Faculty of Marine Technology

Faculty of Marine Technology has been accredited by RINA (the Royal Institute of Naval Architects) of the UK based on curriculum, syllabus, lecturer qualifications, number of students and graduates, and supporting facilities within the faculty. Therefore, graduates from the Faculty of Marine Technology are acknowledged equivalent to B.Sc graduates from UK and other Commonwealth Countries.

This faculty aims to produce graduates who master ship planning and construction, management of dock heavy industry and hydrodynamics, management of port and transportation, shipping systems, propulsion systems, piping system and assistive miscellaneous appliances, offshore structure planning, coastal facility planning, port and its facilities, piping system under sea, and many others.

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<th>Department</th>
<th>Diploma</th>
<th>Bachelor</th>
<th>Master</th>
<th>Doctoral</th>
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<tbody>
<tr>
<td>Naval Architecture</td>
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<td>✓</td>
<td>✓</td>
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<tr>
<td>Marine Engineering</td>
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<td>Ocean Engineering</td>
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<tr>
<td>Double Degree Marine Engineering</td>
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<td>✓</td>
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<td>Marine Transportation</td>
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Introduction

Department of Naval Architecture & Shipbuilding Engineering (DNASE) concentrates on the study and research (mainly) in the following topics: ship design, ship structure, ship hydrodynamics and ship production. This department is 1 out of about 50 Departments of Naval Architecture/Marine Technology in the world which belongs to university maritime directory managed by the Royal Institution of Naval Architects (RINA). This department has become the centre of RINA Indonesia branch since 2006. One of its professors has been elected as an international council member of RINA as the first Indonesian in the council since 2006. Furthermore, Dr Asjhar Imron has been elected as the chairman of RINA Indonesia branch since 2011 and Prof IKAP Utama as the branch secretary since 2006. This department as received two grants from UK Government: (1) PMI-2 award in 2010 and (2) Started research grant in 2012. Both are in collaboration with Newcastle University and DNASE is the only naval architecture/marine technology department to receive those awards in Indonesia.

Research Fields/Concentrations

- Marine Hydrodynamic

Laboratories

- Ship Design
- Ship Structure
- Ship Production and Management
- Ship Hydrodynamic

Career Opportunities

Completion of the course enables graduates to enter various professions. such as: designer, researcher, public and government service employ to many areas of industry, i.e.: furniture, households and electronic, apparel, visual broadcast, visual advertising, production house, digital animation, multimedia, branding, packaging, event organizer, printing and press media, retail/trade, transportation, environment design, crafts and jewelry. Graduates can perform all professions above to take apart as consultant, producer, contractor, developer, communicator, marketer, quality controller, system design integrator and or supplier. Therefore, graduates can perform as an employ, individual/free lancer and or entrepreneur in various fields.

Further Information

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Department of Marine Engineering is one out of three departments within Faculty of Marine Technology has been established in 1982 and its competencies include design and engineering of floating structure systems. Marine engineering is an integrated engineering effort comprising many engineering disciplines directed to the design and development of transport system, warfare, exploration and natural resource extraction at both under and upon the surface of water. This department is actively involve in the Society of Naval Architects and Marine Engineers.

Laboratories/Research Fields/Concentrations
- Marine Electrical and Automation System (MEAS)
- Marine Machinery and Systems (MMS)
- Marine Power Plant (MPP)
- Marine Reliability, Availability and Management System (RAMS)
- Marine Manufacture and Design (MMD)

Career Opportunities
Graduates of this program have theoretical and practical skills to pursue careers in research, consultancy, oil and gas survey, and mining. They can work at shipping companies, shipyards, power plants, fabrications, government and research institutions.

Further Information
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**Introduction**

Institut Teknologi Sepuluh Nopember (ITS) is a nationally and internationally recognized institution for higher maritime education and training, having a comprehensive knowledge in sea transport, shipping and ocean technologies and systems, also conducting research and development and having effective relationships with international partners in these fields. The Hochschule Wismar, Department of Maritime Studies is one of the leading German institutes for maritime education and research, with a specialization in the operation and management of maritime systems. The institute offers two Bachelor programs (for Nautical Science & Transport Operations and for Ship Operation) and a Master program for Operation and Management of Maritime Systems.

**Research Fields/Concentration**

- Management of Technical Ship Operation
- Management of Ship Maintenance
- Marine Surveying
- Marine Safety and Environmental Management
- Naval Architecture for Marine Engineers
- Basic Engine Room Design

**Laboratories**

- Physics
- Engineering Drawing & CAD
- Electrics & Electronics
- Material Engineering & Metal Processing
- Numerical Analysis & Computer Progr.
- Measurement & Control Technology
- Fluid Machinery
- Combustion Engines & Turbines
- HVAC (Heating, Ventilation, Air Conditioning)
- Ship Machinery Plants / Engine Room Layout
- Ship Resistance & Propulsion / Hydrodynam
- Automotive Technology
- Operating Media & Dangerous Materials
- Electrical Engines & Power Electronics
- Deck Machinery & Cargo Handling Systems
- Marine Safety & Environmental Technology
- Ship Diesel Engines & Plants
- Ship Electrical Installations
- Ship Automation
- Ship Maintenance Technology
- Ship Maintenance Management
- Technical Ship Operation / Tanker Shipping
- Complex Ship Operation (Laboratory SGC)

**Career Opportunities**

Graduates of the Bachelor Program shall target the following segments of the Indonesian, European, and International maritime industry: Shipping and Ship management, Port operation, Shipbuilding, Repair and Conversion, Classification Societies, Maritime Education and Training, Maritime Technical Service, Marine Offshore Operations and Services, Maritime Authorities, Marine Finance and Insurance. They shall be qualified to perform in the following professions: Technical Ship and Fleet Manager, Marine Surveyor. Marine Technical Manager / Consultant, Marine Safety and Environmental Manager / Auditor / Consultant, Marine Engineering Instructor / Lecturer

**Further Information**

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Introduction

Department of Ocean Engineering ITS is the first study program in the country running course in ocean and offshore engineering. At present, the department has become the centre of excellence on the development of onshore and offshore engineering matters and has been internationally recognized by the Royal Institutions of Naval Architects (RINA) which is based in London UK. The department was established in 1983 and aims to equip students to solve problems connecting to design, construction and maintenance of onshore and offshore structures and handling conservation of marine environment. There are 31 lectures at this department including 13 PhDs, 16 masters, and 2 bachelor degree holders from distinguished local and international universities e.g. USA, UK, Japan, Norwegian, etc.

Research Fields/Concentrations

- Offshore & Marine Structures
- Design and Production of Offshore Platforms
- Coastal Engineering & Management
- Offshore Hydrodynamic
- Marine Energy and Environment

Laboratories

- Offshore Hydrodynamic
- Ocean Energy and Environment
- Computation and Numerical Modeling
- Operational Research and Design
- Underwater System and Seabed

The Department of Ocean Engineering also has three research centers namely Deep Sea Technology Research Center, Coastal Engineering and Small Island Management Research Center, and LNG Research Center.

Career Opportunities

Graduates can work in many fields related to the oil industry, military, and marine navigation.

Further Information

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Maritime Transportation

Introduction
To complete the expertises in the area of maritime technology, the Department of Sea Transportation was established. This department focuses on managerial and operational aspects of ship/maritime operations including economics, logistics, and informatics aspects of shipbuilding and seaport. Sea Transportation has professional teaching staff with qualifications of the S-2 and S-3 graduates from various reputable overseas universities. Sea transportation includes techniques such as shipbuilding, seaport, economics, logistics, informatics and mathematics which are a reflection of the real world maritime transportation sector.

Research Fields/Concentrations
- Sea Transport (Shipping), focus on planning, operation and evaluation of a shipping management.
- Port and Infrastructure, focus on conceptual planning and operational management of port industry.
- Maritime logistics, focus on multimodal transportation system planning based on the concept of logistics supply chain.

Laboratories
- Marine Transport and Logistics
- Infrastructure and Port
- Marine Transport Telematics
- Computational and Operations Research

Career Opportunities
- Industrial Sector (Shipping Industry, Industrial Port, Shipyard Industry, Logistics/Transportation Multimodal, Oil and Gas Industry, Banking and Insurance Industries)
- Government Sector (Ministry of Transportation, Ministry of Maritime Affairs and Fisheries, Ministry of Finance, Bap)

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