

WORLD CLASS SHIPBUILDER CURRICULUM

SUBJECT	ACADEMIC TERMS			
	1	2	3	4
TECHNICAL MATHEMATICS	TECHNICAL MATH I M111	TECHNICAL MATH II M112		
DRAFTING, ENGINEERING AND DESIGN		DRAFTING D111		MECHANICS M121
MARINE ENGINEERING AND NAVAL ARCHITECTURE		SHIP CONSTRUCTION I N111	SHIP CONSTRUCTION II N222	
PHYSICAL SCIENCE			PHYSICAL SCIENCE I P221	PHYSICAL SCIENCE II P222
TECHNICAL COMMUNICATIONS	TECHNICAL COMMUNICATIONS I C111			
BUSINESS PROCESSES	INTRODUCTION TO COMPUTERS C211		BUSINESS OPERATIONS AND LEADERSHIP B122	PROBLEM SOLVING B112

TRADE RELATED EDUCATION CURRICULUM

COATINGS SPECIALIST

Paint and Surface Preparation
Blueprint Reading for Painters

DIMENSIONAL CONTROL TECHNICIAN

Industrial Measurement I
Industrial Measurement II
Introduction to Pipefitting
Blueprint Reading Fundamentals and Procedures
Machinery Installation Theory

ELECTRICIAN

Applied Theory I: DC Concepts
Applied Theory II: AC Concepts
Applied Theory III: Polyphase Systems and Controls
Electronics I
Electronics II
Programmable Logic Controllers

HEATING & AIR CONDITIONING WORKER

All Electrical Theory Courses
Air Conditioning and Refrigeration I

HEAVY METAL FABRICATOR

Hull Construction Theory I
Fundamentals of Fabrication

INSULATOR

Paint and Surface Preparation
Blueprint Reading for Painters
Theory of Insulation

MACHINIST

Machinist Shop Theory
Numerical Control Programming

MILLWRIGHT

Machinist Shop Theory
Hydraulics I (Introduction)

MODELING & SIMULATION

Introduction to Modeling and Simulation
Modeling and Simulation Applied

MOLDER

Foundry Processes
Blueprint Reading for Molders

NON-DESTRUCTIVE TESTER

Applied Theory I: DC Concepts
Applied Theory II: AC Concepts
Applied Theory III: Polyphase Systems and Controls
NDT Theory

OUTSIDE MACHINIST

Machinery Installation Theory
Hydraulics I (Introduction)
Ship Systems

PATTERNMAKER

Foundry Processes
Blueprint Reading for Molders

PIPEFITTER

Introduction to Pipefitting
Blueprint Reading Fundamentals and Procedures
Sketching and Bending
Fundamentals
Piping Systems

RIGGER

Stagebuilding, Blocking, and Shoring Theory
Lifting and Handling Equipment Theory
Mooring and Ventilation Theory

SHEET METAL WORKER

Blueprint and Group Sheet Reading
Materials, Machine Processes, and Tapping
Sheet Metal Layout
Advanced Print Reading

SHIPFITTER

Hull Construction Theory I
Hull Construction Theory II-CVN Drawings
Hull Construction Theory II-VCS Drawings
Hull Construction Theory III

WELDER

Hull Construction Theory I
Shielded Metal Arc Welding
Gas-Metal Arc Welding
Introduction to Non-Destructive Testing

WELDING EQUIPMENT REPAIRER

All Electrical Theory Classes

PRE-ADVANCED OPTIONAL CURRICULUM

SUBJECT	ACADEMIC SEMESTERS *		
	1	2	3
GENERAL EDUCATION	COLLEGE SUCCESS SKILLS S100 / SDV 100 (T)		WORKPLACE STRESS MANAGEMENT H210 / HLT 210 (T)
MATHEMATICS	PRECALCULUS I M163 / MTH 163 (T)	PRECALCULUS II M165 / MTH 164 (T)	CALCULUS W/ ANALYTIC GEOMETRY I M173 / MTH 173 (T) OR APPLIED CALCULUS M270 / MTH 270 (T)
ENGLISH	COLLEGE COMPOSITION I E111 / ENG 111 (T)		
SOCIAL SCIENCE AND HUMANITIES	PRINCIPLES OF MACROECONOMICS E201 / ECO 201 (T)	UNITED STATES HISTORY I H121 / HIS 121 (T)	INTRODUCTION TO LITERATURE E126 / ENG 125 (T)
BUSINESS PROCESSES			SHIPBUILDING OPERATIONS O233

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** = Course sequence may vary depending on program start date

ADVANCED OPTIONAL CURRICULA

TECHNICAL STUDIES *				
SUBJECT	ACADEMIC SEMESTERS **			
	1	2	3	4
GENERAL EDUCATION	WORKPLACE STRESS MANAGEMENT H210 / HLT 210 (T)			
	COLLEGE SUCCESS SKILLS S100 / SDV 100 (T)			
SOCIAL SCIENCE AND HUMANITIES	PRINCIPLES OF MACROECONOMICS E201 / ECO 201 (T)		UNITED STATES HISTORY I H121 / HIS 121 (T)	
			ETHICS P220 / PHI 220 (T)	
BUSINESS PROCESSES		WORLD CLASS MANUFACTURING I I181 / IND 181 (T)	TOTAL QUALITY MANAGEMENT B209 / BUS 209 (T)	SHIPBUILDING OPERATIONS O233
COMMUNICATIONS	COLLEGE COMPOSITION I E111 / ENG 111 (T)			TECHNICAL COMMUNICATIONS II C232
SCIENCE AND TECHNOLOGY		MATERIALS AND PROCESSES OF INDUSTRY M113 / MEC113 (T)		A.C. & D.C. CIRCUIT FUNDAMENTALS E150 / ELE 150 (T)

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ENGINEERING TECHNOLOGY (Mechanical or Electrical) *					
SUBJECT	ACADEMIC SEMESTERS **				
	4	5	6	7	8
DRAFTING, DESIGN, AND MECHANICAL TECHNOLOGY	ADVANCED TECHNICAL DRAFTING I C211 / CAD 211 (T) – MET ONLY			MATERIALS AND PROCESSES OF INDUSTRY M113 / MEC113 (T) - MET ONLY	SHIPBUILDING DESIGN PROJECT D243
				MECHANICS I M131 / MEC 131 (T) - MET ONLY	MECHANICS II M132 / MEC 132 (T) – MET ONLY
MARINE ENGINEERING AND NAVAL ARCHITECTURE		MARINE ENGINEERING N236	NAVAL ARCHITECTURE N237		
LABORATORY SCIENCE	GEN COLLEGE PHYSICS II P202 / PHY 202 (T)				COLLEGE CHEMISTRY I C221 / CHM 111 (T)
TECHNICAL COMMUNICATIONS		TECHNICAL COMMUNICATIONS II C232	TECHNICAL COMMUNICATIONS III C243		
ELECTRICAL AND ELECTRONICS TECHNOLOGY			DIGITAL PRINCIPLES, TERMS, AND APPLICATIONS E279 / ETR 279 (T) – EET ONLY	MICROPROCESSOR APPLICATION I E261 / ETR 261 (T) – EET ONLY	PRINCIPLES OF LASERS & FIBER OPTICS I E231 / ETR 231 (T) –EET ONLY

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BUSINESS ADMINISTRATION *					
SUBJECT	ACADEMIC SEMESTERS **				
	4	5	6	7	8
SOCIAL SCIENCE		UNITED STATES HISTORY II H122 / HIS 122 (T)			PRINCIPLES OF MICROECONOMICS E202 / ECO 202 (T)
ACCOUNTING		PRINCIPLES OF ACCOUNTING I A211 / ACC 211 (T)	PRINCIPLES OF ACCOUNTING II A212 / ACC 212 (T)		
LABORATORY SCIENCE	GEN COLLEGE PHYSICS II P202 / PHY 202 (T)				
BUSINESS	PROBABILITY & STATISTICS FOR BUSINESS & ECONOMICS B216 / BUS 216 (T)		PRODUCTION PLANNING B215		TOTAL QUALITY MANAGEMENT B209 / BUS 209 (T)
COMPOSITION, TECHNICAL COMMUNICATIONS, AND HUMANITIES		COLLEGE COMPOSITION II E112 / ENG 112 (T)	ETHICS P220 / PHI 220 (T)	TECHNICAL COMMUNICATIONS III C243	

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ENGINEERING (Mechanical, Electrical, or Mod & Sim) *							
SUBJECT	ACADEMIC SEMESTERS **						
	4	5	6	7	8	9	10
ENGINEERING	INTRODUCTION TO ENGINEERING E120 / EGR 120 (T)	ENGINEERING GRAPHICS E110 / EGR 110 (T)	INTRODUCTION TO ENGINEERING METHODS E125 / EGR 125 (T)	ENGINEERING MECHANICS - STATICS E140 / EGR 140 (T) – ME & EE ONLY	ENGINEERING MECHANICS - DYNAMICS E245 / EGR 245 (T) – ME ONLY	MECHANICS OF MATERIALS E246 / EGR 246 (T) & E247 / EGR 247 (T) – ME ONLY	CIRCUIT THEORY II E272 / EGR 272 - EE ONLY
					CIRCUIT THEORY I E271 / EGR 271 (T) – EE & MS ONLY	FUNDAMENTALS OF COMPUTER ENGINEERING E270 / EGR 270 (T) – EE ONLY	
MATHEMATICS	CALCULUS W/ ANALYTIC GEOMETRY II M174 / MTH 174 (T)	VECTOR CALCULUS M277 / MTH 277 (T) - ME & EE ONLY	ORDINARY DIFFERENTIAL EQUATIONS M279 / MTH 279 (T)				
MARINE ENGINEERING AND NAVAL ARCHITECTURE						INTRODUCTION TO MARINE ENGINEERING AND NAVAL ARCHITECTURE N250 - ME & EE ONLY	SHIPBUILDING DESIGN PROJECT D243 - ME & EE ONLY
LABORATORY SCIENCE		COLLEGE CHEMISTRY I C221 / CHM 111 (T)	COLLEGE CHEMISTRY II C222 / CHM 112 (T)		UNIVERSITY PHYSICS I P241 / PHY 241 (T)	UNIVERSITY PHYSICS II P242 / PHY 242 (T)	
TECHNICAL COMMUNICATIONS & HUMANITIES				ETHICS P220 / PHI 220 (T)	TECHNICAL COMMUNICATION II C232		TECHNICAL COMMUNICATION III C243
COMPUTER SCIENCE		PROGRAMMING WITH C++ C210 / CSC 210 – MS ONLY					

(T) = Tidewater Community College

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