

MARINE ENGINEERING & NAVIGATION

One of the few careers that will fully satisfy your spirit of adventure is that of a seafarer. Challenging, both mentally and physically, a seafarer's career affords early responsibility, internationally recognised qualifications, remuneration packages competitive by any standards, very good performance-based promotional prospects at sea and ashore, plus the opportunity to travel the world.

MARINE ENGINEERING is the provision, management and maintenance of engineering systems and equipment in a marine environment. At sea, this primarily includes ships, offshore platforms and undersea vehicles.

This covers the engineering plant and equipment necessary for the propulsion and safety of the hull, supply of electrical power, the pumping systems, the care and handling of cargoes and the care, comfort and safety of passengers and crew.

THE MARINE ENGINEER

The shipping industry offers a very broad scope for engineering talent. The work of the marine engineer can be divided into several categories:

- Plant operation • Plant management
- Maintenance & survey • Voyage analysis

Marine engineers do not necessarily have to be employed in the marine industry. Power stations, mines and the chemical industry also offer employment opportunities for qualified marine engineers.

ADMISSION REQUIREMENTS

A Senior Certificate or equivalent qualification. Student selection is based on academic merit. Applicants are required to undergo an interview.

TRAINING

The Cape Peninsula and Durban Universities of Technology both offer diploma courses in Marine Engineering. Alternatively, Marine Engineering, as a postgraduate specialisation course of Mechanical Engineering, is required to qualify for further training as a Marine Engineer.

The Universities of Stellenbosch and KwaZulu-Natal, the Cape Peninsula University of Technology, the Durban University of Technology and the Nelson Mandela Metropolitan University all offer marine engineering subjects. Candidates must be medically fit for seagoing duties in accordance with the international medical examination standards for seafarers.

NAVIGATION is the science of safely navigating a ship from one destination to another through the management and use of technical navigation equipment on the bridge of a vessel.



THE NAVIGATING OFFICER

The Captain is the ship's manager, responsible for the operation of the ship, its crew and the transport of cargo. Specific duties performed by Deck (Navigation) Officers are the following:

- Navigation (Including passage planning and bridge watch keeping)
- Cargo Operations • Deck Maintenance
- Stability • Safety Organisation

Appropriate operational and managerial job opportunities also exist ashore.

TRAINING

Prospective Deck Officer trainees must have completed their Maritime Studies Diploma (S2) at the Cape Peninsula University of Technology or the Durban University of Technology and be medically fit for seagoing duties in accordance with the international medical examination standards for seafarers. It is recommended that candidates undergo the eyesight examination, administered by SAMSA, prior to enrolling for Maritime Studies, as this is an international requirement to qualify as a Navigation Officer.

CAREER PATH: ENGINEERING AND NAVIGATION OFFICERS

A three to four-year cadetship is offered by shipping companies, which includes technical study, qualifying sea service and ancillary training towards a Marine Certificate of Competency. Through this, cadets advance to the higher ranks of their chosen career.

After obtaining the initial diploma in either Engineering or Maritime Studies, a minimum of 12 months' onboard training follows, during which a training record book is completed. Specific ancillary courses must also be completed prior to sitting the SAMSA oral examination leading to the first qualification as an Engineering or Deck Officer of the Watch.

Upon obtaining the Certificate of Competency, the trainee becomes eligible to serve in the ranks of Junior Engineer (to progress through the ranks to 4th and 3rd Engineer) or on the navigation side, serve in the ranks of 3rd and 2nd Navigating Officer.

At least another 24 months' sea time, more technical training and additional ancillary courses are required before an Engineering or Deck Officer will be ready for the final Certificate of Competency. The successful candidate may now serve in the rank of Chief Engineer or Master (Captain).

Training onboard and ashore is a continuous process. It takes at least 10 years of training and experience to be considered for promotion to the rank of Chief Engineer or Captain.

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