

## Texas Parks and Wildlife Registered Vessel Operator Training and Certification

### *Introduction and Overview*

One of the mainstays of field research at TAMUG is the use of trailered outboard boats. The TAMUG outboard fleet completes several hundred field trips each year throughout the Galveston Bay, its tributaries, and the coastal waters.

Marine science vessel field activities present ever-changing challenges to those who choose to probe, monitor, and collect samples and data from the marine environment. Inherent risks are always present in field activities. Due to the varied nature of marine science field activities, Vessel Operators require training and experience greater than required by the average recreational boater. Recreational boaters typically do not deploy heavy gear, tow nets or dredges, or modify their vessels in order to accomplish a specific mission or purpose.

The success of the University's small boat training program requires that all Vessel Operators be fully trained and competent in these functions. To this end, no faculty member, staff member, or student may operate a TAMUG vessel independently without being certified by the Vessel Operations Manager or his/her designee.

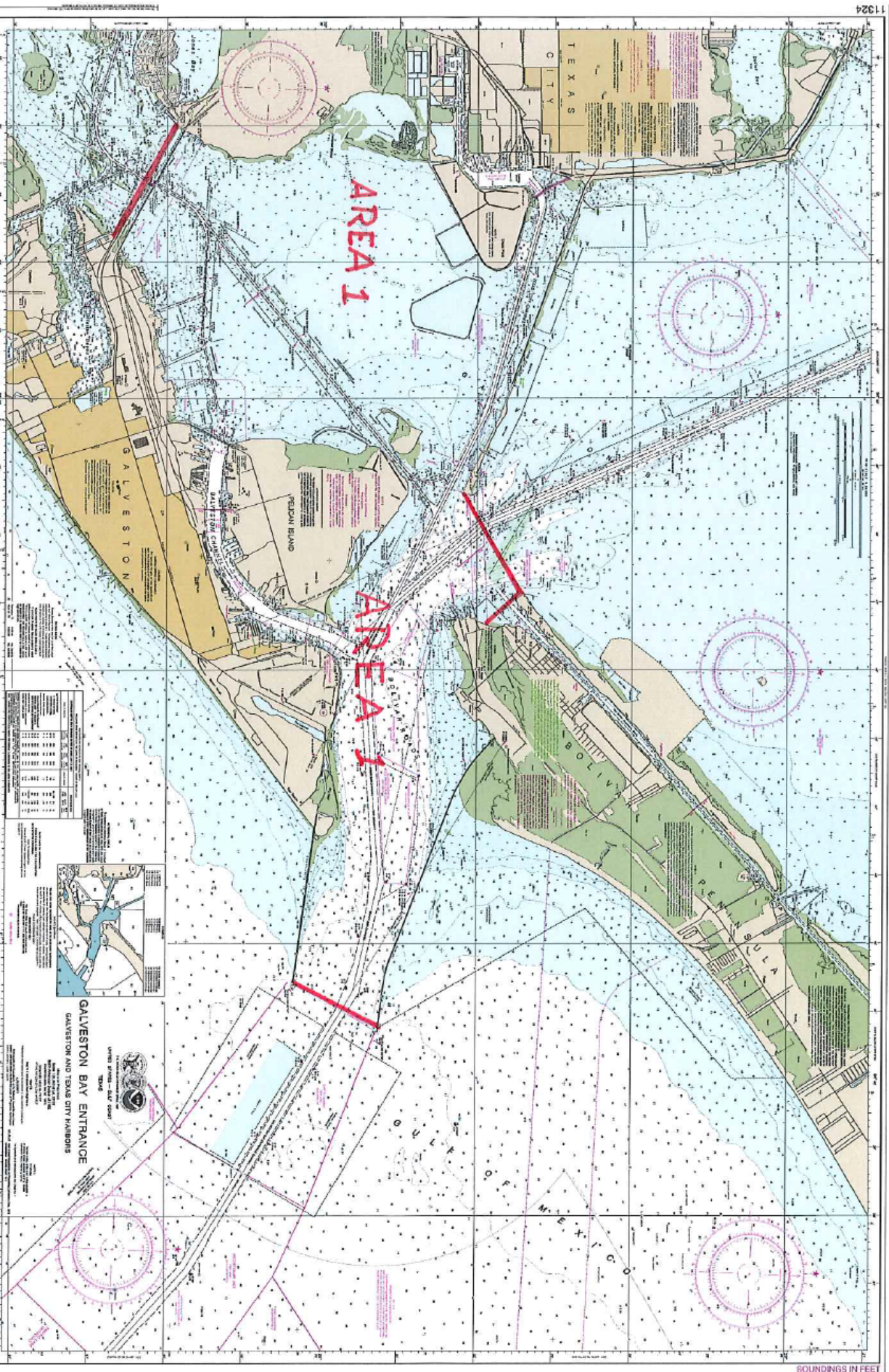
Training and certification as an approved operator requires a level of commitment not only from the potential operator but also from other TAMUG personnel. Thoughtful consideration should be given as to whether an individual will be able to maintain his/her "active" status over an extended period of time before requesting certification. Once certification is granted, an individual must remain current by serving as a Vessel Operator/Master of a vessel a minimum of six trips per year. Any operator not meeting this criterion will be considered inactive and removed from the approved Vessel Operator roster.

The TAMUG operator training and certification program is based on a risk model of operational areas with requisite increasing levels of training required for higher risk areas of operation.

The training and certification program will be adequate for all outboard vessels and based on the following identified risk areas:

- **Area 1:** Our normal operating area as defined as inshore of the Colregs Demarcation line at the Galveston jetties, East of the Galveston Island Causeway, south of a line from the south tip of the Texas City Dike to Bolivar ICW buoy 18, and west of a line intersecting Bolivar buoys 17 and 18.  
**Cert. Requirements:** Current CPR and 1st Aid, TPWD Boat Safely, TAMUG Safe Powerboat Handling Training, Boating experience questionnaire, drug test, Background check (if required), vessel manifest left ashore and submitted to vessel ops, positive EPIRB test.  
**Document Submission Requirements:** Float Plan prior to trip, TripDirect reservation 1 week prior to trip
- **Area 2:** All waters outside area 1 but inshore of the Colregs Demarcation line.  
**Cert. Requirements:** Current CPR and 1st Aid, TPWD Boat Safely, TAMUG Safe Powerboat Handling Training, Boating experience questionnaire, drug test, Background check (if required)  
**Document Submission Requirements:** Float Plan prior to trip, TripDirect reservation and Voyage Plan 1 week prior to trip. Vessel manifest left ashore and submitted to vessel ops, positive EPIRB test.
- **Area 3:** All waters seaward of the Colregs Demarcation line  
**Cert. Requirements:** Current CPR and 1st Aid, TPWD Boat Safely, TAMUG Safe Powerboat Handling Training, Offshore Operator Endorsement, Boating experience questionnaire, drug test, Background check (if required)  
**Document Submission Requirements:** Float Plan prior to trip, TripDirect reservation and Voyage Plan 1 week prior to trip. Vessel manifest left ashore and submitted to vessel ops, positive EPIRB test.

- Trailer training is the responsibility of the department that the operator will be operating for. Part of TAMUG Safe Powerboat Handling Training will be to observe the operator launching and recovering the boat.



UNITED STATES COAST AND GEODETIC SURVEY  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 DEPARTMENT OF COMMERCE

1:50,000

Scale of Horizontal Distances

Scale of Vertical Distances

Chart and Soundings

11324

SOUNDINGS IN FEET

GALVESTON BAY ENTRANCE  
GALVESTON AND TEXAS CITY HARBORS

11324

## ***TPWD Boating Safety Course***

This course is a free online course that is a prerequisite for the TAMUG Safe Powerboat Certification. It is required by state law that any boater born after 08-31-1993 must pass this course

Visit [www.tpwd.state.tx.us/boat/](http://www.tpwd.state.tx.us/boat/) for more information or contact the state boating education office at (800)792-1112

To register and complete the course please use the following link <http://www.boatus.org/texas/>

The BoatUS Foundation's Texas Boating course consists of 6 lessons and a Final Exam. Each lesson has a 10-question quiz at the end to test your knowledge. The Final exam is 75 questions and you must pass with a score of 80% or better.

## ***TAMUG Safe Powerboat Certification Training***

All prospective TAMUG certified operators will be required to pass the TAMUG Safe Powerboat Training Course prior to certification and as re-certification or remedial training as directed

The Training will be offered three times a year the Thursday and Friday before the Fall and Spring Semester starts (weather permitting) and the Thursday and Friday before May graduation (weather permitting) The cost per operator for books and materials is \$75 per person (min 1 person).

Should an operator need immediate training outside of the three classes offered per year then then cost will be \$400 per person (min 1 person).

## **TAMUG Safe Powerboat Certification Training**

### **DAY 1 – SESSION NUMBER 1**

**Daily Goal:** Students Learn Safe Powerboat Handling Standards (Practical Skills 1-3, 4-6, 8- 18, 26, 31-36; Knowledge 1, 4-8, 10-11, 16-18, 19) and NASBLA Standards (1.1-1.2, 2.1-2.9, 3.1, 3.7, 4.1-4.3, 5.1, 5.4-5.8, R1, R2, R3)

**Hours:** 8 \_\_\_\_\_

**Equipment:** Powerboats

Mooring Buoy

6 Buoys with Ground Tackle

**Homework**

**Assignments:** Start Powerboating Right! pages 1-57, 71-77, 82-87, 93-94, 101-106, 120-124, 143-147, 156-157

[www.uspowerboating.com](http://www.uspowerboating.com)

**Session No. 1 Out of: 2**

<b>TIME</b>	<b>ACTIVITY</b>	<b>METHOD</b>
<b>0800</b>	<b>GROUP INTRODUCTIONS (Team Building) Lesson Plan (LP) - 1</b>	<b>G</b>
<b>0820</b>	<b>COURSE OVERVIEW LP - 2</b>	<b>L</b>
<b>0825</b>	<b>PERSONAL SAFETY LP - 3</b>	
	<b>Life Jackets (PFDs)</b>	
	<b>Types</b>	<b>L</b>

	<b>Put on and adjust</b>	<b>D/G</b>
	<b>How and when to wear</b>	<b>L</b>
	<b>Care and maintenance</b>	<b>L</b>
	<b>When required</b>	
<b>0840</b>	<b>SITE SURVEY LP - 4</b>	<b>G</b>
	<b>Weather and Water</b>	
	<b>Wind direction indicators</b>	<b>L/G</b>
	<b>Thunderstorms</b>	<b>L/G</b>
	<b>Tides and currents</b>	<b>L/G</b>
	<b>Local Site Hazards</b>	<b>L/G</b>
<b>0910</b>	<b>BREAK</b>	
<b>0920</b>	<b>ENGINE SYSTEMS AND EQUIPMENT REQUIREMENTS LP - 5</b>	
	<b>Electrical Systems and Troubleshooting</b>	<b>L/D/SS</b>
	<b>Fuel and Lubrication</b>	<b>L/D/SS</b>
	<b>Fueling Procedures and Gasoline Dangers</b>	<b>L/D/SS</b>
	<b>Dangers &amp; Prevention of Carbon Monoxide Poisoning</b>	<b>L/SS</b>
	<b>Engine Controls and Steering</b>	<b>D/SS</b>
	<b>Propeller and Lower Unit</b>	<b>L/D/SS</b>
	<b>Propeller Awareness &amp; Strikes</b>	<b>L/D/SS</b>
	<b>Capacity and Registration</b>	<b>L/D/SS</b>
	<b>Required Equipment</b>	<b>L/D/SS</b>
<b>1000</b>	<b>DOCKSIDE CONTROL FAMILIARITY (Secured Maneuvers) LP - 6</b>	<b>D/G</b>
	<b>Proper boarding procedure</b>	<b>G</b>
	<b>All start and stop engine</b>	<b>G</b>
	<b>Practice shift and throttle coordination</b>	<b>G</b>
<b>1030</b>	<b>INSTRUCTOR DOCKSIDE DEMONSTRATIONS LP - 7</b>	
	<b>Leaving a dock</b>	<b>D/Dist</b>
	<b>Minimum Control Speed Using Intermittent Power</b>	<b>D/Dist</b>
	<b>Docking</b>	<b>D/Dist</b>
<b>1045</b>	<b>ON-THE-WATER DRILLS LP - 8</b>	
	<b>Leave the Dock</b>	<b>OTW/Dist</b>

	<b>Follow the Leader to Training Area</b>	<b>OTW/Dist</b>
	<b>Minimum Control Speed Drill</b>	<b>OTW/Dist</b>
	<b>Rubber Docking from Windward and Leeward</b>	<b>OTW/Dist</b>
<b>1200</b>	<b>MARLINSPIKE LP - 9</b>	
	<b>Cleat Hitch</b>	<b>P/G/Dist</b>
	<b>Coil and Heave a Line</b>	<b>P/G/Dist</b>
	<b>Bowline</b>	<b>P/G/Dist</b>
	<b>Clove hitch</b>	<b>P/G/Dist</b>
	<b>Round Turn and Two Half-hitches</b>	<b>P/G/Dist</b>
	<b>Sheet Bend</b>	<b>P/G/Dist</b>
<b>1230</b>	<b>LUNCH</b>	
<b>1300</b>	<b>AIDS TO NAVIGATION (ATONS) LP - 10</b>	
	<b>Types of Navigation Aids</b>	<b>Dist/IR</b>
	<b>Local Notices to Mariners</b>	<b>L/D</b>
	<b>Local Area Chart</b>	<b>D/G</b>
	<b>Local Navigation Hazards</b>	<b>D/G</b>
<b>1320</b>	<b>PRE-DRILL BRIEF LP - 11</b>	
	<b>Check Local Weather</b>	<b>G</b>
	<b>File a Float Plan</b>	<b>P</b>
	<b>Pre-Departure and Passenger Communication</b>	<b>L/D</b>
<b>1325</b>	<b>INSTRUCTOR DOCKSIDE DEMONSTRATIONS LP - 12</b>	<b>D/Dist</b>
	<b>Pivot Turn</b>	<b>D/Dist</b>
	<b>Backing Slalom</b>	<b>D/Dist</b>
	<b>Mooring and Anchoring</b>	<b>D</b>
	<b>Tie to Dock Using Proper Lines</b>	<b>D</b>
<b>1350</b>	<b>BREAK</b>	
<b>1400</b>	<b>ON-THE-WATER DRILLS LP - 13</b>	
	<b>Follow-the-Leader to Training Area</b>	<b>OTW</b>
	<b>Minimum Control Speed Using Intermittent Power</b>	<b>OTW/Dist</b>
	<b>Constant Radius Turns &amp; Using Pivot Point as a Guide</b>	<b>OTW</b>
	<b>Pivot Turn</b>	<b>OTW/Dist</b>

	Backing Slalom	OTW
	Slow-Speed Avoidance Turns	OTW
	Approach to a Buoy	OTW
	Holding Position	OTW/Dist
	Rubber Docking from Windward and Leeward	OTW/Dist
	Return and Dock	OTW/Dist
1600	HANDLING AND STORAGE OF BOATS ASHORE LP - 14	G
	Use of Trailer	L/D/G
	Washing Boat/Trailer and Aquatic Nuisance Species	D/G
	Theft Prevention	L/D/G
1630	SECURE FOR THE DAY	

L = Lecture, D = Demonstration, P = Practice, R = Review, T=Test, DB = Debrief, G = Group Activity, Dist = Distance Learning (Web Site), IR = Instructor Review, OTW = On The Water, SS = Self Study, LP = Lesson Plan

## **DAY 2 – SESSION NUMBER 2**

**Daily Goal:** Students Learn Remaining Safe Powerboat Handling Standards (Practical Skills 20-21, 23-25, 27-29, 32; Knowledge 9-10, 12-13) and NASBLA Standards (2.10, 5.2–5.3, 6.1–6.5, 7.1–7.5, 8.1–8.2; R4)

**Hours:** 8

**Equipment:** Powerboats  
6 Buoys and Ground Tackle PIW Simulators

### **Homework**

**Assignments:** *Start Powerboating Right!* pages 60-62, 87-92, 94-96, 107-111, 132, 133-142, 148-154  
[www.uspowerboating.com](http://www.uspowerboating.com)

Session No.  2  Out of:  2

<b>Time</b>	<b>Activity</b>	<b>Method</b>
0800	NAVIGATION RULES AND COLLISION AVOIDANCE LP - 15	Dist/IR
0820	HOW BOATS WORK LP - 16	SS/IR
	Powerboat Types and Characteristics	SS/IR
	Controllable and Uncontrollable Forces	SS/IR
	Turning Characteristics	SS/IR
	Maneuverability Concepts	SS/IR
0840	SAFE BOAT OPERATIONS LP - 17	
	Operator Responsibilities / TAMUG requirements	L
	Alcohol and Controlled Substances	L
0850	BREAK	
0900	EMERGENCY PROCEDURES LP - 18	

	<b>Rendering Assistance</b>	<b>L/SS/IR</b>
	<b>Capsizing Emergencies</b>	<b>L/SS/IR</b>
	<b>Falling Overboard and PIW Recovery</b>	<b>L/SS/IR</b>
	<b>Cold Water Immersion, Hypothermia and Heat Emergencies</b>	<b>L/SS/IR</b>
	<b>Fires</b>	<b>L/SS/IR</b>
	<b>Running Aground</b>	<b>L/SS/IR</b>
	<b>Accident Reports</b>	<b>L/SS/IR</b>
<b>0930</b>	<b>ON-THE-WATER DRILLS BRIEF LP - 19</b>	
	<b>Local Weather Briefing</b>	<b>G</b>
	<b>VHF Radio Procedures</b>	<b>L/G/SS/IR</b>
	<b>Steering a Range Demonstration (Land Drill)</b>	<b>D/G</b>
<b>0945</b>	<b>ON-THE-WATER DRILLS (Stress Radio Procedures) LP - 20</b>	
	<b>Instructor Demonstration of PIW Recovery</b>	<b>D</b>
	<b>Follow-the-Leader to Training Area</b>	<b>OTW</b>
	<b>Steering a Range</b>	<b>OTW</b>
	<b>Constant Bearing and Collision Avoidance Practice</b>	<b>OTW</b>
	<b>PIW Recovery</b>	<b>OTW</b>
	<b>Return and Dock</b>	<b>OTW</b>
<b>1130</b>	<b>MARINE ENVIRONMENT LP - 21</b>	
	<b>Laws and Regulations</b>	<b>L</b>
	<b>Human Waste Disposal</b>	<b>L</b>
	<b>Toxic Substance Disposal</b>	<b>L</b>
<b>1140</b>	<b>LUNCH (Optional Review)</b>	
<b>1215</b>	<b>ON-THE-WATER DRILLS BRIEF LP - 22</b>	
	<b>Local Weather Briefing</b>	<b>G</b>
	<b>Distress Signals</b>	<b>D</b>
	<b>High-Speed Maneuvering Concepts</b>	<b>L</b>
<b>1230</b>	<b>ON THE WATER (Stress Proper Radio Procedures) LP - 23</b>	
	<b>Instructor Demonstration of Towing Astern</b>	<b>D</b>
	<b>High-Speed Turns</b>	<b>OTW</b>
	<b>High-Speed Stops</b>	<b>OTW</b>
	<b>Each Boat Tow and Be Towed</b>	<b>OTW</b>
	<b>Dock and Secure Boats</b>	<b>OTW</b>

1445	<b>BREAK</b>	
1500	<b>Fire Extinguisher and Flare Practicum</b>	<b>L/R</b>
1545	<b>Break</b>	<b>L/R</b>
1600	<b>Final Exam and Oral Examination Board</b>	<b>T/DB</b>
1730	<b>SECURE</b>	

**L = Lecture, D = Demonstration, P = Practice, R = Review, T=Test, DB = Debrief, G = Group Activity, Dist = Distance Learning (Web Site), IR = Instructor Review, OTW = On The Water, SS = Self Study, LP = Lesson Plan**



## ***TAMUG Offshore Operator Endorsement***

It is required that Basic Powerboat courses and examinations be completed prior to sitting for this endorsement.

Course fee \$40 (min 1 person)

One day course in the classroom; A two week notice is required to schedule the course.

### **OFFSHORE CRUISING**

#### **LESSON PLAN**

<b>TIME</b>	<b>ACTIVITY</b>	<b>METHOD</b>
<b>0800</b>	INTRODUCTION TO OFFSHORE CRUISING	L,D
<b>0815</b>	GROUP INTRODUCTIONS/TEAM BUILDING EXERCISE	L,D
<b>0900</b>	NAVRULES REFRESHER	L,D,
<b>1000</b>	OVERVIEW OF NAVIGATION EQUIPMENT GPS RADAR EPIRB	L,D
	HOW TO LAY TRACKLINES FOR NAVIGATION	L,D
	OVERVIEW OF OFFSHORE BOUYS MO A RACON BOUYS and Weather Bouys	L,D
	TIME SPEED DISTANCE	L,D
<b>1200</b>	<b>LUNCH</b>	
<b>1230</b>	HOW TO OPERATE IN FOLLOWING AND HEAD SEAS	L,D
<b>1245</b>	EFFECTS OF AN EBB AND A FLOOD ON AN INLET	L,D
<b>1300</b>	HOW TO AVOID SEVERE WEATHER AND IMPORTANCE OF SAFEHAVEN	L,D
<b>1330</b>	DAMAGE CONTROL FOR FLOODING FIRE	L,D
<b>1345</b>	ANCHORING IN DEEP WATER	L,D
<b>1400</b>	RISK VS GAIN WITH OPERATIONS GAR MODELS	L,D
<b>1420</b>	KNOWING THE OPERATIONAL LIMITS OF YOUR VESSEL	L,D
<b>1440</b>	IMPORTANCE OF CREW FATIGUE STANDARDS	L,D
<b>1540</b>	BASIC FIRST AID FOR SEASICKNESS, HEAT EXHUSTION AND HYPOTHERMIA	L
<b>1640</b>	<b>TEST 25 QUESTIONS</b>	T

**L = Lecture, D = Demonstration, T=Test**

## ***Initial Evaluation and Certification***

Prospective operators must successfully pass the TAMUG safe powerboat certification training and test. All paperwork must be completed, submitted, and reviewed prior to the Oral Examination Board.

### ***Oral Examination Board***

A. The purpose of an oral board for prospective vessel operators is to ensure that the individual has a strong knowledge of how to operate a vessel safely and within the guidelines of TAMUG policy.

B. The Oral Board Members will be comprised of, at a minimum, two Vessel Operations Captains and one currently certified Vessel Operator for a total of at least three people.

C. The Board members will question the prospective vessel operator for no more than one hour to ascertain whether or not the individual has the maturity, confidence, and knowledge to operate a vessel safely and within the rules and procedures set forth by the Federal, State, and University laws and procedures.

D. Questions directed to the prospective vessel operator will cover the categories of:

1. Incident reporting procedures;
2. Practical application of Navigation Rules of the Road;
3. Required TAMUG forms, reports, and logs;
4. Identifying risks and ways to mitigate it per the Operations Safety and Procedures Manual;
5. Responsibilities of a vessel operator under state and federal law;
6. Launching and recovering boats on trailers and, trailer towing;

E. The Oral Board members will come to a conclusion within twenty-four hours about the abilities of the prospective operator and make recommendations to the MESSO Executive Director or his representative. At that point, a letter will be drafted to the prospective operator if the individual requires more training and the topics that were lacking or that the individual is certified to operate specific TAMUG small boats.

F. The signed letter from the MESSO Executive Director or his representative will be given to the individual and copies filed electronically and in the operator's files maintained by Vessel Operations Training and Certification Manager.

G. The newly certified Vessel operator will have a one year probationary status. During this time any deviation from the rules and procedures could result in temporary or permanent suspension to operate TAMUG vessels.

Bank of Board Questions: (Suggested but not limited too)

Who should be notified if an incident occurs aboard a TAMUG vessel?

What constitutes an incident that requires reporting?

Where can you find the forms and procedures for incident reporting?

What incidents need to be reported to the USCG and what time frame do you have to make the report?

What steps do you take the moment after running a boat aground?

What steps do you take if there is an injury onboard the boat?

What steps should be taken administratively before an operator takes a boat out of the boat basin?

What are different ways to mitigate the risk of grounding a vessel required to operate in a shallow area?

What are the weather parameters for operating a TAMUG small boat?

What are adverse weather exemptions and what are they for?

Who can grant permission for a trip to continue after adverse weather is reported?

What radio channel is for bridge to bridge communication?

What radio channel is for international hailing and distress?

What four radio channels are USCG working channels?

When does TAMUG require life jackets to be worn?

What are some good resources to look at weather/ marine forecasts?

What forms are you required to have onboard when underway?

When must navigation lights be turned on?

A loaded cargo ship in the Houston channel northbound for Houston is to your left as you are aboard Bateau westbound from Bolivar to Galveston Channel and a risk of collision exists. Who has the right of way?

### ***Certification of Personnel with Masters License from the USCG***

Any person who comes with or has obtained their USCG Master of Uninspected Passenger Vessels license or higher must provide Vessel Operations with a copy of their license for verification. In order to be certified for independent use of the vessel you must pass a checkout ride accomplishing the skills listed in on-the-water boat practicum. If you fail to complete the checkout ride successfully then you must start at the beginning of the training program for unlicensed operators.

### ***Suspension/Recertification/Upgrade***

1. Vessel Operators will have their certification suspended/revoked following an incident involving the unsafe operations of a vessel or operation in a manner that results in property damage or personal injury, pending review by the MESSO Executive Director and the Vessel Operations Safety Officer or designated review board.
2. In the event a certified Vessel Operator has had his/her motor vehicle driver's license suspended/revoked, certification to serve as a Vessel Operator/Master of TAMUG vessels will also be suspended/revoked.
3. MESSO Executive Director may suspend/revoke certification for cause.
4. Recertification is required for a Vessel Operator/Master who does not operate a vessel for at least 6 trips during the 12-month period since their last certification.
5. In the event the operator has their mariner license expire/ revoked/ suspended... example – USCG MMD license expires, then their operator status would be suspended until the license is revalidated.