IRoC-U 2024 FAQ's

Q. Can the team members be from different institutes?

A. No, all the team members must be from a same institute. If your university has multiple institutions then, each institution can send one team

Q. What is the eligibility criteria for participation in IRoC-U 2024?

A. All the students pursuing diploma/graduation/post-graduation/research with age less than 30 years as on 23rd August 2023.

Q. How many teams can apply from a college and who is responsible for selecting the team from a college?

A. Only one team shall participate in the event from an Institute. The institute is responsible for selecting one team. The institute can frame a suitable selection criteria. The team needs to obtain signature from the institution stating that only one team is participating in the competition.

Q. Can foreign universities can participate in the challenge?

A. No, the competition is open for Indian students and studying in Indian institutes

Q. Is it mandatory to be student of any institute?

A. Yes, it is mandatory to be pursuing diploma/graduation/post-graduation/research student from any institute

Q. Number of team members required to participate in the event?

A. Team must consist of 10 students from the same Institute to participate in the event.

Q. Can 11th and 12th class students participate in the event?

A. No, the event is open for students pursuing diploma/graduation/post-graduation/research with age less than 30 years as on 23rd August 2023

Q. When will the registration will get closed?

A. Registrations are open. Please visit register tab of the website https://www.ursc.gov.in/IRoC-U2024/index.jsp Registration will be closed on 8:30 pm (IST) 15th Jan 2024.

Q. Where can I register for the event and submit proposal and presentation?

A. All teams must complete the registration process on the website. The registration procedure includes:

1. Team login account creation.

2. Filling out the team details and download auto-generated registration form.
3. Upload duly signed auto-generated form.
4. Upload proposal file in .pdf format (Max. pages:30 and Max. file size: 10 MB) and presentation (Max 15 slides and Max file size: 5 MB).

Q. What is the deadline for submission of the proposal report and presentation?

A. The final proposal report needs to be submitted by 8:30 pm (IST) 15th Jan 2024

Q. Can the proposal report and presentation be edited after submission?

A. Yes, the report and presentation can be edited after submission until deadline i.e. 8:30 pm (IST) 15th Jan 2024.

Q. Is physical prototype required or simulation is sufficient for the quals round?

A. 50 teams shortlisted for quals rounds have to build an prototype hardware for offline test demonstration in specified arena

Q. Does the rover needs to be operated in fully autonomous mode or commanded mode in qual round?

A. The team is required to design for demonstration of performance of the rover waypoint navigation in commanded and autonomous mode.

Q. Are the arena details mentioned absolute for the quals round?

A. For the Quals it is an absolute arena. But for the final round it is a template.

Q. Is hard-coding of sample drop and final parking positions allowed?

A. No, the coordinates for the sample drop and final parking positions must not be hard-coded. Rover should identify the sample container and place the sample in the container in the appropriate orientation.

Q. Will there be any financial assistance provided for the quals round?

A. The organisers shall not provide funding in any form to the teams participating in Quals Round. However, there is no restrictions on the teams obtaining private funding. The teams may carry a logo of size 10 cm x 15 cm of funding the agency during Quals round only

Q. Will the obstacles firmly fixed in the arena?

A. The obstacles will be made from wood and planted firmly in the Arena. The rover traversal over them will not disturb their position

Q. Are COTS (Commercial-Off-The-Shelf) components like Raspberry Pi allowed?

A. Yes, COTS components are allowed but teams are required to build their own rover. Ready-made integrated robotic kits are not allowed.

Q. Can the same rover design be used elsewhere?

A. The rover design arrived by the teams qualifying for the Field round shall not be used by the teams in any other competition without the written consent of the organisers

Q. Is it mandatory for the commanded mode to be pre-coded before the execution of the mission

A. Yes, it should be pre-coded before the start of mission.

Q. Is legged rover allowed?

A. Rover can be either wheeled or legged

Q. How are the craters created?

A. Craters are created by scooping out sand from the arena. These craters will be approximately hemispheres with diameter 200 and 400 mm

Q. Whether Kill switch should be a manual switch?

A. All rovers must be equipped with a "kill switch" placed on the rover's exterior, accessible and visible at all times. This switch must cease any movement by the rover and withdraw all power draw from batteries in case of an emergency

Q. What if we create a rover that even if it falls down it gets back into it's original/working position? Will we still be disqualified?

A. If it can do this without human intervention it won't be considered as disqualification

Q. Will the colours of the sample tube and the container mentioned in the prelims and arena book be the same in the actual arena?

A. Yes

Q. Will the colour of the obstacles will be same as provided in the arena and task details book?

A. No, the obstacles will not have any specific colour in the arena

Q. Since GPS navigation and local navigation is not allowed, is any form of movement/motion capture-based location and navigation allowed??

A. Motion/movement capture systems comes under category of local positioning system, it is not allowed to use local positioning system. Participants have to rely solely on the rover's on-board sensors for navigation purpose.

Q. What do you mean by autonomous mode?

A. Autonomous mode generally involves generating path and command sequence for going forward, backward, left or right on its own, using sensors in closed loop (without human intervention).

Q. What is commanded mode?

A. Commanded mode generally involves generating a priori, the path and command sequence for going forward, backward, left or right on its own, using sensors in open loop (without human intervention).

Q. What is not allowed in commanded mode?

A. What is not allowed is, rover driven by a human seeing the objects, deciding the path and controlling using a joystick or any other similar devices.

Q. Can a 4th-year student graduating in 2024 still participate in our team?

A. Yes

Q. How Qual round would be conducted?

A. Qual round involves testing rover on the arena indicated in Arena and Task Details V1.0. The qual round rules will be published on the website after prelims round selection results.

Q. How Proposal report will be evaluated?

A. The scoring criteria is given in Prelims Rule Book V1.2 Section 4.9.

Q. Is there any template for Proposal report preparation?

A. Yes, the template can be downloaded from the website

Q. Is there any template for Proposal presentation preparation?

A. No. The team can choose the format of the presentation. There can be a maximum of 15 slides. The maximum file size is limited to 5 MB.

Q. Whether the team can consist of fewer than or more than 10 members?

A. No. The team should consist of exactly 10 members

Q. What happens if more than one team apply from an institution?

A. The team needs to obtain signature from the institution stating that only one team is participating in the competition. However, if it is found that more than one team from the same institution have submitted the proposal, none of the teams shall be considered for evaluation.

Q. Why rover needs to have RF link?

A. The RF link is used to communicate with the rover remotely so as to avoid physical connection with rover for programming/reprogramming. And also, the provision of RF communication would be needed for final round.

Q. Is there any fees to be paid for participating in the challenge?

A. There is no payment required to participate in the challenge.

Q. Will the arena be enclosed by walls on all sides?

 A. The edges would probably be made using wooden planks. It would be needed to identify the boundary while sensor mapping of the Arena.

Q. Is mentor considered as a member of the team?

A. No, the team should consist of 10 members excluding the mentor

Q. Is there any arena model for simulations?

A. Yes, the Parasolid model of the arena can the downloaded from the website.