

# Underwater Robotics & Engineering Design

MATE Center and Monterey Bay National Marine Sanctuary



Design \* Innovate \* Integrate



Marine Advanced Technology Education (MATE) Center in collaboration with Monterey Bay National Marine Sanctuary is providing this exciting offering for 5th-12th grade educators!

## Using MATE Center materials:

- \* Understand how ROVs (underwater robots) are designed with a mission in mind.
- \* Learn how ROVs are used in Monterey Bay and industry.
- \* Engage in engineering design, building and testing of ROVs.
- \* Develop an understanding of buoyancy, hydrodynamics, forces, energy, wiring, electrical circuitry, soldering, and control systems.
- \* Integrate ROVS into a class or club.



## Date:

January 19, 2019  
Saturday

## Time:

9:00 AM - 4:00 PM  
Lunch will be provided

## Place:

**Sanctuary  
Exploration Center**  
35 Pacific Ave.  
Santa Cruz



## Benefits:

- \* Build the skills and confidence you need to teach engineering design of ROVs to students.
- \* Receive a \$200 ROV kit, instruction and lessons.
- \* Enter the MATE ROV Competition or use the ROV for scientific investigations.

Enroll today at: [www.marinetech.org/workshops](http://www.marinetech.org/workshops) (\$200 kit fee)

For more information on the MATE Center, underwater robotics curriculum, ROV kits, mission ideas and ROV competitions please go to:

[www.marinetech.org](http://www.marinetech.org) and [www.seamate.org](http://www.seamate.org)

Questions? – Contact Matt Gardner [mgardner@marinetech.org](mailto:mgardner@marinetech.org)

*The MATE Center was established with funding from the National Science Foundation in 1997.*

*MATE's mission is to use marine technology to inspire and challenge students to learn and creatively apply STEM to solving real-world problems in a way that strengthens critical thinking, collaboration, entrepreneurship, and innovation.*

