

San Diego State University Mechatronics – RoboSub Community & Outreach (RS2026)

The San Diego State University (SDSU) Mechatronics RoboSub team believes that building a strong engineering community is just as important as building a competitive vehicle. As a student-led team, we focus not only on preparing for RoboSub, but also on helping students develop technical skills, creating opportunities for collaboration, and sharing our work with the broader San Diego community.

Throughout the year, we participate in recruitment and outreach events such as Explore SDSU, engineering organization fairs, and campus tabling events. These activities give students the opportunity to learn about autonomous underwater vehicles (AUVs), robotics, electronics, software, and mechanical design, while also showing that students from different backgrounds and experience levels can get involved. We encourage new members to join even if they are completely new to robotics.

Outside of campus, our team participates in public STEM showcase events in the San Diego community, including demonstrations at the Maritime Museum of San Diego. These events give families, students, and visitors the chance to see underwater robotics up close and ask questions about how our systems work. Sharing our vehicle and explaining what goes into designing and testing an AUV helps introduce younger students to engineering and marine technology in a hands-on way.

We also work with other student organizations at SDSU to create technical learning opportunities. In collaboration with clubs such as the Society of Women Engineers (SWE) and other engineering organizations, we host workshops focused on practical skills like soldering and basic electronics. These events help students gain hands-on experience, meet people across disciplines, and become more involved in the engineering community.

Within the team, experienced members mentor newer students in areas such as CAD, machining, manufacturing, electrical integration, software, and system testing. New members complete introductory technical projects to build foundational skills before taking on larger subsystem responsibilities. This structure helps students gain real engineering experience while learning how to work on large interdisciplinary projects.

Our team also stays connected with industry mentors, sponsors, and local professionals in robotics and marine technology. Through mentorship, sponsor support, lab visits, and technical conversations, members are exposed to real-world engineering challenges and career paths in autonomous systems.

Through outreach, mentorship, technical workshops, and public engagement, SDSU Mechatronics works to strengthen both the university engineering community and interest in marine robotics across San Diego.