



SESSION 4

# INNOVATION & REGIONAL LEADERSHIP IN CLEAN PORTS

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Senior Vice President and Provost



# ABOUT UOG



## MISSION

Serves nearly 3,000 students from Guam and all of Micronesia through its mission of *Ina, Deskubre, Setbe* (To Enlighten, To Discover, To Serve).



## OVER 25,000 ALUMNI

For over 70 years, UOG Tritons have been driving progress across the region in government, education, business, science, engineering, healthcare, and the arts.





# ABOUT UOG



## LAND AND SEA GRANT UNIVERSITY

As a U.S.-accredited Land Grant and Sea Grant university, UOG is recognized by U.S. News & World Report among the Best Regional Universities, Best Value Schools, and Top Public Universities.



## REKNOWN FOR RESEARCH

Top 31% of U.S. Research Universities in Science-Related Expenditures. Designated a Carnegie Research College and University (RCU) in 2025 – placing UOG among just 216 U.S. institutions with this recognition.





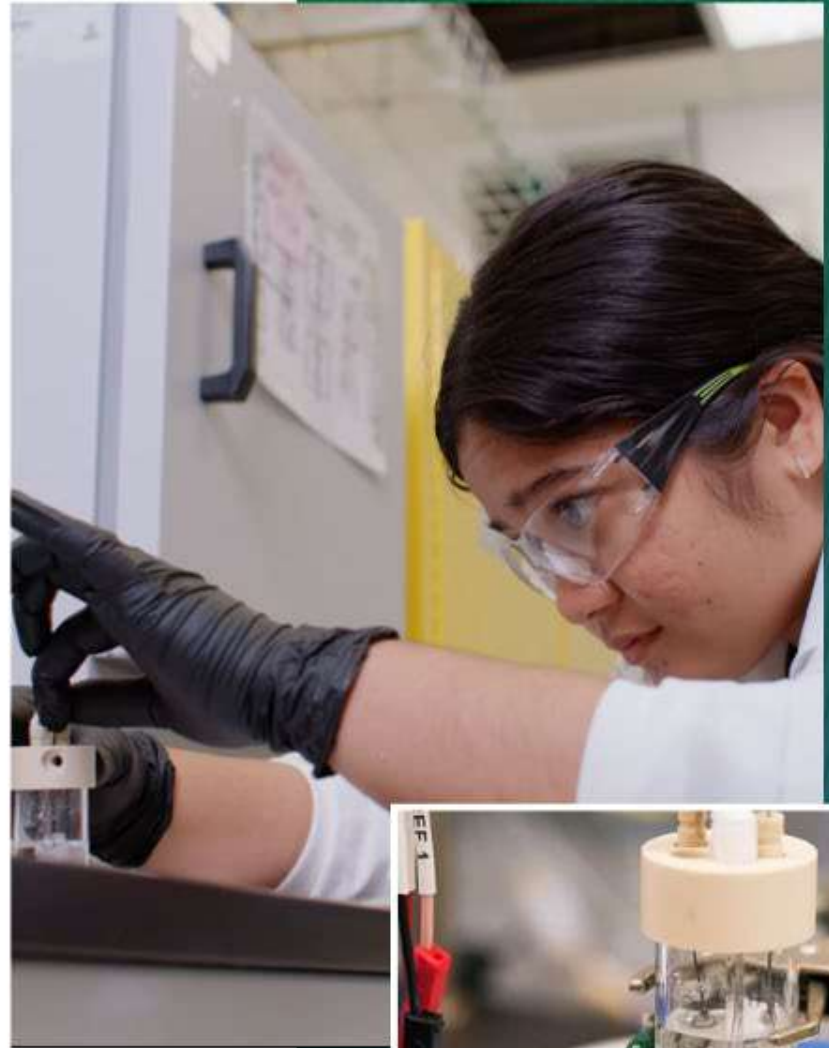
# SUSTAINABLE ENERGY AND INNOVATION AT UOG



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## Seawater-to-Energy Research:

- UOG Faculty and Students' collaboration with Pacific Northwest National Lab explores potential renewable energy source by converting hydrogen from seawater
- Supports innovation in marine-based clean energy sources





# SUSTAINABLE ENERGY & INNOVATION AT UOG

## **NSF EPSCoR Program:**

- Coral nursery development and reef resilience (protecting coastal infrastructure)
- Biodiversity data collection via Biorepository and coral genome research
- Supports ecosystem services critical to maritime zones and ports



# SUSTAINABLE ENERGY & INNOVATION AT UOG

## NASA SPACE GRANT AND MAGIC LAB:

- Drone-based coastal and post-typhoon damage mapping
- Geospatial tools for emissions inventories, infrastructure planning, and resilience analysis
- Supports eligible activities under Clean Ports Planning





An aerial photograph of a coastal city, likely Guam, featuring a large bay with turquoise water and a sandy beach. Modern high-rise buildings are visible along the shoreline, and a road curves through the foreground. The background shows a hilly coastline with more buildings and greenery.

# DEVELOPING A "PORT-READY" PROFESSIONAL WORKFORCE



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## School of Engineering

- Over 200 students currently in Civil Engineering program
- Launching Construction Management degree in 2026
- Partnerships with UH and Colorado School of Mines will produce Mechanical Engineering graduates
- Plans to develop an electrical engineering program





# DEVELOPING A "PORT-READY" PROFESSIONAL WORKFORCE

## **MAGIC Lab / Drone Corps**

- 55+ FAA-certified remote pilots collecting and analyzing coastal infrastructure data
- Building research infrastructure in the region
- Training a homegrown STEM workforce, supporting faculty-led research, and generating high-value data that supports environmental and climate resilience





# DEVELOPING A "PORT-READY" PROFESSIONAL WORKFORCE

## Workforce Development and Career Pathways in STEM fields

- Student researchers work side by side with faculty scientists on projects like site surveys, water quality testing, coral reef health mapping
- Internships lead directly to employment with NAVFAC, Cabras Marine, SSFM, GPA, GWA, and more







# PUBLIC ENGAGEMENT AND REGIONAL IMPACT



# PUBLIC ENGAGEMENT AND REGIONAL IMPACT

- **Marine Lab**

- Coral conservation and reef restoration tied to Guam's coastal resilience

- **WERI**

- Provides critical water quality data and watershed models used by utilities, regulators, and planners





# PUBLIC ENGAGEMENT AND REGIONAL IMPACT

- **agInnovation Research Center**
  - Works directly with farmers, families, and youth to build food security, climate resilience, and land-based innovation
- **Cooperative Extension**
  - Delivers community-based education in agriculture, youth and community development, food safety and security





# PUBLIC ENGAGEMENT AND REGIONAL IMPACT

- **G3 Conservation Corps**
  - Trains members in conservation, circular economy skills, and island sustainability – empowering them to lead in Guam's green transition
- **Annual Conference on Island Sustainability**
  - Brings together leaders from across the Pacific to exchange strategies and solutions for island resilience





# THE CLEAN PORTS VISION AND UOG



# CLEAN PORTS AND UNIVERSITY OF GUAM

*The University of Guam is ready to assist the Port Authority of Guam in the design, implementation, and sustainability of clean port systems.*

## WORLD CLASS RESEARCH

World-class research centers and faculty conducting advanced mapping, emissions modeling, marine ecosystem monitoring, water quality assessment, and other initiatives.

## WORKFORCE PIPELINE

Workforce-ready graduates in STEM, Business, Healthcare, Education, and more.

## PLANNING SUPPORT

Expert grant writers and project managers to support PAG.

## COMMUNITY ENGAGEMENT

Outreach and engagement are built into UOG's mission and are priorities in planning and implementation.

## STRATEGIC PARTNERSHIPS

Leverage collaborative partnerships across local and federal government agencies, private enterprise, and academia.





# CONNECT WITH UOG



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