

Your Degree in Marine & Plant Engineering...What Next?

What skills have I gained from my Marine & Plant Engineering Degree?

You will gain a professional qualification in addition to a Level 7 academic qualification.

Core skills gained from a Marine & Plant Engineering Degree include:

- **Technical Skills**

Health & Safety Training	Navigation Training
Fire Fighting	Meteorology Training
First Aid Training	Personal Safety & Social Responsibility
Sea Survival	Technical Problem-Solving
Radio Communications Training	Good knowledge of Mechanical/ Electrical Systems
Good Mathematical Ability	

- **Non-Technical or ‘Soft’ Skills**

Problem-solving	Self-discipline
Communication – Verbal & Written	Taking Responsibility & Accountability
Interpersonal – Intercultural interaction	Organisation – Workspace & Self
Flexibility & Adaptability – Limited time off in some industries e.g. Cruise Liners as you are expected to work and entertain clients as required.	Demonstrating Professionalism – Corporate image is important to this industry.
Multi-tasking	Logical/Practical Thinker
Teamwork & Leadership	Resourceful
Inspire confidence in others	Decision-making

Other desirable characteristics required for employment within the Maritime sector:

- Calm & good natured
- Patient & Tolerant
- Maturity
- Self-motivated
- Taking Initiative
- Passion & awareness about a career in the sector
- Innovative Thinker
- Dedication – Retention of staff is important for companies

NOTE: Mandatory standards to work on a ship include having; good eye-sight (you cannot be colour-blind); good health; and a Seafarer’s Medical.

What can I do with my Marine & Plant Engineering Degree?

Graduating from your Marine & Plant Engineering degree leaves you with a diverse range of opportunities to consider within **employment** or **continuing education**. The education and training programmes are a mixture of academic work combined with practical training, at college/university and at sea. The programmes will equip you with professional seafaring certification along with a degree or higher national and other recognised qualifications to give you a lifetime of rewarding challenges. Seafaring certification and qualifications give you a wealth of opportunity – in the longer term this can be either at sea or ashore (See www.careersatsea.org for more information).

Employment

Marine Engineers are concerned with the operation and maintenance of the ship's engine room. Work and responsibilities range between *design, development and maintenance of ships' engines*. **However, there is more to Marine Engineering than the maintenance of a ship's main engines. Your responsibilities would also include the operating and servicing of pumps, compressors, boilers, power generation and refrigeration equipment.**

On completion of the Bachelor of Engineering in Marine and Plant Engineering, graduates spend one year at sea to complete their *cadetship*. Career progression is determined by employment experience, further study and professional examinations.

Possible Sea-going Careers

Check out; www.maritimecareers.ie; www.seacareers.co.uk www.trinityhousetraining.org
www.clicandsea.co.uk

The main career path is to become an Officer of the Watch on board a vessel. With time and further study one can advance to become a Second Engineer or Chief Engineer. Employment starts as ***Officer of the Watch (Third Mate)***, which usually involves responsibility for all lifesaving appliances during which a ***Certificate of Competency*** is gained. This leads to the first step on the promotion ladder; ***Second Engineer (Second Mate or Second officer)***, with responsibilities which include planning the ship's route for each voyage, monitoring and recording progress and upkeep of navigational charts. Promotion to ***Chief Officer (Chief Mate)*** is after a minimum of 2-3 years professional experience at sea. This position is second in command to the ship's Captain. A Chief Officer who has obtained a Chief Officer's Certificate and has 2- 3 years' experience is eligible to apply to take the Captain's examinations.

The following could be considered the normal progression routes of a Marine Engineer in the Merchant Navy:

- [Trainee Engineer](#)



- [Junior Engineer/Fourth Engineer](#)



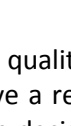
- [Third Engineer](#)



- [Second Engineer](#)



- [Chief Engineer](#)



The key qualities and skills required for any of these roles include but are not limited to being practical, resourceful and have a real interest in mechanical and electrical systems, with good mathematical ability. Like deck officers, you'll be decisive, calm and able to inspire confidence in others. Good written and verbal communication skills are required. Beyond this you'll need to be prepared to learn about new technology and adapt your skills to its use.

Role	Duties
Trainee Engineer	<ul style="list-style-type: none"> • Completes a training programme lasting approximately 2 and a half to 3 years. • Receives structured training and experience on board to complement shore based studies. • Assists and understudies the ship's Engineer Officers in their duties.
Junior Engineer/ Fourth Engineer	<ul style="list-style-type: none"> • Supports the 3rd Engineer and may be responsible for the fuelling and maintenance of specific engine room equipment e.g. purifiers. • Has engineering watch-keeping responsibilities, or will not have watch-keeping duties and is used as a familiarisation role for newly qualified ex trainees in some companies. <p>Normally the first post-certification appointment for an officer trainee.</p>
Third Engineer	<ul style="list-style-type: none"> • Is responsible for the maintenance of certain engine room equipment e.g. auxiliary generators. • Looks after the electrics (if there isn't an electrician or Electro Technical Officer on board). • Has engineering watch-keeping responsibilities.

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Second Engineer	<ul style="list-style-type: none"> • Is directly responsible to the Chief Engineer. • Has responsibility for the management of the engine room and the engine room maintenance team. • Oversees the training of engineers. • Has engineering watch-keeping responsibilities.
Chief Engineer	<ul style="list-style-type: none"> • In charge of the engineering department and responsible to the Master for its efficient operation. • Has overall control and decision making powers for the engineering department. • Is responsible for ensuring that all planned mechanical and electrical maintenance takes place. • Co-ordinates operations with shore-side engineer.

Types of Companies

Shipping	Cruise
Oil & Gas/ Off-Shore Energy	Port
Transport	Dredging
Deep Water Berth	Cargo

Employers Include

- Key Irish employers include: Arklow Shipping Limited, EUCON Shipping and Transport, Norse Merchant Ferries, Stena Line
- International employers include: BP Shipping, Chiltern Maritime, Maersk Shipping Company (IoM), Shell Ship Management, Holland America Cruise Liners, Carlsbrook Shipping

Possible Careers Ashore

Some seafarers spend their whole career at sea whilst others choose to advance their career ashore either in shipping companies or in a host of other marine industries or sectors where their skills and experience are in great demand.

Prepare to spend a career at sea unless you undergo further training which will allow you to work ashore for example Marine Engineers may work ashore as maintenance engineers in Hospitals, Hotels, Powerstations, Pharmaceutical Companies, Petrochemical Companies, Port Security, Port Engineer, Technical Services Advisor (www.maritimejobs.com)

Typical shore-based posts include: (www.careersatsea.org)

- Surveying ships to check seaworthiness
- Ports and harbour management and pilotage
- Lecturers in colleges/universities - training the seafarers of the future
- Maritime regulatory authorities
- Ship repair and marine equipment production management
- Marine insurance
- Shipbroking and finance
- Ship classification
- Maritime law and arbitration

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- Offshore exploration – Offshore oil and gas industries and mineral-extracting companies
- Design of Ships, boats and other offshore structures is one key area of activity.
- Shipbuilding and repair and marine engineering firms, boatyards and marinas
- Offshore Engineers design and produce fixed and floating offshore oil production installations.
- Department of Defence – Naval shipyards

Other areas that may be of interest where you can use similar skills:

- Army
- Gardai
- Air Corps
- Coast Guard
- Security
- Fire Service
- Probation Officer
- Aqua Culture
- Irish Naval Service

Some ashore positions such as Shipping or Maritime Executive are available in the maritime industry. Several maritime internship opportunities are available and can pave the way to develop an ashore career. Organisations such as BP, Clarksons and the European Maritime Agency offer internships. For details, check; www.maritimecareers.ie/onshore-careers/index

Employers Include

- BP, Clarksons
- Singapore Port
- The European Maritime Agency

Finding Employment

The following steps will often be involved in securing employment:

- Application – CV or online form
- Phone Interview
- Formal Face-to-Face Interview
- Potential Assessment Centres – for e.g. Shell & Mersck do intensive psychometric testing

Interviews

Employer Expectations at Interview

You will be expected to display the following at interview;

- Awareness of the maritime industry and particularly the organisation with which you are interviewing i.e. types of ships in the company, number of ships in the fleet, types of cargo carried, numbers on board, regimes, ports used, etc...
- Clear understanding of the ships/fleet and the work involved.
- What attracts you to a career in the maritime sector and the lifestyle that accompanies it?
- Professional dress code; show that you can be a potential brand ambassador for the company.

NB: Are you aware of the Conditions of Employment at Sea?

It is important to give appropriate consideration to the following elements in preparation for a career at sea;

- The unusual nature of the career for e.g. weather extremes, sea-sickness, conditions in the tropics, travel conditions, heat, disease, home-sickness and isolation.
- Work hours are usually spread over seven days per week.
- You may be required to share a cabin with another crew member.
- A dry-ship policy may be in place i.e. no alcohol will be allowed on-board and there may also be alcohol consumption limits in place for the crew, for example when alongside, you will be required to abide by the national drink driving limits in that country if consuming alcohol ashore.
- Professional approach at all times – remember you are representing the company/organisation both on and off the ship during work contracts.
- Females at Sea – consider the requirements that will be placed upon you when docking in ports where there are specific laws for women to follow e.g. Saudi Arabia.

Continuing Education

There are opportunities for further study in order that cadets will progress from the Officer of The Watch level on to the Second Engineer Officer Certificate of Competency and in due course to the Chief Engineer Officer Certificate of Competency with the combination of Sea Service, further study and examinations.

Progress is being made toward the provision at NMCI of further study in Marine Engineering at Level 8. This will be advised via www.nmci.ie and www.cit.ie

*** Further study will lead to progression to senior roles....

Undergraduate & Postgraduate courses – Liverpool Maritime Academy (Lairdside Maritime Centre)
www.lairdside-maritime.com

Marine Society – www.marine-society.org

Further Resources**Government Agencies/Professional Bodies**

Irish Maritime Development Office www.imdo.ie

Commissioners of Irish Lights www.cil.ie

Marine Institute www.marine.ie

Department of Communications, Marine and Natural Resources www.dcmnr.ie

Irish Institute of Master Mariners www.mastermariners.com

International Federation of Shipmasters Association: www.ifsma.org

The Irish Maritime Development Office (IMDO, Ireland): www.imdo.ie

The British Merchant Navy Training Board: www.mntb.org

The British Marine Society: www.marine-society.org

International Shipping Federation: www.careers-at-sea.org

The Nautical Institute: www.nautinst.org

The Irish Navy website

Irish Fisheries Board

Dept of Transport

Employers

Irish Ferries; www.irishferries.com

Arklow Shipping; www.asl.ie – shorter trips & more variety in the work

Irish Mainport Holdings; www.mainport.ie

The Irish Navy careers web pages; http://www.military.ie/careers/navy_recruits.htm

Irish Fisheries Board careers web pages; <http://www.bim.ie/marine/careers.htm>

The British Chamber of Shipping Careers website; www.gotosea.org

The Nautical Campus; www.nauticalcampus.org

Shell Recruitment; www.ssmlrecruitment@shell.com or download an application form at www.shell.com/shipping/careers

International Maritime Employment Sites

Spinnaker Recruitment - Dedicated web site for Jobs in Shipping; www.shippingjobs.com

Faststream Recruitment; <http://www.faststream.co.uk/default.aspx>

TradeWinds Jobs; http://www.tradewinds.no/jobs_tw/search.htm

Lloyds List Careers; <http://www.lloydslist.com/l/careers/index.htm>

Clyde Marine Recruitment; http://www.theclydegroupp.com/jobs/cmr_vacancies.asp

ShipTalk; www.first4marinejobs.com

www.shiptalkjobs.com; www.halcyonrecruitment.com/Halcyon/index.asp

Nautilus – Database of employers

National Recruitment Sites

www.celticcareers.com

www.hrm.ie

www.irishjobs.ie

<http://www.circle.ie/default.aspx>

www.cvprofessionals.co.uk – Merchant Navy CV & Resume Specialists

www.shipping-connections.com/vacancies.htm

www.sstg.org – Merchant Navy Careers