



**PUJA (BRUNEI)  
PROFESSIONAL ASSESSMENT  
(PPA)  
REGULATIONS**

**FOR**

**ENGINEERS**

**1st Edition  
2013**

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## INTRODUCTION

This document contains the criteria and procedures for Engineer applicant to be assessed for the admission as Professional Engineer of PUJA (Brunei). This document is to be read in conjunction with the PUJA (Brunei) Admission By-Law and The Professional Assessment Regulations. Professional Engineer membership of PUJA (Brunei) can be awarded to a wide range of Engineers practising in the broad area of Engineering.

## ROUTES TO PROFESSIONAL ENGINEER (PUJA (BRUNEI) CORPORATE MEMBER) STATUS

To become a PUJA (Brunei) Professional Engineers, the Engineer must be eligible for membership of PUJA (Brunei). For information on becoming a member of PUJA (Brunei), please refer to 'PUJA (Brunei) Admission By-Law' and PUJA (Brunei) Constitution (PPA/GN-01/R0).

The diagram below shows the simplified route to obtain PUJA (Brunei) Corporate Membership / Professional Status for Engineers:-

**Eligibility Requirement:**

Current Membership of PUJA (Brunei) or eligibility to become PUJA (Brunei) Corporate Member.

Minimum 3 years of Engineering experience (professional development stage).



### **The Five (5) Routes to Become Professional Engineer (PUJA (Brunei) Corporate Member):**

**Route 1:** Candidate with active professional qualification from other professional institution recognised by Council.

**Route 2:** Candidate with recognised Engineering Degree.

**Route 3:** Research Candidate.

**Route 4:** Candidate who is a Teacher.

**Route 5:** Candidate over forty (40) years of age.



## PROFESSIONAL ETHICS

In addition to demonstrating that you have reached the necessary standard in the specified competencies, you must also be able to demonstrate that you understand the significance of professional ethics and are willing to meet the standards required of you.

Ethics can be defined as a set of moral principles extending beyond a formal code of conduct. Willingness to adhere to such a set of principles was one of the cornerstones for the expansion of the professions in the nineteenth century and is even more important today. It is one of the main reasons why people choose to rely on members of acknowledged professional bodies. By adhering resolve the inevitable conflicts between the interests of the professional, the client and the community at large.

*Some examples of the principles of ethics are:*

- a) Always acting with honesty and integrity, and within the law;
- b) Meeting all your obligations to your clients, both contractual and implied;
- c) Safeguarding client funds and other assets;
- d) Always giving best advice;
- e) Always acting in the best interests of your client as long as this is not contrary to the public interest;
- f) Always ensuring no conflict of interest arises and where such conflict does unavoidably arise, either taking action to ensure that it is eliminated or seeing that it only continues with the approval of all concerned;
- g) Safeguarding your client's confidentiality;
- h) Declining to take personal advantage of confidential information;
- i) Not accepting instructions when, in your professional judgement, the client has no need of your professional services;
- j) Not accepting instructions when you are aware that the nature of the work involved is not within your competence;
- k) Not issuing information to or concerning clients, fellow professionals or the public which is misleading or inaccurate; and
- l) Ensuring that your charges are fair and that the method of calculating them is open.

This is by no means a comprehensive list (also refer to PUJA (Brunei) Constitution – Rules of Conduct). Nor are the principles themselves finite and unalterable: they must adapt to reflect changes in the law and changes in society's expectations of the professions. For



instance, in recent years consumer pressure has extended the responsibility of all professions to the public at large and to third parties to whom there is no contractual liability.

If you are embarking on your professional career now, you are likely to encounter many new ethical concepts during your working life and need to be prepared to understand and adhere to those which are relevant to your work. The future of the professions depends on their members being able to assure the rest of societies that they can be relied on to maintain the ethical standards which society expects of them.

## **EDUCATION QUALIFICATION**

The stage one (1) benchmark qualification for Professional Engineer is a recognized Bachelor of Engineering or Bachelor of Science in Engineering Degree. Engineering is wide and diverse. At present, there are ten (10) areas of practice for submission for Professional Engineer status of PUJA (Brunei):-

- 1) Building Services Engineer
- 2) Chemical Engineering
- 3) Civil Engineering
- 4) Electrical Engineering
- 5) Environmental Engineering
- 6) Information, Telecommunications, Electronics Engineering
- 7) Geotechnical Engineering
- 8) Mechanical Engineering
- 9) Petroleum Engineering
- 10) Structural Engineering

## **PROFESSIONAL DEVELOPMENT STAGE**

This is the period during which a Graduate Engineer gains the necessary Professional Engineering competencies in an Engineering based organization. Minimum period of Professional Development is generally not stipulated at the process of assessment for award of Professional Status. However, like requirements set in PUJA (Brunei) Admission By-Law and PUJA (Brunei) Professional Assessment (PPA) Regulations (PPA/GN/01/R0) and in accordance with By-Laws and Membership Regulations of internationally accredited Engineering Institutes, a Graduate must have at least three (3) years of work experience at the level of their related occupational category to be eligible for assessment of Professional Status.

Professional Development stage is intended for Graduate Engineer to acquire knowledge and experience at work in order to develop the necessary competencies and ability to take



position of responsibility and make independent judgement. All relevant knowledge and experience at any time in any location, including those acquired at working overseas, is valid for assessment. Suitable pre-graduation experience from industrial placement is valid.

To qualify for Professional Assessment, MPUJA (Brunei), Graduate Engineer must submit an Engineering Training and Experience Report and must demonstrate to the Professional Reviewers to be responsible and having the competency levels required of the Institute. Details of both requirements are outlined in the sections follow.

## **COMPETENCY OF PROFESSIONAL ENGINEER**

Competency is the ability to perform activities within an occupation to standards expected and recognized by employers and the community. A set of competencies are provided therein for Graduate Engineer to use as planning tools for learning and development. Achievement of most of all of these competencies is required by Graduate Engineer before applying to be Professional Engineer. The set of competencies is used as assessment tools for the Professional Reviewers to make evaluation of the knowledge, standard and experience of the Graduate Engineer to qualify as Professional Engineer.

### **1) Engineering Planning & Design Knowledge**

- The candidate must demonstrate the ability to:
  - Interprets design requirements.
  - Prepares conceptual plans.
  - Plan and design using relevant Standards and Codes of Practice.
  - Incorporate latest technology and innovative development of engineering technology and system.
  - Prepares and maintains documentation during design process.
  - Validate designs.

### **2) Engineering Application**

- The candidate must demonstrate the ability to:
  - Research, review and understand appropriate engineering techniques and solution.
  - Development and selection of most appropriate engineering solution.
  - Implement design solution and review solution effectiveness.

### **3) Engineering Project Management**

- The candidate must demonstrate the ability to:
  - Develop project plans for effective project implementation.



- Manage project team and people in the team.
- Manage physical resources of the project.
- Manage project cost and apply budgetary control on project without compromising on quality and safety.
- Manage time and progress, identify and mitigate delay.
- Manage quality processes and project risk.

#### **4) Engineering Operations**

- The candidate must demonstrate the ability to:
  - Plans operation and system.
  - Manages the process with the operation and system.
  - Manages the assets.
  - Manage people.
  - Preparation of operation and system procedure manual.
  - Incorporate innovative, creative and energy efficient operation and system.

#### **5) Environmental Management & Sustainable Development**

- The candidate must demonstrate the ability to:
  - Establish stakeholders' expectations.
  - Review existing environmental conditions.
  - Knowledge of SD best practices and integration with Engineering activities.
  - Develop and strategize plans, evaluate and improve strategies to manage environment and achieve sustainable development.

#### **6) Health and Safety**

- The candidate must demonstrate the ability to:
  - Sound knowledge of legislation and workers' health and welfare.
  - Sound knowledge of health and safety of work site and processes.

#### **7) Business Management**

- The candidate must demonstrate the ability to:
  - Sound Knowledge of engineering business management.
  - Prepare and manage budget and business information.
  - Sound knowledge of statutory and commercial framework within area of responsibility.





### **8) Management and Leadership**

- The candidate must demonstrate the ability to:
  - Plan, manage and organize tasks, people and resources.
  - Plan and develop effective project implementation programme.
  - Ability to manage team and lead people to meet changes.

### **9) Self Management and Communication Skills**

- The candidate must demonstrate the ability to:
  - Develop, present and manage professional image.
  - Commit to Continuing Professional Development.
  - Good communication and interpersonal skills.
  - Able to facilitate clients' demands and maintain clients' focus.

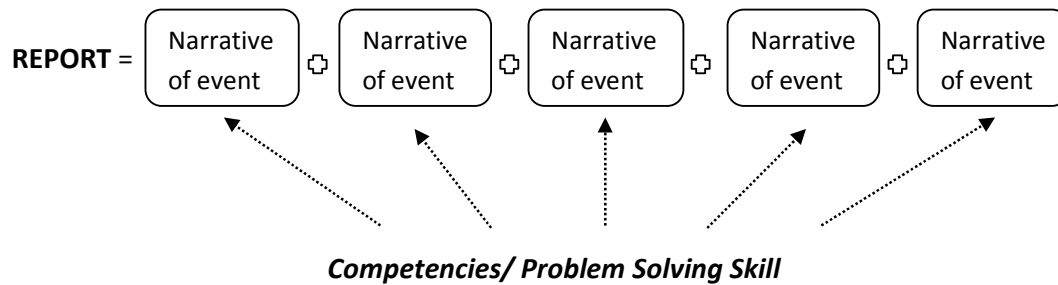
### **10) Independent judgement and Professional Commitment**

- The candidate must demonstrate the ability to:
  - Able to exercise sound independent engineering judgement and take responsibility and accountability.
  - Understand and fully compliance with PUJA (Brunei) Code of Conduct.
  - Support of PUJA (Brunei) activities and values.
  - Commitment to professional standards and Codes of Practice, with obligation to PUJA (Brunei), the society, the profession, the environment and the country.

## **ENGINEERING EXPERIENCE AND PRACTICAL TRAINING REPORT**

This report shall consist of records of engineering experience and practical training gained over a continuous period of the professional development years. The records of experience and practical training is a collection of narratives or accounts related to the events or sequence of events of engineering works the graduate engineer being trained and experienced at work place.

The graduate engineer shall indicate in each narrative of event the attainment of training and experience related to the relevant elements of the set competencies. Each narrative should demonstrate how the graduate engineer identifies problems, issues and solve the problem with application of engineering solution.



The report shall be submitted together with the application for Professional Assessment in standard PPA application form issued by PUJA (Brunei), with records of Continuous Professional Development (CPD) to support the application.

### **PROFESSIONAL INTERVIEWS**

Professional interviews are conducted by a panel of PUJA (Brunei) Professional Assessment who will review the competencies the applicant claimed to have acquired in training and experience report. The Professional Interview will begin with a presentation of work and engineering project and experience. After the presentation, the Professional Reviewers will discuss observations made during the presentation and from Engineering Experience and Practical Training Record with the applicant. The applicant is expected to articulate his or her training and experience and understanding of engineering work he or she has claimed to have achieved.