

Professional Development Guideline

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1. PROGRAM APPLICABILITY

This guideline, and the program it describes, is for the use of:

- all practicing members including Members-in-Training;
- those not currently practicing but who wish to retain the right to resume their practice without being subject to examination or review - non-practicing members*.

**Note: For the purpose of this document, the term “Non-Practicing Member” refers to those members who are not practicing but wish to maintain the right to practice. This Guideline does not apply to other non-practicing members who do not wish to maintain their right to resume practice without further review.*

PEG’s Policy on Professional Development provides information to assist members in determining the applicability of this guideline. Those members who are not sure if the program applies to them should refer to this Policy, available as a separate document from PEG or at [www.pegnl.ca/policy statement \(pdf\)](http://www.pegnl.ca/policy statement (pdf)).

2. A NEW APPROACH

It has been determined from many feedback sources that improving the effectiveness and relevance of PEG’s Professional Development Program necessitates a change whereby the focus is on the quality of learning and its relevance to an individual member’s scope of practice as opposed to meeting a defined quantitative measure of a defined set of activities.

Although measurement of inputs at some minimum level is necessary even in a “quality-based” program, it is important to strike a balance between the measurement processes and creating sufficient flexibility for individuals to design a professional development program with primary emphasis on learning outcomes.

Within this framework, the following key concepts have been incorporated into the Professional Development Program Guideline for PEG members:

- Self-managed;
- Emphasizes planning;

- Promotes benefits and generates a culture of continuous learning;
- Enhances the practice of the profession;
- Emphasizes quality over quantity;
- Concerned with practicing members and those who are non-practicing but wish to maintain practicing status; and,
- Recognizes PEG’s regulatory functions and obligations.

3. PROFESSIONAL DEVELOPMENT PROGRAM – AN INDIVIDUAL CREATION

A successful Professional Development Program will reflect your present scope of practice, years of experience, length of time in your current position, the state of technology, your career path, plans for the future, and other factors pertinent to your professional practice.

An effective Professional Development Program cannot be a static document produced, filed, and forgotten. Your Professional Development Program must be reviewed at least annually, revised as required and the progress or changes you want to make reported to PEG.

The key to building and maintaining a successful Professional Development Program is firmly based in the concepts of planning, measurement and analysis. You should assess your current inventory of education, training and experience and determine what development activities would be appropriate to help you improve your professional practice. Take the time to ensure that the activities you pursue align with your development goals.

There is no prescribed route for achieving professional development goals. There are some minimums defined in the guideline, but it is your responsibility to define the goals that make sense for your professional development.

When building your Professional Development Program, you should do so on the basis of a multi-year rolling plan, reviewed and reported annually. The standard plan has been defined as a three (3) year outlook. If you are retiring or leaving professional practice for some other reason you may have a shorter basis for your plans, if you are just starting out, then 3 years may not be a long enough view.

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3.1 Goals

A Professional Development “Goal” is an end point for a set of linked activities that will result in an improvement to your professional practice.

Improvement is a general term and for you it may mean keeping current with technological change, if your practice is heavily dependent on technology, or it may mean developing new skills because you wish to change your scope of practice, move into management, etc.

Your goals may be long-term, short-term or a combination. To meet the requirements of the Professional Development Program, you should think about where you are and where you want or need to be in 3 years time.

Do some research and layout a plan. That plan will be subject to change as circumstances change, however, at the point the plan is made, it is valid.

Some examples of goals might include completing an MBA, obtaining a designation as a Certified Project Manager, developing a technical specialty within a discipline, maintaining competency in the face of changing technology, etc., by taking a series of selected formal courses and seminars, etc.

Once you have defined your goals, then you should identify the activities which will help you achieve your goals. The onus is on the member to define the link between the planned activity and the goals. Some examples of suitable activities might include completing a prescribed post secondary course, attending a series of seminars, completing industry sponsored or in-house courses, completing a Dale Carnegie course, etc.

You should note that there are minimums with respect to the number and type of activities that you must be complete within a 3 year planning cycle.

The following section provides guidance on planning your professional development program.

3.2 Planning Your Professional Development Program

NOTE: This text has been compiled assuming that this is the first time the reader is submitting a Professional Development Plan. If you have already submitted your first Professional Development Plan, the process should become a maintenance and update activity. There is no requirement to recreate the entire Plan each year, simply update the information that has changed.

Developing an effective professional development program requires thought and planning. You should begin by gathering information which could be useful in developing a plan for professional development, such as

- A current job description;
- A recent performance evaluation;
- An existing professional development plan;
- A list of skills you wish to acquire;
- A body of knowledge of particular interest;
- Course listings and website addresses from educational institutions, technical and management societies, PEG;
- PEG list of technical and/or management societies; and,
- Other information as required.

NOTE: The above list is intended to assist the member in planning his or her program. This information is not required to be submitted to PEG.

Analyze the information in the context of your professional practice or in the area of competency you wish to maintain. Based on the results, define goals or modify goals, if you had established them previously, and determine what activities, such as formal or informal education and training, are required to help achieve those goals. Your planning must also take into account the requirements and categories of activities of the Professional Development Program as set out in Section 3.3 below.

Once you have undertaken the planning of your professional development program, you will need to record

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this information as part of the documentation required by PEG. Each member is required to complete a Member Profile Form and a Professional Development Plan & Report Form. Only the report form needs to be submitted to PEG. The requirements and other necessary information for completion of these forms are described below.

3.3 Categories and Requirements

PEG recognizes two categories of professional development activities and these must be identified on the Professional Development Plan & Report Form, under the heading "Category", as Technical (T) or Non-Technical (NT) activities. The definition of and requirements for Technical Activities for a Practicing Member will differ from that of a Non-Practicing Member.

3.3.1 Technical Activities

A. Practicing Members

If you are a practicing member, technical activities are those that provide you with professional development directly related to your current scope of practice of engineering or geoscience or a modified scope of practice to which you want to move.

Note: An activity which qualifies as a technical activity for you may qualify as a non-technical activity for another member; it is entirely dependent on your scope of practice. A course in finite element analysis could be a suitable technical activity for a structural engineer, but is probably a non-technical activity for an electrical engineer.

B. Non-Practicing Members

If you are a non-practicing member, to qualify as a technical activity it must relate directly to the discipline in which you wish to maintain competency.

Note: A technical activity for a non-practicing member who is a civil engineer and wishes to maintain competency in water resource management could be participation in a course or seminar related to the impacts of climate change on water resources.

3.3.2 Non-Technical Activities

Non-technical activities are those activities which do not relate directly to your practice of engineering or geoscience but do contribute to your professional development.

Note: An example of an appropriate non-technical activity for professional development for a member who has to present his/her work in meetings might be to take a Dale Carnegie course to develop presentation skills.

3.3.3 Selection of Activities

The identification and selection of activities for achieving your goals is at your discretion as long as you meet the minimum requirements for practicing or non-practicing. You, in consultation with others as appropriate, are in the best position to choose how best to achieve the goals you have established.

While formal training is usually the easiest to identify and measure, it is not always available, nor is it always the most appropriate source of professional development. In addition to formal training, other professional development activities may include, but are not limited to, participation in the following:

- Company or industry association sponsored seminars and technical sessions;
- Expanding the body of knowledge in a specific field.
- Development of standards or codes; and,
- Self-directed activities such as a structured reading program, developing and delivering seminars on technical subjects, or other activities provided they can be shown to fulfill the goals identified in your development plan and are directly linked to the your professional practice.

3.3.3.1 Self-Directed Activities

PEG has recognized that all self-directed activities will vary in content and impact, yet the result has to be reportable and the quality level measurable. If you choose to pursue a self-directed activity, then documenting the planning, the learning outcomes and

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their relevance and impact on your professional development will generally require an increased level of records and reporting.

Therefore, you must define and document the purpose, structure, and intent of the activity and how it will meet the requirements of your Professional Development Program. You must define whether the activity is being submitted as a technical or non-technical activity, how it is anticipated the activity will contribute to your professional development, how success will be measured and what records will be retained as evidence of execution.

Typically for a reading program, the member would be expected to identify the journal(s) by title and the general topic upfront in the Professional Development Plan. Specific requirements for documenting self-directed activities are defined below.

The records developed must comply with the guidelines defined in Section 3.4 - Documentation. Also, the number of self-directed activities must not exceed the maximums outlined in Section 3.3.4.

3.3.4 Minimum Requirements

To ensure that a minimum level of appropriate professional development is undertaken, you must have at least four (4) activities which can be categorized as either Technical or Non-technical in every three (3) year cycle. The distribution between the two categories is as follows:

Practicing Members	Non-Practicing Members
Technical Activities: At least one in each 3-year planning cycle.	Technical Activities: At least three in each 3-year planning cycle.
Non-Technical Activities: At least one in each 3-year planning cycle.	Non-Technical Activities: At least one in each 3-year planning cycle.
Total: A minimum of one activity each year and at least four activities in each 3-year planning cycle. Not more than one in each category may be self-directed.	Total: At least one activity each year and at least four activities in each 3-year planning cycle. Not more than one activity in each category may be self-directed.

3.4 Documentation

You must retain supporting documents as evidence of completion of the identified activities. For formal activities, certificates of attendance or achievement will generally suffice. Where certificates are not available, it is suggested that you obtain written documentation providing verification of attendance. For self-directed study, it is your responsibility to develop suitable documentation. As a minimum, you must document in a diary or other suitable record what the activity consisted of and what benefit was obtained. For example, a technical journal reading program record would include a record of the articles read, the journal title, the edition or issue, as well as a brief synopsis of the content, a brief outline of the idea or concept presented and an explanation of how the content contributed to the enhancement of your practice.

Your personal professional development files or records must contain documentation to support and validate all activities reported on the annual Professional Development Report Form prior to submission.

4. REVIEW OF PROFESSIONAL DEVELOPMENT PLANS

You are responsible for maintaining appropriate levels of professional development. However, PEG also has a responsibility to ensure that you are made aware of your obligations and that you respond with a professional development plan and a report on activities which have been undertaken.

As an aid in ensuring that your professional development efforts are relevant and meaningful, you are asked to have your plan reviewed by someone who can be objective and provide you with practical advice with respect to the appropriateness of the goals and activities you have chosen.

The review should assist you in making an objective judgement on the practicality and alignment of goals, activities and your practice. The reviewer should be asked to provide you with that feedback. The reviewer should not be asked to verify the claims you make in the reporting portion of your plan.

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The reviewer would ideally be your supervisor or a professional engineer/geoscientist member or a management person in the organization which employs you. If that is not practical, then you should solicit another professional member with a similar scope of practice to act as a reviewer. If you are having difficulty finding an appropriate reviewer, PEG staff will provide assistance and direction.

5. SUBMISSION OF PROFESSIONAL DEVELOPMENT PLANS

Effective January 2006, it is NOT necessary to submit your Plan form.

6. REVISIONS TO PROFESSIONAL DEVELOPMENT PLANS

You must revise your professional development plan when there is a material change to the stated goals or a material change to your practice. It is considered a material change when goals have to be modified or replaced by new ones.

As part of the ongoing professional development process, you are required to analyze and report on the previous year's progress with respect to achievement of the stated goals. You report your progress towards completing existing goals by including the activities on the Professional Development Plan & Report Form. If there hasn't been a material change, then the plan does not need to be revised, just the activities updated.

The following are some situations which may result in a modification or replacement of goals:

- Goals have been accomplished;
- The member's career path has changed;
- There have been changes in technology;
- There have been changes in employer's educational support policies, etc.

You must resubmit your Member Profile Form with each revision.

7. COMPLETING THE FORMS

7.1 Outputs from the Planning Process

Once you have completed an appropriate level of planning and analysis, you must document the results along with the other required information in your Member Profile Form and Professional Development Plan and Report Form. These forms are maintained and hosted for each member on the PEG website. Members who do not have web access should contact PEG for assistance.

7.2 Member Profile Form

All PEG members must complete a Member Profile Form. You must revise and resubmit the Member Profile Form as often as there is a material change in the content or at a minimum of every three years. The primary elements of the Member Profile Form are as follows.

Name/Member #

Enter your name and PEG member number.

Education

Enter the appropriate data on your formal educational achievements. For assistance on defining Discipline/Sub-Discipline refer to the information contained in the Appendix.

Declaration

Indicate your current status with respect to your professional practice including your current discipline and if appropriate, your sub-discipline or the discipline and sub-discipline in which you wish to maintain the right to practice. (For assistance on defining Discipline/Sub-Discipline refer to the information contained in the Appendix.)

Current Employment

Identify your current job title and employer – you can enter additional information under Duties and Responsibilities if required.

Duties and Responsibilities

Define your duties and responsibilities, in particular, with respect to your professional practice. If you are no longer practicing, then the description of your duties should provide sufficient information to assure a reviewer that you have ceased practicing.

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7.3 Professional Development Plan & Report Form

This guideline has been developed with first time users in mind. If you have been through the process before, your focus should be on reporting your progress and then updating your planning (see "Reporting" below).

7.3.1 Completing the "Plan" Section

If you have not completed a Professional Development Plan before then you need only complete the "Plan" section.

Goals

Enter the goal or goals you identified during the planning phase as described in Section 3.2 above. There is no defined minimum or maximum number of goals, it is your responsibility to ensure that the goals are appropriate and will lead to an acceptable level of professional development in your scope of practice or the competency you wish to maintain. Each goal should be entered by itself on a line titled "Goal" on the form.

Planned Activities

The activity(ies) which supports the goal should be entered on the "Planned Activities" line with the details known at the time the form is completed. Additional activities for a specific goal should be entered on subsequent lines. If additional goals have been identified, then the format should be repeated until all of the goals have been addressed.

The description of the activity should be detailed enough to provide a reviewer with a clear understanding of what the activity involves. Please do not use acronyms. For example, more detail would be required for a self-directed program of reading and study than would be required for a formal course offered at an educational institution.

Technical or Non-Technical

In accordance with the definitions provided in Section 3.3 of this Guideline, you must identify each activity with a "T" for Technical or "NT" for Non-Technical in the column titled "Category".

Year Activity Planned

Enter an X in the box indicating the year in which you plan to complete the activity.

7.3.2 Reporting

The first task is to report progress on previously established goals and activities. If you have completed a Professional Development Plan in the past, then reporting should be a matter of either cutting and pasting your goals and activities from your previous plan into this section and updating progress, or adding in goals and activities that you have established and completed but were not captured on your last Professional Development Plan.

Completed Activities

The description you enter here may be the same description as found under "Planned Activity", or the description may have been modified, or another activity substituted as the planned activity was no longer available, no longer relevant due to changed circumstances, etc.

Category

Enter a "T" or "NT" depending on whether the activity is being reported as a "Technical" or "Non-technical" activity.

Date Completed

Enter the actual date that you completed the activity in the format year/month/day.

8. RECORDS – MAINTENANCE AND SUBMISSION

You are expected to keep adequate records such as, but not limited to, registration forms, course syllabi, detailed lists of self-study materials and summaries of the learning from them, notes or other information about seminars, workshops, trade shows, presentations, etc. that you have attended or delivered. You must retain all relevant records for at least three years.

PEG will hold submitted records in confidence.

Please note: Submission of detailed documentation is only upon request.

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9. ROLE OF THE EMPLOYER

Your employer, when appropriate, can have a significant role to play in professional development. Every employer of professionals is encouraged to support the continuing professional development efforts of members. You are encouraged to discuss your programs and plans with your employer, manager and other PEG members. Through discussion and mutual agreement, you and your employer can decide on mutually beneficial professional development goals and activities.

The employer is encouraged to provide support where practical, as it can instill an ongoing interest in life-long learning in an employee, which can provide increased value and commitment to the company.

Among other things, employer support may include:

- Consultation with the employee during development of the employee's program;
- Provision of learning opportunities;
- Assistance in developing job expectations and responsibilities;
- Positive periodic review of employee performance and progress;
- Financial support of activities;
- Allowing time to participate in activities;
- Encouragement of professional development of employees; and,
- Encouragement of employee life-long learning.

It is important to note, however, that the primary responsibility for developing and maintaining a Professional Development Program rests with the individual member.

10. MONITORING OF PROGRAMS

10.1 Compliance Checking

All Professional Development Report Forms submitted are reviewed for general compliance. A more in-depth review of your records may be under-taken if your file is selected for audit or review.

Individual member's programs may be selected for review:

- by random selection as part of an annual audit;
- as part of a review of a high-risk industry;
- when a non-practicing member resumes practice

Should such an in-depth review be initiated on your file, you will be requested to submit any information you have retained as backup to the information documented in the Member Profile and/or Professional Development Plan & Report Forms. It is very important that you retain complete and accurate records of professional development activities for presentation upon request.

10.2 Annual Audit

An audit of a randomly selected sample of Professional Development Plans will be conducted each year. A member who has been selected for audit will be required to provide supporting documentation for some or all of the activities reported on the Professional Development Report Form. Staff members, volunteer members and/or others may participate in the review process.

The purpose of the audit is two-fold. One will be verification that the information presented in the forms is accurate and complete. The second purpose is to ensure that the professional member has a suitable continuing professional development plan in place, that the goals, objectives, and activities align with the information presented for his or her current practice and future plans. A member whose program is selected for such an in-depth review will be consulted and will also be provided with feedback on the suitability of their plan.

The overall results of the In-depth Review will be also used to provide feedback to PEG on the effectiveness of the Professional Development Program and Guidelines.

Effective January 2005; Amended January 2006

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APPENDIX A

APPENDIX

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DISCIPLINES/SUB-DISCIPLINES

ENGINEERING

Aerospace Engineering

- Avionics
- Propulsion
- Mechanical systems
- Structures
- Space Systems
- Environmental
- Aerodynamics/flight test engineering

Agricultural Engineering

Biosystems Engineering

- Agricultural
- Biotechnology
- Fisheries/aquaculture
- Environmental

Biochemical Engineering

Biomedical Engineering

Bioresource Engineering

Ceramic Engineering

Computer Engineering

- Hardware design/architecture
- Information systems/data processing
- Software design
- System integration

Chemical Engineering

- Chemical
- Process design or control
- Advanced materials & polymers
- Environmental
- System integration

Civil Engineering

- Construction
- Environmental
- Municipal/urban
- Geotechnical
- Hydrotechnical
- Structural
- Transportation

Communications Engineering

- Telecommunications

Electrical Engineering

- Electrical
- Control Systems
- Environmental
- Fire Protection
- Power generation/Transmission/distribution
- Instrumentation

Electronics Engineering

Engineering Chemistry

Engineering Physics

Environmental Engineering

Food Engineering

Forestry Engineering

Geological Engineering

- Geophysics
- Geochemistry
- Geology
- Hydrogeology
- Mining/rock mechanics
- Environmental
- Geotechnical

Geomatics Engineering

Industrial Engineering

- Industrial
- Environmental
- Production Systems

Manufacturing Engineering

- Manufacturing Process
- Quality Assurance/Quality Control/Safety

Materials Engineering

Mechanical Engineering

- Mechanical systems
- Controls/Robotics
- Solid Mechanics/material/stress analysis
- Heating/Ventilation & air conditioning
- Thermodynamics/fluids
- Environmental

Metallurgical Engineering

- Metallurgy
- Environmental

Mineral Engineering

- Mineral Processing

Mining Engineering

- Mining
- Mineral processing
- Exploration
- Environmental

Naval Architectural/Ocean

Marine Engineering

Petroleum Engineering

- Operations
- Refinery
- Environmental
- Oil and Gas
- Reservoir

Software Engineering

Surveying Engineering

Systems Engineering

Water Resources Engineering

GEOLOGY

- General geology
- Environmental geology

Paleontology

- General paleontology

GEOPHYSICS

General Geophysics

- Exploration geophysics

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- Geomorphology
 - Glacial geology
 - Marine geology
 - Petroleum geology
 - Igneous petrology
 - Metamorphic petrology
 - Sedimentary petrology
 - Sedimentology
 - Stratigraphy
 - Structural geology
 - Tectonics
 - Atmospheric sciences
 - Land use/urban geology
- Economic Geology**
- General
 - Coal
 - Metals
 - Non-metals
 - Oil & gas
 - Mineral exploration
- Geochemistry**
- General geochemistry
 - Analytical geochemistry
 - Experimental petrology/phase equilibria
 - Exploration geochemistry
 - Low-temperature geochemistry
 - Marine geochemistry
 - Organic geochemistry
- Biostratigraphy
 - Micropaleontology
 - Paleobotany & palynology
 - Vertebrate paleontology
 - Invertebrate paleontology
 - Paleobiology
 - Paleoecology/paleoclimatology
- Hydrology**
- General hydrology
 - Ground water/hydrogeology
 - Quantitative hydrology
 - Surface waters
 - Geohydrology
- Soil Science**
- Soil physics/hydrology
 - Soil chemistry
 - Mineralogy
 - Pedology/classification/morphology
 - Forest soils/rangelands/wetlands
 - Soil biology/biochemistry
- Engineering Geology**
- General engineering geology
 - Earthquake engineering
 - Mining engineering
 - Petroleum engineering
 - Rock mechanics
- Geodasy
 - Geomagnetism & paleomagnetism
 - Gravity
 - Heat flow
 - Seismology
 - Marine geophysics
- Petroleum Geophysics**
- Data acquisition
 - Data processing
 - Data interpretation
- Environmental Geophysics**
- Data acquisition
 - Data processing
 - Data interpretation
- Mining Geophysics**
- Data acquisition
 - Data processing
 - Data interpretation
- Remote Sensing**
- Data acquisition
 - Data processing
 - Data interpretation

OTHER OCCUPATIONS

If your area of specialization cannot be classified using one of the aforementioned descriptions, please specify.

APPENDIX B

APPENDIX C