



SINGAPORE
SAFETY@SEA
WEEK 2024

Singapore Safety@Sea 2024 Conference

19 August 2024

Conrad Singapore Orchard

All Hands on Deck: Safety First!

All Hands on Deck for Safe Ammonia Bunkering



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Singapore Maritime Academy @ Singapore Polytechnic

Our Mission
As a polytechnic for all ages we prepare our learners to be life ready, work ready, and world ready for the transformation of Singapore

Our Vision
Inspired Learner. Serve with Mastery. Caring Community

A caring community of inspired learners committed to serve with mastery.

The SMA Story
Singapore's Premier Maritime Education & Training Academy

- Training of seafarers under the Singapore Polytechnic started in 1957
- Training expanded to include engineering and business areas
- Training of ratings was conducted by the Seafarers' Welfare Board which was later taken over by the National Maritime Academy under the Maritime and Port Authority of Singapore (MPA).
- SMA was formed in 2000 as a result of the merger of the Maritime Technology and Transportation (MTT) Department of the Singapore Polytechnic and the National Maritime Academy (NMA) of the Maritime and Port Authority of Singapore (MPA).

Official (Open), Non-Sensitive SP Singapore Polytechnic

SMA Course Portfolio
Educating the future maritime workforce

- Deck and Marine Engineer Officer Courses:
Coc 1 & 2 and 5 (Engine)
Coc 1 & 2 and 3 (Deck)
250 to 350 students/year
- Class 5 Special Limits (Deck & Engine)
40 students/year
Class 4 Special Limits (Deck & Engine)
20 students/year
- STCW 2010 & Other Short Courses:
1,000 candidates/year
SSSTC Courses with SMTC Safety Training Centre:
4,000 candidates/year

All courses aligned to the relevant IMO Model Courses and approved by MPA.

Facts and Figures
Official (Open), Non-Sensitive

FACTS AND FIGURES as of 30th June 2023

18,169	6,262	107	1,422
12,391	4,181	778	1,306
1,867	778	67	1,026
1,811	1,306	15	144
1,445	1,026	4,300	11
258	144	1,767	338
358	190	128	18
	62		30
			18
			0

SP Annual Report 2022/2023 SP Singapore Polytechnic

SMA Course Portfolio
Educating the future maritime workforce

- Full-time Diploma Courses:**
Diploma in Marine Engineering (DMR) – 110 students/year
Diploma in Naval Studies (DNS) – 35 students/year
Diploma in Maritime Business (DMB) – 120 students/year
- Part-time CET Courses (30 students for each course annually):**
Specialist Diploma in Maritime Superintendency (NSMS)
Dip (Conversion) in Maritime Business Management (NVMBM)
Dip in Maritime & Offshore Business Management (DMOM) – offered jointly with MPA
- SkillsFuture Work-Study Programmes:**
Work-Study Post Dip for Maritime (Seafaring Deck Officer)
Work-Study Post Dip for Maritime (Seafaring Marine Engineer)
Specialist Diploma in Port Management & Operations (WSP) – 20 students/year

CENTRE OF EXCELLENCE IN MARITIME SAFETY

3A's DIGITAL INNOVATIONS IN TRAINING

- ANRS/NGNS (Digital Platform for Future Competency)
- AI Assessment (Digital Assessment of Human Competency)
- AR/VR/Immersive (Digital Delivery of Training)

Ammonia: The Future of Sustainable Marine Fuel

- Rising demand for sustainable fuels in the maritime industry.
- Ammonia as a zero-carbon alternative with significant potential.
- Environmental benefits & challenges.
- Urgency of adopting safe bunkering practices.



Current State of Ammonia Bunkering Training



Curriculum design and development stage of Ammonia Bunkering Course



Collaborative efforts with MPA and other stakeholders



SMA Staff involvement in various Focus Groups and Working Groups on Ammonia Bunkering



Customised training programme for Fortescue personnel

Handling of Ammonia as fuel for Shipboard Personnel

Customised for Fortescue Future Industries vessel "FFI Green Pioneer"



Familiarisation on Safe Handling of Ammonia for Shipboard Personnel
Curriculum developed in consultation with Fortescue
Personnel trained = 35
(Oct 2023 – Mar 2024)

The Future of Maritime Training: Preparing for Ammonia Bunkering



Integration of ammonia specific module in MET curriculum



Enhanced Safety and Emergency Response Training



Utilisation of cutting-edge technology in course delivery (Advanced Simulation, AR|VR|MR)



Certification and Compliance



Collaborative Industry Partnerships



Call to Action...

- Participate actively in the development of safety standards for Ammonia Bunkering
- Promote knowledge sharing and continuous improvement in ammonia bunkering practices.

Together, we can ensure a safer, more efficient, and sustainable future for maritime operations.

Thank You

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