

## **Intermediate Course Description**

The MATE ROV Institute will provide a forum for educators, especially those interested in participating in future MATE/Marine Technology Society's (MTS) ROV Committee Student ROV Competitions, to:

- Acquire the knowledge and skills needed to implement ROV design and building curriculum in their classrooms.
- Gain exposure to and an understanding of the type of work that ROV technicians do and the technologies they use.
- Learn about the many career opportunities available in the marine technology field.
- Provide opportunities to meet ROV pilots and technicians to gain a better appreciation of the type of work these professionals do and the technologies they use.
- Repurpose their current electronics education to meet the needs of the marine technology industry.
- Create additional participatory activities in their classrooms that align with industry needs.

### **During the ROV institute participants will:**

- Build a small-scale, fully functional ROV that can be replicated with students.
- Build and use environmental sensors on the ROV.
- Acquire the knowledge, skills, and resources to effectively mentor students in designing and building an ROV to participate in future MATE/MTS ROV Committee competitions.
- Learn how to use a BASIC Stamp to program their ROVs to use more advanced motor controls and sensors. Learn how to build and use an environmental sensor.
- Visit and interact with engineers, ROV pilots, and marine technicians to understand the work they do and the technologies they use.
- Make connections with educators with similar interests and share "best practices" in teaching and instruction.
- Gain additional focus on electronics engineering and introduce workforce skills desirable to employers.

### **Workshop participants should be:**

- A current faculty member at a community college, university, or technical college.
- Willing to return to your institution and either start an ROV course or club or integrate ROV technology into your current marine science, technology, engineering, or electronics courses.
- Willing to share with the MATE Center what you have accomplished as a result of the workshop. This could be adapting lessons from the workshop to your region, adding tasks/skills to the lessons, or developing new courses and new programs.