months of eligible work experience

… this document will be useful as you work toward your career goal through a Geoscientist-In-Training (GIT) Program.
# Table of Contents

1. Developing Your Potential ........................................................ 4
2. Choosing the GIT Path ............................................................... 6
3. Demonstrating Your Potential .................................................... 8
4. Documenting Your Accomplishments ....................................... 12
5. Getting Your Best Value ............................................................ 13
6. Need to Know More? ................................................................. 16
7. GIT Programs in Canada ............................................................ 18
8. Terms Explained ........................................................................ 19
1 DEVELOPING YOUR POTENTIAL

If you are reading this guide, you probably have or will soon complete the academic requirements for becoming a professional geoscientist.

? WHAT AREA OF GEOSCIENCE INTERESTS YOU?
? WHICH ECONOMIC SECTOR AND WORK ENVIRONMENT BEST SUITS YOU?
? WHERE WOULD YOU LIKE TO WORK, LIVE AND START YOUR CAREER?

Regardless of where your aspirations and opportunities take you, there is one thing you can be sure of – as a professional geoscientist (PGeo.) you will have the capacity to make decisions and make a difference within your area of expertise.

THE PROFESSIONAL GEOcientist

As a PGeo., you will have at least 4 years (48 accumulated months) of relevant work experience, including a year in a Canadian or equivalent work setting:

• You will be working in a professional capacity, often in multi-disciplinary teams
• You will communicate clearly and accurately
• You will demonstrate sound judgement, responsibility and accountability
• You will understand the legal and ethical implications of your work
• You will contribute to society by safeguarding people, property, economic interests and the natural environment

YOU ARE VALUED IN YOUR WORK AND YOU HAVE THE OPPORTUNITY TO SUCCEED

EMPLOYERS AND CLIENTS ARE ASSURED OF HIGH QUALITY RESULTS FROM AN INDEPENDANT QUALIFIED EXPERT

SOCIETY IS ASSURED THAT YOU WILL CONTRIBUTE TO THE VALUES WE CARE ABOUT - LIFE, HEALTH, PROPERTY, PUBLIC WELFARE AND THE ENVIRONMENT

BEING A LICENSED PROFESSIONAL HAS SEVERAL BENEFITS FOR YOU – AND ALSO FOR EMPLOYERS, CLIENTS AND SOCIETY.
My name is Abigail Martin and I am a prairie girl, born and raised. I started collecting rocks in Saskatoon from a young age and I have always been curious about their origins. During my studies at the University of Saskatchewan and now, working as a consulting Geoscientist-in-Training, I have learned that my home province has so much more to discover.

My GIT experience began in the summer of 2013 as a Geological Intern for the Saskatchewan Geological Survey. During my last year of university, I was employed as a Geological Intern at North Rim Exploration. In 2014, I graduated with honours in Geological Science and I continue to live and work in the heart of this fascinating and geologically diverse region of Western Canada.

Consulting allows for a constant change in project work and endless learning opportunities. From Precambrian to Phanerozoic strata, Saskatchewan hosts world-class uranium and potash deposits and is one of North America’s leading oil and gas districts. Currently as a Junior Geologist/Geomatics Technician with North Rim, my work experience has included well site potash core recovery in south-central Saskatchewan; uranium exploration drill core logging and assay sampling in northern Saskatchewan; interpreting and integrating geophysical wireline data; compiling potash drill program data; and contributing to potash NI 43-101 technical reports to name a few. I have also gained valuable GIS and CAD experience; bringing unique data management solutions to our clients.

I always encourage Geoscience graduates to become part of a GIT program as an essential starting point for any career in Geoscience. Although I learned many technical skills throughout my undergraduate studies, the GIT program gives me practical skills for the professional work setting. The program has also given me a solid foundation in professional ethics to guide me through my work projects.

It feels great to be part of a GIT program and take the first steps toward achieving my professional designation. It feels great to be part of a GIT program and take the first steps toward achieving my professional designation.
2 CHOOSING THE GIT PATH

You need to be registered as a professional geoscientist (P.Geo.) before you can practice independently. Until then, a P.Geo. must supervise and take direct responsibility for all of your geoscience-related work.

A Geoscientists-In-Training (GIT) Program lends support and guidance, and helps with your transition to professional practice.

Guidance and feedback for GITs includes how to obtain and demonstrate geoscience work experience as well as how to present essential information to the professional regulatory associations.

All candidates for licensure are encouraged to go through a GIT program and take advantage of support offered by the associations, supervisors and mentors.

Choosing the GIT path can happen at any point from the time you graduate to the time you are registered. “Geoscientist-In-Training” might not sound like it applies to people who have been working for several years, including those with international experience. However, at some associations the GIT path to registration may be a practical option while in others is a requirement not an option. So you are advised to check.

There are many other benefits to being a GIT with your professional association, including:

- access to members-only services such as liability insurance and employment job boards
- reduced fees for professional development events and association activities
- vendor discounts
1 CLEARLY UNDERSTAND WHAT IS EXPECTED BY A PROFESSIONAL ASSOCIATION AS YOU DEVELOP YOUR CAREER.

- Obtain specific information about the GIT program and application process at your chosen association (see Section 7 for URLs and contacts)
- Read through the “GKE” to understand the depth and breadth of work experience you will need to acquire
- Download a GIT application and a diary or work experience report form (or watch a video) to get an idea of what you will need to document (e.g. Report on Experience in Saskatchewan)
- Become familiar with the Code of Ethics (e.g. Code of Ethics in BC)
- Learn about continuing professional development guidelines and requirements for professional geoscientists (e.g. CPD and Competency Assurance Program Guide in Nova Scotia)

2 TO APPLY TO A GIT PROGRAM, YOU WILL NEED TO CONTACT A PROFESSIONAL ASSOCIATION. NORMALLY, YOU’LL APPLY IN THE PROVINCE OR TERRITORY WHERE YOU ARE/WILL BE WORKING.

TO APPLY, YOU NEED TO:

- Visit an office or apply on-line (see Section 7)
- Include proof of identification and other required information*
- Request your official university transcripts to be sent directly to your association
- Pay an application fee

* For example, if you are a newcomer to Canada and English (or French) is not your first language, you might be asked to take a language test or submit recent test results

3 IDENTIFY YOUR GIT SUPERVISOR TO OVERSEE YOUR WORK EXPERIENCE AND/OR FIND A MENTOR TO GUIDE YOU ON YOUR PATH.

- If your current work supervisor is a professional geoscientist, that person should also be your GIT supervisor. You will probably have more than one supervisor while you’re in the program.
- Contact the association to be sure that all of the GIT supervising responsibilities are met
- A mentor can be assigned to you by your association if you cannot identify anyone

SOME RECENT GRADUATES GET THEIR FIRST YEAR FREE UNDER CERTAIN CONDITIONS. BE SURE TO CHECK.

J. Struyk

D. Shewfelt
3 DEMONSTRATING YOUR POTENTIAL

Your success as a GIT will depend on your interests, enthusiasm, self-motivation and curiosity. And it will largely depend on being able to demonstrate your potential to qualify for and legally earn the right to hold title as P.Geo. and practice as a professional geoscientist.

Although you will be supervised throughout your work training period, think of your GIT experience as a co-creation between you, the association, your supervisors and your mentors.

By the end of your time as a GIT, you should have all the scientific and professional competencies needed to apply for a professional license to practice as an independent geoscientist. You will also gain an appreciation for the broader context of your job, know your capabilities and your limitations, and apply professional ethics in your day to day work and decisions.

WHAT YOU NEED TO ACHIEVE IS SUMMARIZED IN THIS SECTION. HOW YOU ACHIEVE THESE IS LARGELY UP TO YOU.
SUPERVISED GEOSCIENCE WORK EXPERIENCE

It could take more than 4 calendar years for you to accumulate your 48 months of required work experience. You might also work in different places under different supervisors and with different employers. However, at all times you need to:

- Practice within your area of geoscience knowledge (e.g. geophysics, geology/earth science, environmental geoscience)
- Practice under professional supervision, and
- Strive to progressively increase your level of competence and responsibility

Keep in mind that some of your geoscience work experience gained while a student may count as part of the 48 months, as long as it fits the requirements listed in the checklist below. Student experience includes:

- Up to 12 months of experience after completing 2nd year as a B.Sc. student (e.g. summer field jobs)
- Up to 12 months of experience as a M.Sc. student (e.g. thesis research)
- Up to 12 additional months of experience as a PhD student (e.g. thesis research)

ENSURE YOUR WORK PRACTICE INCLUDES PROGRESSIVE RESPONSIBILITY AND PROFICIENCY WITH THE FOLLOWING:

- **PRACTICAL EXPERIENCE** – e.g. field/lab data collection; project function and operation; evaluation of project limitations; project time constraints, project costs, data reliability and uncertainty; equipment maintenance; and safety, environmental impact, and hazard and risk recognition

- **APPLICATION OF GEOSCIENCE THEORY** – e.g. development of concepts and hypotheses; analysis/evaluation of geologic data (maps, graphs or tables); result integration/synthesis; and testing or implementation

- **GEOSCIENCE PROJECT MANAGEMENT** – e.g. planning; scheduling; budgeting; supervision; project control; safety and risk assessment; and leadership

- **COMMUNICATION SKILLS** – e.g. written work and oral presentations to a variety of audiences (superiors, co-workers, government regulators, clients & general public) and on a variety of scales (from daily record keeping to major reports)

- **PROFESSIONAL ACCOUNTABILITY AND ETHICAL RESPONSIBILITIES** – i.e. to the public, profession, and client or employer

- **AWARENESS OF SOCIETAL IMPLICATIONS OF GEOSCIENCE** – e.g. recognition of geoscience value and benefits; inter-relationships between society and the natural environment; government regulations; environmental impacts; economic well-being; safety issues; and public education
PROFESSIONAL AND ETHICAL CONDUCT

Understanding professional and ethical conduct is critically important. Professions are regulated by law at the provincial/territorial level; and each professional association has a Code of Ethics.

Your knowledge of professionalism and ethics could be assessed in a number of ways – e.g. exam, interviews, reports from referees, and your diaries or reports of work experience.

You will be responsible for understanding such things as:

- Application of provincial/territorial geoscience legislation and by-laws, and professional Code of Ethics which regulate professional geoscience practices
- Value of the professional geoscientist with “right to title” and “license to practice”, and the responsibilities and potential liabilities of participating in a self-regulated profession
- Interrelationships with others, and how to apply concepts of professionalism with respect to protecting the public interest
- Importance of continuing professional development to maintain and enhance scientific competence and organizational, personal, team, and business skills
- Limits of one’s technical and non-technical knowledge, training and experience

You will also need to prepare for and write the National Professional Practice Examination.

Law and ethics seminars and other resources are available through your professional association.
PROFESSIONAL AND COMMUNITY VOLUNTEER SERVICE

Service to the professional geoscience community, as well as to your home community, is encouraged (and required in some associations). More specifically, as part of your development as a professional and well-rounded member of society, participating as a volunteer will help you to:

- appreciate the importance of contributing to the geoscience profession
- understand how you can contribute in your community as a professional
- develop your interpersonal and other non-scientific skills with diverse groups

Examples of professional/scientific services:
- Serve on a scientific society or professional association committee
- Help organize or participate in scientific conferences, field trips, seminars, workshops, short-courses, science fairs or career symposiums
- Publish in scientific journals or give a presentation at a meeting or conference
- Mentor a student outside the workplace
- Deliver a presentation on geoscience as a career to a school or youth group

Examples of community service:
- Hold a board position or actively participate in the management/operation of a local not-for-profit, charity, community club, cultural group, sports team or youth group
- Assist with organizing or coordinating a community event or local project
- Teach a workshop related to your interests or tutor someone who needs a little extra help

Volunteering is also a great way to develop your network!
4 DOCUMENTING YOUR ACCOMPLISHMENTS

The reporting and feedback process is a significant part of a GIT Program. Your progress might be submitted in the form of written documents, on-line reports or diaries but check with your association first as each association will have its own reporting requirements. Regardless of the format, make sure to keep an accurate and detailed record.

Demonstrating your competence allows the professional association to assess the quality of geoscience work experience, by looking not just at what you have done, but by also looking at how and why tasks are completed.

YOU NEED TO:

• Download reporting and/or diary forms from your association’s website, if available
• Record your work experience and professional development activities on an on-going basis
• Include descriptions of situations where you have applied particular competencies
• Report your activities as required

YOUR GIT PROGRAM SUPERVISOR SHOULD:

• Cooperate with the program by assisting you in obtaining the appropriate range of geoscientist development activities
• Validate your documentation of your geoscience work experience for the purpose of obtaining professional licensure

Your mentor should also be able to provide feedback on work experience descriptions and formatting.

THE REGULATORY ASSOCIATION WILL:

• Make you aware of the requirements of their GIT Program
• Assist your supervisors and/or mentors in understanding their responsibilities to you as a GIT
• Seek the assistance and support of employers to ensure that you have a professional geoscientist supervisor who will co-operate with the Program
• Encourage your employers to provide an appropriate range of geoscientist development activities
• Provide timely feedback and guidance on your progress towards satisfying registration requirements

THE ASSOCIATION SUPPORTS AND MONITORS YOUR PROGRAM AND CAN HELP IF A SUITABLE SUPERVISOR IS NOT AVAILABLE TO YOU.
Professional geoscientists are obligated under their Code of Ethics to provide opportunities for professional development of fellow geoscientists. Having access to their support and guidance is the best value-added component of a GIT Program.

ROLE OF A GIT SUPERVISOR

Understanding your supervisor’s role will help you make the most of your time and efforts with your supervisor.

You can expect your supervisor to:

- Assign geoscience work that fits with your abilities and assist in your development
- Provide scientific and professional guidance through on-the-job training
- Ensure that you complete each of the geoscience experience requirements by assigning cumulative, progressively more complex and responsible work opportunities
- Provide opportunities to learn and demonstrate good work practices and organizational skills
- Demonstrate the importance of subscribing to the Code of Ethics
- Encourage and help you find professional development opportunities
- Provide a reference or act as a referee for your registration process

IF YOUR WORK SUPERVISOR IS NOT A P.GEO., S/HE NEEDS TO MAKE SURE THAT A P.GEO. WILL TAKE RESPONSIBILITY FOR YOUR GEO SCIENCE WORK.
ROLE OF A MENTOR

Not every GIT will have a mentor but if you find or are assigned a mentor, s/he will be an experienced licensed professional geoscientist who is willing to guide your scientific and professional development.

A Mentor

• Motivates, teaches, inspires and empowers you
• Has experience in mentoring techniques
• Is aware of the responsibilities of mentoring
• Is able to provide references attesting to their own professional conduct

The mentor plays a complementary function that counsels and acts as a role model for you.

• The goal of having a mentor is for you to grow and develop specific abilities
• The mentoring process should be a positive one for both you and your mentor
• Your discussions with a mentor are confidential, unless you agree otherwise

GENERALLY, A MENTOR IS NOT THE SAME PERSON YOU REPORT TO OR WORK WITH DIRECTLY IN YOUR JOB.
You can expect your mentor to:

- Assist with the transition from the university setting to professional practice, such as:
  - Orient you to typical Canadian business culture and practices
  - Guide you in finding resolutions to challenging situations
  - Help you to understand the societal impact of practicing the profession
- Provide assistance with scientific skills development and other essential skill areas, such as:
  - Communication and interpersonal skills
  - Management skills
- Promote the profession and aims of the association, and encourage you to participate in scientific, industry, and professional societies
- Regularly meet with you to discuss progress on your career goals and objectives
**HOW LONG WILL IT TAKE TO BE ACCEPTED INTO A PROGRAM?**
Once you are academically qualified (i.e. you have completed all the required courses) and have submitted your GIT program application, it can take anywhere between **1 week to 4 months to be accepted**, depending on the volume of applications and completeness of your application.

**HOW MUCH DOES IT COST TO BE A GIT?**
There are two fees: an **application fee** and an **annual membership fee**. These fees vary by association. If you apply within 6-12 months of graduating from university, your application fee may be waived depending where you apply.

**DO I NEED TO BE WORKING BEFORE I APPLY?**
No, you **don't** need to be working to apply to a GIT program.

**HOW DO I FIND A MENTOR?**
Mentors are usually found through your geoscience network – **people you know from work**, as well as through professional development and association events. The best mentor is someone who knows you well. However, if you are not successful in finding a mentor, contact your association. Most associations have mentor matching services to assist both GITs and members who are seeking to find a mentor.

**CAN MY SUPERVISOR BE MY MENTOR TOO?**
Ideally, your program supervisor is **not your mentor**. As the person you report to in your job, you don’t choose your supervisor. But you do choose your mentor(s), as they choose you through a mutual agreement. Although your supervisor can advise much like a mentor would, a mentor is an additional resource person.

**WHAT IF I GET WORK OUTSIDE THE PROVINCE/TERRITORY?**
Work experience obtained outside the province or territory where you are registered as a GIT is **normally accepted**. Supervised geoscience work experience obtained outside Canada is also generally acceptable if the work is conducted to Canadian standards of practice.

**WILL MY EXPERIENCE STILL COUNT IF I WORKED SOMEWHERE ELSE BEFORE BECOMING A GIT?**
Any supervised geoscience work experience you have gained, that can be accurately documented and refereed should count. Keep in mind though that there are limits on the amount of work that is acceptable while studying to obtain your degree(s).
**How will I know if my work experience is relevant?**
If you need to find out more on what kind of work experience is required to become a professional geoscientist, please read the GKE or contact your nearest professional association.

**What does at least one year of experience ‘working in a Canadian or equivalent setting’ mean?**
The requirement for Canadian (or equivalent) work experience helps to make sure you understand and are able to practice geoscience according to Canadian laws, as well as social norms and ethical practices such as respect and equitable treatment of workers and communities, gender neutrality, religious freedoms, and consultation protocols with First Nations. These concepts are not normally taught in the classroom. **The Canadian work environment can be substantially different from working in other parts of the world.** One example of an acceptable ‘equivalent setting’ in an international context is working with a Canadian company where Canadian geoscience code of ethics, communication and professional standards are practiced.

**I have or will soon have a degree in geoscience but I don’t have all the courses to become a GIT. Do I need to wait until I get all my credits?**
It is recommended that you **complete all the necessary course requirements** before you apply to become a GIT. In most cases, associations will not register you as a GIT until you have met the education requirements as outlined in the GKE. Contact your local association if you have any questions or if you need suggestions as to where you might take needed courses or write challenge exams.

**What if I decide to go back to school?**
Although you need to have all the necessary BSc course requirements to be accepted into a GIT program, **you can become a GIT as a graduate student.** If you are a GIT, there is no issue with returning to school. Some associations may provide fees relief during your studies if cost is a concern.

**I’m already a student member. Do I need to register with my association again?**
You will need to apply for GIT membership but **your account number will be transferred from your student membership to your GIT membership.** Also, if you are a student member, you may also get a monetary credit toward your first annual membership fee.

**Do I have to be a Canadian citizen to be in the program?**
**No,** you do not need to be a Canadian citizen but check with the association where you wish to apply. You may need to be a permanent resident of Canada.

**I don’t understand some of these requirements. Is there someone I can call and talk to?**
Absolutely, yes. **Phone or email the registrar** at any of the professional association offices.
### GIT Programs in Canada

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<tr>
<th>Association</th>
<th>GIT Program</th>
<th>Contact Information</th>
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| Association of Professional Engineers and Geoscientists of British Columbia | British Columbia | 604.430.8035 OR 888.430.8035  
apeginfo@apeg.bc.ca |
| Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists | NWT & Nunavut | 867.920.4055  
http://www.napeg.nt.ca/contact |
| Association of Professional Engineers and Geoscientists of Alberta | Alberta | 780.426.3990 OR 800.661.7020  
email@apega.ca |
| Association of Professional Engineers and Geoscientists of Saskatchewan | Saskatchewan | 306.525.9547 OR 800.500.9547  
apegs@apegs.ca |
| Engineers Geoscientists Manitoba | Manitoba | 204.474.2736 OR 866.227.9600  
apegm@apegm.mb.ca |
| Association of Professional Geoscientists of Ontario | Ontario | 416.303.2746 OR 877.557.2746  
info@apgo.net |
| Ordre des Géologues du Québec | Quebec | 514.278.6220  
info@ogq.qc.ca |
| Association of Professional Engineers and Geoscientists of New Brunswick | New Brunswick | 506.451.9629 OR 888.458.8083  
info@apegnb.com |
| Geoscientists Nova Scotia | Nova Scotia | 902.420.9928  
registrar@geoscientistsns.ca |
| Professional Engineers and Geoscientists of Newfoundland and Labrador | Newfoundland and Labrador | 709.753.7714  
main@pegnl.ca |

Note: To recognize professional practice and to protect the public in Prince Edward Island and Yukon, geoscientists typically register in an adjacent Canadian jurisdiction.
**Geoscience**: The advancement of knowledge of the Earth and earth-forming processes through scientific investigation and interpretation.

**Geoscientist**: A person who, through specialized education, training and experience advances knowledge of the Earth and earth-forming processes through scientific investigation and interpretation.

"GKE" or *geoscience knowledge and experience requirements for professional registration in Canada*: Publication of Geoscientists Canada summarizing requirements as set by the provincial/territorial professional associations.

**Independent Practice**: Practice in a competent manner, without supervision or direction, and within a reasonable timeframe. An independent practitioner also has the ability to recognize unusual, difficult-to-resolve and complex situations that may require external advice or consultation, reviewing research literature, and/or referring to other more experienced and qualified professionals.

**Practice of Geoscience**: When a person who, through specialized education, training and experience advances knowledge of the Earth and earth-forming processes through scientific investigation and interpretation.

**Professional Geoscientist**: A person registered as a Professional Geoscientist with an Association authorized to regulate the Practice of Geoscience.

**Professional Practice and Ethics Examination**: Formal exam to verify individuals’ knowledge of professional practice issues, including law and ethics, before they are permitted to practice independently.

**Registration**: Formal recognition of an individual to practice in a particular jurisdiction, by the placement of that person’s name on the register and issuance of a license to practice.

**Self-Regulating Professional Association**: Also referred as a regulatory body, a professional association is set up under a legislative act that allows the profession to regulate itself on behalf of a provincial or territorial government (Yukon and PEI are the exceptions) and in the public interest for that jurisdiction. All P.Geo’s belong to a professional association.

**Stream**: Grouping of science and geoscience educational components designed to cover special requirements for each of the broad areas of geoscience – Geology/Earth Science, Environmental Geoscience and Geophysics.
Adapted from map compiled by Mark Cooper used with the permission of the Canadian Society of Petroleum Geologists.