# OCEAN ECONOMY Blue Economy and Climate Action Pathways

# Luke Meyer: Director, Los Angeles Center of Excellence for Labor Market Research hosted at MT. SAN ANTONIO COLLEGE

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California Community Colleges need to ensure that CTE curriculum produces workers with the skills relevant to the regional and statewide economies.

The COE provide **quality labor market data and information** to help colleges respond to workforce needs.

Colleges use the data for:



Investing in new and relevant programs



Reviewing existing programs





Pursuing grants





# What is the Ocean Economy?

The blue economy is defined by the World Bank as the "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem." The term ocean economy is often used interchangeably with blue economy, though it sometimes refers to only economic activities.



The current ocean economy consists of maritime-based economic activities in six distinct industry sectors

- Tourism and Recreation
- Marine Transportation
- Living Resources
- Offshore Mineral Resources
- Marine Construction
- Ship and Boat Building







Source: Ocean Economy 101: Emerging Educational Supply and Labor Market Demand

# **Emerging Blue Industry Sectors**

Emerging ocean industries with potential for high longterm growth

- Industrial Marine Aquaculture
- Offshore Wind Energy
- Ocean Renewable Energy
- Marine and Seabed Mining
- Marine Biotechnology
- High-Tech Marine Products and Services
- Marine Robotics
- Maritime Safety and Surveillance



#### **Ocean Economy**

# LA Community College Programs

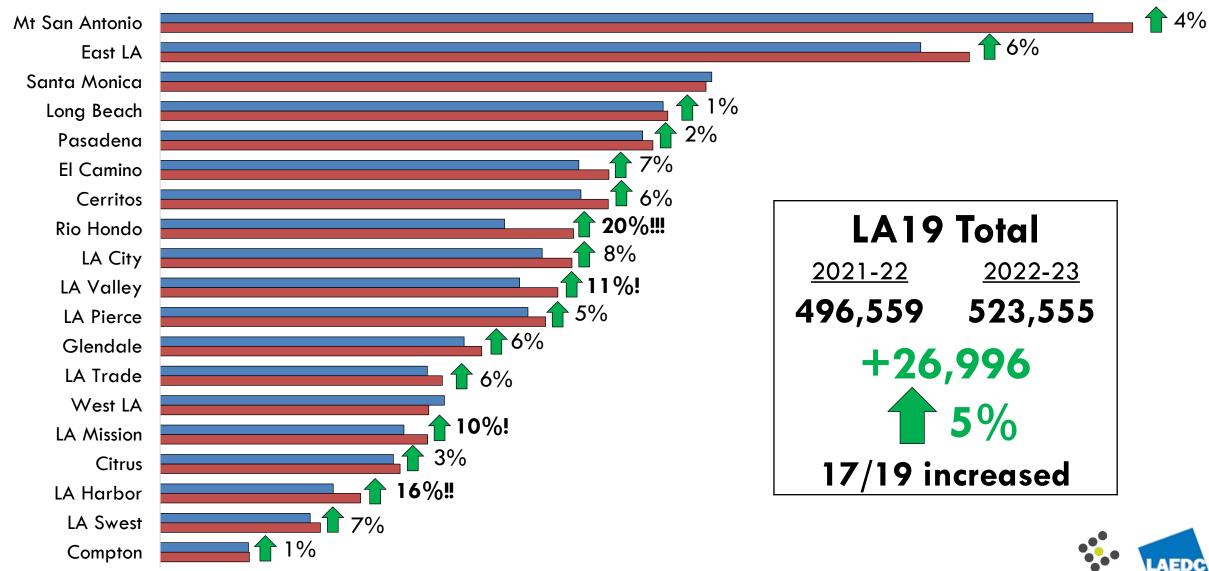
COLLEGE	PROGRAM NAME	HOW DOES THIS PROGRAM RELATE TO THE OCEAN ECONO- MY?
Santa Monica	• Aquaculture	The Aquaculture Program is a new, interdisciplinary CTE program at Santa Monica College (Business, Earth Science, & Life Science Departments) that seeks to train students for employment in the emerging field of aquaculture.
LA Mission LA Valley LA Southwest Long Beach City	<ul> <li>Robotics</li> <li>Robotics and PLCs</li> <li>Fundamentals of Robotics</li> <li>Robotics Welding Automation</li> </ul>	Underwater robotics is a rapidly growing field. These existing robotics programs provide the necessary knowledge, skills, and abilities for students pursuing careers as robotics, calibration, electro-mechanical, and mechatronics technologists and technicians. With additional experience and education, program completers set themselves on a path towards employment as a robotics engineer.
LA Pierce LA Trade-Tech Mt. San Antonio Pasadena City Rio Hondo	<ul> <li>Geographic Information Systems</li> </ul>	Mapping the ocean floor is critical to understanding the ocean ecosystem as a whole. These GIS programs provide students with the skills necessary for ongoing ocean exploration and mapping.
East LA LA Harbor LA Valley Long Beach City Mt. San Antonio	<ul> <li>Oceanography</li> <li>Earth Science</li> </ul>	Knowledge of plate tectonics, coastlines, tides, marine resources, and the pollution sources that threaten these are essential to the ocean economy.



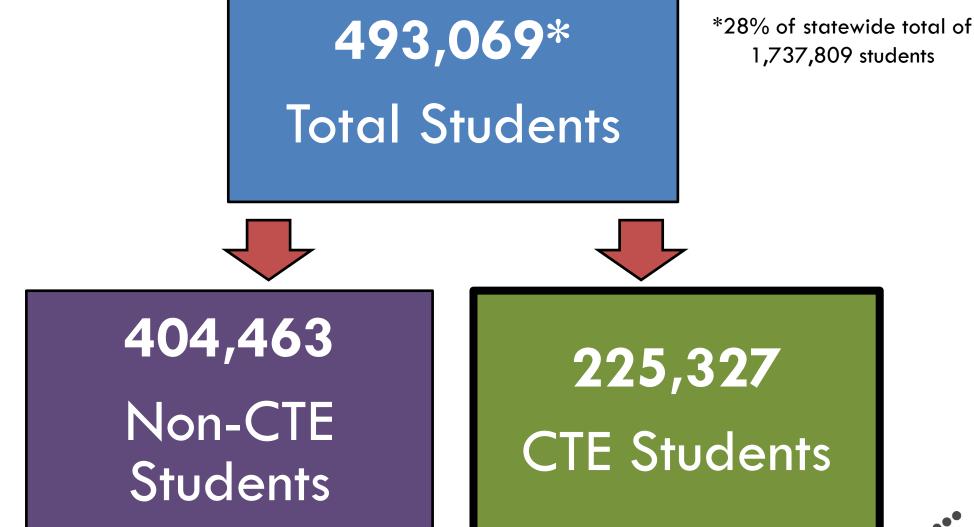
### Ocean Economy

# LA Community College Students

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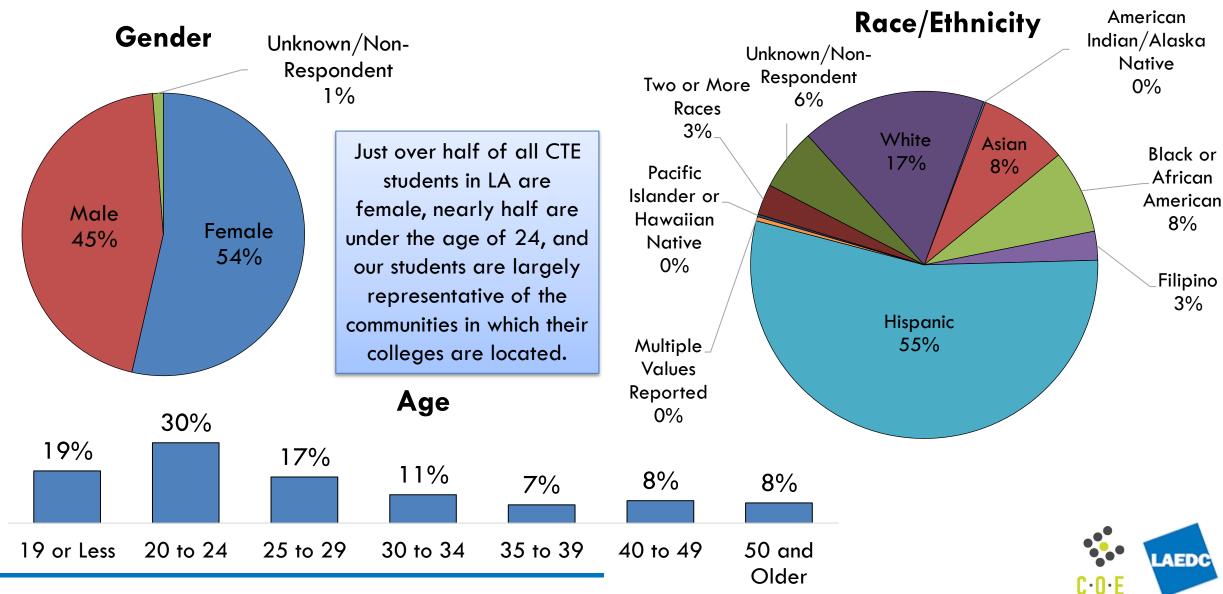


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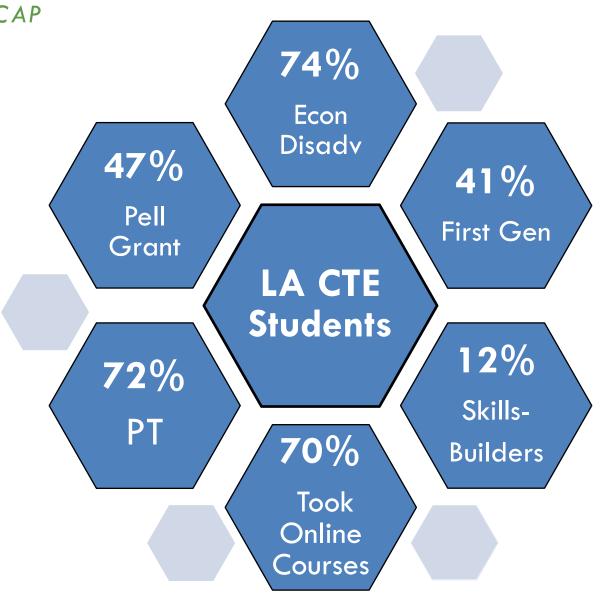




# LA CTE Student Demographics



Source: Cal-PASS Plus LaunchBoard



# **LA CTE Student Characteristics**

- Over **200 unique CTE Programs** in LA Basin at 19 geographically-dispersed colleges
- 28,889 Average Annual Awards Issued
  - 14, 479 Associate Degrees (50%)
  - 11,839 Certificates (41%)
  - 2,012 Noncredit Awards (7%)
  - 479 Other Credit Awards (2%)
  - 80 Bachelor's Degrees (<1%)



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