robosub

POWERED BY robonation

STORM RESPONSE
ROBONATION 2026

2026 ROBOSUB COMPETITION

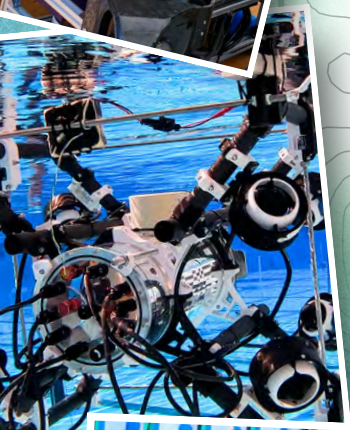
JULY 11-16, 2026 | WOOLLETT AQUATICS CENTER
IRVINE, CALIFORNIA, USA

WHAT IS ROBOSUB?

RoboSub is an international competition that invites participants to tackle simplified versions of challenges facing the underwater maritime industry. Students design, build, and compete with autonomous underwater vehicles (AUVs) in a series of tasks that challenge their engineering skills and problem-solving abilities. Each team's AUV must complete complex missions simulating real-world underwater scenarios.

WHAT IS ROBONATION?

RoboNation is a nonprofit organization dedicated to providing hands-on educational experiences for students through nine international competition programs, engaging over 250,000 students annually.



DISCOVER MORE

on our website & socials!

robosub.org **@robonation**

TEAMS OF 2026

58 TEAMS

11 NEW TEAMS

6 TASKS

9 COUNTRIES
18 U.S. STATES

BANGLADESH

Bangladesh RoboSpace Consortium
Bangladesh University of Engineering and Technology
BRAC University
Tech Autocrats

BRAZIL

Universidade de Brasília

CANADA

École de Technologie Supérieure
Université de Sherbrooke
Université du Québec à Trois-Rivières
University of Alberta
University of British Columbia
University of British Columbia Okanagan
University of Victoria

INDIA

Indian Institute of Technology Bombay
Manipal Institute of Technology, Bengaluru

MEXICO

Tecnológico de Monterrey

POLAND

University of Warsaw &
Warsaw University of Technology

SINGAPORE

Nanyang Technological University
National University of Singapore

TURKIYE

Istanbul Technical University
Konya Technical University
Middle East Technical University

UNITED STATES OF AMERICA

Advancing Science Technology and Art
Amador Valley High School
Arizona State University | Firewheel STEM Institute
California State University, Los Angeles
Carnegie Mellon University
Cornell University
Duke University
Embry-Riddle Aeronautical University | Autonomous Maritime Robotics Association
Georgia Institute of Technology
Gibson Ek High School
ASME at University of California Los Angeles
Kennesaw State University
Miramar College
Montana State University
New Mexico State University
North Carolina State University
Olympic College
Project Nebula
San Diego State University
South Dakota School of Mines and Technology
Stanford University
Team Simplexity
Texas A&M University
The Ohio State University
Troy High School NJROTC
University of California Berkeley
University of California, Davis
University of Florida
University of Maryland
University of Michigan
University of Missouri, Columbia
University of Rhode Island
University of Southern California
University of Southern Mississippi
Washington State University

STORM RESPONSE robosub 2026

robosub.org

robosub
POWERED BY robonation

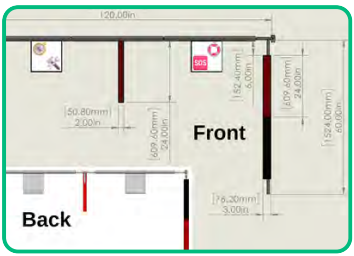
COMPETITION TASKS

STORM RESPONSE
ROBONATION 2026

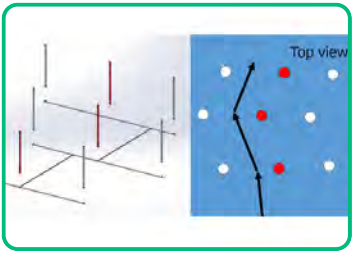
Setting: A storm has caused widespread damage, and vehicles are deployed to support recovery by taking on one of two roles: ***Survey & Repair*** or ***Search & Rescue***. Survey & Repair focuses on assessing and repairing infrastructure, while Search & Rescue works through debris to locate supplies and restore safety and functionality.

1 Begin Assessment

Entry & Exit Gates



Task 1 begins with the AUV* navigating through a floating PVC gate just below the water's surface, marked with red and black corrugated panels and a central divider that defines two possible mission roles. By *choosing a side, the vehicle selects either the* ***Survey & Repair*** *role (🧭/⚒️) or the* ***Search & Rescue*** *role (🛟/SOS) as it passes through at any depth. Additional points can be earned for controlled "style" maneuvers such as 90° orientation changes, rolls etc.*



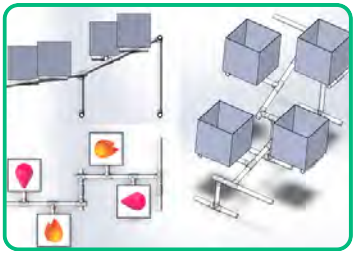
Avoid Debris 2

Slalom

The AUV must navigate a slalom channel blocked by vertical red and white PVC pipes arranged in three sets, earning points for each successfully passed section. Extra points are awarded for staying within the pipe boundary without going above or below it and continuing through the same side chosen at the gate.

3 Recon

Bins



The AUV performs reconnaissance around a 3D PVC pipeline structure with four bins representing either Survey & Repair (🔥) or Search & Rescue (🩸) roles, indicated by an initial light signal. The vehicle earns points by dropping up to two markers into the correct bins based on its assigned role and where the markers come to rest. Additional points are awarded for interacting with up to two magnetic detectors on the pipeline and turning off the lights.

**AUV - Autonomous Underwater Vehicle*

robosub
POWERED BY robonation

COMPETITION TASKS

STORM RESPONSE ROBONATION 2026

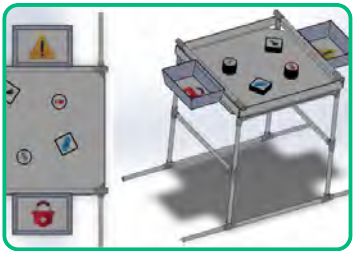
4 Deploy

Torpedoes

The AUV must fire torpedoes at a vertical board marked with **Survey & Repair** (🔥🚒) and **Search & Rescue** (🩸🚑) targets, which includes two differently sized openings. Full points are earned by passing torpedoes through the openings, with higher scores for the smaller opening and greater distances, while partial credit is given if a torpedo that only contact the board.

Restore 5

Octagon



The AUV enters a floating octagon guided by an acoustic pinger and interacts with a central re-supply table containing role-based items for Survey & Repair (🔩, 🔌) and Search& Rescue (💊, 🩹). Points are earned for surfacing inside the octagon, collecting and then correctly placing items into the appropriate baskets. Points are awarded for facing any image hanging from the octagon, with maximum points for facing the correct icon based on the role and items in the basket. Additional points are awarded for matching vehicle rotations to the number of collected items while staying within the octagon.

6 Return Home

End Run

At the end of the run, while underwater, the AUV passes back through the start gate.

WANT THE FULL MISSION BREAKDOWN?

Explore the Team Handbook for complete descriptions of all RoboSub 2026 tasks.

**AUV - Autonomous Underwater Vehicle*

robosub
POWERED BY robonation