

## **BEng(Hons) Marine Engineering and Management**

Warsash Maritime Academy offers an academic top-up programme leading to a Bachelor of Engineering (Honours) Degree in Marine Engineering and Management.

Details of the programme are given below. For further details, please contact:

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### **Course Pre-Requisites**

Candidates should hold either a Foundation Degree in Marine Engineering or a Higher National Diploma (HND) in Marine Engineering with at least 12 months industrial experience after attaining the HND.

### **Course Aims**

- Provide a systematic understanding of areas associated with marine engineering that involve developed and emerging technologies, along with the ability to optimise their application.
- Apply appropriate theoretical and practical methods to the analysis and solution of marine engineering related problems.
- Develop the skills required to evaluate new and emerging technologies in the context of a particular application, based upon a review of relevant literature.
- Develop the qualities needed for employment in situations requiring the exercise of personal responsibility, technical leadership and commercial management in complex and unpredictable circumstances.
- Provide a course of study that will give partial exemption from the educational requirements for registration as Incorporated Engineer.

### **Method of delivery**

The course is delivered via blended learning commencing with a 15 week period of attendance at the Academy. During this period the areas of study will be introduced and some initial assessment carried out.

Students will then complete the course via flexible learning over a period of up to 18 months. During this period students will be supported by nominated tutorial staff.

In order to be awarded the qualification, students must achieve 120 x level 3 credits made up from the three compulsory units and a choice of two from the three optional units (as described in the 'Course Content' section on the next page).

### **Course Dates**

4 April 2011                      5 September 2011                      16 April 2012

## Course Content - BEng(Hons) Marine Engineering and Management

Unit Name	Credits	Type	Description of Unit
Engineering Project	40	Compulsory	Student will complete an 8,000 word project in an area of engineering and/or related engineering business management. The project will draw on relevant theoretical or practical aspects of the degree programme. The project is seen as the integrating vehicle that draws on the total course of study and demonstrates a student's ability to plan, execute and present the findings of a suitable applied research topic.
Project Management	20	Compulsory	This unit will enhance knowledge and understanding of engineering project management and covers the skills required at all stages throughout the life of a project. It will investigate how resource management, planning, control and evaluation techniques can be applied to the management of a significant engineering project.
Professional Engineering Management	20	Compulsory	This unit will explore how technological progress, engineering design skills, manufacturing methods and customer expectation has developed exponentially over recent years. It will look at the relationship between companies working within major collaborative projects and consider how these relationships can be managed in a multinational industry. Elements of strategic management will be introduced within this unit.
Naval Architecture	20	Optional	This unit will focus on the practical application of scientific theory to the design and analysis of ships and floating structures, in both normal design and off design conditions. Analytical skills and knowledge that is relevant to both sea-going engineering officers in the Merchant Navy and to engineers working in shore based organisations.
Control Systems	20	Optional	This unit will cover the underpinning principles and practical methods used to model feedback control systems, predict their response and carry out procedures to improve performance. It will involve predicted behaviour of electrical and mechanical systems when subjected to different types of input stimulation and how the system response is measured in the time and frequency domains.
Materials and Manufacturing	20	Optional	The unit is designed to cover the important characteristics of engineering materials and their correct selection, in order that potential problems can be taken into account at the design stage. The unit therefore covers the properties of materials, how materials are processed, component manufacturing issues, and the application of materials within the marine environment. The unit also covers the area of materials selection and causes of material failure.