The University of Texas at Austin Marine Science Institute
Port Aransas

UTMSI Discovery Starts Here
marine research | education | public outreach
77 Acre Campus on two sites:
Main Campus on Channel View Dr. & Cotter St.
and Fisheries and Mariculture Laboratory on Port Street

- ~150,000 sf research laboratories, classrooms, meeting, physical plant and administration space
- Marine Science Education Center
- Bay Education Center in Rockport
- Dormitories (cap. 70)
- Cafeteria
- Marina - R/V Katy & Small Boat Fleet
- Estuarine Research Center HQ of Mission-Aransas National Research Reserve
- Conservation Easement at Fennessey Ranch, Refugio
University of Texas at Austin
College of Natural Sciences

Marine Science Institute at Port Aransas

Education and Research:

- Department of Marine Science
- National Estuarine Research Reserve
- Fisheries & Mariculture Laboratory
- Center for Coastal Ocean Health & Sustainability*

Public Outreach and Ocean Literacy:

- Marine Science Education Center
- Estuary Explorium
- Bay Education Center at Rockport
- Fennessey Ranch 3300 Acres

Response:

- Marine Animal Rehabilitation Keep & GLO Oiled Wildlife Facility
# Faculty, Students & Staff

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>14</td>
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<tr>
<td>Emeriti</td>
<td>2</td>
</tr>
<tr>
<td>Adjunct</td>
<td>3</td>
</tr>
<tr>
<td>Research Fellows &amp; Associates</td>
<td>14</td>
</tr>
<tr>
<td>Postdoctoral Scholars</td>
<td>8</td>
</tr>
<tr>
<td>Graduate Students (15 MS : 15 PhD)</td>
<td>30</td>
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<tr>
<td>K12 &gt; Adult Marine Educators</td>
<td>12</td>
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~500 Undergraduate students Introduced to Marine Science in Austin

~70 Enroll in undergraduate Marine & Freshwater Science option

10-20 Accepted for Spring Residential Program each year
The University of Texas Marine Science Institute is a center for higher education and research with global reach.

From tropical seas to polar oceans our faculty and students expand our understanding of marine ecosystem structure and function, fisheries, organismal biology, and biogeochemical cycles leading the way to discoveries that define the interdependency of land and sea, civilization and nature, for resources, health and well-being.
UTMSI Research Spans the Globe
Graduate Studies Curriculum

Marine Science is an interdisciplinary field of study which requires an integrated understanding of how biology, physics, chemistry and geology come together to explain the nature of coastal and blue water oceans.
UTMSI  Discovery Starts Here
Faculty Scientists and Future Scientists from the Arctic and Antarctic

Beaufort & Chukchi Seas, Arctic

McMurdo Sound, Antarctica
Discovery Starts Here

to the Gulf of Mexico and Tropic Seas

Cedar Bayou Pass

Gulf of Mexico Wave Glider

Akumal Mexico

Sea of Cortez

Snapper Spawning Aggregation
Climate Change and Upwelling - Current & Future Responses of the California & Benguela Ecosystem
Influence of sea ice on ecosystem shifts in Arctic Seas
Resolving microbial biogeochemical interactions on algal cell surfaces
Dynamics of dissolved inorganic carbon and dissolved oxygen following natural or manmade petroleum carbon release into marine environments
Dispersion Research on Oil: Physics and Plankton Studies (DROPSS II)
Chukchi Sea offshore monitoring in drilling area (COMIDA) Hanna Schoal Ecosystem Study
A long-term seagrass monitoring program for upper Laguna Madre, Padre Island National Seashore
Arctic kelp communities in the Beaufort Sea: Sentinels of long-term change
Animida III Beaufor Sea Ecosystem Study
Tracking long term trends in seagrass cover and condition in Texas Coastal Waters
Inventory of Gulf of Mexico ecosystem indicators using an ecological resilience framework
A seagrass monitoring program for Corpus Christi Bay and the Upper Laguna Madre
ECOHAB: CIGUAHAB: Ciguatera investigations in the greater Caribbean region: ecophysiology, population connectivity, forecasting and toxigenesis
Collaborative Research: Alexandrium Blooms Toxins
REU Site: REU in Subtropical Marine Ecosystems
Cooperative Monitoring for spawning aggregations in the Gulf of Mexico: An Assessment of Existing Information, Data Gaps and Research Priorities
Combining Passive- and Active-Acoustic sampling to assess the effects of boat noise and fishing activities on the distribution, abundance and behavior of spawn
Cooperative Research with recreational anglers to map spawning habitat of spotted sea trout in the Mission- Aransas National Estuarine Research Reserve (MANERR)
Ocean Acidification: Implications for respiratory gas exchange and acid-base balance in estuarine fish
Relationships of effects of cardiac outcomes in fish for validation of ecological risk (RECOVER)
Collaborative Research: Geomagnetic Navigation by Weddell Seals beneath Antarctic ice
Effect of light spectrum and light intensity on growth and survival of red drum larvae through first feeding
Refining pigfish fingerling production for commercial aquaculture: captive spawning, feeding and fingerling production
Increasing Fishing Opportunities and Creating Jobs through Baitfish Aquaculture
Effect of light spectrum and light intensity on growth and survival of red drum larvae through first feeding
Dimensions: Collaborative Research: Taihu Lake, China
Where a river slows: the oscillate freshwater zone
Chemical analysis on liquid biofertilizer samples
Acidification of coastal estuaries due to climate change, episodic nutrient loadings and hypoxia, and ocean acidification
The Arctic Great Rivers Observatory (Arctic-GRO)
Global ocean repeat hydrography, carbon and tracer measurements, 2015-2020
Relative Sea Level Rise habitat Assessment in Aransas Bay
Progesterone regulation of human vascular smooth muscle relaxation through mPR
Ecosystem services integrated assessment within the Mission Aransas Reserve
Ecological Impacts of Oil and Gas Inputs to the Gulf – 2 (ECO GIG-2)
Notable Recent Achievements

• **Prof. Ed Buskey**, Assoc. Chair and Director of GoMRI DROPPS Consortium awarded total of $15 Million to conduct Oil Spill research

• **Prof. Peter Thomas**, HEB Chair & Lichtenstein Foundation Fellow, was honored for “Top 10” *Endocrinology* papers published in the world in 2014

  Identification and characterization of membrane androgen receptors in the ZIP9 zinc transporter subfamily: II. Role of human ZIP9 in testosterone-induced prostate and breast cancer cell apoptosis. *Endocrinology* 155:4250

• **Assoc. Prof. Bryan Black** published twice in *Science*

  Climate change and wind intensification in coastal upwelling ecosystems. *Science* 345:77-80.

• **Asst. Prof. Brett Baker**, Sloan Fellow published landmark study in *Nature Microbiology* on most comprehensive genomic tree of life.

UTMSI Managing Partner
Mission-Aransas National Estuarine Research Reserve
Research | Education | Stewardship | Coastal Training

- NOAA Program managed by the UTMSI
- 185,708 Acres within the boundary – non-regulatory, non-enforcement
- 5 System-wide Monitoring Program Stations
- 1 of 28 in the United States and the only one on the Gulf of Mexico west of the Mississippi
- 3,300 acre Conservation Easement on the Fennessey Ranch & Bay Education Center in Rockport
NERR Discovery Starts Here

- Aboard the R/V Katy
- ARK
- The Estuary Explorium
- Women in Marine Science Program
- Wetlands Education Center
- Rockport Bay Education Center
Mission-Aransas National Estuarine Research Reserve (NERR) System Wide Monitoring Platforms

- Water temperature
- pH
- Salinity
- Dissolved oxygen
- Turbidity
- Water level
- Air temperature
- Wind direction and speed
- Barometric pressure
- Relative humidity

Scientists also take nutrient samples for:
- Ammonium
- Nitrate
- Nitrite
- Ortho-phosphate
- Chlorophyll A

AVAILABLE ON-LINE
www.utmsi.utexas.edu
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