



**BACHELOR OF SCIENCE IN NAVAL ARCHITECTURE AND
MARINE ENGINEERING (BSNAME) PROGRAM**

ANNEX III

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REQUIRED EQUIPMENT

RECOMMENDED MINIMUM EQUIPMENT, MATERIALS, CHEMICALS AND TEACHING AIDS GOVERNING THE OPERATION OF THE BACHELOR OF SCIENCE IN NAVAL ARCHITECTURE AND MARINE ENGINEERING (BSNAME) PROGRAM. HOWEVER, THE NUMBER OF ENROLLED STUDENTS SHOULD DETERMINE THE RATIO OR EXACT QUANTITY OF EQUIPMENT.

<u>Item</u>	<u>Description of Item</u>	<u>Min. Qty. Req.</u>
1. Drafting Room Equipment	Drafting Table with chair	10 units
	Drawing Instruments	10 pcs
	T-square	10 pcs
	Ship's curves	10 sets
	Lettering equipment	10 sets
	Straight edge (Stainless steel)	10 pcs.
	Flexible curves	2 sets
2. Machine Shop Equipment	1. Hand Tools	5 sets/type
	2. Power Tools	5 sets/type
	3. Driving Tools	5 sets/type
	4. Wood working equipment	
	4.1 Planner (wood)	1 set
	4.2 Sander	1 set
	4.3 Circular Saw	1 set
	4.5 Wood Lathe	1 set
	5. Cutting Hand Tools	5 sets/type
	6. Work holding tools	5 sets/type
	7. Bar cutter	1 set
	8. Cut-off grinding wheel	1 set
	9. Sheet Metal tools	2 sets/type
	10. Welding Machine/tools	
	10.1 Arc	2 units
	10.2 Gas	1 set
	10.3 Inert Gas	1 set each
	TIG & MIG	
	11. Forging Tools and Furnace	5 sets of tools & 1 set furnace
	12. Foundry Tools	5 sets of tools
	13. Cupola-crucible type	1 set
	14. Measuring Instruments/Tools	5 sets/type
15. Lathe Machines (manual and/or numerical controlled)		
16. Shapers		
17. Milling Machines		
18. Bench Grinder		
19. Surface Grinder		
20. Cylindrical Grinder		
21. Drill Press		
22. Power Hack Saw		



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<u>Item</u>	<u>Description of Item</u>	<u>Min. Qty. Req.</u>
3. Computer Room (Fully Airconditioned)	Desktop PC's complete with tables and chairs, fully networked and with fast Internet connection	10 sets
	Networked printers capable of printing A3 paper size	2 units
4. Marine Engineering Room	1. Marine Diesel Engine (One operational with simulated propulsion Unit, one for assembly And disassembly)	2 units
	2. Steam plant (Prototype) with complete operating unit	1 unit
	3. Refrigeration-trainer operational with complete operating unit	1 unit
	4. Auxiliary unit and Cut-away assemblies	
	4.1 Assorted valves	1 each
	4.2 Various pumps	1 each
	4.3 Cut-away of filtering equipment	1 each
	4.4 Propellers	1 each
	4.5 Rudders	1 each
	4.6 Windlass	1 each
4.7 Capstan	1 each	
5. Engineering Laboratory Equipment	Electrical Equipment	
	DC/AC Test Equipment or its equivalent DC/AC Machine Lab. Setup	
	Engineering Materials Equipment	
	1. Abrasion Machine	1 unit
	2. Slump test apparatus	1 unit
	3. Transits and levels	5 sets
4. Strain gages, indicator	1 pc.	
6. Mold Lofting Room	Wooden Board Flooring	1 Unit
	Wooden Template	20 pcs
	Wood Saw	2 units
	Chalk Line	1 set
	Batten Bar	20 pcs
	Carpentry Tools	1 set