

## Bachelor of Science in Naval Architecture & Marine Engineering (BSNAME)

			FIRST	YEAR	}		
	Course Number	Descriptive Title	Lec Hours	Lab Hours	Units	Pre-requisites	Co-requisites
	ENGL 1R	Remedial English	3		3		
<u>_</u>	ENGL 1	Study and Thinking Skills	3		3		
يدا	EMath 11A	College Algebra	3		3		
l s	EMath 11B	Plane and Spherical Trigonometry	3		3		
ΙE	CHEM 1H	General Inorganic Chemistry 1 lec	3		3		CHEM 1HL
SI	CHEM 1HL	General Inorganic Chemistry 1 lab		3	1		CHEM 1H
يزا	BES 11A	Engineering Drawing 1A		3	1		
].⊑	BES 11B	Engineering Drawing 1B (CAD)		3	1		
ᄔ	NA 101	Orientation to NAME	1		1		
	PE 1	Self-Testing Activities	[2]		[2]		
	NSTP 1	National Service Training Program 1	[3]		[3]		
			16/21	9	19/24		

	Course Number	Descriptive Title	Lec Hours	Lab Hours	Units	Pre-requisites	Co-requisites
١.	ENGL 2	Writing in the Discipline	3		3	ENGL 1	
ē	EMath 12A	Advanced Algebra	2		2	EMath 11A	
St	EMath 12B	Solid Mensuration	2		2	EMath 11A,EMath 11B	
lΨ	EMath 12C	Analytic Geometry	3		3	EMath 11A,EMath 11B	
ē	PHYS 1A	College Physics 1 lec	3		3	EMath 11A,EMath 11B	PHYS 1AL
S	PHYS 1AL	College Physics 1 lab		3	1	EMath 11A,EMath 11B	PHYS 1A
٦	BES 12A	Engineering Drawing 2A		3	1	BES 11A	
18	BES 12B	Engineering Drawing 2B (CAD)		3	1	BES 11B	
Se l	BES 60A	Safety Management	1		1		
0,	PE 2	Rhythmic Activities	[2]		[2]	PE 1	
	NSTP 2	National Service Training Program 2	[3]		[3]	NSTP 1	
			14/19	9	17/22		

At the end of First Year, the student is qualified to take the Competency Assessment leading to the National Certificate (NC II – Technical Drafting)

	SECOND YEAR								
	Course Number	Descriptive Title	Lec Hours	Lab Hours	Units	Pre-requisites	Co-requisites		
_	ENGL 24	Technical Report Writing	3		3	ENGL 2			
te	ECON 1	Basic Economics w/ TLR	3		3				
es	PSYCH 1	General Psychology	3		3				
Ε	EMath 21A	Differential Calculus	4		4	EMath 12A,EMath 12B,EMath 12C			
Se	PHYS 2A	College Physics 2 lec	3		3	PHYS 1A,PHYS 1AL	PHYS 2AL		
	PHYS 2AL	College Physics 2 lab		3	1	PHYS 1A,PHYS 1AL	PHYS 2A		
ir	NATVET 21	Workshop Theory and Practice 11-A	1	6	3	2nd Year Standing			
ч	NA 21A	Introduction to NAME	3	3	4	NA 101			
	PE 3	Fundamentals of Games and Sports	[2]		[2]	PE 2			
			20/22	12	24/26				

r	Course Number	Descriptive Title	Lec Hours	Lab Hours	Units	Pre-requisites	Co-requisites
šŧ	ENGL 3	Speech Communication	3		3	ENGL 2	
ē	PHILO 2	Logic	3		3		
Ë	EMath 22A	Integral Calculus	4		4	EMath 21A	
Se	BES 20A	Computer Fundamentals and Programming		6	2	2nd Year Standing	
p	AS 20B	Basic Electrical Engineering	2	3	3	PHYS 2A,PHYS 2AL	
	NATVET 22	Workshop Theory and Practice 11-B	1	6	3	NATVET 21	
SC	MarE 22A	Marine Engineering 1	3	3	4	NA21 A	
	PE 4	Recreational Activities and Team Sports	[2]		[2]	PE 3	
į			16/18	18	22/24		

At the end of Second Year, the student is qualified to take the Competency Assessment leading to the National Certificate (NC I –Shielded Metal Arc Welding)

			THIRD	YEAF	₹		
	Course Number	Descriptive Title	Lec Hours	Lab Hours	Units	Pre-requisites	Co-requisites
占	POL SCI 6	Politics & Governance w/ Phil. Constitution	3		3		
ste	LIT 3	Philippine Literature	3		3		
ne	EMath 31A	Differential Equations	3		3	EMath 22A	
ĕ	MECH 10A	Engineering Mechanics (Static)	3		3	EMath 22A,PHYS 1A,PHYS 1AL	
15	BES 30A	Engineering Economy	3		3	3rd Year Standing	
irs	BES 40A	Engineering Management	3		3	3rd Year Standing	
щ	AS 10B	Thermodynamics 1	3		3	PHYS 2A,PHYS 2AL,EMath 22A	
	NA31A	Ship Hydrostatics	3	3	4	3rd Year Standing	
			24	3	25		

	Course	Descriptive Title	Lec	Lab	Units	Pre-requisites	Co-requisites
Semester	Number	-	Hours	Hours			
SSI	MECH 20A	Engineering Mechanics (Dynamics)	2		2	MECH 10A	
Ĕ	MECH 30A	Mechanics of Materials	5		5	MECH 10A	
Se	MECH 40B	Mechanics of Fluids	3	3	4	EMath 31A	MECH 20A
9	AS 40A	DC and AC Machinery	3	3	4	AS 20B	
Second	ME 32A	Thermodynamics 2	3		3	AS 10B	
	NA32A	Intact Stability	3	3	4	NA31A	
Š	MarE 41A	Marine Engineering 2	3	3	4	MarE 22A	
			22	12	26		
			SUM	MER			
	C						
	Course	Descriptive Title	Lec	Lab	Units	Pre-requisites	Co-requisites
	Number		Hours	Hours			-
	NA 400	On-the-Job Training /Practicum 1		15	5	4th Year Standing	
			OURT	H YEA	AR .		
	Course		Lec	Lab	_		
	Number	Descriptive Title	Hours	Hours	Units	Pre-requisites	Co-requisites
	FIL 1D	Komunikasyon sa Akademikong Filipino	3		3		
e	HUM 1	Art Appreciation	3		3		
Semester	EMath 32B	Advanced Engineering Math	3		3	EMath 31A	
Ĕ	CE 41A	Structural Theory 1	3	3	4	MECH 30A	
Se	ME 314	Machine Elements 1	2	3	3	PHYS 2A, PHYS 2AL, BES 12A	
st	ME 414A	Refrigeration System	3		3	ME 32A	
First	ME 415	Heat Transfer & Thermal System Design	2		2	AS 10B, MECH 40B, EMath 31A	
	NA 41B	Damage Stability	3	6	5	NA32A	
	MarLaw 41A	Maritime Laws (with PMMR)	3		3	4th year standing	
			25	12	29		
	_					and the second s	
	Course	Descriptive Title	Lec	Lab	Units	Pre-requisites	Co-requisites
_	Number	-	Hours	Hours		•	•
Semester	FIL 2J	Pagbasa at Pagsulat Tungo sa Pananaliksik	3		3	Freeth 12.0	
ne	EMath 32A AS 30A	Probability and Statistics Basic Electronics 1	3 2	-	3	Emath 12A AS 20B	
ē	ME 423B	Air-Conditioning & Ventilation System	2	3	3	ME141A	
	7230		_	ļ		7	
	ME 321A	Combustion Engineering	3		3	ME 32A. ME 415	
	ME 321A NA 42A	Combustion Engineering Ship Structural Analysis and Design 1	3 2	3	3	ME 32A, ME 415 CE 41A	
Second S		Combustion Engineering Ship Structural Analysis and Design 1 Ship Resistance		3	3 3 4		
	NA 42A	Ship Structural Analysis and Design 1	2		3	CE 41A	
	NA 42A NA 42B	Ship Structural Analysis and Design 1 Ship Resistance	3		3 4	CE 41A NA 41B	
	NA 42A NA 42B	Ship Structural Analysis and Design 1 Ship Resistance	2 3 3 21	12	3 4 3	CE 41A NA 41B	
	NA 42A NA 42B	Ship Structural Analysis and Design 1 Ship Resistance	2 3 3 21	3	3 4 3	CE 41A NA 41B	
	NA 42A NA 42B MarE 32A	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System	2 3 3 21	12	3 4 3	CE 41A NA 41B 4th Year Standing	
	NA 42A NA 42B MarE 32A	Ship Structural Analysis and Design 1 Ship Resistance	2 3 3 21 SUM Lec	12 MER Lab	3 4 3	CE 41A NA 41B	Co-requisites
	NA 42A NA 42B MarE 32A Course Number	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title	2 3 3 21	12 MER Lab Hours	3 4 3 25 Units	CE 41A NA 41B 4th Year Standing  Pre-requisites	Co-requisites
	NA 42A NA 42B MarE 32A	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System	2 3 3 21 SUM Lec	12 MER Lab	3 4 3 25	CE 41A NA 41B 4th Year Standing	Co-requisites
	NA 42A NA 42B MarE 32A Course Number	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title	2 3 3 21 SUM Lec Hours	12 MER Lab Hours	3 4 3 25 <b>Units</b>	CE 41A NA 41B 4th Year Standing  Pre-requisites	<b>Co-requisites</b>
	NA 42A NA 42B MarE 32A  Course Number NA 500	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title	2 3 3 21 SUM Lec Hours	12 MER Lab Hours 15 YEAR	3 4 3 25 <b>Units</b>	CE 41A NA 41B 4th Year Standing  Pre-requisites	<b>Co-requisites</b>
	NA 42A NA 42B MarE 32A  Course Number NA 500  Course	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title	2 3 3 21  SUM  Lec Hours	MER Lab Hours 15 YEAR Lab	3 4 3 25 <b>Units</b>	CE 41A NA 41B 4th Year Standing  Pre-requisites	Co-requisites  Co-requisites
	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours	12 MER Lab Hours 15 YEAR	3 4 3 25 Units 5 Units	CE 41A NA 41B 4th Year Standing  Pre-requisites 5 <sup>th</sup> Year Standing	-
Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title On-the-Job Training /Practicum 2  Descriptive Title Philippine History	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours 3	MER Lab Hours 15 YEAR Lab	3 4 3 25 <b>Units</b> 5 <b>Units</b>	CE 41A NA 41B 4th Year Standing  Pre-requisites 5 <sup>th</sup> Year Standing	-
Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title On-the-Job Training /Practicum 2  Descriptive Title Philippine History Life & Works of Dr. Jose Rizal	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours  3 3	MER Lab Hours 15 YEAR Lab	3 4 3 25 <b>Units</b> 5 <b>Units</b> 3 3	CE 41A NA 41B 4th Year Standing  Pre-requisites 5 <sup>th</sup> Year Standing  Pre-requisites	-
Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title On-the-Job Training /Practicum 2  Descriptive Title Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours 3 3 3 3	MER Lab Hours 15 YEAR Lab Hours	3 4 3 25 <b>Units</b> 5 <b>Units</b> 3 3 3	CE 41A NA 41B 4th Year Standing  Pre-requisites 5 <sup>th</sup> Year Standing  Pre-requisites  MECH 40B	-
Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title On-the-Job Training /Practicum 2  Descriptive Title Philippine History Life & Works of Dr. Jose Rizal	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours  3 3	MER Lab Hours 15 YEAR Lab Hours	3 4 3 25 <b>Units</b> 5 <b>Units</b> 3 3 3 2	CE 41A NA 41B 4th Year Standing  Pre-requisites 5 <sup>th</sup> Year Standing  Pre-requisites	-
Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2	2 3 3 21 SUM Lec Hours FIFTH Lec Hours 3 3 1	MER Lab Hours 15 YEAR Lab Hours	3 4 3 25 <b>Units</b> 5 <b>Units</b> 3 3 3 2 3	CE 41A NA 41B 4th Year Standing  Pre-requisites 5 <sup>th</sup> Year Standing  Pre-requisites  MECH 40B NA 42A	-
Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A NA 51B	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1	SUM Lec Hours  FIFTH Lec Hours  3 3 1 2	MER Lab Hours 15 YEAR Lab Hours	3 4 3 25 <b>Units</b> 5 <b>Units</b> 3 3 3 2	CE 41A NA 41B Ath Year Standing  Pre-requisites  5 <sup>th</sup> Year Standing  Pre-requisites  MECH 40B NA 42A 5th Year Standing	-
Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A NA 51B NA 51C NA 51D MarE51A	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves Ship Propulsion and Design 2	2 3 3 21 SUM Lec Hours 3 3 3 1 2 2 2 3	MER Lab Hours 15 YEAR Lab Hours	3 4 3 25 Units 5 Units 3 3 3 2 3 3 2 4	Pre-requisites  Sth Year Standing  Pre-requisites  Pre-requisites  MECH 40B NA 42A Sth Year Standing Sth Year Standing EMath 32B MarE 32A	-
Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A NA 51B NA 51C NA 51D	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves	2 3 3 21 SUM Lec Hours FIFTH Lec Hours 3 3 3 1 2 2 2	MER Lab Hours 15 YEAR Lab Hours	3 4 3 25 Units 5 Units 3 3 3 2 3 3 2 4 3	Pre-requisites  Sth Year Standing  Pre-requisites  Pre-requisites  MECH 40B NA 42A Sth Year Standing Sth Year Standing  EMath 32B	-
Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A NA 51B NA 51C NA 51D MarE51A	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves Ship Propulsion and Design 2	2 3 3 21 SUM Lec Hours 3 3 3 1 2 2 2 3	MER Lab Hours 15 YEAR Lab Hours	3 4 3 25 Units 5 Units 3 3 3 2 3 3 2 4	Pre-requisites  Sth Year Standing  Pre-requisites  Pre-requisites  MECH 40B NA 42A Sth Year Standing Sth Year Standing EMath 32B MarE 32A	-
Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51B NA 51C NA 51D MarE51A NA Elective 1	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves Ship Propulsion and Design 2	2 3 3 21 SUM Lec Hours 3 3 3 1 2 2 2 3 3 3 22	3 12 MER Lab Hours 15 YEAR Lab Hours 3 3 3 3 12	3 4 3 25 Units 5 Units 3 3 3 2 3 3 2 4 3	Pre-requisites  Sth Year Standing  Pre-requisites  Pre-requisites  MECH 40B NA 42A Sth Year Standing Sth Year Standing EMath 32B MarE 32A	-
Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51B NA 51C NA 51D MarE51A NA Elective 1	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves Ship Propulsion and Design 2 NA EL*	2 3 3 21 SUM Lec Hours 3 3 3 1 2 2 2 2 3 3 3 22	MER Lab Hours 15 YEAR Lab Hours 3 3 3 3 12 Lab	3 4 3 25 Units 5 Units 3 3 3 2 3 3 2 4 3	Pre-requisites  Sth Year Standing  Pre-requisites  Pre-requisites  MECH 40B NA 42A Sth Year Standing Sth Year Standing EMath 32B MarE 32A	Co-requisites
First Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A NA 51B NA 51C NA 51D MarE51A NA Elective 1  Course Number	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves Ship Propulsion and Design 2 NA EL *  Descriptive Title	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours  3 3 1 2 2 2 3 3 22  Lec Hours	3 12 MER Lab Hours 15 YEAR Lab Hours 3 3 3 3 12	3 4 3 25 Units 5 Units 3 3 3 2 4 3 26 Units	Pre-requisites  MECH 40B  NA 42A  5th Year Standing  MECH 40B  NA 42A  5th Year Standing  EMath 32B  MarE 32A  5th Year Standing	-
First Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A NA 51B NA 51C NA 51D MarE51A NA Elective 1  Course Number BES 50A	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves Ship Propulsion and Design 2 NA EL *  Descriptive Title  Environmental Engineering	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours  3 3 1 2 2 2 3 3 22  Lec Hours 2	MER Lab Hours 15 YEAR Lab Hours 3 3 3 12 Lab Hours	3 4 3 25 Units 5 Units 3 3 3 2 4 3 26 Units	Pre-requisites  MECH 40B  NA 42A  5th Year Standing  MECH 40B  NA 42A  5th Year Standing  EMath 32B  MarE 32A  5th Year Standing  Pre-requisites  Other Standing  Pre-requisites  CHEM 1HL,BES 11A	Co-requisites
Semester Second	NA 42A NA 42B MarE 32A  Course Number NA 500  Course Number HIST 1 RIZAL MECH 422 NA 51A NA 51B NA 51C NA 51D MarE51A NA Elective 1  Course Number	Ship Structural Analysis and Design 1 Ship Resistance Marine Auxiliary System  Descriptive Title  On-the-Job Training /Practicum 2  Descriptive Title  Philippine History Life & Works of Dr. Jose Rizal Fluid Machinery Ship Structural Analysis and Design 2 Ship Design 1 Shipyard Process and Management Motion in Waves Ship Propulsion and Design 2 NA EL *  Descriptive Title	2 3 3 21  SUM  Lec Hours  FIFTH  Lec Hours  3 3 1 2 2 2 3 3 22  Lec Hours	MER Lab Hours 15 YEAR Lab Hours 3 3 3 3 12 Lab	3 4 3 25 Units 5 Units 3 3 3 2 4 3 26 Units	Pre-requisites  MECH 40B  NA 42A  5th Year Standing  MECH 40B  NA 42A  5th Year Standing  EMath 32B  MarE 32A  5th Year Standing	Co-requisites

	Course Number	Descriptive Title	Lec Hours	Lab Hours	Units	Pre-requisites	Co-requisites
ē	BES 50A	Environmental Engineering	2		2	CHEM 1HL,BES 11A	
st	ME 515A	Power Plant Engineering	4	3	5	MECH 422	
ΙĔ	NA 52A	Contracts and Specifications	3		3	5th Year Standing	
Se	NA 52B	Ship Design 2		6	2	NA 51B	
g	NA 52C	Marine Inspections and Surveys	2	3	3	5th Year Standing	
8	NARev 52A	NAME Review 1	3		3	Graduating	
Se	NARev 52B	NAME Review 2	3		3	Graduating	
	NA Elective 2	NA EL *	3		3	5th Year Standing	
			20	12	24		

**Summary:**A. General Education Subjects 45 B. Technical Courses 87 C. Core Subjects 109 D. Electives 6 [14] TOTAL 247/261 E. Other Subjects (PE and NSTP)

## \*Technical Electives

NA EL 1A CAD and Construction NA EL 2A Welding Technology

NA EL 3A Special Topics (innovation for hull design, ship's efficeincy design)