



## Designing Dual and Concurrent Enrollment Pathways with Stackable, Relevant Credentials

NCPN Conference - October 28-30, 2015



# What is The SMART Center?



The SMART Center serves as a regional ATE center and is an economic model for developing a sustainable, globally prepared maritime and transportation workforce for the 21<sup>st</sup> century through partnership with vital industry and educational entities



Barbara Murray

The SMART Center

Executive Director and Principal Investigator



# SMART

SOUTHEAST MARITIME AND TRANSPORTATION CENTER



**Dr. Sallie Kay Janes**  
Co-PI The SMART Center  
San Jacinto College  
Vice President  
Continuing and Professional  
Development



**Ross Leach**  
Apprentice Program Manager  
AMSEC, LLC



**Guy St John**  
Apprentice Program Manager  
Oceaneering



# The SMART Center Goals



Dual Enrollment



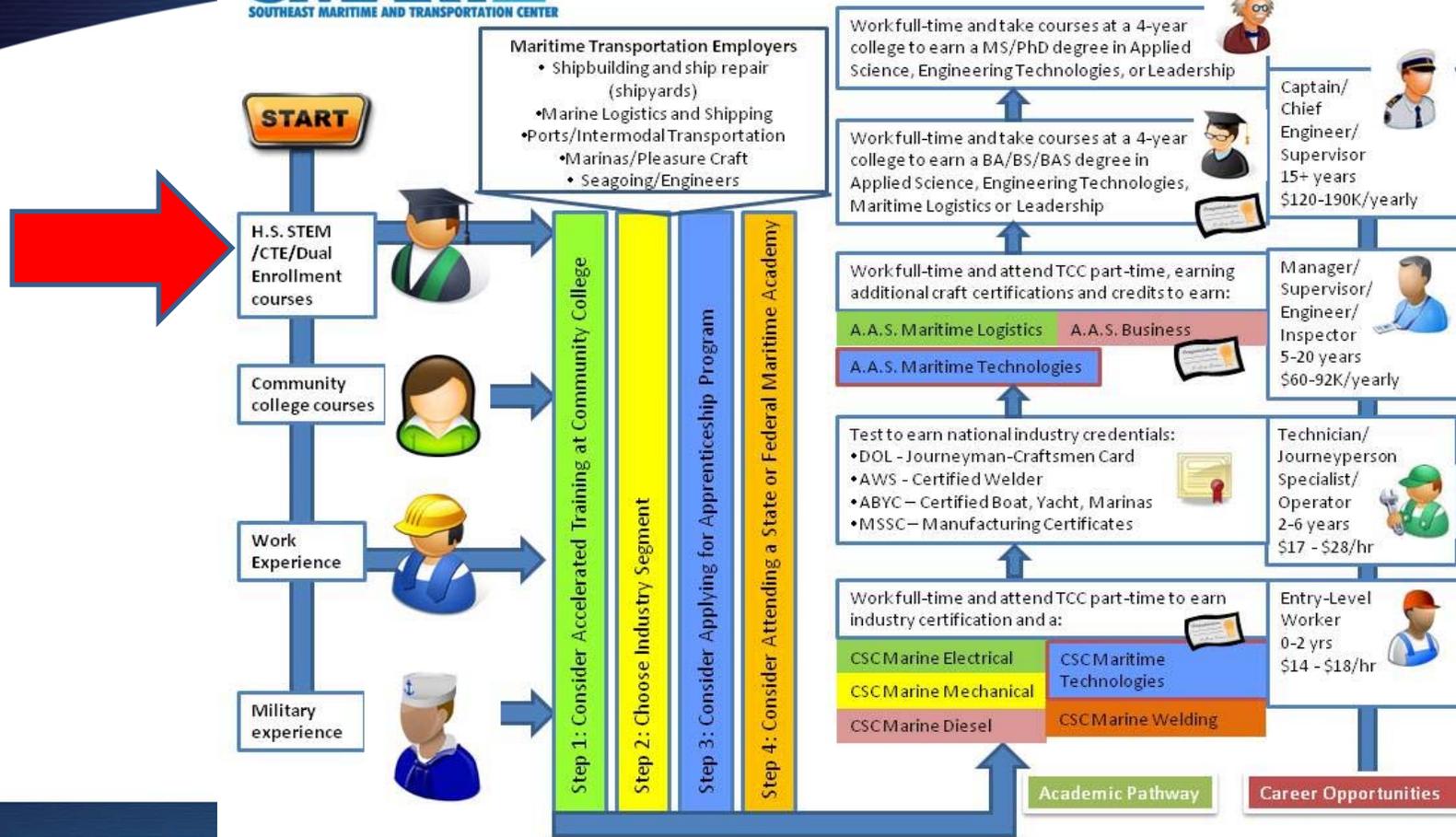
1. Career pathways and program development
2. Career awareness and promotion
3. Model for education & industry partnerships



# Variety of Pathway Entry Points



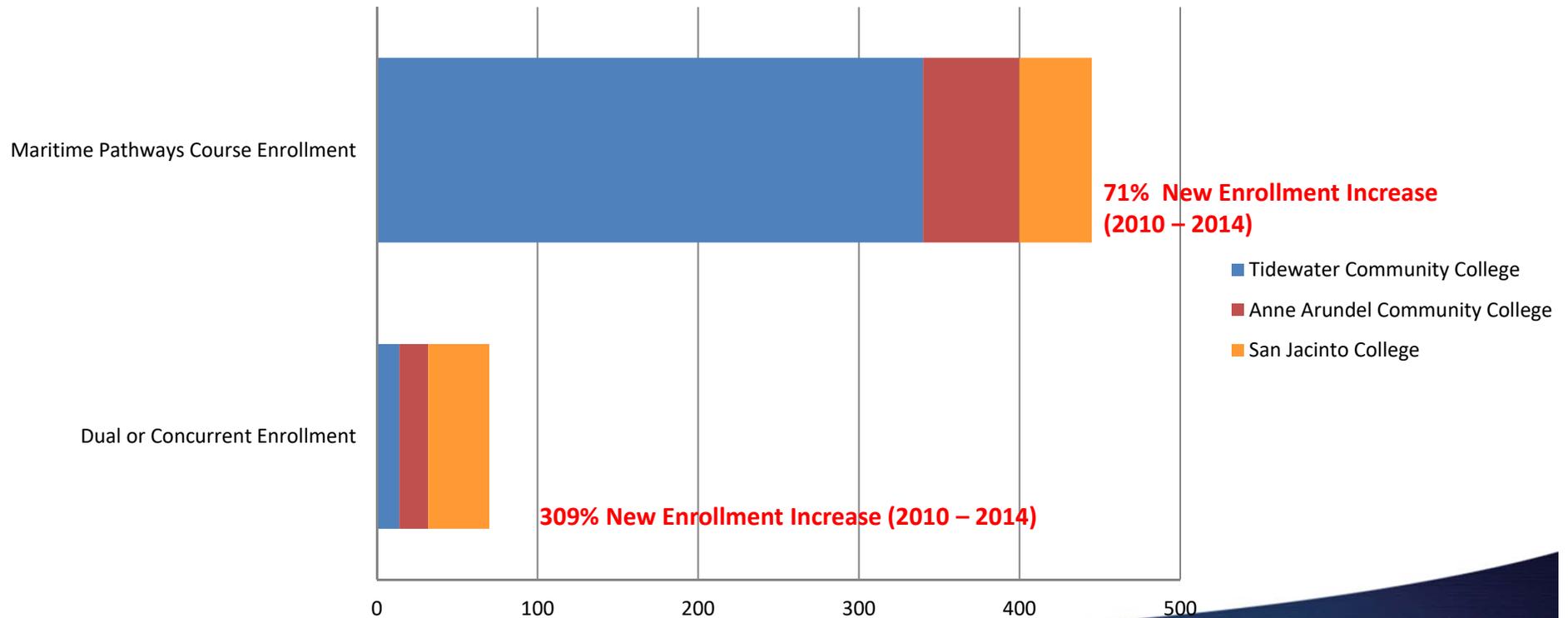
## Your Maritime and Transportation Industry Career Pathway



# Proven Pathway Growth



## Academic Program Growth



# What is Dual Enrollment?



72% of students taking DE courses at a college campus enroll in post secondary education\*

63% of students taking DE courses at a high school campus enroll in post secondary education\*

Only 61% of students NOT taking DE enroll in post secondary education\*

\*Community College Research Center  
"What We Know about Dual Enrollment"  
February 2012



# Concurrent Enrollment In Vessel Operations



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- Seagoing/Vessel operations focus



# Partnerships for Concurrent Enrollment



- Port of Houston Partners in Maritime Education
- Seagoing/Vessel operations focus
  
- Credits toward SJC Associate Degree in Maritime Transportation while in high school



# An Employer's Perspective



**Guy St John**

Apprentice Program Manager

Oceaneering



- Marine Services Division
- Ship maintenance, modernization for variety of U.S. government military vessels



## What is Registered Apprenticeship?

- It's the beginning of a Career  
The Program is 4 years in length (8000 hrs OJT) + 144 hrs Apprentice Related Instruction per year
- It's on-the-job training and education  
Apprentices start working from day one with incremental wage increases as they become more proficient
- It's a Nationally Recognized Credential  
At the end of the apprenticeship, all apprentices receive a Nationally Recognized Journeyman's Credential in your trade
- It's the chance to earn "stackable credentials" along with a Journeyman's Card
- A certificate from Tidewater Community College:  
Maritime Technologies Mechanical or Structural or Welding  
An Associate's Degree

# 2+2+2 Pathway



Get on the SMART Career Pathway from High School to the Maritime and Transportation Industry!



**Did you know?**  
Dual Enrollment classes allow you to take one course that meets your high school graduation requirements and earn college credit! Talk with your guidance counselor about DE courses you may be able to take today.

## STEP 1: Take these High School or Dual Enrollment Courses

### Math

- Algebra 1
- Algebra 2
- Geometry
- Trigonometry

### Science

- Biology
- Chemistry
- Physics

### Career and Technical Education

- Engine repair
- Drafting/design
- Engineering
- Electronics
- Robotics



## STEP 2: Graduate and Enroll in a Community College Academic Maritime-Related Certificate Program



Certificate Program:  
Marine Welding  
• 19 credits

Certificate Program:  
Marine Electrical  
• 19 credits

Certificate Program:  
Marine Diesel  
• 19 credits

Certificate Program:  
Marine Mechanical  
• 19 credits



## STEP 3: Apply Academic Certificate

Credits Toward:

- Certificate Program (CSC) Maritime Technologies (25-27 credits)



## STEP 4: Apply Academic Certificate

Credits Toward:

- Associate degree (A.A.S.) Maritime Technologies (67 credits)  
- Associate degree (A.A.S.) Maritime Logistics (67 credits)



## STEP 5: Continue Education or Enter the Workforce

### Continue Education

- B.A./B.S./B.A.S.
- M.A./M.S.
- PhD



### Enter workforce in one of four industry segments:

- Seagoing
- Shipbuilding and Ship Repair
- Ports and Logistics
- Pleasure craft boating



# Why Create a DE Pathway?



- Prepares college-bound students in all areas that support further study and meaningful industry-recognized standards.

- Provides OPTIONS, making the connection between school and work ***through industry partnerships.***

- Provides students “value added” courses with work place readiness skills that prepare students for a competitive workforce.



# An Employer's Perspective



Ross Leach

Apprentice Program Manager

AMSEC, LLC



- Division of Huntington Ingalls Industries
- Ship maintenance, modernization for variety of U.S. government agencies - generates \$200M annually



# Building a DE Program



## Welding (2009)

Dual Enrollment - 5 credits  
Partnership  
Apprenticeships



## Marine Electric (2012)

Dual Enrollment – 6 credits  
Partnership - SMART Institute  
Apprenticeships



TIDEWATER COMMUNITY COLLEGE  
From here, go anywhere.™

## AutoCAD (2013)

Dual Enrollment – 4 credits  
Partnership - SMART Institute  
Apprenticeships



# Potential Earnings Comparison between College Career Path and Apprenticeship



## Enter College from High School

Year	Earnings	Cumulative
1	-20,000	-20,000
2	-20,000	-40,000
3	-20,000	-60,000
4	-20,000	-80,000
5	60,000	-20,000
6	62,000	42,000
7	64,000	106,000
8	68,000	174,000
9	71,000	245,000
10	76,000	321,000

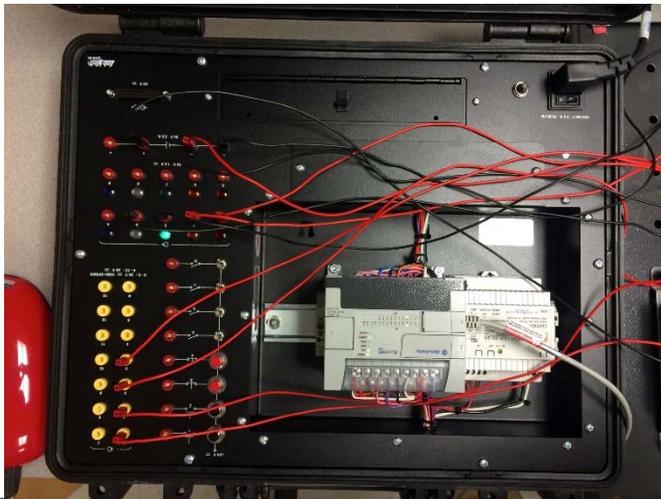
## Enter workforce from High School

Earnings	Cumulative	Delta
29,500	29,500	49,500
30,400	59,900	99,900
32,500	92,400	152,400
34,800	127,200	207,200
37,300	164,500	184,500
40,000	204,500	162,500
43,000	247,500	141,500
51,000	298,500	124,500
55,000	353,500	108,500
57,750	411,250	90,250



Benefits of Stackable Credentials & Dual Enrollment Head Start

- ❖ Moving SMART Career Pathway Model to the West Coast expanding Apprentices Programs
- ❖ Working with US DOL to Register Apprentices Program Nationwide



- ❖ AMSEC Program provides pathways from Certificates thru Journeyman's Credential to Associates and Bachelors Degree
- ❖ Working with Tidewater Community College to develop Mechatronics Program for the Maritime Industry

# Discussion & Questions

# Contact Us



**Dr. Sallie Kay Janes**

Co-PI The SMART Center  
San Jacinto College

Vice President, Continuing and Professional  
Development

[Sarah.Janes@sjcd.edu](mailto:Sarah.Janes@sjcd.edu)  
281-478-3605



**Ross Leach**

Apprentice Program Manager  
AMSEC, LLC

[Ross.leach@hii-amsec.com](mailto:Ross.leach@hii-amsec.com)  
757-226-1152



**Guy St John**

Apprentice Program Manager  
Oceaneering

[GStJohn@oceaneering.com](mailto:GStJohn@oceaneering.com)  
757-985-3884



# Contact Us



## The SMART Center

Barbara R. Murray  
PI and Executive Director  
The SMART Center  
bmurray@tcc.edu  
757.401.8259  
[www.maritime-technology.org](http://www.maritime-technology.org)

