Marine Engineer

Marine engineers are involved in designing, building and maintaining the engines, systems and equipment used in ships, yachts, remote operated vehicles and subsea and offshore installations. They need a wide knowledge and understanding of mechanical, hydraulic, pneumatic, electrical and electronic systems, but would usually specialise in a particular area.

Seagoing marine engineers are responsible for all engines, equipment and machinery while the vessels are at sea.

The Work

You could be:

- working with naval architects to decide on the type of power and control systems that vessels need
- designing, constructing and maintaining engines, pumps and other machinery and equipment
- designing, constructing and maintaining navigation and communication equipment and other electrical and electronic systems
- ensuring that equipment meets international standards on health and safety, the environment and pollution
- carrying out testing and analysis on processes and systems to identify possible failures and their effect
- preparing emergency plans in case of the failure or breakdown of vessels' machinery
- ensuring that safety precautions for the crew, passengers and cargo are effective
- managing projects and liaising with clients and suppliers.

Pay

The figures below are only a guide. Actual salaries may vary, depending on:

- where you work
- the size of the company or organisation you work for
- the demand for the job.

The starting salary for marine engineers at graduate entry is usually around £25,000 to £30,000 a year. With experience this can rise to between £30,000 and £40,000 a year. Senior engineers can up to £60,000 a year or more.

Conditions

- Working conditions vary greatly, depending on whether you work in an office, a design laboratory, a workshop, a construction yard or at sea.
- If you are in a workshop or construction yard, or at sea, conditions can be noisy and dirty and you might have to work in cramped spaces and at height.
- You may have to wear overalls or a uniform, together with protective headgear, footwear and glasses.
- You may have to work shifts or to be on call for emergencies.
- If you are a seagoing marine engineer, you may be away from home for long periods of time. You would

live on board with other crew members.
- At sea, you would have to work in all kinds of conditions – rough seas and very hot, cold or wet weather.

Getting In

- Most employers will expect you to have a degree (SCQF Level 9-10) in marine or mechanical engineering. Other subjects such as offshore engineering, ocean engineering or naval architecture may also be acceptable.
- Qualifications in other engineering subjects such as electrical, electronic or systems and control engineering, followed by a relevant postgraduate course, may also give entry.
- The University of Strathclyde offers a BEng and MEng (SCQF Level 11) in Naval Architecture and Marine Engineering, and MSc courses (SCQF Level 10) in Marine Engineering and Marine Technology. See the institution's website for specific entry requirements.
- The Institute of Marine Engineering, Science and Technology (IMarEST) website has details of various scholarships that are available as well as a full range of accredited courses.
- For entry to a degree course you need 4-5 Highers including Maths and Physics or a technological subject.
- Studying for a Foundation Apprenticeship (SCQF Level 6) while in fifth and sixth year at school could help you gain entry to a degree in a relevant engineering discipline. Entry requirements vary between colleges, but you usually require 3 subjects at National 5 including English and Maths. You would be expected to have Higher Maths by the end of sixth year.
- If you are interested in a career at sea, you could train by becoming a trainee engineer with the Merchant Navy or the Royal Navy. (See the Job Profiles Merchant Navy Engineering Officer and Royal Navy Officer).
- You should be fit, as the work can be physically demanding. To work at sea you may have to pass fitness and medical tests.
- If you work offshore you would undergo specific training, such as the Basic Offshore Safety Induction and Emergency Training Certificate (BOSIET).

Marine engineers are employed by a variety of organisations, including shipbuilding and repairing companies, ship owning companies, offshore oil and gas companies, marine equipment manufacturers, defence contractors, the Ministry of Defence, the Merchant Navy and the Royal Navy. Jobs are advertised on the internet and through specialist journals.

What Does It Take

You need to have:

- an interest and ability in science and technology
- a willingness to work at sea for some jobs
- good written and verbal communication skills
- a creative approach to solving problems
- good maths, IT and computer-aided design (CAD) skills
- a strong sense of responsibility and health and safety awareness
- leadership and management skills.

You need to be able to:

- handle complex information
- plan and organise programmes of work
- work to timetables, deadlines and within budgets
- work on your own and also as part of a team
- react quickly to emergencies and remain calm under pressure.

Training

- You will likely undergo further training on the job, completing more specialised courses.
- You must be willing to keep up to date with new technology and commit to continued professional development (CPD) all through your career.

Getting On

- After gaining your degree and some further training with an employer, you can register with the Engineering Council as a professional engineer – either Incorporated Engineer (IEng) or Chartered Engineer (CEng).
- For IEng you need to have a recognised Bachelor's degree or a recognised HNC (SCQF Level 7) or HND (SCQF Level 8) plus further study to Bachelor's degree level.
- For CEng you need to have a recognised Bachelor's degree with Honours plus a recognised Masters degree (or equivalent), or a recognised integrated Master of Engineering (MEng) degree (SCQF Level 11).
- If you do not have any of the above qualifications, you may still be able to achieve IEng or CEng by other approved routes. You can check these alternative routes with the Engineering Council or with the appropriate professional engineering institution.
- There can be opportunities to work abroad.

More Information

The Engineering Council sets and maintains the standards of the engineering profession in the UK. It does so through 50 professional engineering institutions which are Licensed Members of the Engineering Council.

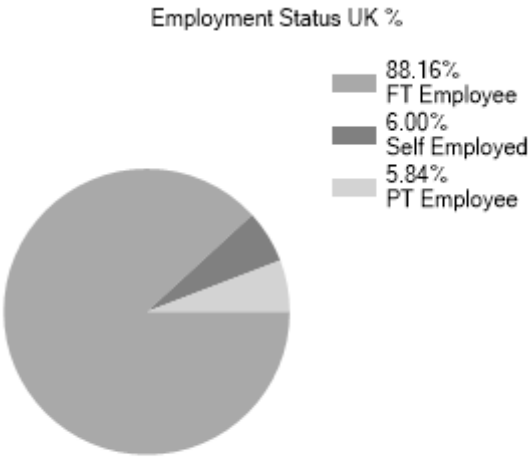
The Tomorrow's Engineers website has more information on careers in engineering.

Contacts

British Marine Federation
Tel: 01784 473377
Email: info@britishmarine.co.uk
Website: www.britishmarine.co.uk
X: @britishmarine
Facebook: www.facebook.com/BritishMarine

Institute of Marine Engineering, Science and Technology (IMarEST)
Tel: 020 7382 2600
Email: info@imarest.org
Website: www.imarest.org
X: @IMarEST
Facebook: www.facebook.com/TheIMarEST

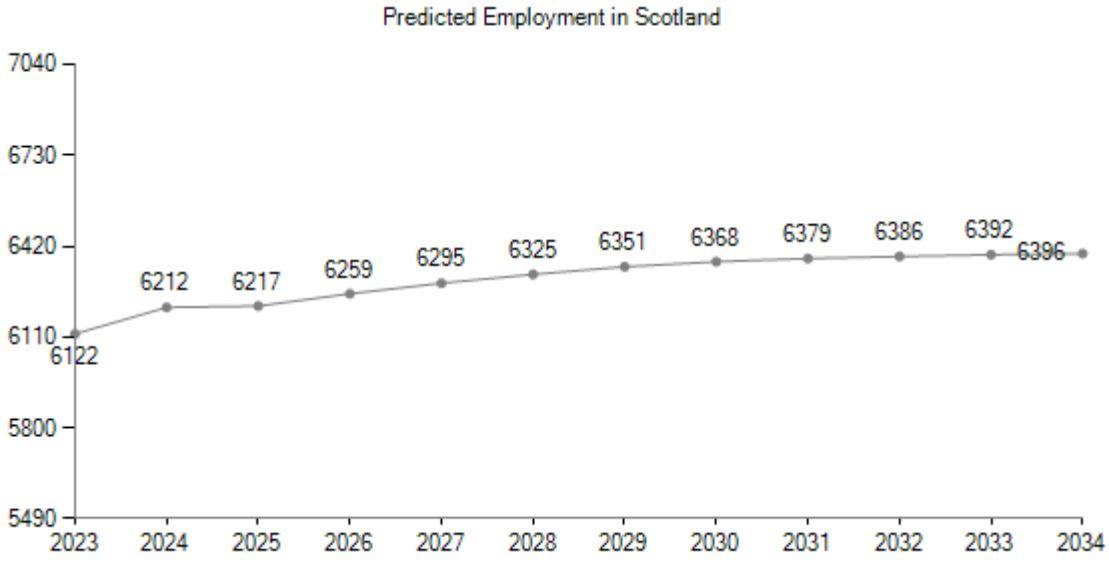
Statistics



Past Unemployment - Scotland

No Claimant statistics available for Scotland.

LMI data powered by LMI for All



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