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Florida Tech is a private university devoted to the advancement of technology. Florida Tech was founded in 1958 to train professionals working in the space program. Florida Tech is committed to providing quality education, furthering knowledge through applied research.

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AUV POWERED GLIDER
Florida Tech D.M.E.S.

This new generation AUV powered glider offers new abilities never seen before in underwater gliders. With long mission durations the AUV powered glider will be able to conduct detailed scientific research at depths and parts of the ocean never before studied. The versatility of the glider makes it ideal for researchers of all fields.
The above 3D renderings are of the overall layout of the AUV glider. As shown in the illustrations we plan for two forward vertical thrusters and two main forward thrusters. We plan on using the aileron in the aft to ascend and descend as well as to bank port and starboard.

The two renderings also show the two main instrument spheres located in the center of the forward section. Since some of the sensors will require the glider to stay as perfectly level as possible, the ailerons main job will be to keep the glider level.

The central area of the main section is dedicated to the collection of biological specimens. It uses the shape of the forward section to funnel the specimens into a central net where a high-res digital camera documents them before releasing them. The forward collection containers are designed to take both water and biological samples up to the surface for further study in a laboratory environment.

**The Glider:**

This glider will be one of the first in the generation of autonomous powered gliders. This glider is designed to be capable of operating a wide variety of scientific missions at a variety of locations and depths all over the ocean. The control system will allow the user to customize the mission and have the glider to make stops at multiple depths or multiple areas to allow for more useful data collection. The instruments the glider will be capable of carrying benefit as many researchers from numerous fields allowing them to do anything from collecting water samples and biological specimens to mapping the sea floor in detail to analyzing the chemical make up of the water flows. These instruments range from cameras to record images of sea life, sonar to map the floor, hydrophones to record the noises of sea life, sensors to determine the state of the sea water, and instruments to measure the various components of the sea water. The glider’s ability to operate at a variety of depths, locations for a prolonged period of time and with either a broad or specific instrument package will allow the glider to be widely used as a standard for ocean exploration.

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<th>AUV Functionality</th>
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