

university. Entry requirements include mathematics and science at a higher-grade level.

**REGISTRATION:** After completion of diploma or degree studies, a graduate may register with the ECN in an in-training capacity. After a minimum post-qualification training period of three years with an approved employer, a candidate may then apply for registration as an engineering technician, incorporated engineer, or professional engineer.

#### **EPA MEMBERSHIP**

##### **CORPORATE MEMBER**

Professional engineer, incorporated engineer, or engineering technician registered with the ECN.

##### **ASSOCIATE MEMBER**

Engineering graduates registered with the ECN as in-training, and persons not registered with the ECN but who are involved in professions related to or supportive of the engineering profession.

##### **STUDENT MEMBER**

Engineering students who are studying at any institution to become a professional engineer, incorporated engineer or engineering technician, but not yet registerable by the ECN.

##### **MEMBERSHIP APPLICATIONS AND FEES**

Membership application forms and information on current membership entrance and subscription fee may be obtained from the EPA Administrator – please see the cover page for contact details.

**They call it a miracle –**



*pexels-- thisisengineering*

**We call it engineering**

# *The Engineering Professions Association of Namibia*

And

## Engineering in Namibia

### *A Brief Introduction*



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## OUR ASSOCIATION

The Engineering Professions Association of Namibia (EPA) is a non-profit, voluntary membership association of professionals active in engineering and related fields in Namibia. We are a member of the South African Road Federation (SARF), and Namibia is a member country of the Commonwealth Engineers Council, London, UK.

## OUR MISSION AND AIMS

The mission of the EPA is to uphold excellence in the field of engineering by promoting the image of engineering and related professions, continuing professional education and common interests of its members.

Our aims are to facilitate the engineering and related professions in their crucial role towards developing and maintaining Namibia's excellent infrastructure, promoting the effective utilization of scarce resources, and achieving sustainable development with due regard to the protection of the environment.

## OBJECTIVES OF THE EPA

- ❖ Providing study loans / bursaries to engineering students via the EPA Scholarship Trust.
- ❖ Promoting awareness of engineering at school level,
- ❖ Providing career guidance brochures for a career in engineering.
- ❖ Arranging continued education courses in association with accredited training companies and institutions.
- ❖ Arranging lectures, seminars, site visits and social events for members.
- ❖ The National Adjudicators List (NAL) offers a procedural and impartial nomination service to assist employers in the construction industry with the appointment of adjudicators. e.g. as specified in the FIDIC forms of contract. The selection process is handled by the EPA Administrator and the NAL Manager.
- ❖ The "Who's Who of Engineering in Namibia" Publication has been published since 2009 showcasing the industry and engineering projects in Namibia. It is published by Virtual

Marketing in close collaboration with the EPA and the Engineering Council of Namibia (ECN).

## CAPACITY BUILDING

Once the new Engineering Act is promulgated the EPA in cooperation with the ECN will be responsible for the implementation and management of the continuous professional development system for engineering professionals. Part of the EPA's functions in this regard will be organizing accredited courses in Namibia.

## TYPES OF ENGINEERING

Engineering can be described as the harnessing of materials and forces of nature, through scientific knowledge and information to produce goods and services which people use and need to improve their living standards, welfare and safety.

**AERONAUTICAL ENGINEERING** is the engineering discipline that centres on designing, building, and/or testing equipment used in flight. This may include airplanes, helicopters, missiles, spacecraft, satellites, or even some military equipment.

**AGRICULTURAL ENGINEERING** is the engineering discipline that applies engineering science and technology to agricultural production and processing. It combines the disciplines of animal biology, plant biology and mechanical, civil, electrical and chemical engineering principles with a knowledge of agricultural principles.

**CHEMICAL ENGINEERING** combines the principles of physical science with life science in the process of converting raw materials or chemicals into commercially more valuable products.

**CIVIL/STRUCTURAL ENGINEERING** has several branches: (a) Structural — bridges, buildings, towers, power pylons; (b) Transportation — roads, traffic control, public transport and airports; (c) Water — dams, pipelines, purification works, reservoirs, sewerage purification, storm water management; (d) Geotechnical — foundations, excavations, rock anchors and piling, tunnels; (e) Urban — municipal services and facilities, development and maintenance of towns, recreational facilities; (f) Railway and Harbour — railway networks, facilities in harbours, coastal structures; (g) Environmental — impact studies, social and natural environments, harmonizing affected elements and

resources; and (h) Information — capture, transmission and storage of data, use of computers in civil engineering design, communication and reports.

**ELECTRICAL / ELECTRONIC ENGINEERING** is categorized into three fields: (a) Electronics and telecommunications, focusing on semiconductor devices, computer hardware and software, radio and television, microwave and radar systems, antennas, telephone switching systems, digital communications, fibre optics, microelectronics and more; (b) Power electrical engineering, where the emphasis is on generation, transmission and utilization of electrical energy and all its forms; and (c) Measurements, computation, control and automation which encompasses the areas of instrumentation, microprocessors and robotics.

**INDUSTRIAL ENGINEERING** deals with the synthesis of electrical and mechanical elements applied to industrial production processes.

**MECHANICAL ENGINEERING** is the discipline that applies the principles of physics and materials sciences for the analysis, design, manufacturing and maintenance of mechanical processes. It is the branch of engineering that involves the production and usage of heat and mechanical power for the design, production and operation of machines.

**MINING ENGINEERING** deals with the extraction of raw minerals and ore from the earth in mines.

## AN ENGINEERING CAREER

There are 4 distinct routes to a career in the broad field of engineering.

**ENGINEERING TECHNICIANS** study for a National Diploma in their field of interest for a period of 3 years, with 2 years of theoretical studies at an approved technical institution and one year of practical supervised training in a workplace.

**INCORPORATED ENGINEERS** study towards a generally practice or career oriented, as opposed to academically oriented, four-year B.Tech. degree at an accredited university.

**PROFESSIONAL ENGINEERS** study towards a four-year academically oriented B.Sc. (Eng) degree at an accredited