

## RELATIONSHIP OF THE PROFESSIONAL COURSES TO THE PROGRAM OUTCOMES

### Program Outcomes

A graduate of the Bachelor of Science in Naval Architecture and Marine Engineering (BSNAME) program must attain:

- a) apply knowledge of mathematics, science, naval architectural and marine engineering design to solve engineering problems
- b) design and conduct experiments as well as analyze and interpret data
- c) design floating vessels, its fittings and powering to meet the required specifications within realistic constraints
- d) function on multi-disciplinary teams
- e) identify, formulate and solve naval architectural and marine engineering problems
- f) demonstrate professional and ethical responsibility
- g) communicate effectively using English language
- h) evaluate the impact of naval architectural and marine engineering solutions in global, economic, environmental and societal context
- i) engage in life-long learning and recognize the need to keep current with the latest development in the specific field of specialization
- j) address contemporary issues with effective naval architectural and marine engineering solutions
- k) use techniques, skills and modern engineering tools in naval architecture and marine engineering practice
- l) apply engineering and management principles while working as a leader or member of a team undertaking projects across multidisciplinary environments.

Key:

- I – Introductory
- E – Enabling
- D – Demonstrative

Courses	Relationship to Program Outcomes											
	a	b	c	d	e	f	g	h	i	j	k	l
<b>CALC 1</b> - Differential Calculus	I											
<b>CALC 2</b> - Integral Calculus	I											
<b>CALC 3</b> - Differential Equation	I				I							
<b>DRAW 1</b> - Ship Drafting 1	I						I				I	
<b>DRAW 2</b> - Ship Drafting 2 (Computer-aided Drafting)	I						I				I	
<b>DRAW 3</b> - Ship Modeling (Computer-aided Design)	E						E				E	
<b>ECON</b> - Engineering Economics	E		E		E			I			E	E

## ANNEX I

Courses	Relationship to Program Outcomes											
	a	b	c	d	e	f	g	h	i	j	k	l
<b>EE 1</b> - Basic Electrical Engineering	I						I					
<b>EE 2</b> - DC and AC Machinery	I											
<b>ELECTRO</b> - Basic Electronics	I											
<b>ELEC 1</b> - General Engineering Elective												
<b>EMAT 1</b> - Engineering Materials	I									I	I	
<b>ENVI</b> - Environmental Engineering	E		E		E	E		E		E		
<b>FMECH</b> - Fluid Mechanics	E		E		E	E		E		E		
<b>KMATICS</b> - Kinematics and Dynamics of Machines	E											
<b>MARE 1</b> - Marine Engineering 1	E	E	E		D						E	
<b>MARE 2</b> - Marine Engineering 2	E	D	D		D						D	
<b>MARE 3</b> - Marine Auxiliary System	E		E		E						E	
<b>MARE 4</b> - Marine Auxiliary Generating System	E		E		E						E	
<b>MARE 5</b> - Ship Propulsion		D	D		D						D	
<b>MARLAW</b> - Maritime Laws, Rules & Regulations	E		E			E		E	E	E	E	E
<b>MECH 1</b> - Static of Rigid Bodies	E											
<b>MECH 2</b> - Dynamics of Rigid Bodies	E											
<b>MECH 3</b> - Mechanics of Deformable Bodies	E											
<b>NA 1</b> - Introduction to Naval Architecture and Marine Engineering	I	I	I	I	I	I	I	I	I	I	I	I
<b>NA 2</b> - Ship Hydrostatics	D	D	D		D						D	
<b>NA 3</b> - Ship Resistance	E	D	D		D						D	
<b>NA 4</b> - Intact Stability	D	D	D		D						D	
<b>NA 5</b> - Damage Stability	D		D		D						D	
<b>NA 6</b> - Ship Structural Analysis	D		D		D						D	
<b>NA 7</b> - Ship Structural Design	D		D		D						D	
<b>NA 8</b> - Motion in Waves	E		D		D						D	
<b>NA 9</b> - Ship Design 1	D	D	D		D						D	
<b>NA 10</b> - Ship Design 2	D	D	D		D						D	
<b>NA 11</b> - Shipyard Management	E		E		D						D	
<b>NA 12</b> - Shipyard Processes	E		E		D						D	
<b>NA 13</b> - Contracts and Specifications			D		D		D				D	D
<b>NA 14</b> - Marine Inspections & Surveys	D	D		D		D	D	D			D	
<b>SHIP 1</b> - Ship Building Processes	D	D		D		D	D	D			D	
<b>SHOP</b> - Workshop Theory and Practices	E	E		E		E	E	E			E	
<b>THERMO 1</b> - Thermodynamics 1	I											
<b>THERMO 2</b> - Thermodynamics 2	I											