

**CDI MARINE COMPANY  
GSA PES FUNCTIONAL ENGINEERING DISCIPLINES  
SUPPORT MATRIX**

PRIMARY DISCIPLINE	SUB- DISCIPLINES/ SPECIALTIES	SINs					
		871-1	871-2	871-3	871-4	871-5	871-6
<b>CIVIL ENGINEERING (NAVAL ARCHITECTURE)</b>		X	X	X	X		X
	SHIP DESIGN	X	X	X	X		
	BOAT DESIGN	X	X	X	X		
	MARINE VESSEL DESIGN	X	X	X	X		
	HI-SPEED CRAFT DESIGN	X	X	X	X		
	SHIP ALTERATION DESIGN	X	X	X	X		X
	BOAT ALTERATION DESIGN	X	X	X	X		X
	SURVEYS & INSPECTIONS	X	X	X	X		
	FINITE ELEMENT ANALYSIS	X	X	X	X		
	HULL DESIGN & ANALYSIS	X	X	X	X		X
	STRUCTURAL DESIGN & ANALYSIS	X	X	X	X		X
	HABITABILITY DESIGN	X	X	X	X		X
	GENERAL ARRANGEMENTS	X	X	X	X		
	SHIP STABILITY ANALYSIS	X	X	X	X		
	ENGINEERING MANAGEMENT	X	X	X	X		X
	COST ANALYSIS	X	X	X	X		X
	UNDERWAY REPLENISHMENT	X	X	X	X		X
	JLOTS	X	X	X	X		X
	DECK HANDLING SYSTEMS	X	X	X	X		X
	SHIPS INCLININGS	X	X		X		
	MODEL FABRICATION AND TESTING	X	X		X		
	PROTO-TYPE TESTING	X	X		X		
	DAMAGE CONTROL SYSTEMS	X	X	X	X		X
	TRAINING	X	X		X		
	TECHNICAL DOCUMENTATION	X	X	X	X		X
	MATERIAL SUPPORT	X	X	X	X		X
	SIMULATION AND MODELING	X	X	X	X		
	DESIGN FOR CLASSIFICATION	X	X	X	X		
	STRUCTURAL LOADS ANALYSIS	X	X	X	X		
	SEAKEEPING AND MANEUVERING	X	X	X	X		
	CONFIGURATION MANAGEMENT	X	X	X	X		X
	OWNER'S REPRESENTATIVE	X	X	X	X		
	SPECIFICATION DEVELOPMENT	X	X	X	X		
	CONSTRUCTION OVERSIGHT	X	X	X	X		
	SHIP SILENCING	X	X	X	X		
	HOVERCRAFT DESIGN	X	X	X	X		
	AERODYNAMIC ANALYSIS	X	X	X	X		
	3-D COMPUTER AIDED DESIGN	X	X	X	X		

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<b>CIVIL ENGINEERING (NAVAL ARCHITECTURE)</b>		X	X	X	X		X
	WHOLE SHIP DESIGN SYNTHESIS	X	X	X	X		
	COST AS INDEPENDENT VARIABLE	X	X	X	X		
	ECONOMIC ANALYSIS	X	X	X	X		
	SHIP PERFORMANCE ANALYSIS	X	X	X	X		
	RM&A	X	X	X	X		X
	VULNERABILITY ANALYSIS	X	X	X	X		
	COMPUTER PROGRAMMING	X	X	X	X		
	MISSION PLANNING SOFTWARE	X	X	X	X		
	SHIP IMPACT OF EMERGING TECH	X	X	X	X		
	LOFTING	X	X	X	X		
	SHIP MOORING SYSTEM	X	X	X	X		
	DRYDOCKING STUDIES	X	X	X	X		
	WEIGHT AND BALANCE ANALYSIS	X	X	X	X		
<b>ELECTRICAL ENGINEERING</b>			X	X		X	X
	POWER GENERATION DESIGN			X			
	POWER DISTRIBUTION DESIGN		X	X			
	CIRCUIT AND SYSTEM DESIGN			X		X	X
	COMMUNICATION SYSTEMS DESIGN			X			
	ELECTRONIC SYSTEMS DESIGN			X		X	X
	COMBAT SYSTEMS DESIGN			X			
	CONTROL SYSTEMS DESIGN			X			
	FIBER OPTICS DESIGN			X			
	INSTRUMENTATION DESIGN					X	X
	CATHODIC PROTECTION DESIGN			X			
	ENGINEERING MANAGEMENT			X		X	X
	COST ANALYSIS		X	X			X
	ANTENNAS AND ARRAYS DESIGN			X			
	FAULT CURRENT ANALYSIS			X			
	CIRCUIT BREAKERS			X			
	CIRCUIT CARD TESTING & REPAIR						
	SHIPCHECKS AND SURVEYS		X	X			
	ALTERATION & REPAIR DESIGN			X			X
	TRAINING			X		X	X
	TECHNICAL DOCUMENTATION		X	X		X	X
	MATERIAL SUPPORT		X	X		X	X

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<b>ELECTRICAL ENGINEERING</b>			X	X		X	X
	ELECTONIC TECHNICAL MANUALS					X	X
	RM&A					X	X
	MAINTENANCE PLANNING					X	X
	PROVISIONING AND SUPPLY SUPPORT					X	X
	SUPPORT EQUIPMENT DESIGN		X	X		X	X
	PROTOTYPE DEVELOPMENT AND TEST			X			
	TEST PROGRAM ENGINEERING		X	X		X	X
	ENGINEERING INVESTIGATIONS		X	X		X	X
	SIMULATION AND MODELING		X	X			X
<b>MECHANICAL ENGINEERING</b>		X	X	X	X	X	X
	HM&E SYSTEM DESIGN	X	X	X	X		
	HM&E SYSTEM ALTERATION DESIGN	X	X	X	X		
	HVAC DESIGN	X	X	X	X		
	SYSTEM ANALYSIS	X	X	X	X		X
	PROPULSION SYSTEMS DESIGN	X	X		X		
	ENGINEERING MANAGEMENT	X	X	X	X	X	X
	COST ANALYSIS	X	X	X	X		X
	COMPUTATIONAL FLUID DYNAMICS	X	X	X	X		X
	CARRIER LAUNCH & RECOVERY SYS	X	X	X		X	X
	FIREFIGHTING PROTECTION SYS	X	X	X			
	POLLUTION ABATEMENT SYS	X	X	X	X		
	SHIP SERVICE SYSTEMS DESIGN	X	X	X	X		
	ALTERATION AND REPAIR DESIGN	X	X	X	X		
	SHIPCHECKS AND SURVEYS	X	X	X	X		
	MECHANICAL & PIPING SYS DESIGN	X	X	X	X		X
	TECHNICAL DOCUMENTATION	X	X	X	X	X	X
	TRAINING	X	X	X	X	X	
	MATERIAL SUPPORT	X	X	X	X	X	
	RM&A					X	
	MAINTENANCE PLANNING					X	
	PROVISIONING AND SUPPLY SUPPORT					X	
	SUPPORT EQUIPMENT DESIGN	X	X	X	X	X	X
	PROTOTYPE DEVELOPMENT AND TEST			X	X		
	ENGINEERING INVESTIGATIONS		X	X	X	X	X

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<b>MECHANICAL ENGINEERING</b>		X	X	X	X	X	X
	SIMULATION AND MODELING	X	X	X			X
	STRUCTURAL ANALYSIS	X	X	X	X		X
	SHOCK TESTING				X		
	FATIGUE TESTING			X	X		
	HEAT TRANSFER ANALYSIS		X	X			X
	HIGH ENERGY CABLE DYNAMICS		X	X			X
	EXPEDITIONARY AIR FIELDS		X	X			