

Human Powered Submarine at UCSD Constitution

1. NAME OF STUDENT ORGANIZATION

The organization shall be called Human Powered Submarine at UCSD.

2. STATEMENT OF PURPOSE

- a. The goal of Human Powered Submarine (here on referred to as HPS) is to design and build a human-powered submarine for competition with other universities to develop hands-on engineering skills not easily acquired in the classroom environment. We strive to develop engineering intuition, team communication, and critical thinking in all members in order to prepare a new generation of engineers for their careers.
- b. HPS promotes exploration of the ocean by facilitating interaction with maritime professionals and inspiring young students to seek a greater understanding of aquatic engineering.
- c. Members will receive an advanced understanding of technical and social skills, which will become important in the fields they choose to pursue. Members will also find a welcoming, supportive, and collaborative community.

3. NONPROFIT STATEMENT

Human Powered Submarine at UCSD is a non-profit student organization.

4. REQUIREMENTS FOR MEMBERSHIP

- a. UC San Diego undergraduates and graduates are eligible for membership.
- b. There are no dues or fees required to join HPS.
- c. One becomes a member by attending at least 1 workday and show an active interested in learning. Prior experience is not required to join the team.
- d. If a plurality of the leadership decides that a member's performance is below expectations for the organization, and that the member is not making an effort to improve, then the member may be asked to leave the organization
- e. Team members are identified by joining our Slack channel for team updates and by regular attendance of workdays and GBMs.

5. FREQUENCY OF ORGANIZATION MEETINGS

- a. Workday meetings will be held once every week on Saturdays. GBMs will be held approximately once a month to go over current progress and future plans.

- b. There is no official requirement of meeting attendance to remain a member, but regular participation is expected. It is up to the discretion of one's team lead to determine their desire to participate on the team.
- c. Minutes will be taken at all GBMs for documentation in a doc that is accessible in a team google drive. All members should have access to the team google drive.

6. QUALIFICATIONS FOR HOLDING OFFICE AND METHODS OF SELECTING AND REPLACING OFFICERS

- a. Only registered UCSD students may hold office in the organization. Only registered UCSD students may vote in elections for the selection of the HPS captain.

The responsibilities of the following officers are not extensive. Let the following points serve as guidelines for responsibilities outlined by the Team Captain yearly.

- b. There are seven (7) officers, as follows:
 - i. Team Captain
 - Administrative:
 - Continue relationships with past sponsors, team advisors, and UC San Diego contacts.
 - Maintain the team email account and regularly respond to inquiries.
 - Maintain the team Slack channel and post regular announcements of team activities.
 - Plan social events for team mixers.
 - Handle registration of EISR or ISR competition
 - Handle other logistical barriers that prevent the team from focusing on the engineering of the submarine.
 - Presentation
 - Prepare and practice marketing and technical presentations for funding requests, outreach events, and recruitment GBMs.
 - Officers
 - The team captain is responsible for the appointment of team leads and officers if a mutual agreement is reached between the captain and the officer.
 - Organize meetings with team Officers for team decisions and progress updates.
 - Delegate subteam-specific budgeting, scheduling, presentations, and technical writing to team Officers.

- ii. Treasurer
 - Maintain and accurate budget and collaborate with other officers for accurate estimates of team funds
 - Manage requests for external and internal sponsors for funding of the team
 - Handle the reimbursement process in a timely manner for all members
- iii. Drivetrain Lead
 - Oversee the design and manufacture of the drivetrain of the submarine
 - Lead team-wide manufacturing endeavors.
 - Establish communication with companies that will assist in sponsoring major components and materials for the drivetrain.
- iv. Hull Lead
 - Properly delegate tasks among the hull team so as to make the most responsible use of team resources, physical, financial, and human
 - Oversee the design and manufacture of the hull of the submarine
 - Lead team-wide manufacturing endeavors.
 - Establish communication with companies that will assist in manufacturing major components and materials for the hull.
- v. Dive Lead
 - Oversee diving certification of new divers.
 - Teaching new divers the procedures and hand signals necessary to prepare and support the submarine in pool tests and competition.
 - Lead underwater operations and logistics.
 - Acquire, manage, and maintain necessary diving equipment.
- vi. Steering/HSI Lead
 - Oversee the design and installation of steering mechanisms for the submarine.
- vii. Electronics Lead
 - Oversee the design and implementation of electronic systems in the submarine
 - Properly delegate tasks among the electronics team so as to make the most responsible use of team resources, physical, financial, and human.

c. Officer election process

i. Team Captain

- During spring quarter, an election to determine team captain is held.
- All members of HPS are given one (1) vote and may vote for their preferred Team Captain candidate.
- Of candidates who are willing to accept the role, the candidate who receives the most votes is officially elected Team Captain

ii. Other officers

- Other officers are appointed by the newly elected Team Captain
- In order to be appointed to a position, the acceptance of the position must be approved by both the appointee and the Team Captain

d. Changing of officers

- i. The prospective officers will begin the transition into their positions directly after their election/appointment.
- ii. This transition will occur after the Team Captain election, over the remainder of spring quarter. The official date the elected Captain becomes the new team Captain is when the sub is returned to UC San Diego from the competition (ISR or EISR). This year, that date is July 21st after EISR is over.
- iii. The prospective officers are to be taught the responsibilities and requirements of their positions by the current officers.

e. Officer ability to alter the constitution

- i. In the future, modification of this Constitution may be necessary. In this case, edits to the Constitution are to be made by the officers in tandem with their predecessors
- ii. Any edits to the Constitution must be approved by at least a majority of the prospective and current officers.

7. RISK MANAGEMENT

Human Powered Submarine at UCSD is a registered student organization at the University of California, San Diego, but not part of the University itself. Human Powered Submarine at UCSD understands that the University does not assume legal liability for the actions of the organization. Members may choose to participate in scuba-diving, handling heavy equipment, working with hazardous chemicals and substances, and traveling internationally.

Human Powered Submarine will provide the opportunity to receive a scuba certification at a discounted cost, which prepares divers for common injuries expected while operating. Staffed UC San Diego machinists and engineers oversee the team when handling machining equipment in the EBU-II machine shop. Trained Industry professionals assist in the handling of carbon fiber and fiberglass composites as well as advise the mold making process. During pool tests, Canyonvista lifeguards oversee all divers and swimmers. Additionally, HPS will provide necessary personal protective equipment (PPE) when scuba-diving, operating heavy equipment, and handling hazardous chemicals and substances.

a. International travel

Human Powered Submarine at UCSD recognizes that the University generally recommends against all international travel by Student Organizations due to the myriad of risks travelers face in foreign countries. Student organizations are discouraged from traveling to foreign countries due to the wide variety of risks involved with foreign travel, and the extensive planning efforts required by the Student Organization's Members to manage those risks. Security risks and health care services vary widely from one country to another, so thorough research on those topics is especially important. International travelers are advised to research US State Department Travel Advisories and the CDC Travel Health site and abide by all recommended alerts and warnings, and procure travel insurance with medical coverage that covers their chosen destination because most USA Health Plans are not valid in foreign countries.

b. Handling hazardous chemicals/material/equipment/machinery

Human Powered Submarine at UCSD recognizes that all student organization activities must be conducted safely, in accordance with all applicable federal, state and local laws. Additionally, Human Powered Submarine at UCSD will abide by UC San Diego requirements for students in labs, including policies for minors in UC laboratories, and ensure members receive safety training regarding the use of chemicals and/or machinery before entering the lab. Members must follow any best practices and lab safety protocols for the use of such chemicals, research equipment or machinery, including the appropriate use of Personal Protective Equipment, and should work under close supervision of those trained in the handling of chemicals/use of research equipment or machinery.

8. COMMUNITY ADVISOR

All faculty advisors are given full membership on the team and are able to participate in all team events.

- **Ruben Ortiz-Torres** - Visual arts faculty member. He is one of the team's primary connections to the visual arts department. He works with the team in a collaboration between arts and engineering. This includes previously painting Vaquita and Santiana, and potentially additional submarines in the future.
- **Thomas Malphus** - Non-staff advisor and friend to the team. He advises team members on mechanical design and fabrication, and occasionally assists with manufacturing. He has been affiliated with the team since 2000.
- **Raymond Seraydarian** - Non-staff advisor and friend to the team. He advises team members on mechanical design and fabrication, and occasionally assists with manufacturing. He has been affiliated with the team since 1998.
- **Janet Becker** - Scripps staff member. Janet will work with the team treasurer to help manage finances, purchases, and reimbursements. She also advises team members on aerodynamic and oceanic design decisions. She also may choose to reach out to her colleges for their expertise in maritime engineering.

9. FINANCIAL MANAGEMENT

- a. HPS will appoint a treasurer to track financial activities. HPS will also communicate regularly with the MAE department to keep track of its financial accounts and handle reimbursements.
- b. Money will be earned through material donations from companies, UC San Diego specific grants, and external sponsors of the team. Money earned will be deposited to the HPS funding account handled by the MAE department.
- c. Since AS is not currently oriented towards funding project teams with competitions outside of the school year, HPS will not be regularly submitting budgets to AS. HPS will contact AS for fundraising help with public events to showcase its work or live product demonstrations.