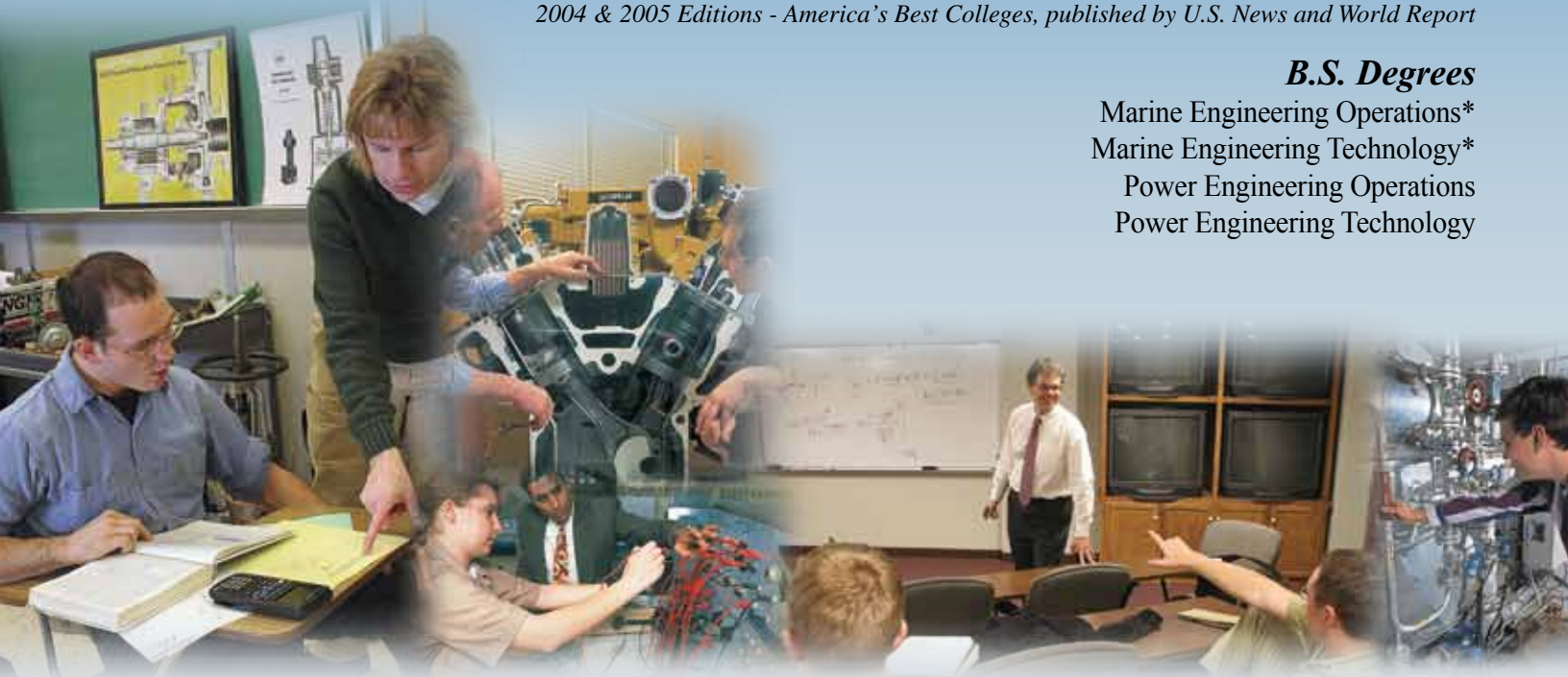




*Maine Maritime Academy — named in “Best Undergraduate Engineering Programs”
2004 & 2005 Editions - America’s Best Colleges, published by U.S. News and World Report*

B.S. Degrees

Marine Engineering Operations*
Marine Engineering Technology*
Power Engineering Operations
Power Engineering Technology



Program Overviews

If you are interested in how the world around you works or if you have ideas on how to improve the tools, appliances, and machines we use, you already have the qualities needed to become an outstanding engineer. As an engineer you’ll be faced with significant and rewarding challenges — in charge of the controls, assigned to find and fix problems, or working to create new and better products. Not only will you learn to meet these challenges at Maine Maritime, you will practice on real equipment, bringing theory to life.

Marine Engineering Operations (MEO)*

This major forms the foundation of all programs within the Engineering Department. You will learn to operate the power generation, electrical, hydraulic, and many other engineering systems of a floating vessel. Although you’ll train to be a specialist in marine engineering operations, you’ll find that this major allows you ample flexibility to work in areas such as off-shore oil exploration, shore-side power generation, or business.

Marine Engineering Technology (MET)*

This major incorporates many courses from the MEO program, with additional courses in science, mathematics, communications, technical science, and laboratory testing methods. Students entering this major are interested in working at sea with the option of becoming a shore-based technologist. This program is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700

Power Engineering Operations (PEO)

This non-seagoing major is concerned primarily with the operation and maintenance of industrial steam and gas turbine power plants and with related electrical systems. Classroom studies are closely coordinated with practical experience in laboratories. Successful completion of the program leads to the Bachelor of Science degree and, after passing a State of Maine examination, a 4th-Class Stationary Engineer’s license.

Power Engineering Technology (PET)

This non-seagoing major includes most MEO courses, plus study of shoreside power plant operations and management. Your career opportunities as a power engineering technologist lie in utility power plants, biomass operations, and cogeneration systems. This program is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - telephone: (410) 347-7700

** This major leads to a U.S. Coast Guard engineering license and requires participation in the Maine Maritime Academy Regiment of Midshipmen.*

Sea Time and Co-op Training

All candidates seeking a 3rd Assistant Engineer license from the U.S. Coast Guard are required to complete 180 sea days. Sea time is accomplished through specialized laboratories, simulation, and three distinct training cruises. Majors impacted by this training requirement include:

Marine Engineering Operations (MEO) **Marine Engineering Technology (MET)**

Training Cruise: At the conclusion of the first and third years, students gain sea experience aboard the college's *T.S. State of Maine*. Scheduled during May and June for at least 60 days, training cruises typically include four domestic or foreign ports-of-call. Designed to develop practical skills required of a licensed seafaring officer, cruise will place you in watch standing and activities involved in the direct operation and maintenance of the ship. Regardless of your major, the first cruise provides an overall orientation to both the deck and engineering aspects of a ship's operation. The training cruise experience at the conclusion of the junior year focuses on engineering training, watches, and maintenance.

Cadet Shipping: The second cruise experience, completed at the conclusion of the sophomore year, will place you aboard a commercial merchant ship, aboard an actual tanker, bulk carrier, container ship, or cruise liner. A vital element of your undergraduate education, this 60-day Cadet Shipping experience immerses you in this dynamic industry, giving you a chance to test your knowledge, learn from professional seafaring officers, and see the world.

Co-ops: PEO and PET students gain hands-on training in summer cooperative work experiences in power plants and large industrial settings nationwide.

Hands-On Opportunities

At MMA, a typical day on the path to becoming competent, well-rounded engineers and engineering technologists is packed with exciting classes involving hands-on lab work, high-tech training, and stimulating classroom discussion.

Academic Activities:

- A Computer-Aided Drafting (CAD) project that produces engineering drawings of several machine parts.
- Work in the Machine Tool Laboratory using lathes to manufacture a valve stem.
- Non-Destructive Testing (NDT) on welds that students have prepared in the welding laboratory.

High-Tech, On-Campus Labs:

- Small Scale Operating Steam Plant
- 1,200-hp Diesel Engine
- Power Plant Simulator
- Machine Tool Lab
- Welding and Testing Lab
- Control Room Simulator (Diesel Power)
- Electrical Power Lab
- 500-foot Training Ship *State of Maine*

Dynamic Careers

Professional engineering careers encompass a wide variety of jobs, offering many opportunities and excellent pay throughout the world. Some recent graduates have taken on dynamic positions:

- **Operating Engineers** on ocean going ships or in land-based electrical generation facilities
- **Power Broker** controlling the supply and distribution of electricity for the world's largest entertainment complex, involving the purchase and sale of millions of dollars worth of electricity annually.
- **Technical Operator**
- **Engineer**
- **Field Service Engineer**
- **Project Engineer**

Engineering and Technology

It's a whole new language in the engineering world. The terms may seem abstract, but the differences between engineers and engineering technologists are clear.

Engineers design and develop technology:

Engineers begin with the most basic instructions and requirements: improve the fuel efficiency of this engine, develop an appliance that stabilizes a boat in rough seas, design a toaster that heats evenly. Compared to the courses of an engineering technology student, an engineer prepares for the demands of this career by taking more design, systems, analysis, math, and science courses; fewer lab courses.

Engineering technologists test and operate technology:

Engineering technologists work with products that have been designed and fine-tuned by engineers. Your job as an engineering technologist is to integrate and operate the often complicated systems — hydraulic, electrical, power generation — these machines rely upon to run. You must thoroughly understand each system and its fundamentals in order to test products for safety and endurance. You are responsible for recognizing operating problems, inefficiencies, and potential breakdown. Moreover, you must be comfortable troubleshooting and repairing complex systems. Compared to the courses of an engineering student, an engineering technology student prepares for the demands of this career by taking fewer math and science courses; more lab, and application of machines and devices courses.

Students Like You

Outside of class, Maine Maritime engineering students enjoy intercollegiate conferences and professional networking as part of the MMA student chapters of the American Society of Mechanical Engineers, the Society of Naval Architects and Marine Engineers, and the Association for Facilities Engineering. Group activities have included a gravity powered car design and performance contest, tutoring in local schools, and field trips to major industrial settings.

Learn More

Visit www.mainemaritime.edu - our web site is filled with helpful information that may assist you as you consider attendance more seriously. Admissions counselors are always available to speak with you. Simply give us a call.

The Academy reserves the right to make changes in its rules, regulations, procedures, degree requirements, and fees. Our online catalog is regularly updated with contemporary information and should be referred to for complete programming facts. Please visit www.mainemaritime.edu

admissions@mma.edu

(800) 464-6565 (Maine)

(800) 227-8465 (Out of Maine)

Professional Credentials

Successful completion of requirements in each of the engineering majors offered at MMA leads to potential professional licensing opportunities.

Marine Engineering Operations (MEO)

Marine Engineering Technology (MET)

USCG 3rd Assistant Engineer License, Unlimited Horsepower, Steam or Motor, Any Ocean
Eligible to sit for State of Maine 3rd Class Engineer License (Stationary Plant)

Power Engineering Operations (PEO)

State of Maine 4th Class Engineer License (Stationary Plant)

Power Engineering Technology (PET)

Eligible to sit for State of Maine 3rd Class Engineer License (Stationary Plant)

Eligible to sit for Fundamentals of Engineering Exam