UKSEDS COMPETITIONS

OLYMPUS ROVER TRIALS 2026-27

BASIC STREAM

RULE BOOK

OLYMPUS ROVER TRIALS
UKSEDS

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1. ACRONYMS & REFERENCE DOCUMENTS

1.1. Acronyms

Acronym	Description
ECSS	European Cooperation for Space Standardisation
ITT	Invitation To Tender
ORT	Olympus Rover Trials
UKSEDS	UK Students for the Exploration and Development of Space
PDR	Preliminary Design Review
CDR	Critical Design Review
TRR	Test Readiness Review

1.2. Reference Documents

1.2.1. Competition Documents

There are two other documents related to the competition to make a total of **three regulatory documents** this year. The three documents are as follows:

ID	Document	Description
ORT-RB	Rulebook (this document)	Outlines the overall competition rules, funding, team structures and so on - the competition logistics.
ORT-SOW	Statement of Work	Outlines the main deliverables teams shall be expected to deliver - the competition project requirements.
ORT-RS	Requirements Specification	Outlines the technical requirements the rover must be designed to meet

1.2.2. Useful Reference Documents

No.	Document	Description
1	ECSS-M-ST-10C Rev. 1	**Space project management** - Project planning and implementation
2	ECSS-S-ST-00-01C	**Glossary of Terms** - A list of commonly used terms in ECSS documents

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2. Introduction

The Olympus Rover Trials challenges student teams to design, construct and operate a rover for an analogue space mission. Students create a rover concept, trade off performance parameters and pass through a rigorous review process with panels of engineers from the space sector. The competition aims to:

1. Challenge students to perform a complex, systems engineering task of the development of a vehicle to a set of real space mission requirements;
2. Enable students to apply taught technical skills and learn new ones relevant to a job in the space industry in an applicable project environment;
3. Provide students with an opportunity to develop and practise other important and transferable skills, such as teamwork, leadership and project management;
4. Foster interest in the activities of the space sector, especially in space engineering and robotics.

2.1. Scope

This document explains the rules for the Olympus Rover Trial 25/26 competition iteration. It will describe key areas that participants are expected to abide by along with information that participants may find useful for finding and setting up a team.

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3. COMPETITION RULES

3.1. Competition Authority

The ORT rules are issued by UKSEDS annually. Official announcements by UKSEDS should be considered to have the same validity as these rules. UKSEDS reserve the right to alter the rules, clarify ambiguities and disqualify teams at any point from taking part in the competition, for safety reasons or otherwise. Teams that enter agree to comply with the rules, and report ambiguities or mistakes to UKSEDS at rovers@ukseds.org.

3.2. Eligibility and Team Structure

The competition is open to university students and recent graduates who are also UKSEDS members. It has been designed to be carried out as a group project towards a degree, or by a UKSEDS branch team. If you do not fit in either of these categories, please email rovers@ukseds.org to enquire about eligibility. A UKSEDS membership can be applied for at https://ukseds.org/ignition/members/.

There may be a maximum of **10 team members per team**, and **minimum of 2**. The names of the team members must be provided to UKSEDS with any changes reflected in the team monthly report to UKSEDS. There may be an additional limit on the number of attendees to the competition event. Additionally, the work should be demonstrable as being done by the team members, and not academic supervisors or other advisers.

The basic stream of the competition is intended for teams that have not had significant experience in developing a complex system such as a rover. The advanced stream is geared towards more experienced teams who have competed at least once or have completed other similar projects. Teams will be assigned a stream by UKSEDS based on their experience as described at sign up. The following document is for teams competing in the **basic stream**.

Tip: Team Structure

By its nature, robotics is incredibly interdisciplinary. We recommend building a team with students from a number of disciplines. Key disciplines are mechanical engineering, electronic or electrical engineering, computer science (particularly for autonomy) and geology (understanding the properties of the surface).

Standard engineering practices are advised for creating a team structure. It is also recommended that at least one team member takes the role of systems engineer. This role will be critical in defining how different parts of the rover interface with one another. An example team structure is provided in Appendix RB-1.

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Support: Finding Team Members
UKSEDS have an extensive network of contacts at branches and in departments at universities across the country and might be able to help find team members if it is proving to be tricky. Please get in touch with the team contact if you need some support in organising a team.

Support: Team Connect
Designing, building and testing a rover is a multidisciplinary and collaborative exercise. In the real world, these projects are carried out by hundreds or thousands of scientists and engineers, all over the world. If your group does not have all the expertise you think you need, please get in touch with your team contact. We may be able to find another group that has a complimentary skillset at another university for you to collaborate with.

For example:

1. University 1 consists of a group of mechanical and electronic engineers, with very little experience or skills in software development
2. University 2 are a group of computer science students
3. UKSEDS puts university 1 in touch with university 2, who form a team together

3.3. Plagiarism

Teams shall endeavour to use appropriate citations for all work that is not their own. Should any team be found to have plagiarised portions of other bodies of work, UKSEDS reserves the right to penalise or even remove teams from the competition. This is not something that is done lightly but is necessary to ensure the integrity of the competition.

Rovers that reuse significant elements (hardware or software) of previous years entries without any attempt at improvement or enhanced function (as determined at the judges discretion) will be penalised. Reuse without modification or improvement constitutes self–plagiarism and will be treated accordingly.

A detailed description of what is judged as plagiarism and possible consequences are outlined in the UKSEDS Competitions Plagiarism Guidelines.

3.4. Design Requirements

Teams shall comply with all requirements listed in the Requirements Specification (ORT-RS). Teams may choose to comply (or identify and explain areas of non-compliance) with other applicable space standards, such as the ECSS standards. Teams will be informed of changes to the Requirements Specification.

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3.5. Costs and Funding

There is no fee to enter the competition. Teams should source funding for the project themselves, via grants from their universities, student unions or departments or sponsorship. Teams shall keep accurate record of their spending for the project and show proof of spend via receipts from purchase. Any misrepresentation of funds that results in teams saving money shall be considered seriously.

3.6. Test Readiness Review

A mandatory Test Readiness Review will be conducted in late June (refer to Statement of Work). The rovers must clearly demonstrate key functionalities described in the Requirements Specification. If the rovers fail any high priority requirements (e.g. with regard to Safety, Command & Control, Power & Locomotion), they will not be able to progress to the next stage of the competition. Note it is not required for rovers to be fully complete at this stage.

Alongside the TRR submission, there shall be a mandatory submission towards the Public Engagement Award (see Appendix SOW-2)

3.7. Competition Day

The final part of the competition is the test on the competition day. This will be held at RAL Space, Didcot. The date, travel, and accommodation arrangements will be released.

Teams and participants shall adhere to all rules and regulations enforced by UKSEDS, competition day hosts, and partners.

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Prizes

Table RB-3 provides a full description of the prizes available for this year's competition. Prizes also have associated points available to be scored.

Table RB-3: Full List of Prizes

Prize	Description
Best Rover	For the best rover based on the successful completion of the mission objectives (awarded to the team with the most points).
Best Public Engagement	For the team with the best public engagement programme connected to their rover.
Best Innovation Award	To the team with the best innovative engineering solution (decided by the judges).
Best CDR	The highest scoring CDR shall receive this award.
Automation Prize	For the team with the most impressive automation capabilities (assessed by the judges).

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1. Appendix RB-1: Example Team Structure

An example Team structure is provided below. This is not considered the "best" organisation method as teams may find structures that better suit their skills.

- Project Manager
  - Team Organisation
  - Budget Allocation
  - Project Schedule
  - Document Overseeing
- Systems Engineer
  - Interfacing all the different disciplines with one another
  - Top level architecture of the rover
  - Monitoring requirements compliance
- Electronics Lead
  - Top level electronics decisions
- Electronics Engineer
- Mechanical Lead
  - Top level mechanical decisions
- Mechanical Engineer
- Software Lead
  - Top level software decisions
- Software Engineer
- (Public Engagement Lead)
  - (All external communications including to UKSEDS, social media presence etc)

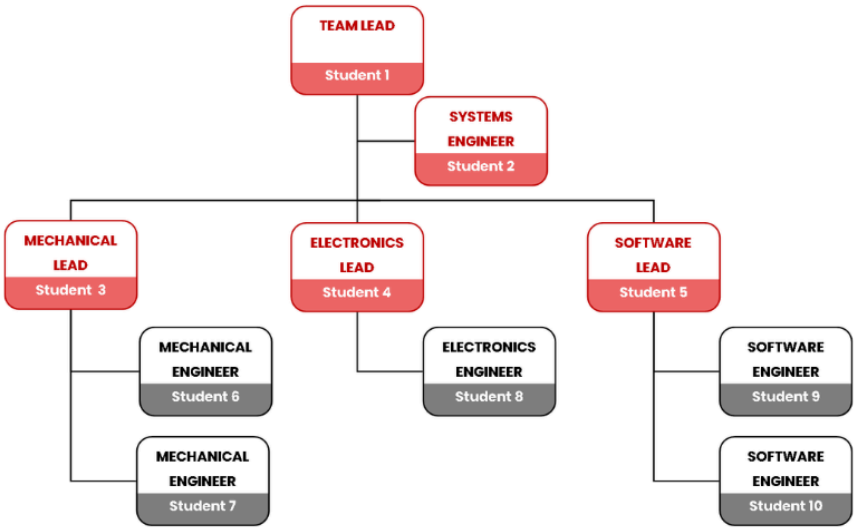

Figure RB-1: Example Team Structure

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