

ENG 104.2 - ENGINEER IN THE SOCIETY

PROFESSIONAL QUALIFICATIONS

Professional qualifications are titles or awards granted by professional bodies. Most, but not all professional qualifications are 'Chartered' qualifications, and follow on from having been admitted to a degree (or having an equivalent qualification). The term "professional qualification" can also be used to refer to higher-level vocational qualifications in "professional" roles.

ENGINEERING EDUCATION QUALIFICATIONS

Engineering education is the activity of teaching knowledge and principles to the professional practice of engineering. It includes an initial education (bachelor's and/or master's degree), and any advanced education and specializations that follow. Engineering education is typically accompanied by additional postgraduate examinations and supervised training as the requirements for a professional engineering license. The length of education, and training to qualify as a basic professional engineer, is typically 5 years, with 4 years for an engineer who takes responsibility for major projects.

Science, technology, engineering, and mathematics (STEM) education in primary and secondary schools often serves as the foundation for engineering education at the university level.

Service-learning in engineering education is gaining popularity within the variety of disciplinary focuses within engineering education including civil engineering, mechanical engineering, petroleum engineering, chemical engineering, electrical engineering, and other engineering education.

Every engineering cadre is registrable as a professional with the following professional bodies in Nigeria;

a.) NIGERIAN SOCIETY OF ENGINEER (NSE) :

The Nigerian Society of Engineers, NSE, is the umbrella organization for the Engineering Profession in Nigeria. It was founded on 16th February 1958 by a group of young Nigerian graduate engineers and students in the UK and inaugurated at the Nigerian House in London.

The Organisation looks after the professional needs of members through well-structured programmes and regular interactions among the different cadre of membership, enhancing high professional standard and ethical practices.

It is the vision of the Nigerian Society of Engineers to be one of the very best Engineering Professional bodies in the World while the Society's mission is stated thus: "The Nigerian Society of Engineers is dedicated to providing quality service aimed at enhancing professional competence and development of its members at all times.

"The Nigerian Society of Engineers is committed to focused collaboration with, influencing and providing quality advice to the various arms of Government, Industry, Commerce, academia and the Society at large, for the purpose of uplifting the country as a whole.

"The Nigerian Society of Engineers shall make meaningful contributions to the advancement of technology worldwide".

OBJECTIVES OF THE NIGERIAN SOCIETY OF ENGINEERS

The objective of the Society is to promote the advancement of engineering education, research, and practice in all its ramifications. Naturally, this is with a view to maintaining and enhancing the professional

capabilities of its members so as to better equip them to fulfil the needs of the profession for the good of the public and the nation at large.

The objects for which the Society is established are:

- ✓ To provide a central organisation for engineers in Nigeria and to generally from time to time be necessary to maintain a strict standard or professional ethics among its members and to advance the interest of the engineering profession in Nigeria.
- ✓ To promote, protect, encourage and maintain a high standard of engineering study and practice and to encourage greater efficiency therein.
- ✓ To present to the Government of Nigeria the views of the Society on any subject of concern or interest to engineers in Nigeria and if considered advisable to join with any other bodies in submitting such representation.
- ✓ To represent to any other individual or bodies or organisation the views of the society on any subject of concern or interest to engineers in Nigeria or any appropriate subject on which the views of the Society may be invited.
- ✓ To provide a body to which the Government or other official or unofficial authority or organisation in Nigeria can have recourse for advice, assistance or the expression of views on any subjects of concern or interest to engineers in Nigeria.
- ✓ To facilitate the development and acquisition of technology by conducting visits to places of engineering interest, reading technical papers, holding meetings, conferences, publishing books journals and periodicals on engineering matters.
- ✓ To subscribe or guarantee or otherwise use monies of the Society for charitable or benevolent objects or scholarships on bursaries or for any exhibitions for any public general or useful objects.
- ✓ To provide for the training and examination of students in engineering as well as the continuing professional update and development of its members.
- ✓ To nominate any member of members as arbitrators, panellists, investigators, auditors expert witnesses or specialist advisers, when called upon to do so.
- ✓ To assist necessitous members and any of the dependent kindred of deceased members including the widows and widowers of members and to appoint treasurer and distributor of any benevolent fund or funds which may be contributed by members or others for these purposes or any of the them and subject to the provisions of paragraph four (prohibiting payments being made to members), to make any contributions out of the surplus assets or income of the Society from time to time to any benevolent fund or funds.
- ✓ To assist necessitous members and any of the dependent kindred of deceased members including the widows and widowers of members and to appoint treasurer and distributor of any benevolent fund or funds which may be contributed by members or others for these purposes or any of the them and subject to the provisions of paragraph four (prohibiting payments being made to members), to make any contributions out of the surplus assets or income of the Society from time to time to any benevolent fund or funds.
- ✓ To purchase, hold, lease, let, mortgage, sell, improve, or otherwise acquire and dispose of any movable or immovable property and any rights or privileges, which may be necessary or convenient for the advancement of any of the objects of the Society.
- ✓ To invest and deal with the monies of the Society not immediately required in any manner.
- ✓ To borrow money where necessary to promote any of the objects set out herein upon such securities as may be determined.
- ✓ To apply or petition for any legislation, parliamentary or otherwise that would further any of the objects of the Societies.
- ✓ To do all or any such Lawful things as are incidental or conducive to the attainment of the object and generally to further the profession of engineering in Nigeria as well as enhance the status of engineers in Nigeria. Provided that the Society shall not support with its funds and objects nor endeavour to impose on or

procure to be observed by its members or others any regulation, restriction or condition which if an object of the Society would make it a trade union.

✓ To maintain and enhance links with national, international and multinational organizations and bodies to promote any of the objects of the Society.

✓ To collaborate with Industry, Commerce, Academia, and other such national bodies as may be necessary or convenient for the advancement of any of the objects of the Society.

✓ To promote and enforce a high standard of performance and professional ethics among its members.

✓ To watch over, promote, and protect the mutual interests of its members and to give advice to members.

MEMBERSHIP OF THE NIGERIAN SOCIETY OF ENGINEERS

The following are guidelines for persons who want to become members of the Nigerian Society of Engineers.

To register, visit the registration portal at <http://portal.nse.org.ng/Account/Register>

There are six grades of membership namely: Student Member, Graduate Member, Corporate Member, Associate, Fellow and Honorary Fellow.

The education and training required for each grade of membership are listed hereunder:

1. STUDENT MEMBER

A Student Member must be a person who is undertaking an approved engineering course of training leading to a degree in an institution recognised by the Council of the Society for the purpose of training professional engineers.

2. GRADUATE MEMBER

A person seeking admission to Graduate Membership must possess an academic qualification acceptable to the Council of the Society and registrable by the Council for the Regulation of Engineering in Nigeria (COREN) under the provisions of the Engineering Registration Decree (No.55) of 1970 or such amendments thereof. Post-qualification practical experience is not a requirement for entry into this class. HND holders are also not registrable.

3. CORPORATE MEMBER

Candidates for this membership are grouped into different categories thus:

A1 - Candidates - This covers holder of the Bachelor's degree in Engineering whose institutions' programmes are accredited by COREN and with such candidates having been registered by COREN as Professional Engineers.

A2 - Candidates - This covers engineers who are already Corporate Members of Engineering Institutions (licensed as Professional Chartered or Registered Engineers) recognized by COREN.

B1 - Candidates - These are holders of the Bachelor's degree in Engineering whose qualifications are accredited by COREN or any overseas accreditation board recognised by COREN. Such candidates must have acquired a minimum of 4 years post-qualification experience.

B2 Candidates - Candidates who obtained HND and PGD in the same field of Engineering from approved Institution and had acquired a minimum of 6 years post-graduation experience in the practice of Engineering.

B3 Candidates - Candidates who obtained HND in Engineering from an approved institution and have successfully completed the NSE Graduateship Examinations and have had additional 2 years of engineering practice.

C1 Candidates - Candidates are holders of correct and adequate basic academic qualifications by COREN Standards and Regulations who are 40 years and above. Such candidates as at the time of application must have a minimum of 10 years post-qualification experience. The candidates must appear in person.

C2 Candidates - Candidates who are holders of correct and adequate basic academic qualifications by COREN Standards and Regulations and are top executives in Government parastatals or Industries etc, who are not only 45 years and above with respect to age, but who, as at the time of application have a minimum of 15 years post qualification experience. They may be accorded Presidential interview through NSE branch.

4. ASSOCIATE

A person seeking election, as an Associate of the Society shall possess an academic qualification at the level of a university degree in the sciences allied to engineering science, or the qualifications approved by the Council of the Society. In addition, he shall have been engaged in work related to the practice of engineering for a minimum period of 5 years.

5. FELLOW

The following requirements/conditions are necessary for anyone to qualify for fellowship award by the Nigerian Society of Engineers:

All candidates must have been corporate members of the Society for 10 years in addition to what is written in the Memorandum and Articles of Association of NSE.

NOTE:

- All HND holders must have an additional academic qualification(s) before Fellowship.
- All referees must be financial members of the Society and their reference letters must be received before the consideration of the candidate's application. (Only the President can waive this option).
- Intending members must have attended at least 5 AGMs in the last ten years prior to the year of application. - Must have written and presented four (4) Technical/Management papers at NSE and or any other for a acceptable to the Board of Fellows (all papers must have been presented in the last 10 years).
- Aspirants also must have worked on some outstanding projects (that stand out from the ordinary).
- Attended the yearly refresher Engineering Courses/Workshops to make him or her current on engineering practice and not with obsolete knowledge (must show evidence of this in the application form).
- All candidates must be active in their Branch and Division activities.
- Financial status must be consistent. There must be evidence of consistency in the payment of dues to NSE in the last 5 years.

The processing fees for the two categories of Fellowship had been reviewed upwards as follows:

(i) By invitation - the Council had approved N2.2m for applicants by invitation. The intention was to limit the number of applicants for this category and encourage applicants by application.

(ii) By application - the Council also approved N300,000 for this category of applicants.

6. HONORARY FELLOW

The Council of the Society may at its discretion elect distinguished persons to Honorary Fellowship. Such persons, though not necessarily engineers, would normally have used their positions to render notable assistance to the practice of engineering science.

BENEFITS OF BEING A MEMBER OF THE NIGERIAN SOCIETY OF ENGINEERS

1. COURSES/WORKSHOPS/CONFERENCE

The Society offers courses and workshops regularly for professional improvement and continuing education of members. These courses/workshops are coordinated by the Professional Development Directorate of the National Headquarters and are organized nation-wide through Divisions and Branches of the Society and the National Headquarters.

The Society holds Engineering Conference every year and an international conference every two years between the last week in November and December. Conference Themes are chosen based on contemporary issues and a communique issued at the end of proceedings.

2. CAREERS AND EMPLOYMENT ADVICE

The Society provides advice to members on job placement and career progression through her Job placement unit. The unit maintains a list of members wishing to change jobs or in search of jobs, and also match jobs opportunities by its job listing.

3. LIAISON WITH THE COUNCIL FOR THE REGULATION OF ENGINEERING IN NIGERIA (COREN)

The Society is represented on the Council of COREN and maintains close relations with the body on all issues relating to the engineering profession. These include Engineering Regulations Monitoring (ERM), Mandatory Continuing Professional Development (MCPD) and Engineers remuneration.

4. FORUM

The Society provides a forum for engineers to exchange ideas and update their knowledge on contemporary and future developments in engineering.

5. CODE OF ETHICS

The Society has established a Code of Ethics to control the professional conduct of her members. Disciplinary actions are instituted under this code.

6. ADVISORY SERVICES

The Society provides guidance to members on a wide range of matters relevant to their involvements with and development in the profession. Government and the general public may also seek the advice of the Society on Professional Engineering matters.

7. AWARDS AND PRIZES

Grants/Fellowships/Awards and Prizes for papers, research and other contributions to the profession are awarded by the Society from time to time to those who distinguished themselves in the profession.

8. BENEVOLENT FUND

The Society maintains a benevolent fund to which individual members contribute. The fund is to help members and their families in distress.

9. COMPETITIONS

The Society sponsors and encourages competitions at all levels, secondary schools through Universities to Professional. The Engineer of the Year Award has also been instituted.

10. INTERNATIONAL RELATIONS

The Society represents Nigeria through her membership of the Commonwealth Engineers Council (CEC) and World Federation of Engineering Organization (WFEO). The Society is also the Secretariat of the Federation of African Engineering Organization (FAEO).

Foreign Industrial tours are also organized by Branches and the Headquarters coordinated by the International Affairs unit at the Headquarters.

b.) COUNCIL FOR THE REGULATION OF ENGINEERING IN NIGERIA (COREN) :

HISTORY OF COREN

The Council for the Regulation of Engineering in Nigeria, COREN, was established by decree 55 of 1970 and amended by Decree 27 of 1992, now the “Engineers (Registration, etc) Act, CAP E11 of 2004” Law of the Federal Republic of Nigeria. The Act establishes COREN as a statutory body of the Federal Government empowered to regulate the Practice of Engineering in all aspects and ramifications in Nigeria.

MANDATE OF COREN

The Council for the Regulation of Engineering in Nigeria, COREN, is a body set-up by the Decrees 55/70 and 27/92 (now Acts 110). The Decrees empowered the Council to regulate and control the training and practice of engineering in Nigeria and to ensure and enforce the registration of all engineering personnel (i.e. Engineers, Engineering Technologists, Engineering Technicians, and Engineering Craftsmen) and consulting firms wishing to practice or engage in the practice of engineering.

BENEFITS OF BEING COREN CERTIFIED

- The National Council on Establishment (NCE) has approved an enhanced entry point of salary Grade Level 09 for engineers in the public service.
- It also approved the inclusion of relevant certificates for Surveyor, Survey Technical and Craftsmen in the civil service cadre, and restoration of Industrial Promotion Officer Cadre on salary grade level 08 to 17.

c.) AFRICAN INSTITUTE OF SCIENCE AND TECHNOLOGIST (AIST, NIGERIA)

d.) NIGERIAN ASSOCIATION OF TECHNOLOGIST IN ENGINEERING (NATE)

e.) PROFESSIONAL BODIES OF OTHER COUNTRIES

There are many professional bodies in the world relating to the different branches of engineering.

The following are examples of professional bodies namely;

- Professional Engineering Organizations (PEO)
- The World Federation of Engineering Organizations (WFEO)
- Federation of African Engineering Organisations (FAEO).

- Commonwealth Engineers Council (CEC)
- Institution of Civil Engineers (ICE)
- American Society of Civil Engineers (ASCE)
- Society of Petroleum Engineers (SPE)

f.) DIFFERENT ENGINEERING DEPARTMENTS

The different engineering departments have been discussed in the branches of engineering in the previous lecture.

g.) DIFFERENT ENGINEERING DIVISIONS

- Electrical Division (NIEEE)
- Geotechnical Division
- Mechanical Engineering Division (NIMechE)
- Nigerian Institution of Civil Engineers (NICE)
- Association of Professional Women Engineers of Nigeria (APWEN)
- Metallurgical & Mining Division
- Nigerian Institution of Agricultural Engineers (NIAE)
- Aeronautical Division
- Industrial Division
- Nigerian Institute of Communication Engineers
- Nigerian Society of Chemical Engineers (NSCheE)
- The Nigerian Institution of Structural Engineers (NIStructE)
- Highway Division
- Environment Division
- Facility Division
- Polymer Division
- Power Division
- Procurement
- Automotive Division
- Appraisers and Cost Engineers
- The Nigerian Institution of Marine Engineers and Naval Architects (NIMENA)
- Space Division
- Water Division
- Safety Division