

PROSPECTIVE ENGINEERING OFFICER DIESEL

&

ADVANCED DIESEL SYLLABUS

SURFACE WARFARE OFFICERS SCHOOL COMMAND, MATERIAL READINESS NEWPORT

446 CUSHING RD NEWPORT, RI 02841

COURSE DATA

Course Title:

Surface Warfare Officer Prospective Engineering Officer Diesel

Course Overview:

This course is designed to prepare officers to successfully perform as Chief Engineers onboard Diesel class ships. Training consists of three weeks of Common Core, which includes an in-depth explanation of engineering theory and engineering management programs including Maintenance University (2 days) and Advanced Shipboard Firefighting (2 days). Upon completion of Common Core, the students are separated by hull type and receive five weeks of hull-specific Diesel Specialty Training (LSD, LPD-17 or MCM). This specialty training covers Main Propulsion, Auxiliaries, and Electrical systems and includes the use of computer based simulators and console trainers in the execution of engineering evolutions and casualty control procedures. The ninth and final week is Ship Ride and Material Self-Assessment training accomplished onboard a hull of the applicable ship class. Students are required to complete multiple written tests, level of knowledge oral boards, homework, P-Works and successfully complete a practical factors assessment by Engineering Assessments Atlantic (EAA), including performance of drills and evolutions on the console trainers, in order to graduate from the course of instruction.

OUTLINE OF INSTRUCTION SUMMARY

Lesson Number	Title	Class Periods	Lab Periods	PA Periods	Total Periods
Unit 1: ENGINEERING COMMON CORE PHASE 1 – See Common Core Syllabus					
Unit 2: ENGINEERING COMMON CORE PHASE 2 – See Common Core Syllabus					
Unit 3: PROPULSION UNIT					
3.1	Console Trainers, Propulsion	0.0	1.0	0.0	1.0
3.2	Propulsion Control Systems	1.0	0.0	0.0	1.0
3.3	Basic Diesel Engine	1.0	0.0	0.0	1.0
3.4	Diesel Engine Construction	1.0	0.0	0.0	1.0
3.5	Combustion Air	1.0	0.0	0.0	1.0
3.6	Console Trainers, Propulsion	0.0	1.0	0.0	1.0
3.7	Fuel Oil (F/O) Systems	2.0	0.0	0.0	2.0
3.8	Lube Oil (L/O) Systems	1.0	0.0	0.0	1.0
3.9	Cooling Water Systems	1.0	0.0	0.0	1.0
3.10	Diesel Engine Starting Systems	1.0	0.0	0.0	1.0
3.11	Jacket Water Chemistry	1.0	0.0	0.0	1.0
3.12	Console Trainers, Propulsion	0.0	4.0	0.0	4.0
3.13	Main Propulsion Diesel Engine (MPDE) Maintenance / Troubleshooting	1.0	0.0	0.0	1.0
3.14	Platform Specific Main Propulsion Diesel Engine (MPDE)	1.0	0.0	0.0	1.0
3.15	Console Trainers, Propulsion	0.0	4.0	0.0	4.0
3.16	Propulsion Shafting	1.0	0.0	0.0	1.0
3.17	Main Reduction Gear (MRG), Light Load Propulsion Motor (LLPM), Clutch, and Gearbox	1.0	0.0	0.0	1.0
3.18	Controllable Pitch Propeller (CPP)	1.0	0.0	0.0	1.0
3.19	Console Trainers, Propulsion	0.0	2.0	0.0	2.0
3.20	Oil Purifiers	1.0	0.0	0.0	1.0

OUTLINE OF INSTRUCTION SUMMARY

Lesson Number	Title	Class Periods	Lab Periods	PA Periods	Total Periods
Unit 4: ELECTRICAL UNIT					
4.1	Console Trainers, Electrical	0.0	1.0	0.0	1.0
4.2	Electrical Plant Operations	1.0	0.0	0.0	1.0
4.3	Basic Shipboard Electrical Equipment	1.0	0.0	0.0	1.0
4.4	60 Hertz (HZ) Electrical Distribution	1.0	0.0	0.0	1.0
4.5	Governors and Voltage Regulators	1.0	0.0	0.0	1.0
4.6	Console Trainers, Electrical	0.0	4.0	0.0	4.0
4.7	60 Hertz (HZ) Electrical Distribution	1.0	0.0	0.0	1.0
4.8	400 Hertz (HZ) Distribution	1.0	0.0	0.0	1.0
4.9	Gyrocompass Familiarization	1.0	0.0	0.0	1.0
4.10	Landing Ship Dock (LSD) / Mine Countermeasure (MCM) / Patrol Coastal (PC) Diesel Generators	1.0	0.0	0.0	1.0
4.11	Console Trainers, Electrical	0.0	3.0	0.0	3.0
4.12	Master Charlie Fire Electrical Distribution (MCFED) Lab	0.0	1.0	0.0	1.0
4.13	Switchboard, Trainer	0.0	1.0	0.0	1.0
4.14	Electrical Maintenance Seminar	2.0	0.0	0.0	2.0

Unit 5: AUXILIARY UNIT

5.1	Console Trainers, Auxiliary	0.0	2.0	0.0	2.0
5.2	Damage Control (DC) Systems	1.0	0.0	0.0	1.0
5.3	Pier / Hotel Services	1.0	0.0	0.0	1.0
5.4	Compressed Air Systems	1.0	0.0	0.0	1.0
5.5	Air Conditioning and Refrigeration (AC&R)	1.0	0.0	0.0	1.0
5.6	Console Trainers, Auxiliary	0.0	1.0	0.0	1.0
5.7	Oily Water Separator / Drainage	1.0	0.0	0.0	1.0
5.8	Firemain and Drainage	1.0	0.0	0.0	1.0
5.9	Marine Sanitation Device (MSD) / Collection Holding and Transfer (CHT) System	1.0	0.0	0.0	1.0
5.10	Small Boat Maintenance and Operation	1.0	0.0	0.0	1.0
5.11	Potable Water	1.0	0.0	0.0	1.0
5.12	Deck Machinery	1.0	0.0	0.0	1.0
5.13	Console Trainers, Auxiliary	0.0	5.0	0.0	5.0
5.14	Platform Specific (Landing Ship Dock (LSD) / Mine Countermeasure (MCM) / Patrol Coastal (PC)) Steering Systems	1.0	0.0	0.0	1.0
5.15	Aviation Support	1.0	0.0	0.0	1.0
5.16	Gas Turbine Operations	1.0	0.0	0.0	1.0
5.17	Auxiliary Boiler	1.0	0.0	0.0	1.0
5.18	Minesweeping Systems	1.0	0.0	0.0	1.0
5.19	Boiler Water / Feedwater	1.0	0.0	0.0	1.0
5.20	Bowthruster	1.0	0.0	0.0	1.0
5.21	Ballast System	1.0	0.0	0.0	9 1.0
5.22	Solar Magnetic Minesweeping Gas Turbine Generator (MMGTG)	1.0	0.0	0.0	1.0
5.23	Console Trainers, Auxiliary	0.0	15.0	0.0	15.0

OUTLINE OF INSTRUCTION SUMMARY

Lesson Number	Title	Class Periods	Lab Periods	PA Periods	Total Periods
5.24		1.0	0.0	0.0	1.0
5.25		1.0	0.0	0.0	1.0
5.26		1.0	0.0	0.0	1.0
5.27	Propulsion Casualty Control	1.0	0.0	0.0	1.0
5.28	Electrical Casualty Control	1.0	0.0	0.0	1.0
	Unit 5 Total	24.0	23.0	0.0	47.0

Unit 6: COMPREHENSIVE

6.1	Engineering Plant Management	1.0	0.0	0.0	1.0
6.2	Main Reduction Gear (MRG) Inspection	1.0	0.0	0.0	1.0
6.3	Diesel Readiness System	1.0	0.0	0.0	1.0
6.4	Console Trainers; Propulsion, Electrical, Auxiliary	0.0	31.0	0.0	31.0

Unit 7: ENGINEERING ASSESSMENT ATLANTIC (EAA) / ENGINEERING ASSESSMENT PACIFIC (EAP) ASSESSMENT

7.1	Engineering Assessment Atlantic (EAA) / Engineering Assessment Pacific (EAP) Assessment	0.0	0.0	31.0	31.0
	Unit 7 Total	0.0	0.0	31.0	31.0

Unit 8: SHIPRIDE

8.1	Shipride	0.0	40.0	0.0	40.0
-----	----------	-----	------	-----	------