

# Certificate Program: Shipyard Industry Manufacturing Technician Training

NSRP Project  
Workforce Development – Scott Christman  
General Dynamics Bath Iron Works



# NSRP Project

- Subject Matter Experts– BIW Trade Training (and subsidiaries)
- Workforce Development – Scott Christman
- Southern Maine Community College

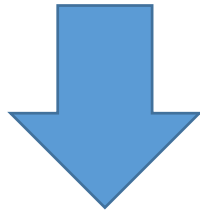


**GENERAL DYNAMICS**  
Bath Iron Works



# A Need for Basic Training

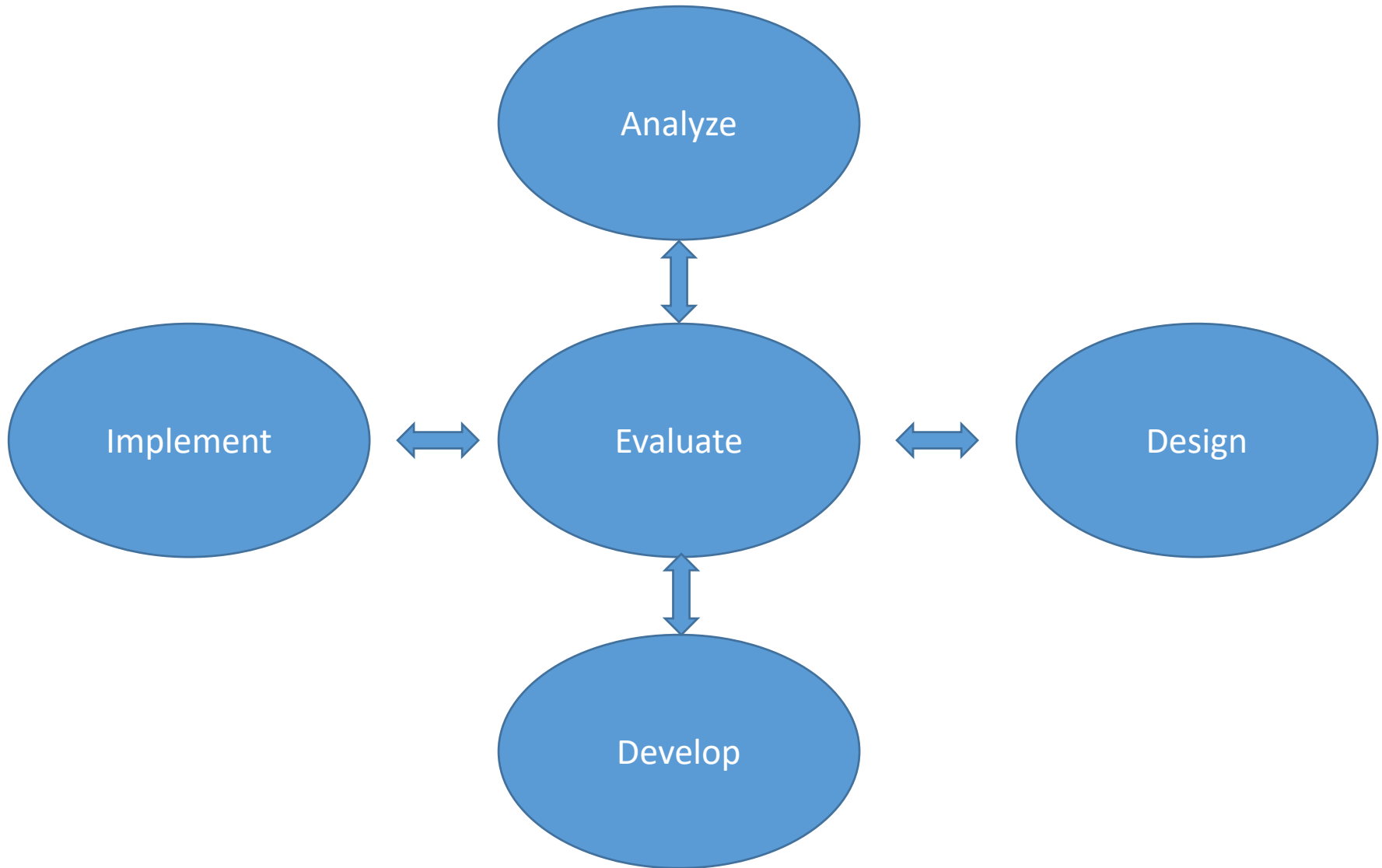
- Shipyards are hiring entry level mechanics
- Unskilled labor
- Becoming more complicated



## Basic Training to hit deck plate

1. Pre-Hire, Community College: Three-week Certificate
2. Post Hire, Shipyard: New Hire Training
3. Apprenticeship: Hybrid of both

# The ADDIE Model



# Analysis

## OCCUPATION: Basic Manufacturing Technician

SOC: 17-3029.09  
 TERM: 2000 hours

NAICS Code: 336611  
 RTI Hours: 144 hours

SKILLS TO BE LEARNED ON THE JOB		Hours Required	Hours Attained	Proficient As of Date	Supervisor Signature
	<b>MANUFACTURING TECHNICIAN SKILLS CHECKLIST</b>				
	Set up and verify the functionality of safety equipment				
	Adhere to all applicable regulations, policies, and procedures for health, safety, and environmental compliance				
	Calibrate or adjust equipment to ensure quality production, using tools such as calipers, micrometers, height gauges, protractors, or ring gauges				
	Inspect finished products for quality and adherence to customer specifications				
	Monitor and adjust production processes or equipment for quality and productivity				
	Troubleshoot problems with equipment, devices, or products				
	Test products or subassemblies for functionality or quality				
	Select cleaning materials, tools, or equipment				
	Set up and operate production equipment in accordance with current good manufacturing practices and standard operating procedures				
	Plan and lay out work to meet production and schedule requirements				
	Install new manufacturing equipment				
	Start up and shut down processing equipment				
	Prepare and assemble materials				
	Build product subassemblies or final assemblies				
	Maintain inventory of job materials				
	Clean production equipment or work areas				

# Deliverable

## Training Package

- Instructor's Guide
  - PowerPoint Presentation
  - Instructor Notes
- Student Guide (Book)
  - Lab Day Exercises
  - Hands-on Criteria

## Training Structure

- 120 Hours
  - Classroom – Hands-on
- 1 -2 Month
  - Include OJT – Proficiencies
- Apprenticeship Program
  - Supplement with Shipyard course

NSRP | National Shipbuilding Research Program

### **Certificate Program: Shipyard Industry Manufacturing Technician Training**

Course Curriculum  
For the  
National Shipbuilding Research Project

Due to foreign access restrictions (e.g., ITAF) or other regulations, distribution is authorized only to U.S. commercial and government shipyards.



**Instructor's Guide**

January 2021

# Technology Transfer

- NSRP Meetings
  - Workforce Development
  - Other Panels
- Industry
  - Other Shipyards
  - Academia



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# Timeline

Title	Description	Team Member(s)	Receiver	Due Date
Analysis & Design - Curriculum Data Gathering	Gather Data from Community Shipbuilders and Partners to define what is to be learned and the process by which learning will occur	BIW EB Austal NASSCO	BIW	3/1/2020
Quarterly Report - at 3 Months	Create Report of Progress	BIW	ATI	3/15/2020
Course Development	Process of authoring and producing the course materials - "Core Body of Knowledge"	BIW SMCC	BIW	6/1/2020
Quarterly Report - at 6 Months	Create Report of Progress	BIW	ATI	6/15/2020
Implement Pilot	Process of installing the project into real-world context	BIW SMCC	BIW	7/1/2020
Evaluation and Revise	Process of determining the adequacy of the instruction	BIW SMCC	BIW	8/1/2020
Quarterly Report - at 9 Months	Generate a Report of Findings & Recommendations	BIW	ATI	9/15/2020
Final Report - at 11 Months	Generate a Report of Findings & Recommendations	BIW	ATI	11/15/2020



Questions?

