

The Singapore AUV Challenge 2026

Rulebook

Current Rulebook
version

6.0.0

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Objectives

The goal is for each team to develop an Autonomous Underwater Vehicle (AUV) which can negotiate the tasks put forth under a prescribed time and at the same time, to learn about underwater robotics and have fun in the process.



▲ Figure 1: The SAUVC 2017 Participants.

Structure of the Team

A team may consist of up to **11 participants**.

Student Category

- Any **faculty advisors** count towards the maximum of 11 participants.
- At least half of the participants must be full-time students at the time of registration.

Open Category

- If you don't meet the student category requirements, you can still participate in the open category.



The Singapore AUV Challenge

IEEE OES Singapore Chapter



▲ Figure 2: One of the teams with faculty advisors from the 2017 Competition.

Video Submission

All teams have to submit a video of their AUV prior to the competition. The video **HAS TO**

- be **maximum 30 seconds** long,
- be submitted before 23:59 4th January, 2025, [Anywhere On Earth](#),
- showcase the tether-less operation of AUV swimming underwater for at least **10 seconds**.
- show clearly that someone pressing the [Kill Switch](#) should stop all thrusters immediately.

Note: The video will not be played beyond 30 seconds, so whatever you want to showcase, must be done strictly within the 30 seconds.

Donts: For your video, DO NOT

- put the most important parts of the video after 30 seconds (safety, control etc.), as

it will not be reviewed, without exception.

- you do not need to showcase an intro of team structure, university details etc - this will only take up valuable time in your video.

Videos will be reviewed by the organizing committee and **35 teams with the best vehicles will be short-listed to attend the competition. The above criteria are the basic necessary criteria, failing which the teams won't be short-listed.**

The organizers reserve the right to publish the video submissions after the competition.

Updates to the Rulebook

The rulebook will be updated in from time to time. The latest version of the rulebook will be available on the [SAUVC website](#). It is the responsibility of the teams to ensure that they are following the latest version of the rulebook.

This is a preliminary version of the rulebook. The final version will be published in the next few months.

Safety

- AUVs must not leak and pollute the pool.
- AUVs must be designed and manufactured as to pose no danger of any kind to anyone or anything at the venue. This includes making sure that thrusters/propeller blades are shrouded.
- AUVs **must have a kill switch** that turns off the vehicle including thrusters, or any other propulsion mechanism.
- The kill switch must be **easily accessible** to a diver. This must be marked in bright color.
- Pressure of any compressed gas used must not exceed **6 bars**.
- AUV must be completely autonomous.
- The use of explosives, fire or hazardous chemicals is prohibited. Certified lithium batteries are allowed.
- If lasers are used, they must be of class 2 or lower. Care must be taken to protect all persons at the venue from harm. Beams must be oriented in such a fashion

that they cannot shine into the eyes of the spectators.



▲ Figure 3: Example a kill switch on an AUV from 2015 Competition.

Others

- The legitimacy of any actions not provided in this rulebook will be subject to discretion of the **Judges**.
- The dimensions, weights, etc. of the field, facilities and equipments stated in this rulebook have a margin of error of $\pm 5\%$ unless otherwise stated. However the dimensions and weights of the AUVs as stated in the rule book are the maximum and cannot be deviated.
- The **Judges** may demand additional explanations on safety issues when the safety of a vehicle is deemed to be in question.

Feedback

If you spot any errors in the rulebook or have queries about the rules, please email rules@sauvc.org or contact us through [our website](#).