

MARITIME TECHNOLOGIES PATHWAY

Associate of Applied Science Degree:

• Maritime Technologies

Career Studies Certificates:

- Marine Electrical
- Marine Mechanical
- Maritime Technologies
- Maritime Welding

The Maritime Technologies program provides students with a comprehensive set of maritime industry-related skills and knowledge that employers seek when selecting technicians for their industry and be positioned for promotion into supervisory positions both within their technical fields and within their companies.

Students who complete one or more certificate programs can apply those credits toward the A.A.S. Maritime Technologies degree, earning multiple academic credentials in the process. Graduates who entered the program with no previous maritime experience will be prepared to apply for technician positions within the industry including electrician, electronics technician, inside machinist, outside machinist, pipefitter, rigger, painter, carpenter, insulator, shipfitter, welder, and sheetmetal worker.

Graduates of the Maritime Technologies program who have also completed a registered apprenticeship program sponsored by their employer can pursue a four-year degree.

SEMESTER 1	SEMESTER 1 (Based on a Fall semester start)				
Course No.	Course Title	Credits	Prerequisite		
CAD 160	Machine Blueprint Reading	3			
ENG 111	College Composition I	3	Placement		
ITE 115	Introduction to Computer Applications and	4			
	Concepts				
MAR 120	Introduction to Ship Systems	3			
SDV 101	Orientation to Maritime Careers	1			
	Approved Mathematics Elective ²	3	Placement		
	SEMESTER TOTAL	17			

SEMESTER 2			
Course No.	Course Title	Credits	Prerequisite
CAD 201	Computer Aided Drafting and Design I	4	
ENG 115	Technical Writing	3	Placement
SAF 126	Principles of Industrial Safety	3	
	Approved Mathematics Elective ²	3	Placement
	Approved Elective ³	3	
	SEMESTER TOTAL	16	





SEMESTER 3			
Course No.	Course Title	Credits	Prerequisite
IND 101	Quality Assurance Technology I	3	
MAR 297	Cooperative Education	3	
	Approved Elective ³	3	
	Approved Elective ³	3	
	Humanities Elective ¹	3	
	Social Science Elective ¹	3	
	SEMESTER TOTAL	18	

SEMESTER 4			
Course No.	Course Title	Credits	Prerequisite
HLT 105	Cardiopulmonary Resuscitation	1	
IND 137	Team Concepts and Problem Solving	3	
MAR 297	Cooperative Education	3	
	Approved Elective ³	3	
	Approved Elective ³	3	
	Social Science Elective ¹	3	
	SEMESTER TOTAL	16	

Total Minimum Credits

67

Electrical (Electrician, Electronics Technician)

ELE 145, ELE 146, ELE 150, ELE 174, ELE 233, MAR 160, MAR 210

Mechanical (Inside Machinist, Outside Machinist, Pipefitter, Rigger, Painter, Carpenter, Insulator) ELE 233, IND 115, MAR 130, MEC 154, MEC 155, MEC 268, MEC 269

Structural (Shipfitter, Welder, Sheetmetal Worker)

IND 115, MAR 130, WEL 165, WEL 170, WEL 171, WEL 210, WEL 220, WEL 230

HVAC (HVAC Technician, Junior HVAC Technician)

AIR 111, AIR 112, AIR 121, AIR 122, AIR 165, AIR 200, AIR 206

CAD (Entry-level Designer, Junior Designer)

CAD 151, CAD 152, CAD 211, CAD 212, CAD 241, CAD 242, CAD 280

Industrial Management (Entry-level Construction Supervisory, Entry-level QC, Foreman)

ACC 211, BUS 100, BUS 200, BUS 201, BUS 265, IND 121, IND 122, IND 150, IND 236

Occupational Safety (Industrial Hygienist)

IND 165, IND 216, SAF 120, SAF 205, SAF 246



¹Eligible courses are listed on page 28 in the 2013-2014 catalog. See your academic advisor counselor to choose the appropriate course(s).

²Approved Mathematics Elective: MTH 115, MTH 158, MTH 163

³Approved Electives: Choose a course mix of 15 credits from <u>one</u> of the following career areas of interest. All five electives must be chosen from the same career area.



CAREER STUDIES CERTIFICATE IN MARINE ELECTRICAL

(program code: 221.706.10)

The Career Studies Certificate in Marine Electrical is focused on the maintenance and repair of shipboard electrical and electronic systems. Following completion of this program, individuals may seek employment as marine electricians

SEMESTER 1	SEMESTER 1 (Based on a Fall semester start)			
Course Number	Course Title	Credits	Prerequisite	Complete
ELE 150	A.C. and D.C. Circuit Fundamentals	3		
MAR 120	Introduction to Ship Systems	3		
MAR 160	Marine Electrical for Maritime Vessels	3		
	SEMESTER TOTAL	9		

SEMESTER 2				
Course Number	Course Title	Credits	Prerequisite	Complete
ELE 145	Transformer Connections and Circuits	2	ELE 150 or Equivalent	
ELE 146	Electric Motor Control	4	ELE 150 or Equivalent	
MAR 210	Marine Electronics for Maritime Vessels	4		
	SEMESTER TOTAL	10		

19

Total Minimum Credits



CAREER STUDIES CERTIFICATE IN MARINE MECHANICAL

(program code: 221.953.20)

The Career Studies Certificate in Marine Mechanical prepares students for a career in the maintenance and repair of shipboard mechanical systems. Following completion of this program, individuals may seek employment as marine mechanical technicians.

SEMESTER 1 (Based on a Fall semester start)				
Course Number	Course Title	Credits	Prerequisite	Complete
CAD 160	Machine Blueprint Reading	3		
MAR 120	Introduction to Ship Systems	3		
SDV 101	Orientation to Maritime Careers	1		
	Approved Elective ¹	3		
	SEMESTER TOTAL	10		

SEMESTER 2				
Course Number	Course Title	Credits	Prerequisite	Complete
MEC 155	Mechanisms	3		
MEC 268	Fluid Power – Hydraulic Systems	3		
	Approved Elective ¹	3		
	SEMESTER TOTAL	9		

Total Minimum Credits

*Note: Students may choose from two of the following courses for their approved

19

electives. More elective options will be added later.

Course	Course Title	Credits
MEC 154	Mechanical Maintenance I	3
MEC 269	Fluid Power-Pneumatic Systems	3





CAREER STUDIES CERTIFICATE IN MARITIME TECHNOLOGIES

(program code: 221.953.38)

The Career Studies Certificate in Maritime Technologies prepares students with the core education and skills necessary for entry-level work in the commercial or naval ship repair industry. The students gain familiarization with basic ship construction and ship repair processes and techniques, various ship systems and the basic knowledge and terminology to report to worksites aboard ships or in the shipyard.

SEMESTER 1 (SEMESTER 1 (Based on a Fall semester start)			
Course Number	Course Title	Credits	Prerequisite	Complete
CAD 160	Machine Blueprint Reading	3		
IND 101	Quality Assurance Technology I	3		
MAR 120	Introduction to Ship Systems	3		
SDV 101	Orientation to Maritime Careers	1		
	Approved Elective ¹	3-4		
	SEMESTER TOTAL	13-14		

SEMESTER 2				
Course Number	Course Title	Credits	Prerequisite	Complete
ENG 115	Technical Writing	3	Placement	
IND 137	Team Concepts and Problem Solving	3		
MTH 115	Technical Mathematics I	3	Placement	
	Approved Elective ¹	3-4		
	SEMESTER TOTAL	12-13		

Total Minimum Credits

25-27

*Note:	Students may choose from two of the following courses for their approved
	electives.

Course	Course Title	Credits
CAD 201	Computer-Aided Drafting and Design I	4
ELE 150	A.C. and D.C. Circuit Fundamentals	3
MAR 130	Marine Maintenance Mechanics	3
MAR 160	Marine Electric for Maritime Vessels	3
MAR 210	Marine Electronics for Maritime Vessels	4
MAR 297	Cooperative Education	3
MEC 154	Mechanical Maintenance 1	3
WEL 170	Maritime Shielded Metal Arc Fillet Welding (SMAW I)	3
WEL 171	Maritime Shielded Metal Arc Groove Welding (SMAW II)	3





CAREER STUDIES CERTIFICATE IN MARITIME WELDING

(program code: 221.953.30)

The Career Studies Certificate in Maritime Welding prepares students for entry-level positions as maritime welders. While some welding skills are universal, this program will focus specifically on developing the knowledge, skills, and abilities needed to obtain the employment as a maritime welder.

SEMESTER 1 (Based on a Fall semester start)					
Course Number	Course Title	Credits	Prerequisite		
MAR 120	Introduction to Ship Systems	3			
WEL 165	Introduction to Maritime Welding	2			
WEL 170	Maritime Shielded Metal Arc Fillet Welding (SMAW I)	3			
	SEMESTER TOTAL	8			

SEMESTER 2			
Course Number	Course Title	Credits	Prerequisite
WEL 171	Maritime Shielded Metal Arc Groove Welding (SMAW II)	3	WEL 170
WEL 210	Maritime Flux Core Arc Fillet Welding (FCAW)	3	
	SEMESTER TOTAL	6	

SEMESTER 3			
Course Number	Course Title	Credits	Prerequisite
WEL 220	Maritime Gas Metal Arc Fillet Welding (GMAW)	3	
WEL 230	Maritime Gas Tungsten Arc Fillet Welding (GTAW)	2	
	SEMESTER TOTAL	5	

Total Minimum Credits

19

