Collaborative Opportunities in Marine Research and Development

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USM’s Presence Along the Coast

- Office of Vice-President for Research (Hattiesburg)
- College of Science and Technology (Hattiesburg, Long Beach)
  - Dept. of Marine Science (Stennis Space Center)
  - Gulf Coast Research Laboratory (Ocean Springs)
- Trent Lott National Center (HBG)
- Office of Technology Development (HBG)
- Small Business and Innovation Assistance Center (SSC)
- Mississippi Enterprise for Technology (SSC)
Flagship University for Marine and Coastal Science and Education

- Only Marine Science grad/undergrad program in Mississippi
- BSc in Marine Science
- MSc and PhD in Marine Science and Coastal Sciences
- 1 of 2 Category A Hydrographic Science Programs in U.S.
- Over 100 full-time research staff
FLAGSHIP UNIVERSITY FOR MARINE AND COASTAL RESEARCH

Research Areas

• Marine Technology and Sensor Development
• Marine Ecosystems and Responses to Stressors
• Past and Present Ocean-Climate Dynamics and Coastal Response
• Ocean Observing Systems
• Ocean Modeling and Forecasting
• Fisheries and Fisheries Oceanography
• Marine Ecology and Biodiversity
• Aquaculture
• Marine Microbial and Marine Pathology Science
• Aquatic Toxicology
The mission of the Department of Marine Science is to cultivate intellectual development and creativity through **graduate and undergraduate education**; to advance the fields of marine and hydrographic science through **excellence in research**; promote our position within the University, local, national and international communities through **service and economic development activities**; and, to **communicate** our programs to the public through outreach.
INTERSECTION OF RESEARCH AND ECONOMIC DEVELOPMENT IN GULF RESTORATION AND RECOVERY

- Science-Based Decisions for Restoration and Recovery
- Long-Term Monitoring of Gulf Ecosystems and Economies
- Develop and Validate New Technologies
- Technical Training and Workforce Development
Ocean Observation and Marine Technologies at USM Marine Science
Tracking Deepwater Horizon Oil Spill
UNDERSTANDING REAL-TIME PROCESSES IMPORTANT TO PEOPLE:
USM OCEAN WEATHER LAB
Observing and Monitoring
• Fixed (buoys, seafloor, shore-based)
• Mobile (ships, planes, unmanned)

Habitat and Seafloor Mapping
• Unmanned & manned

Modeling and Forecasting
• Coastal circulation
• Ecosystems

Visualization and Data Distribution

Advanced Marine Technologies
## Collaborative Opportunities

### Industry
- Optech/USACE
- Huntley-Raleigh Biopetroleum, Royal Dutch Shell Cellana
- Liquid Robotics, Inc.
- SailDrone, Inc.
- Ocean Technologies, LLC
- Exocetus
- Shell Oil
- Lockheed-Martin

### Fed/State
- NASA
- Navy (NAVO, NRL)
- USACE
- NOAA: NDBC, NMFS, NCDDC
- USGS
- USEPA
- GOMA
- MS Dept. Marine Res.
- MS Dept. Env. Quality
- MSET

### Academic
- Center for Gulf Studies
  USM, UM, MSU, JSU
- NIUST
  USM, UM
- NGI
  MSU, USM, LSU, FSU, DI Sea Lab
- WHOI
- Gulf of Mexico Univ Research Collaborative
MARINE TECHNOLOGIES ECONOMIC FORUM

Spotlight on the Economic Potential of Marine Technologies along the Gulf Coast
BUILDING ‘BLUE TECH’ IN MISSISSIPPI

✓ Establish a formal marine technology industry cluster
  Innovation, Collaboration, Workforce Development

✓ Leveraging
  Academic and Industry Partnerships to promote Innovation
  Collaboration with Federal, State and Local Stakeholders
  Engagement with Community Colleges promotes Workforce Development

✓ Emphasize the strong existing industry base

✓ Apply resources strategically to create opportunities and build an attractor for new tech-based industry

✓ Rebuild the R&D capacity around southern Mississippi

✓ Wise economic development for the coast; dovetails with long-term Gulf restoration