



Advanced Diploma in
**Marine
Engineering**

(KPT: R/0715/5/0001) (MQA/FA9789)



WHY CHOOSE ALAM?

Industry-Relevant Training

ALAM offers comprehensive maritime education that includes both theoretical and hands-on training.

Globally Recognized Qualifications

ALAM's programs are recognized and accredited by international maritime organizations. The academy has consistently been rated highly by DNV and has received awards such as the Sea trade Maritime Awards Asia for Best Education & Training. This recognition highlights ALAM's commitment to excellence in maritime education.

Extensive Alumni Network

DMET graduates will be considered as ALAM's Alumni. Since its establishment in 1977, ALAM has trained over 15,000 seafarers who are now spread across the global maritime industry. This extensive network of alumni provides current students with valuable connections and opportunities within the maritime sector.

Comprehensive Campus Facilities

Students benefit from state-of-the-art simulation centers, workshops, and laboratories that replicate real-world maritime environments, ensuring they are well-prepared for the global maritime industry.

One Stop Centre

ALAM offers a comprehensive suite of modular courses following ADME graduation, providing graduates with a seamless pathway for continued professional development and specialization.

PROGRAMME OVERVIEW

The aim of the program is to provide the students with the knowledge, understanding, and skill necessary to prepare him/her for an Advanced Diploma in Marine Engineering and the Chief and Second Engineer Officer (Motor and Steam) Certificate of Competency for Unlimited Voyages.

The **Advanced Diploma in Marine Engineering (ADME)** program is designed to provide students with comprehensive knowledge, technical skills, and practical experience necessary for a successful career in marine engineering. This program integrates both theoretical and practical training, ensuring that graduates are well-prepared to perform effectively as Marine Engineer Officers on merchant vessels and other marine platforms.

The curriculum is developed in accordance with the **International Maritime Organization (IMO) Standards of Training, Certification, and Watchkeeping (STCW) 1978 Convention, as amended, including the Manila Amendments of 2010**. It also adheres to the requirements of the **Malaysian Qualifications Agency (MQA)** and the **Ministry of Higher Education (MOHE)**, ensuring compliance with national and international standards for higher education and maritime training.

Graduates of this program are qualified to obtain the **Certificate of Competency (COC) Class 2 (Second Engineer Officer) and Class 1 (Chief Engineer Officer)**, enabling them to pursue senior engineering roles at sea.



Study Pathways

Complete ADME Program

Includes modular courses for ADME endorsement

Oral Examination for 2nd class COC from Malaysia Marine Department

Conducted by the Malaysia Marine Department

Oral Examination for 2nd class COC from Malaysia Marine Department

- Conducted by the Malaysia Marine Department
- Promoted to Chief Engineer (depend on company promotion)

2nd class COC

- Promotion to 2nd Engineer (depending on company promotion)
- Collect sea time 12 months after holding 2nd class COC can proceed for 1st class COC oral examination

Can further study

Bachelor's Degree Programs

- **Bachelor of Marine Engineering Technology (BMET)** - Direct entry into a related bachelor's degree program to deepen technical knowledge
- **Bachelor of Mechanical Engineering** - Specialization in marine or offshore engineering
- **Bachelor of Maritime Technology** - Focusing on ship design, marine technology, and naval architecture
- **Bachelor of Electrical and Electronics Engineering** - Specialization in marine automation and electrical systems
- **Bachelor of Naval Architecture and Shipbuilding** - For those interested in ship design and construction
- **Bachelor of Offshore Engineering** - For careers in oil and gas, offshore platforms, and renewable energy

Bachelor's Degree (Hons) Programs

- **Bachelor of Engineering (Hons) in Marine Engineering** - A direct continuation with a focus on marine systems and propulsion
- **Bachelor of Technology (Hons) in Marine Electrical Technology** - Specializing in marine electrical and electronic systems
- **Bachelor of Technology (Hons) in Marine Mechanical Technology** - Advanced study of mechanical systems in marine contexts

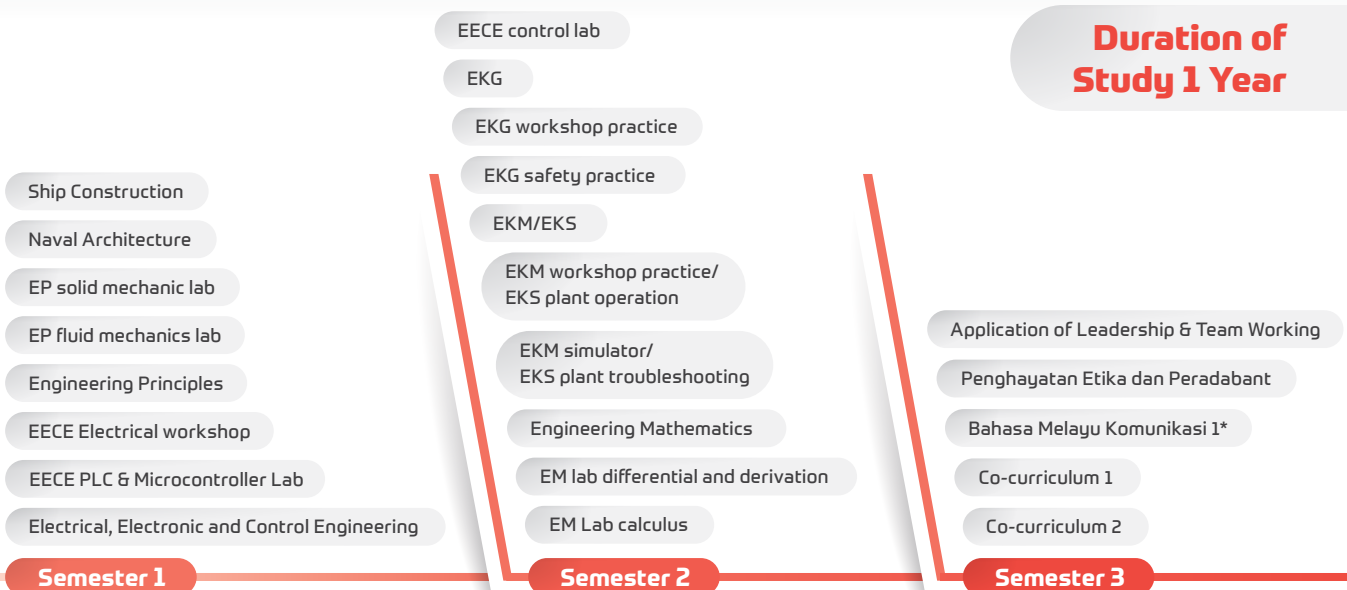
Postgraduate Programs (For those pursuing academic or research careers)

- **Master of Science (MSc) in Marine Engineering or Marine Technology**
- **Master of Engineering (M.Eng) in Mechanical Engineering or Naval Architecture**
- **Master of Maritime Safety and Environmental Protection**
- **Master of Business Administration (MBA) in Maritime Management** - For those interested in management and leadership roles in the maritime industry

Obtain Professional Membership

- **Join recognized marine engineering institutions** - (e.g., Institute of Marine Engineering, Science, and Technology - IMarEST)
- **Obtain Chartered Engineer (CEng) status** - for international recognition

Programme Structure





Assessment System

The assessments will be carried out under nine (9) modules covering the above functions and other modules as per the Malaysia Qualifications Agency (MQA) requirements. The following are the modules:

Engineering Knowledge Motor (EKM)

covering Function 1 & Function 3

Engineering Knowledge Steam (EKS)

covering Function 1 & Function 3

Engineering Knowledge General (EKG)

covering Function 1 & Function 3

Electrical, Electronic & Control Engineering

covering Function 2

Naval Architecture & Ship Construction

covering Function 4

Engineering Mathematics

Engineering Principles

Malaysia Studies / Communication Language 1

Professional Etiquette

After completed all the assessment, the student needs to do an oral exam with MMD (Malaysia Marine Department)

Career Opportunities

Maritime Industry (Shipping Career)

Marine Engineer Officer

Work on merchant ships, cruise ships, oil tankers, container ships, and offshore supply vessels.

Second Engineer Officer (COC Class 2)

After obtaining COC Class 2, serve as the second engineer responsible for engine room operations.

Chief Engineer (COC Class 1)

After gaining experience and further certification, become the chief engineer, overseeing all technical and mechanical operations onboard.

Offshore Oil & Gas Industry

Maintenance Engineer

Maintain and repair offshore equipment and machinery on oil platforms or FPSOs (Floating Production Storage and Offloading units).

Drilling Engineer

Monitor and maintain drilling equipment and systems on offshore drilling rigs.

Production Engineer

Oversee production processes, ensuring safety and efficiency on oil and gas platforms.

Marine Equipment Manufacturing & Maintenance

Technical Service Engineer

Provide technical support, maintenance, and repair of marine engines, generators, and other machinery.

Marine Equipment Designer

Work on designing and improving marine mechanical systems, including propulsion systems and safety equipment.

Quality Control Inspector

Ensure that marine equipment and machinery meet international standards.

Marine Surveying & Inspection

Marine Surveyor

Conduct ship inspections, including hull, machinery, and safety systems, for classification societies (e.g., Lloyd's Register, ABS).

Port State Control Officer

Inspect foreign ships to ensure compliance with international regulations.

Shipbuilding & Repair Industry

Shipyards Supervisor

Oversee construction, maintenance, and repair of ships in a shipyard.

Mechanical Design Engineer

Design propulsion systems, hull systems, and marine machinery for new ship designs.

Project Manager

Manage shipbuilding or ship repair projects, ensuring timely and budget-compliant delivery.

Minimum Entry Requirements

Must hold a **Watch-keeping Engineer Certificate of Competency** (>750kW, WKE Unlimited Voyages).

Must have completed **at least 12 months of sea service** after obtaining the WKE Certificate or as per the **Training & Certification Rules of the Marine Department, Malaysia.**

Must be **medically & physically fit** for sea service.

English Language Proficiency Requirements

Depending on the language proficiency of the candidates in the course, the course will be conducted in English language supplement by Bahasa Malaysia

Awards & Accreditations



MINISTRY OF HIGHER EDUCATION



Akademi Laut Malaysia

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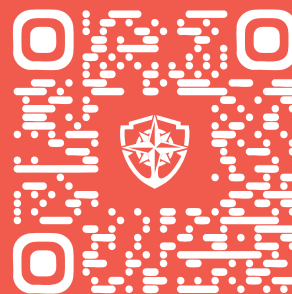
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