



Annex-1

Nepal Engineering Council

Registration for Title of Professional Engineer, PEng (Nepal)

Guidelines for Applicants

March 2016



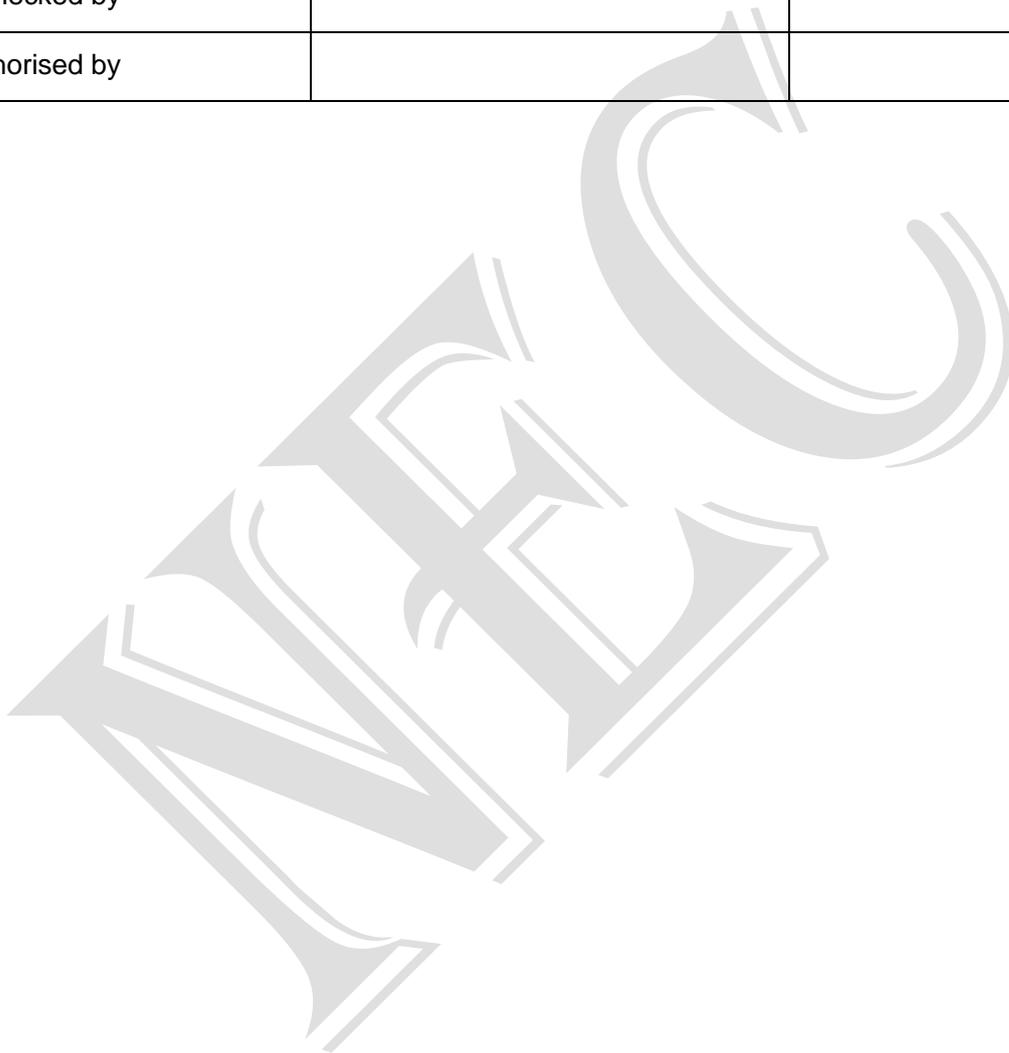
Guidelines for Applicants

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ACRONYMS AND ABBREVIATIONS

CEng	Chartered Engineer
CPD	Continuing Professional Development
CPEng	Chartered Professional Engineer
DO	Development Objectives
GoN	Government of Nepal
IEA	International Engineering Alliance
NEA	Nepal Engineers' Association
NEC	Nepal Engineering Council
NPRs	Nepali Rupees
PEng	Professional Engineer
PPA	Public Procurement Act
PPMO	Public Procurement Monitoring Office
PPR	Public Procurement Rules
RE	Registered Engineer
WTO	World Trade Organisation

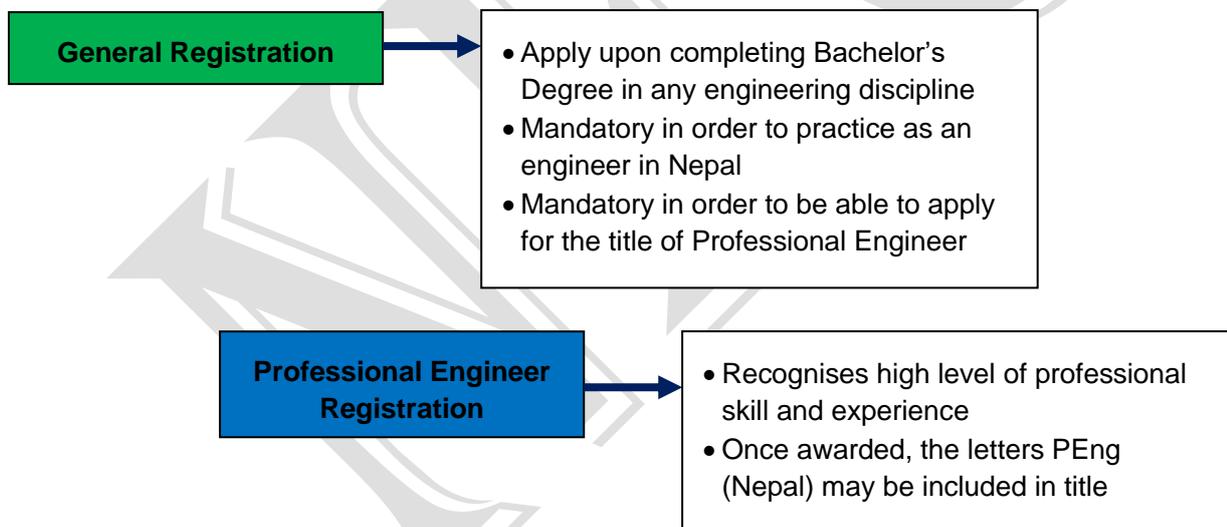
1. INTRODUCTION

1.1. THE TITLE OF PROFESSIONAL ENGINEER

The Nepal Engineering Council (NEC) is an extended arm of the Government of Nepal and is the regulatory body for the engineering profession, and engineering education, in Nepal, as per the Nepal Engineering Council Act 1999. Under this act the NEC may award the title of Professional Engineer to engineers who have achieved prescribed standards in their academic qualifications and professional experience. The award of the title of Professional Engineer enables an engineer to use the title PEng (Nepal), indicating that the engineer practices to high ethical standards and is applying their engineering knowledge to provide solutions to complex problems. A similar title is awarded in the USA and Canada, in Japan the title of Registered Engineer (RE) is awarded, in Australia and New Zealand the title awarded is Chartered Professional Engineer (CPEng), in the UK and Ireland the title Chartered Engineer (CEng) is awarded.

1.2. THE BENEFIT OF BECOMING A PROFESSIONAL ENGINEER

Securing the title of Professional Engineer provides a badge of credibility to an engineer and is a clear demonstration of their professional ability. Engineers should take pride in their skills and abilities and the title of Professional Engineer can be seen as a formalisation of this. The title of Professional Engineer also holds a status that is not just relevant to the Nepali context but also relevant in the wider engineering profession. Engineers who are awarded the title will be entitled to include the letters PEng (Nepal) in their title. The relationship between 'General Registration' and 'Professional Engineer Registration' is outlined in the diagram below:



The Government of Nepal (GoN) and other organisations, through legal provision, may introduce requirements for particular engineering roles and responsibilities to be carried out only by engineers who hold the Professional Engineer (PEng (Nepal)) title. Prior to the introduction of this, employers can immediately begin to award certain engineering roles and responsibilities only to engineers who hold the Professional Engineer (PEng (Nepal)) title.

1.3. ETHICS AND CODE OF CONDUCT OF A PROFESSIONAL ENGINEER

All engineers working in Nepal must adhere to the NEC Code of Conduct as per Rule 18 of the NEC Regulation 2057 (2001). The title of Professional Engineer brings further responsibility in terms of professional conduct and adhering to the code of conduct. The title of Professional Engineer can be removed in cases of misconduct as stated in the NEC Act & Regulations and the By-laws of the NEC related to the PEng (Nepal) title.

The Code of Conduct of the Nepal Engineering Council (NEC) can be found on the NEC website:



NEC Professional Engineer Title

Guidelines for Applicants

- In Nepali, <http://http://nec.gov.np/img/downloads/Aachar%20Samhita.pdf>
- In English, <http://http://nec.gov.np/img/downloads/Code%20of%20Conduct.pdf>

1.4.APPLICATION FEES

A non-refundable, application fee of 1500 NPRs has been fixed in the Nepal Engineering Council regulations. Upon the approval of the application the Applicant shall have to pay NRs. 10,000.00 as registration charge. These fee rates will be reviewed at regular intervals, and updated as required.

1.5.APPLICATION DEADLINES

Applications will be accepted twice a year and the application deadlines will be published through public notice. Applications under Route A, Senior Experience Route, will be open for only one year.

1.6.RENEWAL OF PROFESSIONAL ENGINEER TITLE

The period of validity of the Professional Engineer title awarded by the NEC is five years. Application for renewal of the PEng (Nepal) title must be submitted a minimum of two months prior to the completion of the five year period. The intention of the renewal process is to ensure that engineers holding the PEng (Nepal) title are working continuously as engineers, and are maintaining their Continuing Professional Development (CPD). Engineers will be required to submit an up to date Curriculum Vitae (CV) and CPD record in order to renew their PEng (Nepal) title.

2. APPLICATION AND REVIEW PROCESS

This section of the guidelines provides a step by step overview of the process involved in submitting an application, and the review of submitted applications. There are minimum criteria that applicants must meet which are specific to particular application routes, as explained in [Section 2.1](#) below, but in general all applicants must meet the following:

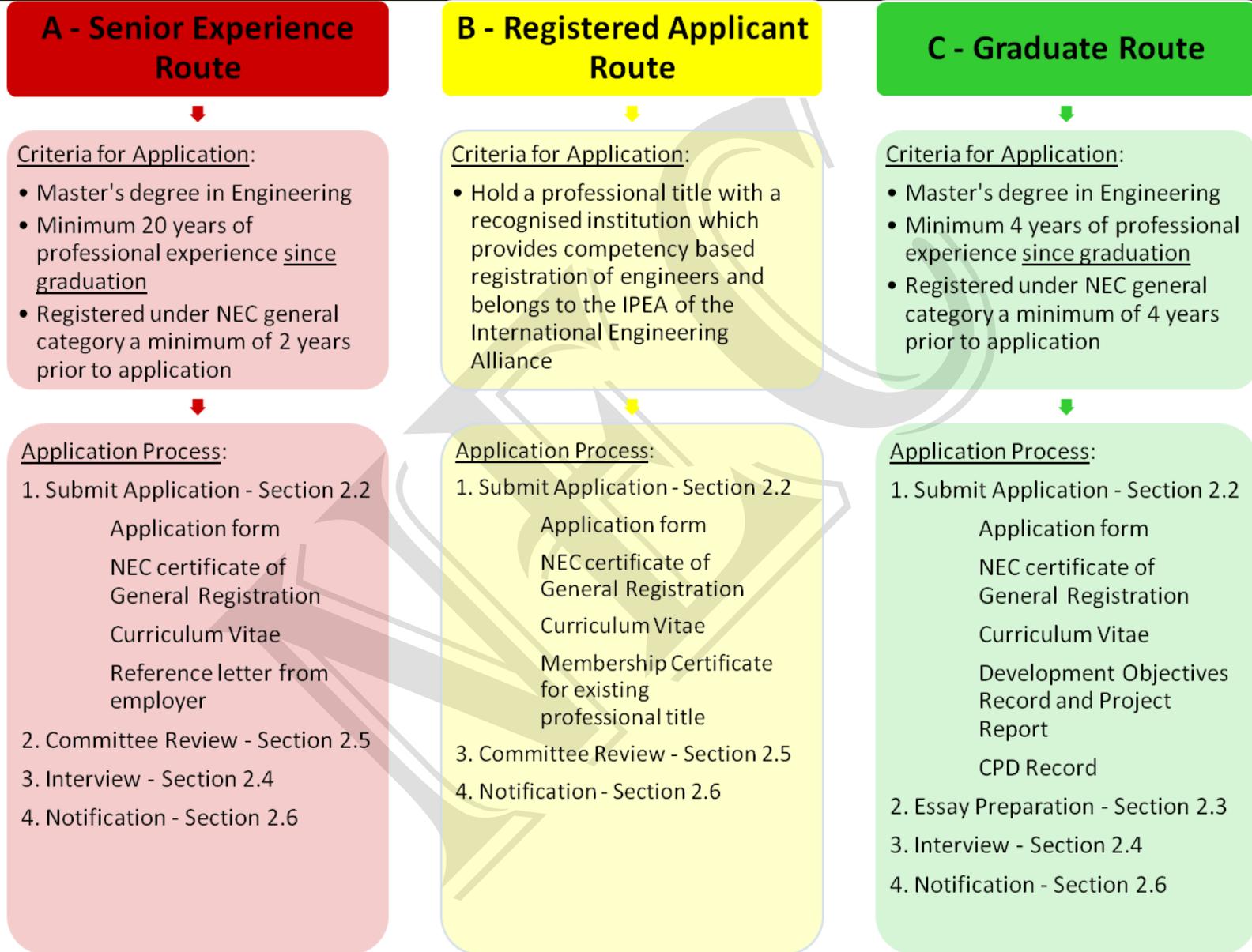
- Be registered under the General Category of the Nepal Engineering Council.
- Hold a Master's Degree in engineering from a university recognised by the NEC
- Have attained a suitable level of professional experience

The review process is primarily focused on the professional experience acquired by the applicant and looks to determine if sufficient professional experience has been acquired to achieve the skills and competencies required of a Professional Engineer (PEng (Nepal)). The NEC will evaluate applications based on a weighted scoring system, and applicants will have to achieve at least the minimum score set by the NEC in order for their application to be successful.

2.1.APPLICATION ROUTES

There are three possible routes for applicants to apply for the title of Professional Engineer (PEng (Nepal)) under the Nepal Engineering Council (NEC); A – Senior Experience Route, B – Registered Applicant Route, and C – Standard Route. Route A is time bound and will be available for one year only during the transition phase for the introduction of the PEng (Nepal) title. Routes B and C are not time bound and will remain as application routes beyond the transition phase.

The requirements for applicants under each of the three routes are outlined in the diagram below:





2.2.SUBMITTING AN APPLICATION

2.2.1. Application Form

Applies to all Application Routes.

The application form can be found in Annex 2. It will also be possible to apply online, through the NEC website (will be notified later), but during the initial six months, following the roll out of the PEng (Nepal) title, paper based applications will also be accepted.

The application form has seven sections:

- *A – Applicant Details:* Basic information regarding the applicant, e.g. name, contact details, etc.
- *B – Application Route:* Indicate under which route the applicant is applying, i.e. Route A, B, or C,
- *C – Background and Expertise:* Indicate under which discipline academic experience was gained and in which field of expertise professional experience was gained
- *D – NEC Membership:* Provide details of NEC General Registration
- *E – Documents Submitted with Application:* Provide details of documents submitted with application form
- *F – Declaration:* Applicant must declare that all information and statements included in the application form, and in the accompanying documents, are true
- *G – Supporter's Details:* Only relevant for Application Route C. Applications through route C must be supported by two engineers who hold the PEng (Nepal) title. The supporters are expected to review the applicant's application prior to submission and to provide support as required to make sure that the applicant's application effectively represents why the applicant is a suitable candidate for the PEng (Nepal) title

2.2.2. NEC Certificate of General Registration

Applies to all Application Routes.

All engineers must be registered under the general category of the Nepal Engineering Council (NEC) upon completing their Bachelor's Degree in order to be able to work as an engineer in Nepal. At the time of applying for General Registration, a transcript and notarised copy of the Bachelor's Degree must be submitted. Applicants for the PEng (Nepal) title must hold General Registration with the NEC in order to be eligible to apply. The certificate of General Registration must be submitted with the application form. Applicants under Route A must have registered under the general category a minimum of 2 years prior to applying for the PEng (Nepal) title.

2.2.3. Curriculum Vitae

Applies to all Application Routes.

A complete, and up to date, Curriculum Vitae must be provided by all applicants. Curriculum Vitae must be submitted as per the format which can be found in Annex 2A.

2.2.4. Reference Letter

Applies to Application Route A only.

Applicants applying through Route A, the Senior Experience Route, must provide a reference letter from their employer with their application. If the applicant is self-employed, they should provide a reference letter from a client (senior member of staff), or senior colleague.



2.2.5. Registration Certificate for Existing Professional Title

Applies to Application Route B only.

Applicants applying through Route B, the Registered Applicants Route, must provide a copy of their registration certificate for their existing professional title, and also provide evidence of an active membership subscription with the awarding institution. Please note, that the awarding institution must be a recognised institution which provides competency based registration of engineers and belongs to the International Professional Engineers Agreement of the International Engineering Alliance (IEA).

2.2.6. Development Objectives Record and Project Report

Applies to Application Routes C only.

Development Objectives (DOs) set of competencies, skills, and attributes which engineers must acquire and develop, through a task oriented approach, throughout their professional experience; refer to [Section 3.1](#) for further details. Applicants must demonstrate that they have achieved an 'Ability' rating, refer to [Section 3.2](#) for further details, for a minimum of five Development Objectives (DOs) using the Development Objectives Record which can be found in Annex 2B. Under application route C, 'Standard Route', applicants must demonstrate that they have had regular sign off by a mentor and supervisor on their progress towards achieving their DOs.

The Development Objectives Record must also be accompanied by a Project Report, where the applicant is expected to demonstrate, in terms of a particular project they have worked on, how they achieved their DOs in a practical sense. There is no prescribed format for the project report but it should be a maximum of 3,000 words.

2.2.7. Continuing Professional Development Record (CPD)

Applies to Application Route C only.

Applicants must have completed a minimum of 60 hours of Continuing Professional Development (CPD) per year to be eligible to apply for the title of Professional Engineer (PEng (Nepal)). Applications must be accompanied by a completed CPD record, the format for which can be found in Annex 2C. The CPD record should be used by applicants to demonstrate the value of the CPD hours that they have completed. Refer to [Section 4](#) for further information regarding Continuing Professional Development.

2.3.ESSAYS

Applies to Application Routes C only.

As part of the application process the applicant will be required to prepare essays, under exam conditions. The topics and questions to be addressed in the essay preparation will be defined by the NEC and will be revised before every application deadline.

The essays are included as part of the application in order to provide an opportunity for the applicant to articulate their professional opinion on important topics relevant to the professional practice of engineering, as well as to demonstrate their communication skills. It is important that the essays are based on the applicant's own opinions, arguments, conclusions and analysis, and do not include large amounts of quoted text or arguments from other sources. It is not necessary for the assessor to agree with the applicant's stance on a particular topic, they must simply see that the stance has been argued in a logical manner.

The essay preparation sessions will be held in Kathmandu, in a location determined by the NEC.

2.4.INTERVIEW

Applies to Application Routes A and C.

If called for interview, the applicant will be notified at least one month in advance of the date and location of the interview. Applicants invited to interview will be interviewed by a panel of three interviewers from the relevant engineering discipline.



2.5.COMMITTEE REVIEW

Applies to Application Routes A and B only.

Applications received through Application Routes A and B will be processed through a committee review. The review committees will be formed by the Nepal Engineering Council.

2.6.NOTIFICATION

If the application for professional registration title has been successful, the applicant will be notified no more than one month after their interview / committee review.

If the application has been unsuccessful, the applicant will be provided with feedback regarding the reasoning behind not awarding the professional title, and they will be encouraged to reapply at an appropriate time.

3. PROFESSIONAL EXPERIENCE

3.1.DEVELOPMENT OBJECTIVES (DOS)

Development Objectives (DOs) are a pre-defined set of competencies, skills, and attributes which engineers must acquire and develop, through a task oriented approach, throughout their professional experience. The Nepal Engineering Council (NEC) has defined a set of ten Development Objectives (DOs) from which applicants must have achieved a minimum of 5 prior to applying for the PEng (Nepal) title. The ten DOs are as follows:

- DO1 – Identify engineering problems and define possible solutions
- DO2 – Manage contractual issues
- DO3 – Understand, and apply, the relevant procurement act and regulations
- DO4 – Control budgets, tasks, people, and resources
- DO5 – Bring about continuous improvement through quality management
- DO6 – Demonstrate personal and social skills and ability to communicate with others at all levels
- DO7 – Comply with relevant codes of conduct
- DO8 – Manage and apply safe systems of work
- DO9 – Contribute to sustainable development through engineering activities
- DO10 – Demonstrate commitment to Continuing Professional Development (CPD)

These Development Objectives (DOs) have been developed based on the model used by the Institute of Civil Engineers in the UK, in order to align with established, internationally recognised attributes and professional competencies.

Engineers applying for the title of Professional Engineer are expected to acquire a wide variety of experience under each Development Objective. A guideline for the suggested range of activities for each DO is provided below:

DO1 – Identify engineering problems and define possible solutions

Use codes and standards for engineering design to provide engineering solutions, demonstrate situations where codes are not applicable and reasons for this, validate engineering designs with actual implementation of the design solution. Apply and understand the limitations of established best practice as defined by codes, standards and specifications. Undertake value engineering for various engineering solutions, present solutions, and secure acceptance from stakeholders. Review engineering outputs from consultants or in-house designs, Make recommendations for improvement to engineering solutions in line with codes and constraints, contribute to implementation of engineering projects, and monitor outputs and results.

DO2 – Manage contractual issues

Forms of contract. Responsibility of parties to a contract. Procurement methods. Modes of payment. Contractual records. Insurances. Instructions and variations. Payments. Prepare contract documents for



engineering projects, demonstrate good understanding of contractual obligations. Review and certify payment requests for works undertaken, Assess contractual issues, claims and make recommendations, Undertake Co-ordination of project activities, Prepare and update risk matrixes for projects etc.

DO3 – Understand, and apply, the relevant procurement act and regulations

Understand role of PPMO, Read PPA and PPR. Apply procurement act and regulations across a wide variety of procurement activities, etc.

DO4 – Control budgets, tasks, people, and resources

Contribute to preparation of planning and resourcing schedules, Contribute to preparation of method statements. Contribute to setup of Information and administration systems for Project Management. Site supervision. Works scheduling and prioritisation, etc.

DO5 – Bring about continuous improvement through quality management

Contribute to preparation/implementation of Management systems, Foster strong team working, Support preparation and review of Quality Management Plans, Maintain quality standards. Recommend improvements to quality assurance and control systems. Contribute to the improvement of quality systems, etc.

DO6 – Demonstrate personal and social skills and ability to communicate with others at all levels

Prepare various Reports, Letters, and Drawings. Make presentations on various issues, Provide advice to technical and non-technical colleagues, Contribute to meetings and consider the views of others. Proactively use IT systems in the work place. Effectively communicate difficult ideas / concepts to colleagues / staff at various levels. Conduct discussions in a professional manner with clients and others etc.

DO7 – Comply with relevant codes of conduct

Understand the purpose and history of the Nepal Engineering Council. Comply with the NEC Code of Conduct. Demonstrate knowledge, and application, of employer's Code of Ethics. Demonstrate understanding of current developments and issues affecting the engineering industry. Exhibit high ethical and professional behaviour, actively promote the engineering profession etc.

DO8 – Manage and apply safe systems of work

Understand and correctly apply Nepali Health & Safety Legislation across various work activities and sites, Undertake Risk Assessments for engineering activities, Demonstrate detailed knowledge of the hazards applicable to the engineer's field of work. Apply risk management techniques appropriate to the engineer's field of work, Prepare and update method statements etc.

DO9 – Contribute to sustainable development through engineering activities

Understand and comply with relevant Nepali legislation and codes. Contribute to Initial Environmental Examinations and Environmental Impact Assessments. Understand the social and economic issues in implementing solutions. Comply with legislation and codes. Environmental impact. Environmental management (interaction between design, implementation, and operation). Social and economic issues in implementing solutions. Project whole life cycles. Knowledge of sustainable development tools, etc.

DO10 – Demonstrate commitment to Continuing Professional Development (CPD)

Actively seek out learning opportunities. Follow latest trends in engineering development. Demonstrate application of learning. Document CPD activities in a log book, etc.

The suggested range of activities outlined under each DO above should not be considered complete and are offered as a guideline only. Engineers applying for the title of Professional Engineer are encouraged to complete as wide a range of activities as possible under their DOs.



3.2.ACHIEVEMENT RATINGS

The achievement of Development Objectives (DOs) will be graded based on the 'Achievement Ratings', as per the Institute of Civil Engineers in the UK model and as shown in the table below:

Achievement Rating	Definition	Level of Demonstration	Suggested Time Frame (Months)
A	Appreciation	Engineer must appreciate why the DO is important and why it is done.	1-3
K	Knowledge	Engineer must have a basic understanding and knowledge of the DO and how it is achieved.	1-3
E	Experience	Engineer must have achieved the DO, or part of it, working under supervision.	3-12
B	Ability	Engineer must have achieved the DO several times in different situations, having the competence to assist others and to work without supervision.	12-48

In order to apply for the title of Professional Engineer applicants are required to be able to demonstrate that they have attained achievement rating 'B' for all of the development objectives. If this level is achieved prior to four years of professional experience post-graduation the applicant will not be able to apply for the title of Professional Engineer until the required number of years of professional experience has been completed.

3.3.DOCUMENTING EXPERIENCE UNDER DEVELOPMENT OBJECTIVES

The standard format for documenting Achievement Rating, the Development Objectives Record, can be found in Annex C. Applicants must be able to explain when, where, and how they have achieved each particular DO both through the provision of relevant supporting documentation and during the interview ([Section 2.4](#)).

4. CONTINUING PROFESSIONAL DEVELOPMENT

4.1.INTRODUCTION

Continuing Professional Development (CPD) is defined as the systematic maintenance, improvement, and broadening of knowledge and skills, and the development of personal qualities, necessary for the execution of professional and technical duties throughout an engineers working life.

CPD can therefore be seen to cover all aspects of professional life, and relate to both technical and non-technical skills. The aim of CPD is to provide framework for overall professional development and career progression. CPD should therefore not be viewed simply as attendance at particular training courses, but instead as a planned, and structured, long term training approach for professional development.

4.2.THE IMPORTANCE OF CPD

Engineers must be constantly learning and adapting as their relevant engineering discipline advances. This is also particularly important for skill sets which are not necessarily engineering specific but which are critically important for a Professional Engineer, for example communications skills, report writing, etc. Continuing Professional Development (CPD) is the systematic way in which life-long learning is approached throughout an engineer's career. Demonstrating a commitment to learning, and participation in CPD activities is an important part of the application for the title of Professional Engineer.



4.3.SCOPE OF CONTINUING PROFESSIONAL DEVELOPMENT

The Nepal Engineering Council defines Continuing Professional Development (CPD), under the By-Laws which govern the registration of engineers under the PEng (Nepal) title, as any of the following activities:

- Performance in the engineer's certified field and its continuation
- Conduct or participate in seminars on subject matter directly related with the engineer's certified field
- Research and development, and publication, of technical articles related to the engineer's certified field
- Knowledge and efforts to develop knowledge on underlying requirements concerning qualifications and expertise of professional engineers as stipulated in international agreements and treaties including the provisions of the World Trade Organisation (WTO) and the International Engineering Alliance (IEA).
- Knowledge of project management techniques
- Knowledge of financial analysis of projects
- Knowledge of laws, bylaws, guidelines, codes, and specifications related to the engineering profession and its performance

CPD activities outside of those listed above may also be considered and as above do not necessarily need to be technical or engineering orientated, and can cover any learning that develops the professional capacity of an engineer, for example learning a language, IT skills, training on socio-economic issues to improve understanding of social needs, etc.

4.4.CONTINUING PROFESSIONAL DEVELOPMENT RECORD

Applicants applying through Route C must have completed a minimum of 60 hours of CPD per year to be eligible to apply for the title of Professional Engineer (PEng (Nepal)). Applications must be accompanied by a completed Continuing Professional Development (CPD) record, the format for which can be found in Annex D. The CPD record should be used by applicants to demonstrate the value of the CPD hours that they have completed.

4.5.CONTINUING PROFESSIONAL DEVELOPMENT AS A PROFESSIONAL ENGINEER

Continuing Professional Development (CPD) continues to be important beyond the award of the title of Professional Engineer. When applying for renewal of the title of Professional Engineer (PEng (Nepal)), the engineer must provide an up to date CPD Record. Professional Engineers are required to complete a minimum of 40 hours of CPD per year. The format for the CPD record can be found in Annex 2C.



ANNEX 2: APPLICATION FORM FOR TITLE OF PROFESSIONAL ENGINEER

FOR OFFICE USE ONLY			RECENT PHOTOGRAPH
APPLICATION RECEIPT NO.:-		DATE:-	

A Applicant Details

In Roman Script (Please use Block letters)

Title:	First Name:	Family Name:
देवनागरी लिपिमा		
	नाऊ	थर
Date of Birth: DD/MM/YYYY	Please specify your gender: <input type="checkbox"/> Male <input type="checkbox"/> Female	
Address: Permanent:		
Contact :		
Phone Number:	Email Address:	
Name of Father/Mother		
Name of Grand Father/Mother		

B Application Route

Please indicate under which application route you are applying:

Route A Route B Route C



G Supporter's Details (Application Routes C Only)

I, the undersigned, support the candidate from professional knowledge as worthy of consideration for Engineering Council registration and I endorse the content of this application.

Supporter 1

Name:	Signature:	Date:
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Full Address:

Phone Number:	Email Address:
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NEC Registration Number:												
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Academic Qualifications:	Professional Membership/Affiliation of Engineering Bodies:
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Supporter 2

Name:	Signature:	Date:
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Full Address:

Phone Number:	Email Address:
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NEC Membership Number:												
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Academic Qualifications:	Professional Membership of Engineering Bodies:
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ANNEX 2A: STANDARD FORMAT FOR CURRICULUM VITAE

NAME

Phone: 000000 Email: email@mail.com Skype: skype name

Education

Month YY – Month YY **Highest level of academic qualification (Bachelor / Master)**, Score Achieved, Awarding Institution

Project: Title (if relevant)

Subjects: List of key subjects

Month YY – Month YY **Lower levels of academic qualification**, Awarding Institution

Month YY – Month YY **Lower levels of academic qualification**, Awarding Institution

Month YY **Training Institution – Title of Training**

Month YY **Training Institution – Title of Training**

Employment History

Month YY – Month YY **Company / Organisation Name, Location of Post**

Job Title. Description of role and responsibilities.

Month YY – Month YY **Company / Organisation Name, Location of Post**

Job Title. Description of role and responsibilities.

Month YY – Month YY **Company / Organisation Name, Location of Post**

Job Title. Description of role and responsibilities.

References

Name, Job Title, Company / Organisation Name, email, phone number

Name, Job Title, Company / Organisation Name, email, phone number

Name, Job Title, Company / Organisation Name, email, phone number



ANNEX 2B: DEVELOPMENT OBJECTIVES RECORD

DO No.		DO Title			
Range of activities					
Achievement Rating					
Level	A	K	E	B	
Date Achieved					
Claim of Achievement					



ANNEX 2C: CONTINUING PROFESSIONAL DEVELOPMENT RECORD

Title & Type of Activity	Details of Activity	Dates	Time spent learning	Key Learning Points	Key Benefits