IMarEST Register Standards Document

Contents

MarTech

Marine Technician

Introduction

The Institute of Marine Engineering, Science and Technology (IMarEST) is the international membership body and learned society for marine professionals, with 50 branches and 15, 000 members in over 100 countries around the world.

The Institute's role is to promote the scientific development and interdisciplinary understanding of marine engineering, marine science and marine technology and to uphold and advance the knowledge and status of professionals across the international marine community.

IMarEST is open to everyone associated with the marine, coastal and offshore world, across all scientific, engineering and technological disciplines and applications.

The IMarEST received its Royal Charter in 1933 and is a licensed body of both the Engineering Council and the Science Council. In accordance with our Royal Charter, the IMarEST is able to award suitably qualified and experienced applicants the title of Marine Technician (MarTech). The IMarEST is the only professional body in the world able to award this title.

Marine Technicians (MarTech)

Marine Technicians are professional Scientists or Technologists, who harness, exploit, manage, use or apply marine science or marine technology in the pursuit of research, wealth creation and/or the provision of services in the marine sector. Marine Technicians are involved in applying proven techniques and procedures to the solution of practical scientific and technological problems. They carry supervisory or technical responsibility and are competent to exercise creative aptitudes and skills within defined fields of science and technology. Marine Technicians contribute to the design, development, manufacture, commissioning, operation or maintenance of products, equipment, processes, research or services. Marine Technicians are required to apply safe systems of work and possess effective interpersonal skills.

Marine Technicians continue to advance their knowledge, understanding and competence to a high level and are bound by an IMarEST Code of Conduct.

Typically, Chartered Marine Technologists will be professionals from the following disciplines: Fleet Managers, Hydrographers, Marine Superintendents (Deck), Meteorologists, Pilots, Marine Logisticians, Deck Officers and Ratings, Marine Surveyors, Shipping Professionals, Harbourmasters, College Lecturers, Navigators, Radar/Sonar Maintenance Experts, Warfare Officers and Ratings and Naval Officers and Ratings.

Applicants seeking professional registration as a Marine Technician, who do not work in these areas, will need to demonstrate through their professional education/training and experience in roles directly related to the use or management of marine technology that they are eligible for Marine Technologist Registration.

The Benefit of Marine Technicians Registration

The Marine Technician designation has many benefits for individuals, employers and the public as a whole. MarTech ensures high and improving standards across all scientific and technological disciplines; it reflects best practice and is set at an internationally recognised benchmark level. MarTech encompasses high calibre professionals in the practice, application and teaching of technology, and recognises the increasing focus on interdisciplinarity for the future of science, engineering and technology. Furthermore, MarTech registration provides employers with additional assurance of the quality of their workforce. It is of benefit to:

Society, which will be more confident in the competence of an individual and need no longer be confused by a platform of letters and descriptions.

Individual practitioners, by identification as professional scientists and technologists that sets them at the forefront of their profession and offers a passport to mobility.

Employers, with confirmation, through the designation, of the quality of a job applicant's application.

Government departments, seeking to appoint advisers or consultants would have an assurance about the level of an individual's expertise.

Professional bodies, with provision through the new designation of additional opportunities to benchmark their qualifications.

Higher education, which will be better able to set and monitor benchmarks for their science and technology courses, and to promote programmes of study to meet the high standards required of a Marine Technician.

Regulatory Authorities, who could be confident in specifying the designation in legislation and regulations.

Legal credibility, enabling expert witness participation at a defined standard.

Professional standing, recognising equality of excellence across the technology professions.

What is the required knowledge and competence?

Marine Technician is open to everyone who can demonstrate the required knowledge, understanding and professional competence. The exemplifying educational standard is a Level 3 NVQ or an advanced modern apprenticeship in an approved subject. There are many routes that can be offered to meet this standard, including a combination of academic awards, vocational qualifications and experiential learning through work competence includes the knowledge, understanding and skills that underpin performance.

Marine Technicians are required to maintain their professional competence, working within professional codes of conduct and participate actively within their profession. There is also a requirement for continuing professional development.

Assessment of knowledge and competence

The IMarEST is the only organisation able to confer Marine Technician on individuals, who meet the criteria.

To become registered as a Marine Technician, applicants must have their competence assessed by the IMarEST. The assessment is made against standards rigorously assessed by the IMarEST's Professional Affairs and Education Committee and the Membership Committee, as being suitable for MarTech.

The process of assessment starts with a written application to the IMarEST's Membership Services Department. Claims to qualifications, experience and training will require formal documented evidence. In giving details of experience, applicants will need to show how this relates to the required competencies for MarTech.

Following a review of the documented evidence, the Membership Committee may require the applicant to undertake a professional review interview (PRI)[1]. The Membership Services Department will inform the candidate of the necessary procedures. If deficiencies in the application emerge, the Membership Committee will usually be able to suggest ways in which they can be addressed (this may involve further learning, training or additional experience). If a candidate receives a positive decision on their application for MarTech, they will become registered as a Marine Technician and their details will be included on the Register of Marine Technician. Retention of the designation will require continued membership of the IMarEST and payment of the required subscription.

What needs to be demonstrated?

Competence

The following table details the generic competences that have to be demonstrated in order to achieve registration as a Marine Technician. Given the diverse nature of scientific and technological practice, achieving the required level for these professional competencies will involve a broad range of activities. Candidates, who believe they meet these or who wish to work towards them, should approach the IMarEST's Membership Services Department to obtain further details on how to apply for registration.

[1] Any interviews will be conducted in English, subject only to the provisions of the Welsh Language Act 1993 and any Regulations, which may be made in implementation of European Union directives on free movement of labour.

Marine Technicians must be competent throughout their professional lives using a combination of their knowledge, training and experience to be able to:

The Competence and Commitment Standards for Marine Technicians Marine Technicians must be competent throughout their working life, by virtue of their education, training and experience, to:	**Guidance – These are examples of activities which could demonstrate that you have achieved the MarTech criteria**. Tell us about your career and the education and training you have received. Explain how the experience you have gained has made you more competent.
A Use appropriate knowledge and understanding to apply technical and practical skills. This includes the ability to:	**The reviewers will be looking for evidence that you have the know-how to do the job and were able to go beyond the immediate requirements and use your initiative and experience to solve a problem or improve a process.**
A1 review and select appropriate techniques, procedures and methods to undertake tasks	Describe something in your work you were involved in which didn't quite work and explain why.
A2 use appropriate principles.	Drawing from your direct experience, this might be an explanation of how a piece of equipment, system or mechanism works.
B Contribute to the design, development, manufacture, construction, commissioning, operation or maintenance of products, equipment, processes, systems or services. In this context, this includes the ability to:	**Explain how you contribute to one or more of these activities.**
B1 identify problems and apply diagnostic methods to identify causes and achieve satisfactory solutions	Show an example of how you have used measurement, monitoring and assessment to identify the source of a problem or to identify an opportunity.
B2 identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety and environmental impact.	Illustrate how you make decisions about what material, component, people or plant to use or how to introduce a new method of working.
C Accept and exercise personal responsibility. This may include the ability to:	**Describe an experience or instance where you have had to accept personal responsibility for seeing a process through to completion within agreed targets.**
C1 work reliably and effectively without close supervision, to the appropriate codes of practice	Your evidence should show how you personally identified and agreed with what had to be done and to what standards on a typical project.
C2 accept responsibility for work of self and others	Minutes of meetings; site notes and instructions; Variation Orders; programmes of work; specifications, drawing and reports; appraisals. Activity not associated with your job can contribute evidence.
C3 accept, allocate and supervise technical and other tasks.	Minutes of meetings; site notes and instructions; Variation Orders; programmes of work; specifications, drawing and reports; appraisals. Activity not associated with your job can contribute evidence.

D Use effective communication and interpersonal skills. This includes the ability to:	**You will need to show you can: contribute to discussions; make a presentation; read and synthesise information; write different types of documents.**
D1 use oral, written and electronic methods for the communication in English of technical and other information	Letters, reports, drawings, advice, minutes, including progress meetings, appraisals, work instructions, and other task planning and organising documents certificated by colleagues, clients, customers or management. Your application itself will be relevant.
D2 work effectively with colleagues, clients, suppliers and the public.	Examples of how this has occurred, and your role at the time.
E Make a personal commitment to an appropriate code of professional conduct, recognising obligations to society, the profession and the environment. In order to satisfy this commitment, they must:	**Your commitment will be to become part of the profession and uphold the standards to which all members subscribe. You need to show that you have read and understood the IMarEST's Code of Conduct.**
E1 Comply with the IMarEST's Code of Conduct	You will need to sign a personal undertaking. The professional review involves demonstration of, or discussion of, your position on typical ethical challenges.
E2 manage and apply safe systems of work	Evidence of applying current safety requirements, such as examples of good practice you adopt in your work. You will need to show that you have received a formal safety instruction relating to your workplace, such as a CSCS safety test, or an update on statutory regulations such as COSHH requirements.
E3 undertake work in a way that contributes to sustainable development	Examples of methodical assessment of risk in specific projects; actions taken to minimise risk to health, safety, society or the environment.
E4 carry out continuing professional development, including opportunities for this offered by the IMarEST, to ensure competence in areas and at the level of future	This means demonstrating that you have actively sought to keep yourself up to date, perhaps by studying new standards or techniques, or made use of magazines, Branch
intended practice.	meetings and other opportunities to network in order to keep abreast of change.

What needs to be demonstrated? (Continued)

Education

Normally, formal education is a pre-requisite for registration, as it demonstrates the underpinning knowledge and understanding for professional competence. The following qualifications exemplify the required knowledge and understanding for Marine Technician registration.

Standard Route

Integrated training and experience such as is provided by many Advanced Apprenticeships can provide most, or all, of the knowledge and experience necessary, and may lead directly to Marine Technician registration.

Other qualifications can provide a straightforward way of demonstrating that part of the necessary competence has been acquired. The following are examples of qualifications which an applicant for Marine Technician registration might hold:

- An approved National Certificate or National Diploma
- An approved qualification at level 6 in the Scottish Qualifications and Credit Framework
- A City & Guilds Higher Professional Diploma
- A technical certificate as part of an approved Advanced Apprenticeship Programme
- An NVQ3 or SVQ3, which has been approved for the purpose by the IMarEST
- A work-based learning route approved by the IMarEST
- Qualifications in similar areas providing they are assessed as equivalent by the IMarEST.

Qualifications at this level are subject to change as a result of national policy developments. Please consult www.imarest.org for details of any changes or additions to this list.

Individual Route

Many potential professional Marine Technicians will not have had the advantage of formal training and will need to demonstrate they have acquired the necessary competences through extended experience, some of this supervised.

Experienced, practising professional Marine Technicians are often found to have gained the necessary knowledge and skills for their job through working closely with other skilled colleagues over a number of years. Thus, individuals without the types of qualifications listed above may apply for an Individual Route assessment. This separate procedure, administered by the IMarEST, involves an in-depth appraisal of the applicant's competence. Evidence of employer recognition of competences and relevant skills will assist in achieving registration. The IMarEST may be able to provide a mentor to help applicants to address any gaps in their training and experience portfolio.

Accreditation of degree programmes is carried out by the IMarEST's Education and Training Team. The key criterion in accreditation is the learning outcomes achieved by a programme's graduates.

If one of these approved qualifications is not offered, it is possible to demonstrate the appropriate level of achievement through a combination of academic awards and/or appropriate experiential learning. Candidates applying through this route must clearly demonstrate that they have achieved the same level of knowledge and understanding as those with the accredited qualifications. The IMarEST has proven benchmarks and procedures in place to measure the required level through professional experience and knowledge gained specific to their scientific and technological discipline.

Professional Development

Professional development is a key part of developing the competence required to achieve the standard for Marine Technician registration. Aspiring Marine Technicians learn to apply their knowledge and understanding and apply professional judgement through professional development. Many larger employers run well-established training and development schemes, some of which are accredited by the IMarEST for the purposes of MarTech registration.

Accredited professional development schemes, however, are not the only route to achieving the professional development necessary for MarTech registration. In the absence of an accredited scheme, aspiring Marine Technicians will need to develop profiles of competence and professional activity in accordance with the competence and commitment statements mentioned earlier. The IMarEST Education and Training Team will be able to provide the information and guidance necessary and may be able to put them in touch with a mentor to assist them through the process and help to identify any skills gaps in their development.

Anyone seeking registration as a Marine Technician should maintain a detailed record of their development, responsibilities and experience, verified by referees, in order to be best prepared to provide the evidence of professional competence commensurate for MarTech registration.

Maintaining competence and demonstrating a commitment to CPD

Once MarTech registration has been achieved, Marine Technicians have an obligation to maintain professional competence. Guidance on CPD (including a downloadable CPD record) can be found on the IMarEST website (www.imarest.org).

The IMarEST's rules of Professional Conduct

All Corporate Members of the Institute are required to make a personal commitment to live by the appropriate codes of professional conduct, recognising their obligations to society, the marine professions and the environment (www.imarest.org/membership/conduct).

RMarTech

Registered Marine Technologist

Introduction

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The IMarEST received its Royal Charter in 1933 and is a licensed body of both the Engineering Council and the Science Council. In accordance with our Royal Charter, the IMarEST is able to award suitably qualified and experienced applicants the title of Registered Marine Technologist (RMarTech). The IMarEST is the only professional body in the world able to award this title.

Registered Marine Technologists (RMarTech)

Registered Marine Technologists are professionals, who harness, exploit, manage, use or apply marine technology in the pursuit of wealth creation and/or the provision of services in the marine sector. Registered Marine Technologists are characterised by their ability to act as exponents of today's technology through creativity and innovation. To this end, they maintain and manage applications of current and developing technology, and may undertake technological design, development, manufacture, construction and operation. Registered Marine Technologists are variously engaged in technical and commercial management and possess effective interpersonal skills.

Registered Marine Technologists continue to advance their knowledge, understanding and competence to a high level and are bound by an IMarEST Code of Conduct.

Typically, Chartered Marine Technologists will be professionals from the following disciplines: Fleet Managers, Hydrographers, Marine Superintendents (Deck), Meteorologists, Pilots, Marine Logisticians, Deck Officers and Ratings, Marine Surveyors, Shipping Professionals, Harbourmasters, College Lecturers, Navigators, Radar/Sonar Maintenance Experts, Warfare Officers and Ratings and Naval Officers and Ratings.

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Society, which will be more confident in the competence of an individual and need no longer be confused by a platform of letters and descriptions.

Individual practitioners, by identification as professional that sets them at the forefront of their profession and offers a passport to mobility.

Employers, with confirmation, through the designation, of the quality of a job applicant's application.

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Higher education, which will be better able to set and monitor benchmarks for their technology courses, and to promote programmes of study to meet the high standards required of a Registered Marine Technologist.

Regulatory Authorities, who could be confident in specifying the designation in legislation and regulations.

Legal credibility, enabling expert witness participation at a defined standard.

Professional standing, recognising equality of excellence across the technology professions.

What is the required knowledge and competence?

Registered Marine Technologist is open to everyone, who can demonstrate the required high-level knowledge, understanding and professional competence. The exemplifying educational standard is a Bachelor ordinary level qualification in an approved subject. There are many routes that can be measured to meet this standard, including a combination of academic awards, vocational qualifications and experiential learning through work competence includes the knowledge, understanding and skills that underpin performance.

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What needs to be demonstrated?

Competence

The following table details the generic competences that have to be demonstrated in order to achieve registration as a Registered Marine Technologist. Given the diverse nature of technological practice, achieving the required level for these professional competencies will involve a broad range of activities. Candidates who believe they meet these or who wish to work towards them, should approach the IMarEST's Membership Services Department to obtain further details on how to apply for registration.

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Registered Marine Technologists must be competent throughout their professional lives using a combination of their knowledge, training and experience to be able to:

The Competence and Commitment Standard for Registered Marine Technologists. Registered Marine Technologists must be competent throughout their working life, by virtue of their education, training and experience, to:	**Guidance – These are examples of activities which could demonstrate that you have achieved the RMarTech criteria.**
A Use a combination of general and specialist knowledge and understanding to apply existing and emerging technology.	
A1 Maintain and extend a sound theoretical approach to the application of technology in practice. This could include an ability to: • Identify the limits of own personal knowledge and skills • Strive to extend own technological capability • Broaden and deepen own knowledge base through new applications and techniques.	Engage in formal learning. Learn new theories and techniques in the workplace, at seminars, etc. Broaden your knowledge of relevant codes, standards and specifications.
A2 Use a sound evidence-based approach to problem-solving and contribute to continuous improvement. This could include an ability to: • Establish users' requirements for improvement • Use market intelligence and knowledge of technological developments to promote and improve the effectiveness of products, systems and services • Contribute to the evaluation and development of continuous improvement systems • Apply knowledge and experience to investigate and solve problems arising during tasks and implement corrective action.	Manage/contribute to market research, and product and process research and development. Involvement with cross-disciplinary working. Conduct statistically sound appraisal of data. Use evidence from best practice to improve effectiveness. Apply root cause analysis.

B Apply appropriate theoretical and practical methods to design, develop, manufacture, construct, commission, operate, maintain, decommission and re- cycle processes, systems, services and products.	
B1 Identify, review and select techniques, procedures and methods to undertake tasks. This could include an ability to: • Select a review methodology • Review the potential for enhancing products, processes, systems and services, using evidence from best practice • Establish an action plan to implement the results of the review.	Contribute to the marketing of and tendering for new products, processes and systems. Contribute to the specification and procurement of new products, processes and systems. Develop decommissioning processes. Set targets, and draft programmes and action plans. Schedule activities.
B2 Contribute to the design and development of solutions. This could include an ability to: • Contribute to the identification and specification of design and development requirements for products, processes, systems and services • Identify potential operational problems and evaluate possible solutions, taking account of cost, quality, safety, reliability, appearance, fitness for purpose and environmental impact • Contribute to the design of solutions.	Contribute to theoretical and applied research. Manage/contribute to value and whole life costing. Work in design teams. Draft specifications. Develop and test options. Identify resources and costs of options. Produce detailed designs.
B3 Implement design solutions and contribute to their evaluation. This could include an ability to: • Secure the resources required for implementation • Implement design solutions, taking account of critical constraints • Identify problems during implementation and take corrective action • Contribute to the evaluation of design solutions • Contribute to recommendations for improvement and actively learn from feedback on results.	Follow the design process through into product manufacture. Operate and maintain processes, systems etc. Contribute to reports on the evaluation of the effectiveness of the designs. Contribute to product improvement. Interpret and analyse performance. Contribute to determining critical success factors.
C Provide technical and commercial management.	
C1 Plan for effective project implementation. This could include an ability to: • Identify the factors affecting the project implementation • Prepare and agree implementation plans and method statements • Secure the necessary resources	Manage/contribute to project planning activities. Produce and implement procurement plans. Contribute to project risk assessments. Collaborate with key stakeholders. Plan programmes and delivery of tasks. Identify resources and costs. Prepare and agree contracts/work orders.

and confirm roles in project team • Apply the necessary contractual arrangements with other stakeholders (client, subcontractors, suppliers, etc.).	
C2 Manage the planning, budgeting and organisation of tasks, people and resources. This could include an ability to: • Operate appropriate management systems • Work to the agreed quality standards, programme and budget, within legal and statutory requirements • Manage work teams, coordinating project activities • Identify variations from quality standards, programme and budgets, and take corrective action • Evaluate performance and recommend improvements.	Manage/contribute to project operations. Manage the balance between quality, cost and time. Manage contingency processes. Contribute to the management of project funding, payments and recovery. Satisfy legal and statutory obligations. Manage tasks within identified financial, commercial and regulatory constraints.
C3 Manage teams and develop staff to meet changing technical and managerial needs. This could include an ability to: • Agree objectives and work plans with teams and individuals • Identify team and individual needs, and plan for their development • Manage and support team and individual development • Assess team and individual performance and provide feedback.	Carry out/contribute to staff appraisals. Plan/contribute to the training and development of staff. Gather evidence from colleagues of the management, assessment and feedback that you have provided. Carry out/contribute to disciplinary procedures.
C4 Manage continuous quality improvement. This could include an ability to: • Ensure the application of quality management principles by team members and colleagues • Manage operations to maintain quality standards • Evaluate projects and make recommendations for improvement.	Promote quality. Manage/contribute to best practice methods of continuous improvement, e.g. ISO 9000, EFQM, balanced scorecard. Carry out/contribute to quality audits. Monitor, maintain and improve delivery. Identify, implement and evaluate changes to meet quality objectives.
D Demonstrate effective interpersonal skills.	
D1 Communicate in English with others at all levels. This could include an ability to: • Contribute to, chair and record meetings and discussions • Prepare letters, documents and reports on technical matters • Exchange information and provide advice to technical and non-technical colleagues.	Reports, minutes of meetings, letters, programmes, drawings, specifications.
D2 Present and discuss proposals. This could include an ability to: • Prepare and deliver appropriate presentations • Manage debates with audiences	Presentations, records of discussions and their outcomes.

• Feed the results back to improve the proposals.	
D3 Demonstrate personal and social skills. This could include an ability to: • Know and manage own emotions, strengths and weaknesses • Be aware of the needs and concerns of others • Be confident and flexible in dealing with new and changing interpersonal situations • Identify, agree and work towards collective goals • Create, maintain and enhance productive working relationships, and resolve conflicts.	Records of meetings. Evidence from colleagues of your personal and social skills. Contribute to productive working relationships. Apply diversity and anti-discrimination legislation.
E Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.	
E1 Comply with relevant codes of conduct. This could include an ability to: • Comply with the IMarEST's rules of professional conduct of own professional body • Manage work within all relevant legislation and regulatory frameworks, including social and employment legislation.	Contribute to the affairs of the IMarEST. Work with a variety of conditions of contract.
E2 Manage and apply safe systems of work. This could include an ability to: • Identify and take responsibility for own obligations for health, safety and welfare issues • Manage systems that satisfy health, safety and welfare requirements • Develop and implement appropriate hazard identification and risk management systems • Manage, evaluate and improve these systems.	Undertake formal H&S training. Work with H&S legislation and best practice, e.g. HASAW 1974, CDM regs, OHSAS 18001:2007 and company safety policies. Carry out safety audits. Identify and minimise hazards. Assess and control risks. Deliver H&S briefings & inductions.
E3 Undertake activities in a way that contributes to sustainable development. This could include an ability to: • Operate and act responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously • Provide products and services which maintain and enhance the quality of the environment and community, and meet financial objectives • Understand and encourage stakeholder involvement in sustainable development.	Carry out/contribute to environmental impact assessments. Carry out/contribute to environmental risk assessments. Manage best practice environmental management systems, e.g. ISO 14000. Work within environmental legislation. Adopt sustainable practices. Contribute to "triple bottom line" (i.e. social, economic and environmental) outcomes.
E4 Carry out continuing professional development necessary to maintain and enhance competence in own area of practice.	Keep up to date with relevant national and international issues. Maintain CPD plans and records. Involvement with the affairs of the

This could include an ability to: • Undertake reviews of own development needs • Prepare action plans to meet personal and organisational objectives • Carry out planned (and unplanned) CPD activities • Maintain evidence of competence development • Evaluate CPD outcomes against the action plans • Assist others with their own CPD.	IMarEST. Evidence of your development through on-the-job learning, private study, in- house courses, external courses and conferences.

What needs to be demonstrated? (Continued)

Education

Normally, formal education is an essential pre-requisite for registration, as it demonstrates the underpinning knowledge and understanding for professional competence. The following qualifications exemplify the required knowledge and understanding for Registered Marine Technologist registration.

An IMarEST accredited Bachelor ordinary degree Or

A Higher National Certificate or Diploma or Foundation Degree, plus appropriate further learning to degree level.

Or

An NVQ4 or SVQ4 which has been approved for the purpose by the IMarEST

Accreditation of degree programmes is carried out by the IMarEST's Education and Training Team. The key criterion in accreditation is the learning outcomes achieved by a programme's graduates.

If an accredited Bachelor ordinary degree level qualification is not present, it is possible to demonstrate Bachelor ordinary degree level achievement through a combination of academic awards and/or appropriate experiential learning.

Candidates applying through this route must clearly demonstrate that they have achieved the same level of knowledge and understanding as those with the accredited qualifications. For example, a HND qualification supported by appropriate professional experience may be sufficient to demonstrate a Bachelor level knowledge. The IMarEST has proven benchmarks and procedures in place to measure Bachelor ordinary degree level learning through professional experience and knowledge gained specific to their technological discipline.

Professional Development

Professional development is a key part of developing the competence required to achieve the standard for Registered Marine Technologist registration. Aspiring Registered Marine Technologists learn to apply their knowledge and understanding and apply professional judgement through professional development. Many larger employers run well-established graduate training and development schemes, some of which are accredited by the IMarEST for the purposes of RMarTech registration.

Accredited professional development schemes, however, are not the only route to achieving the professional development necessary for RMarTech registration. In the absence of an accredited scheme, aspiring Registered Marine Technologists will need to develop profiles of competence and professional activity in accordance with the competence and commitment statements mentioned earlier. The IMarEST Education and Training Team will be able to provide the information and guidance necessary and may be able to put them in touch with a mentor to assist them through the process and help to identify any skills gaps in their development.

Anyone seeking registration as a Registered Marine Technologist should maintain a detailed record of their development, responsibilities and experience, verified by referees, in order to be best prepared to provide the evidence of professional competence commensurate for RMarTech registration.

Maintaining competence and demonstrating a commitment to CPD

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Chartered Marine Technologists continue to advance their knowledge, understanding and competence to a high level and are bound by an IMarEST Code of Conduct (www.imarest.org).

Typically, Chartered Marine Technologists will be professionals from the following disciplines: Fleet Managers, Hydrographers, Marine Superintendents (Deck), Meteorologists, Pilots, Marine Logisticians, Deck Officers and Ratings, Marine Surveyors, Shipping Professionals, Harbourmasters, College Lecturers, Navigators, Radar/Sonar Maintenance Experts, Warfare Officers and Ratings and Naval Officers and Ratings.

Applicants seeking professional registration as a Chartered Marine Technologist, who do not work in these areas, will need to demonstrate through their professional education/training and experience in roles directly related to the use or management of marine technology that they are eligible for Chartered Marine Technologist Registration.

The Benefits of Chartered Marine Technologists Registration (CMarTech)

The Chartered Marine Technologist designation has many benefits for individuals, employers and the public as a whole. CMarTech ensures high and improving standards across all technological disciplines; it reflects best practice and is set at an internationally recognised benchmark level. CMarTech encompasses high calibre professionals in the practice, application and teaching of technology, and recognises the increasing focus on interdisciplinarity for the future of science, engineering and technology. Furthermore, CMarTech registration provides employers with additional assurance of the quality of their workforce. It is of benefit to:

Society, which will be more confident in the competence of an individual and need no longer be confused by a platform of letters and descriptions.

Individual practitioners, by identification as a professional that sets them at the forefront of their profession and offers a passport to mobility.

Employers, with confirmation, through the designation, of the quality of a job applicant's application.

Government departments, seeking to appoint advisers or consultants would have an assurance about the level of an individual's expertise.

Professional bodies, with provision through the new designation of additional opportunities to benchmark their qualifications.

Higher education, which will be better able to set and monitor benchmarks for their technology courses, and to promote programmes of study to meet the high standards required of a Chartered Marine Technologist.

Regulatory Authorities, who could be confident in specifying the designation in legislation and regulations.

Legal credibility, enabling expert witness participation at a defined standard.

Professional standing, recognising equality of excellence across the technology professions.

What is the required knowledge and competence?

Chartered Marine Technologist is open to everyone, who can demonstrate the required high-level knowledge, understanding and professional competence. The exemplifying educational standard is a master's level qualification in an approved subject. There are many routes that can be measured to meet this standard, including a combination of academic awards, vocational qualifications and experiential learning through work. Competence includes the knowledge, understanding and skills that underpin performance.

Chartered Marine Technologists are required to maintain their professional competence, working within professional codes of conduct and participate actively within their profession. There is also a requirement for continuing professional development.

Assessment of knowledge and competence

The IMarEST is the only organisation able to confer Chartered Marine Technologist on individuals, who meet the criteria.

To become registered as a Chartered Marine Technologist, applicants must have their competence assessed by the IMarEST. The assessment is made against standards rigorously applied by the IMarEST's Professional Affairs and Education Committee and the Membership Committee, as being suitable for CMarTech.

The process of assessment starts with a written application to the IMarEST's Membership Services Department. Claims to qualifications, experience and training will require formal documented evidence. In giving details of experience, applicants will need to show how this relates to the required competencies for CMarTech.

Following a review of the documented evidence, the Membership Committee will require the applicant to undertake a professional review interview (PRI)[1]. The Membership Services Department will inform the candidate of the necessary procedures. If deficiencies in the application emerge, the Membership Committee will usually be able to suggest ways in which they can be addressed (this may involve further learning, training or additional experience). If a candidate receives a positive decision on their application for CMarTech, they will become registered as a Chartered Marine Technologist and their details will be included on the Register of Chartered Marine Technologists. Retention of the designation will require continued membership of the IMarEST and payment of the required subscription.

What needs to be demonstrated?

Competence

The following table details the generic competences that have to be demonstrated in order to achieve registration as a Chartered Marine Technologist. Given the diverse nature of technological practice, achieving the required level for these professional competencies will involve a broad range of activities. Candidates who believe they meet these or who wish to work towards them, should approach the IMarEST's Membership Services Department to obtain further details on how to apply for registration.

Chartered Marine Technologists must be competent throughout their professional lives using a combination of their knowledge, training and experience to be able to:

[1] Any interviews will be conducted in English, subject only to the provisions of the Welsh Language Act 1993 and any Regulations, which may be made in implementation of European Union directives on free movement of labour.

The Competence and Commitment Standard for Chartered Marine Technologists. Chartered Marine Technologists must be competent throughout their working life, by virtue of their education, training and experience, to:	**Guidance – These are examples of activities which could demonstrate that you have achieved the CMarTech criteria.**
A Use a combination of general and specialist knowledge and understanding to optimise the application of existing and emerging technology.	
A1 Maintain and extend a sound theoretical approach in enabling the introduction and exploitation of new and advancing technology and other relevant developments. This could include an ability to: • Identify the limits of own personal knowledge and skills • Strive to extend own technological capability • Broaden and deepen own knowledge base through research and experimentation.	Engage in formal post-graduate academic study. Learn and develop new relevant theories and techniques in the workplace. Broaden your knowledge of appropriate codes, standards and specifications.
A2 Engage in the creative and innovative development of systems, processes and products and continuous improvement systems. This could include an ability to: • Establish users' needs • Assess marketing needs and contribute to marketing strategies Identify constraints and exploit opportunities for the development and transfer of technology within own chosen field • Promote new applications when appropriate • Secure the necessary intellectual property rights • Develop and evaluate continuous improvement systems.	Lead/manage market research, and product and process research and development. Cross-disciplinary working involving complex projects. Conduct statistically sound appraisal of data. Use evidence from best practice to improve effectiveness.
B Apply appropriate theoretical and practical methods to the analysis and solution of problems.	
B1 Identify potential projects and opportunities. This could include an ability to: • Explore the territory within own responsibility for new opportunities • Review the potential for enhancing products,	Involvement in the marketing of and tendering for new products, processes and systems. Involvement in the specification and procurement of new products, processes and systems. Set targets, and draft programmes and action plans. Schedule activities.

processes, systems and services • Use own knowledge of the employer's position to assess the viability of opportunities.	
B2 Conduct appropriate research and undertake design and development of solutions. This could include an ability to: • Identify and agree appropriate research methodologies • Assemble the necessary resources • Carry out the necessary tests • Collect, analyse and evaluate the relevant data • Draft, present and agree design recommendations, taking account of cost, quality, safety, reliability, appearance, fitness for purpose and environmental impact • Undertake design.	Carry out formal theoretical research. Carry out applied research on the job. Lead/manage value and whole life costing. Lead design teams. Draft specifications. Develop and test options. Identify resources and costs of options. Produce concept designs and develop these into detailed designs.
B3 Implement design solutions and evaluate their effectiveness. This could include an ability to: • Ensure that the application of the design results in the appropriate practical outcome • Implement design solutions, taking account of critical constraints • Determine the criteria for evaluating the design solutions • Evaluate the outcome against the original specification • Actively learn from feedback on results to improve future design solutions and build best practice.	Follow the design process through into product or service realisation and its evaluation. Prepare and present reports on the evaluation of the effectiveness of the designs. Manage product improvement. Interpret and analyse performance. Determine critical success factors.
C Provide technical and commercial leadership.	
C1 Plan for effective project implementation. This could include an ability to: • Identify the factors affecting the project implementation • Lead on preparing and agreeing implementation plans and method statements • Ensure that the necessary resources are secured and brief the project team • Negotiate the necessary contractual arrangements with other stakeholders (client, subcontractors, suppliers, etc.).	Lead/manage project planning activities. Produce and implement procurement plans. Carry out project risk assessments. Collaborate with key stakeholders and negotiate agreement to the plans. Plan programmes and delivery of tasks. Identify resources and costs. Negotiate and agree contracts/work orders.
C2 Plan, budget, organise, direct and control tasks, people and resources. This could include an ability to: • Set up appropriate management systems • Agree quality standards, programme and budget within legal and statutory requirements • Organise and lead work teams,	Take responsibility for and control project operations. Manage the balance between quality, cost and time. Manage contingency systems. Manage project funding, payments and recovery. Satisfy legal and statutory obligations. Lead/manage tasks within identified financial, commercial and regulatory constraints.

coordinating project activities • Ensure that variations from quality standards, programme and budgets are identified, and that corrective action is taken • Gather and evaluate feedback and recommend improvements.	
C3 Lead teams and develop staff to meet changing technical and managerial needs. This could include an ability to: • Agree objectives and work plans with teams and individuals • Identify team and individual needs, and plan for their development • Lead and support team and individual development • Assess team and individual performance and provide feedback.	Carry out/contribute to staff appraisals. Plan/contribute to the training and development of staff. Gather evidence from colleagues of the management, assessment and feedback that you have provided. Carry out/contribute to disciplinary procedures.
C4 Bring about continuous improvement through quality management. This could include an ability to: • Promote quality throughout the organisation and its customer and supplier networks • Develop and maintain operations to meet quality standards • Direct project evaluation and propose recommendations for improvement.	Plan and implement best practice methods of continuous improvement, e.g. ISO 9000, EFQM, balanced scorecard. Carry out quality audits. Monitor, maintain and improve delivery. Identify, implement and evaluate changes to meet quality objectives.
D Demonstrate effective interpersonal skills.	
D1 Communicate in English with others at all levels. This could include an ability to: • Contribute to, chair and record meetings and discussions • Prepare letters, documents and reports on complex matters • Exchange information and provide advice to technical and non-technical colleagues.	Reports, minutes of meetings, letters, programmes, drawings, specifications.
D2 Present and discuss proposals. This could include an ability to: • Prepare and deliver presentations on strategic matters • Lead and sustain debates with audiences • Feed the results back to improve the proposals.	Presentations, records of discussions and their outcomes.
D3 Demonstrate personal and social skills. This could include an ability to: • Know and manage own emotions, strengths and weaknesses • Be aware of the needs and concerns of others • Be confident and flexible in dealing with new and changing interpersonal situations • Identify, agree and lead work towards	Records of meetings. Evidence from colleagues of your personal and social skills. Take responsibility for productive working relationships. Apply diversity and anti-discrimination legislation.

collective goals • Create, maintain and enhance productive working relationships, and resolve conflicts.	
E Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.	
E1 Comply with relevant codes of conduct. This could include an ability to: • Comply with the rules of professional conduct of the IMarEST • Lead work within all relevant legislation and regulatory frameworks, including social and employment legislation.	Work with a variety of conditions of contract. Demonstrate initiative in and commitment to the affairs of the IMarEST.
E2 Manage and apply safe systems of work. This could include an ability to: • Identify and take responsibility for own obligations for health, safety and welfare issues • Ensure that systems satisfy health, safety and welfare requirements • Develop and implement appropriate hazard identification and risk management systems • Manage, evaluate and improve these systems.	Undertake formal H&S training. Work with H&S legislation and best practice, e.g. HASAW 1974, CDM regs, OHSAS 18001:2007 and company safety policies. Carry out safety audits. Identify and minimise hazards. Assess and control risks. Evaluate the costs and benefits of safe working. Deliver strategic H&S briefings and inductions.
E3 Undertake activities in a way that contributes to sustainable development. This could include an ability to: • Operate and act responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously • Use imagination, creativity and innovation to provide products and services which maintain and enhance the quality of the environment and community, and meet financial objectives • Understand and secure stakeholder involvement in sustainable development.	Carry out environmental impact assessments. Carry out environmental risk assessments. Plan and implement best practice environmental management systems, e.g. ISO 14000. Work within environmental legislation. Adopt sustainable practices. Achieve "triple bottom line" (i.e. social, economic and environmental) outcomes.
E4 Carry out continuing professional development necessary to maintain and enhance competence in own area of practice. This could include an ability to: • Undertake reviews of own development needs • Prepare action plans to meet personal and organisational objectives • Carry out planned (and unplanned) CPD activities • Maintain evidence of competence development • Evaluate CPD outcomes against the action plans • Assist others with their own CPD.	Keep up to date with relevant national and international issues. Maintain CPD plans and records. Involvement with the affairs of the IMarEST. Evidence of your development through on-the-job learning, private study, in- house courses, external courses and conferences.

What needs to be demonstrated? (Continued)

Education

Normally, a formal education is an essential pre-requisite for registration as it demonstrates the underpinning knowledge and understanding for professional competence. The following qualifications exemplify the required knowledge and understanding for Chartered Marine Technologist Registration:

An IMarEST accredited Integrated Master's degree or

An IMarEST accredited bachelor's degree with honours, plus either an appropriate master's degree accredited by the IMarEST, or appropriate further learning to Masters level.

Accreditation of degree programmes is carried out by the IMarEST's Education and Training Team. The key criterion in accreditation is the learning outcomes achieved by a programme's graduates.

If an accredited master's level qualification is not presented, it is possible to demonstrate master's level achievement through a combination of academic awards and/or appropriate experiential learning. Candidates applying through this route must clearly demonstrate that they have achieved the same level of knowledge and understanding, as those with the accredited qualifications. For example, a bachelor's qualification supported by appropriate professional experience may be sufficient to demonstrate a master's level knowledge. The IMarEST has proven benchmarks and procedures in place to measure master's level learning through professional experience and knowledge gained specific to their technological discipline.

Professional Development

Professional development is a key part of developing the competence required to achieve the standard for Chartered Marine Technologist registration. Aspiring Chartered Marine Technologists learn to apply their knowledge and understanding and apply professional judgement through professional development. Many larger employers run well-established graduate training and development schemes, some of which are accredited by the IMarEST for the purposes of CMarTech registration.

Accredited professional development schemes, however, are not the only route to achieving the professional development necessary for CMarTech registration. In the absence of an accredited scheme, aspiring Chartered Marine Technologists will need to develop profiles of competence and professional activity in accordance with the competence and commitment statements mentioned earlier. The IMarEST Education and Training Team will be able to

provide the information and guidance necessary, and may be able to put them in touch with a mentor to assist them through the process and help to identify any skills gaps in their development.

Anyone seeking registration as a Chartered Marine Technologist should maintain a detailed record of their development, responsibilities and experience, verified by referees, in order to be best prepared to provide the evidence of professional competence commensurate for CMarTech registration.

Maintaining competence and demonstrating a commitment to CPD

Once CMarTech registration has been achieved, Chartered Marine Technologists have an obligation to maintain professional competence. Guidance on CPD (including a downloadable CPD record) can be found on the IMarEST website (www.imarest.org).

The IMarEST's rules of Professional Conduct

All Corporate Members of the Institute are required to make a personal commitment to live by the appropriate codes of professional conduct, recognising their obligations to society, the marine professions and the environment (www.imarest.org/membership/conduct).

RMarSci

Registered Marine Scientist

Introduction

The Institute of Marine Engineering, Science and Technology (IMarEST) is the international membership body and learned society for marine professionals, with 50 branches and 15, 000 members in over 100 countries around the world.

The Institute's role is to promote the scientific development and interdisciplinary understanding of marine engineering, marine science and marine technology and to uphold and advance the knowledge and status of professionals across the international marine community.

IMarEST is open to everyone associated with the marine, coastal and offshore world, across all scientific, engineering and technological disciplines and applications.

The IMarEST received its Royal Charter in 1933 and is a licensed body of both the Engineering Council UK and the Science Council UK. In accordance with our Royal Charter, the IMarEST is able to award suitably qualified and experienced applicants the title of Registered Marine Scientist (RMarSci). The IMarEST is the only professional body in the world able to award this title.

Registered Marine Scientists (RMarSci)

Registered Marine Scientists are professional scientists, who harness, exploit, manage, use or apply marine science in the pursuit of knowledge, understanding of the marine environment, wealth creation and/or the provision of services in the marine sector. Registered Marine Scientists are characterised by their ability to act as exponents of today's technology through creativity and innovation. To this end, they maintain and manage applications of current and developing science, and may undertake design, research, development, manufacture, construction and operation. Registered Marine Scientists are variously engaged in scientific and commercial management and possess effective interpersonal skills.

Registered Marine Scientists continue to advance their knowledge, understanding and competence to a high level and are bound by an IMarEST Code of Conduct.

The Benefits of Registered Marine Scientists

The Registered Marine Scientist designation has many benefits for individuals, employers and the public as a whole. RMarSci ensures high and improving standards across all technological disciplines; it reflects best practice and is set at an internationally recognised benchmark level. RMarSci encompasses high calibre professionals in the practice, application and teaching of science, and recognises the increasing focus on interdisciplinarity for the future of science, engineering and technology. Furthermore, RMarSci registration provides employers with additional assurance of the quality of their workforce. It is of benefit to:

Society, which will be more confident in the competence of an individual and need no longer be confused by a platform of letters and descriptions.

Individual practitioners, by identification as professional scientists that sets them at the forefront of their profession and offers a passport to mobility.

Employers, with confirmation, through the designation, of the quality of a job applicant's application.

Government departments, seeking to appoint advisers or consultants would have an assurance about the level of an individual's expertise.

Professional bodies, with provision through the new designation of additional opportunities to benchmark their qualifications.

Higher education, which will be better able to set and monitor benchmarks for their science courses, and to promote programmes of study to meet the high standards required of a Registered Marine Scientist.

Regulatory Authorities, who could be confident in specifying the designation in legislation and regulations.

Legal credibility, enabling expert witness participation at a defined standard.

Professional standing, recognising equality of excellence across the technology professions.

What is the required knowledge and competence?

Registered Marine Scientist is open to everyone, who can demonstrate the required high-level knowledge, understanding and professional competence. The exemplifying educational standard is a Bachelor ordinary level qualification in an approved subject. There are many routes that can be measured to meet this standard, including a combination of academic awards, vocational qualifications and experiential learning through work competence includes the knowledge, understanding and skills that underpin performance.

Registered Marine Scientists are required to maintain their professional competence, working within professional codes of conduct and participate actively within their profession. There is also a requirement for continuing professional development.

Assessment of knowledge and competence

The IMarEST is the only organisation able to confer Registered Marine Scientist on individuals, who meet the criteria.

To become registered as a Registered Marine Scientist, applicants must

have their competence assessed by the IMarEST. The assessment is made against standards rigorously applied by the IMarEST's Professional Affairs and Education Committee and the Membership Committee, as being suitable for RMarSci.

The process of assessment starts with a written application to the IMarEST's Membership Services Department. Claims to qualifications, experience and training will require formal documented evidence. In giving details of experience, applicants will need to show how this relates to the required competencies for RMarSci.

Following a review of the documented evidence, the Membership Committee will require the applicant to undertake a Professional Review Interview (PRI)[1]. The Membership Services Department will inform the candidate of the necessary procedures. If deficiencies in the application emerge, the Membership Committee will usually be able to suggest ways in which they can be addressed (this may involve further learning, training or additional experience). If a candidate receives a positive decision on their application for RMarSci, they will become registered as a Registered Marine Scientist and their details will be included on the Register of Registered Marine Scientists. Retention of the designation will require continued membership of the IMarEST and payment of the required subscription.

What needs to be demonstrated?

Competence

The following table details the generic competences that have to be demonstrated in order to achieve registration as a Registered Marine Scientist. Given the diverse nature of technological practice, achieving the required level for these professional competencies will involve a broad range of activities.
Candidates, who believe they meet these or who wish to work towards them, should approach the IMarEST's Membership Services Department to obtain further details on how to apply for registration.

Registered Marine Scientists must be competent throughout their professional lives using a combination of their knowledge, training and experience to be able to:

[1] Any interviews will be conducted in English, subject only to the provisions of the Welsh Language Act 1993 and any Regulations, which may be made in implementation of European Union directives on free movement of labour.

The Competence and Commitment Standard for Registered Marine Scientist. Registered Marine Scientists must be competent throughout their working life, by virtue of their education, training and experience, to:	**Guidance – These are examples of activities which could demonstrate that you have achieved the RMarSci criteria.**
A Use a combination of general and specialist knowledge and understanding to apply existing and emerging technology.	
A1 Maintain and extend a sound theoretical approach to the application of technology in practice. This could include an ability to: • Identify the limits of own personal knowledge and skills • Strive to extend own technological capability • Broaden and deepen own knowledge base through new applications and techniques.	Engage in formal learning. Learn new scientific theories and techniques in the workplace, at seminars, etc. Broaden your knowledge of appropriate codes, standards and specifications.
A2 Use a sound evidence-based approach to problem-solving and contribute to continuous improvement. This could include an ability to: • Establish users' requirements for improvement • Use market intelligence and knowledge of technological developments to promote and improve the effectiveness of products, systems and services • Contribute to the evaluation and development of continuous improvement systems • Apply knowledge and experience to investigate and solve problems arising during tasks and implement corrective action.	Manage/contribute to market research, and product and process research and development. Involvement with cross-disciplinary working. Conduct statistically sound appraisal of data. Use evidence from best practice to improve effectiveness. Apply root cause analysis.
B Apply appropriate theoretical and practical methods to design, develop, manufacture, construct, commission, operate, maintain, decommission and re-cycle processes, systems, services and products.	
B1 Identify, review and select techniques, procedures and methods to undertake tasks. This could include an ability to: • Select a review methodology • Review the potential for enhancing products, processes, systems and services, using evidence from best practice • Establish an action plan to implement the	Contribute to the marketing of and tendering for new products, processes and systems. Contribute to the specification and procurement of new products, processes and systems. Develop decommissioning processes. Set targets, and draft programmes and action plans. Schedule activities.

results of the review.	
B2 Contribute to the design and development of solutions. This could include an ability to: • Contribute to the identification and specification of design and development requirements for products, processes, systems and services • Identify potential operational problems and evaluate possible solutions, taking account of cost, quality, safety, reliability, appearance, fitness for purpose and environmental impact • Contribute to the design of solutions.	Contribute to theoretical and applied research. Manage/contribute to value and whole life costing. Work in design teams. Draft specifications. Develop and test options. Identify resources and costs of options. Produce detailed designs.
B3 Implement design solutions and contribute to their evaluation. This could include an ability to: • Secure the resources required for implementation • Implement design solutions, taking account of critical constraints • Identify problems during implementation and take corrective action • Contribute to the evaluation of design solutions • Contribute to recommendations for improvement and actively learn from feedback on results.	Follow the design process through into product manufacture. Operate and maintain processes, systems etc. Contribute to reports on the evaluation of the effectiveness of the designs. Contribute to product improvement. Interpret and analyse performance. Contribute to determining critical success factors.
C Provide technical and commercial management.	
C1 Plan for effective project implementation. This could include an ability to: • Identify the factors affecting the project implementation • Prepare and agree implementation plans and method statements • Secure the necessary resources and confirm roles in project team • Apply the necessary contractual arrangements with other stakeholders (client, subcontractors, suppliers, etc.).	Manage/contribute to project planning activities. Produce and implement procurement plans. Contribute to project risk assessments. Collaborate with key stakeholders. Plan programmes and delivery of tasks. Identify resources and costs. Prepare and agree contracts/work orders.
C2 Manage the planning, budgeting and organisation of tasks, people and resources. This could include an ability to: • Operate appropriate management systems • Work to the agreed quality standards, programme and budget, within legal and statutory requirements • Manage work teams, coordinating project activities • Identify variations from quality standards, programme and budgets, and take corrective action • Evaluate performance and recommend improvements	Manage/contribute to project operations. Manage the balance between quality, cost and time. Manage contingency processes. Contribute to the management of project funding, payments and recovery. Satisfy legal and statutory obligations. Manage tasks within identified financial, commercial and regulatory constraints.

C3 Manage teams and develop staff to meet changing technical and managerial needs. This could include an ability to: • Agree objectives and work plans with teams and individuals • Identify team and individual needs, and plan for their development • Manage and support team and individual development • Assess team and individual performance and provide feedback.	Carry out/contribute to staff appraisals. Plan/contribute to the training and development of staff. Gather evidence from colleagues of the management, assessment and feedback that you have provided. Carry out/contribute to disciplinary procedures.
C4 Manage continuous quality improvement. This could include an ability to: • Ensure the application of quality management principles by team members and colleagues • Manage operations to maintain quality standards • Evaluate projects and make recommendations for improvement.	Promote quality. Manage/contribute to best practice methods of continuous improvement, e.g. ISO 9000, EFQM, balanced scorecard. Carry out/contribute to quality audits. Monitor, maintain and improve delivery. Identify, implement and evaluate changes to meet quality objectives.
D Demonstrate effective interpersonal skills.	
D1 Communicate in English with others at all levels. This could include an ability to: • Contribute to, chair and record meetings and discussions • Prepare letters, documents and reports on technical matters • Exchange information and provide advice to technical and non-technical colleagues.	Reports, minutes of meetings, letters, programmes, drawings, specifications.
D2 Present and discuss proposals. This could include an ability to: • Prepare and deliver appropriate presentations • Manage debates with audiences • Feed the results back to improve the proposals.	Presentations, records of discussions and their outcomes.
D3 Demonstrate personal and social skills. This could include an ability to: • Know and manage own emotions, strengths and weaknesses • Be aware of the needs and concerns of others • Be confident and flexible in dealing with new and changing interpersonal situations • Identify, agree and work towards collective goals • Create, maintain and enhance productive working relationships and resolve conflicts.	Records of meetings. Evidence from colleagues of your personal and social skills. Contribute to productive working relationships. Apply diversity and anti-discrimination legislation.

E Demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.	
E1 Comply with relevant codes of conduct. This could include an ability to: • Comply with the IMarEST'S Code of professional conduct of own professional body • Manage work within all relevant legislation and regulatory frameworks, including social and employment legislation.	Contribute to the affairs of the IMarEST. Work with a variety of conditions of contract.
E2 Manage and apply safe systems of work. This could include an ability to: • Identify and take responsibility for own obligations for health, safety and welfare issues • Manage systems that satisfy health, safety and welfare requirements • Develop and implement appropriate hazard identification and risk management systems • Manage, evaluate and improve these systems.	Undertake formal H&S training. Work with H&S legislation and best practice, e.g. HASAW 1974, CDM regs, OHSAS 18001:2007 and company safety policies. Carry out safety audits. Identify and minimise hazards. Assess and control risks. Deliver H&S briefings & inductions.
E3 Undertake relevant activities in a way that contributes to sustainable development. This could include an ability to: • Operate and act responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously • Provide products and services which maintain and enhance the quality of the environment and community, and meet financial objectives • Understand and encourage stakeholder involvement in sustainable development.	Carry out/contribute to environmental impact assessments. Carry out/contribute to environmental risk assessments. Manage best practice environmental management systems, e.g. ISO 14000. Work within environmental legislation. Adopt sustainable practices. Contribute to "triple bottom line" (i.e. social, economic and environmental) outcomes.
E4 Carry out continuing professional development necessary to maintain and enhance competence in own area of practice. This could include an ability to: • Undertake reviews of own development needs • Prepare action plans to meet personal and organisational objectives • Carry out planned (and unplanned) CPD activities • Maintain evidence of competence development • Evaluate CPD outcomes against the action plans • Assist others with their own CPD.	Keep up to date with national and international issues. Maintain CPD plans and records. Involvement with the affairs of the IMarEST. Evidence of your development through on-the- job learning, private study, in-house courses, external courses and conferences.

What needs to be demonstrated? (Continued)

Education

Normally, formal education is an essential pre-requisite for registration, as it demonstrates the underpinning knowledge and understanding for professional competence. The following qualifications exemplify the required knowledge and understanding for Registered Marine Scientist registration.

An IMarEST accredited Bachelor ordinary degree Or

A Higher National Certificate or Diploma or Foundation Degree, plus appropriate further learning to Bachelor ordinary degree level.

Or

An NVQ4 or SVQ4, which has been approved for the purpose by the IMarEST

Accreditation of degree programmes is carried out by the IMarEST's Education and Training Team. The key criterion in accreditation is the learning outcomes achieved by a programme's graduates.

If an accredited Bachelor ordinary level qualification is not present, it is possible to demonstrate Bachelor level achievement through a combination of academic awards and/or appropriate experiential learning. Candidates applying through this route must clearly demonstrate that they have achieved the same level of knowledge and understanding, as those with the accredited qualifications. For example, a HND qualification supported by appropriate professional experience may be sufficient to demonstrate a Bachelor ordinary degree level learning. The IMarEST has proven benchmarks and procedures in place to measure Bachelor ordinary degree level through professional experience and knowledge gained specific to their technological discipline.

Professional Development

Professional development is a key part of developing the competence required to achieve the standard for Registered Marine Scientist registration. Aspiring Registered Marine Scientists learn to apply their knowledge and understanding and apply professional judgement through professional development. Many larger employers run well-established graduate training and development schemes, some of which are accredited by the IMarEST for the purposes of RMarSci registration.

Accredited professional development schemes, however, are not the only route to achieving the professional development necessary for RMarSci registration. In the absence of an accredited scheme, aspiring Registered Marine Scientists will need to develop profiles of competence and professional activity in accordance

with the competence and commitment statements mentioned earlier. The IMarEST Education and Training Team will be able to provide the information and guidance necessary and may be able to put them in touch with a mentor to assist them through the process and help to identify any skills gaps in their development.

Anyone seeking registration as a Registered Marine Scientist should maintain a detailed record of their development, responsibilities and experience, verified by referees, in order to be best prepared to provide the evidence of professional competence commensurate for RMarSci registration.

Maintaining competence and demonstrating a commitment to CPD

Once RMarSci registration has been achieved, Registered Marine Scientists have an obligation to maintain professional competence. Guidance on CPD (including a downloadable CPD record) can be found on the IMarEST website (www.imarest.org).

The IMarEST's rules of Professional Conduct

All Corporate Members of the Institute are required to make a personal commitment to live by the appropriate codes of professional conduct, recognising their obligations to society, the marine professions and the environment (www.imarest.org/membership/conduct).

Prepared by Ben Saunders – Education and Training Manager Date: 26/11/2009
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