

GUIDELINE FOR EXPERIENCE REQUIREMENTS FOR MEMBERSHIP AS A PROFESSIONAL LICENSEE

INTRODUCTION

This brochure outlines the mandatory elements of experience that are necessary to meet the registration requirements and the voluntary elements that will enable you to grow beyond those standards after registration.

Although the responsibility for professional development is meant to be a joint task of the candidates, supervisors, mentors and employers, candidates must assume the primary role in ensuring that they get the appropriate experience. The management of one's own career has become increasingly important as job security has declined, short-term contract work has increased and the possibility of being supervised by a non-professional is growing.

This brochure should be shared and discussed with those you work for, preferably even prior to accepting a position, to ensure that the position has the requisite elements. Of course, having the right elements of experience in a position and following the advice in this brochure does not guarantee that you will meet the registration requirements. Of equal importance to APEGA's Board of Examiners (the Board) is how well you carry out your responsibilities and this will be confirmed by the references you nominate when you apply for professional membership.

There should be no surprises. This brochure is designed to let you know what the Board's expectations are. Performance review by professionals is a critical element in the registration process and your choice of references is therefore very important. The references must be candid with the Board about your performance without undue concern for whether their comments may delay your registration. There will be obvious differences of opinion between members as to what the standards of performance should be and how the candidate is performing to those standards, but the Board tries to balance such differences in coming up with a reasonable decision.

The issue of what constitutes acceptable experience can be simplified by asking yourself "Have I been applying the scientific principles that I have learned?" Subject to the need to be working to North American standards, if you can confidently say "Yes", then you can be more confident that you have been practicing engineering. The acceptance of your experience will then rest on the Board's evaluation of quantity and content, and the references' opinions concerning your performance.

Careful documentation of all experience is essential.

QUANTITY OF EXPERIENCE

If you have met the academic requirements, at least six years of experience acceptable to the Board is required. At least two years of this experience must be within your requested Defined Scope of Practice and must have been completed under the supervision and control of a Professional Member.

COMPONENTS OF EXPERIENCE

The Board will evaluate whether your experience contains the following five elements.

1. Application of Technical Theory
2. Practical Experience
3. Development of Management Skills
4. Development of Communication Skills
5. Development of the Understanding of the Societal Implications of the Work Performed

You must show evidence of a significant expenditure of time on the application of technical theory and of practical experience. Ours are technical professions and demand that you show technical proficiency. Exposure to management skills, development of oral and written communication skills and the understanding of the societal

implications of what you do will be considered as integral to the learning experience but requiring lesser exposure. These last three will take on a much greater significance as your career develops.

Each of the above five elements have subcomponents that vary in the degree to which they must be evident in your experience. The following paragraphs detail these subcomponents.

The application of technical theory **must** include selecting solutions and problem solving, preparing and checking of designs or interpretations, showing evidence of sound technical judgement and practices, and in general showing familiarity with the use and application of pertinent technologies, procedures, systems and programs within your Defined Scope of Practice. It **may** include becoming familiar with the collection, analysis and understanding of information and data. However, data collection and analysis should not be the major component of your assigned tasks for a significant period of time.

Practical experience **must** include exposure to work site operations, developing a recognition of limitations in designs, interpretations or recommendations, and the understanding of the application of pertinent Codes and Regulations within your Defined Scope of Practice. It **may** include acquiring an understanding of the interdependence of disciplines, systems and activities, and developing working relationships.

The development of management skills **must** include managing personal and project resources, involvement in planning, scheduling, budgeting and cost control, developing team skills, understanding professional and business ethics, and keeping appropriate records. It **may** include developing an understanding of corporate structure, legal aspects of contracts, quality assurance programs and cost impact studies.

Development of good oral and written communication skills is essential for a good professional. Your experience **must** show evidence of the preparation of written technical reports and of making oral presentations to management, peers or the public.

The interaction between the professions and society has become very much an issue of public scrutiny. Your experience **must** show evidence of acquaintance with such matters as safeguards and benefits to the public, and the roles and responsibilities of regulatory agencies in your specific field of professional practice.

It is expected that, with regard to the last three elements of experience, candidates will take seminars or courses to fulfil the requirements in preparation for more responsible positions even if the early positions do not demand their development and understanding.

SUPERVISION

Supervision by a Professional Member is required for at least 2 years of experience within your Defined Scope of Practice.

Supervision by a Professional Member is expected for the balance of your experience time. If you are unable to receive supervision on the job from a professional member on staff, you will need assistance from a professional member outside the company who will evaluate the technical content of your work. This professional must spend enough time in discussion with you and reviewing your work to become comfortable with its quality in order to respond confidently to the Board about your capabilities when a reference is sought.

MENTORING

A mentor is not a mandatory requirement but having a mentor may be of considerable help in your development. A mentor is often defined as a trusted counselor or guide. He or she may also be your supervisor. He or she should be an experienced professional member of APEGA or an equivalent organization. There may be advantages in having a mentor in the same discipline as long as the focus of discussions is not exclusively technical. A mentor from within the company may be able to enhance your potential for advancement, but an external perspective can be both refreshing and helpful. Whether from inside or outside the company, the mentor can serve many roles.

A mentor will be able to discuss the important aspects of assigned tasks, both from a procedural and technical point of view although he/she is not to take responsibility for the work. He or she can provide a sympathetic ear to your needs and non-judgmental advice when required. Needless to say, a mentor should be an example of professional excellence. He or she will have extensive experience with and knowledge of organizations and their operations, procedures and objectives. A mentor should be able to give advice and direction, and should be aware of current changes, developments and trends in industry.

For another perspective on the pros and cons of mentoring you may wish to read "Beyond the Myths and Magic of Mentoring", by Margo Murray, Jossey-Bass Inc. Publishers. It focuses on the mentor, rather than the line supervisor, as the leader in the candidate's professional development.

BOARD OF EXAMINERS GUIDELINES

The following clarifies what the Board generally considers to be acceptable for specific types of experience.

North American Work Standards - the Board expects that you are performing to North American technical and ethical standards and codes. Working for North American companies overseas, or for International organizations whose standards meet those of North American jurisdictions, may be acceptable but you will have to show evidence of equivalent standards. The Board must also be convinced that candidates with training and experience in warmer climates have been exposed to and understand the effects that the colder Canadian climate has on the practice of their profession.

Other acceptable experience - there are many types of experience that may be given full credit, but the following list represents those for which additional documentation will be required. Such documentation must confirm the percentage of time spent on the technical aspects of the professions and provide evidence that the principles of engineering are being applied. Orientation programs, administration and management may also be acceptable forms of experience if conducted in an engineering environment. However, it will be to your advantage if your experience is not exclusively in any one of the following areas.

- sales administration or management
- supervision of production
- supervision or inspection of construction
- startup or commissioning of plant
- patent examination and filing
- military service
- construction estimating
- technology school teaching
- well logging
- drafting
- feasibility or economic studies
- computer programming or systems analysis

DOCUMENTATION

There are four good reasons to carefully document your experience. First you will need detailed information on your experience in order to convince the Board of Examiners that you have been practicing engineering, within your Defined Scope of Practice. Second, if you worked in a remote area without close professional supervision, or if your supervision came from a professional outside the company whom you saw infrequently, it will be essential to have good documentation. Third, some jurisdictions in Canada, which provide the same functions as APEGA, demand a log book of your experience. If you expect to move or want the flexibility to be able to move, it is a good idea to maintain a detailed diary. Finally, after you are registered as a Professional Licensee (Engineering) there is a mandatory requirement, as part of the Continuing Professional Development Program, that you document any developmental programs that have enabled you to maintain your competence. Starting early in your career to document your experience and developmental programs is a good habit. The Continuing Professional Development Guideline will be provided to you upon registration.

Elaborating on the first reason for documentation, the Board of Examiners needs evidence that you have experience in the five elements mentioned earlier i.e. that you have sufficient experience at a fully professional level. The Board requires information on position titles, job descriptions, specific assignments and responsibilities, values, successes, degrees of independence and initiative needed, and evidence of increasing levels of responsibility. It may be useful to break down the information into meaningful time (no less than 6 months) or project segments with no more than a page dedicated to each segment. A typical resume doesn't usually provide the detail required. A separate listing of the professional development courses and seminars taken will be needed.

