

Underwater Robotics

Agenda

This course is a basic introduction to the field of Remotely Operated Vehicles (ROV's). ROV's are used in a variety of fields including marine research, police work and oil drilling. In this course you will build a small ROV using a PVC frame and you will have the chance to "fly" them in the water.

Introduction:

What is the MATE Center?
How is HCC involved?
What is an ROV?
How can I use this in my classroom?

ROV's:

The technology and the uses of these underwater robots

Competitions:

MATE Center & HCC sponsored Florida Regional Competition
MATE Center National Competition
Short video from MATE

Build your own ROV:

The basics of vehicle design including simple physics, basic electrical wiring and structure design to suit the mission.
Build an ROV (ROV in a bag, modeled after Kim Swann at MBAq)

Please note: We will spend just a short time on the actual lecture. This program is designed to be a hands-on, ask as you go type of program. The participants will be using 1" PVC pipe, 12 Volt motors, insulating foam flotation and their imagination to build a simple, yet fully functional ROV that can be operated in a "kiddie" pool. It is an effective introduction to the technology of ROV's and is designed to allow teachers to replicate the program for a minimal cost as well as to peak the interest of those teachers who may wish to advance their knowledge of ROV's. Those wishing to continue to develop their knowledge of ROV's will be given information on how to attend a MATE workshop, participate in the Regional Competition and purchase or view the text(s) that can be used in the classroom to include ROV technology as a larger part of the science curriculum.