



**CANSAT**

 IRELAND

# Partner Guidelines

## 2023



# CanSat Ireland – Partner Guidelines

## Project Intro

The European Space Agency (ESA) endorses and supports a range of education activities across its Member States. The CanSat Ireland project, aimed at secondary school students, gives students opportunities to learn skills in electronics, sensors, programming/coding, radio telemetry, mechanical design, parachute design, problem solving, teamwork, and communications & outreach.

ESERO Ireland ([www.esero.ie](http://www.esero.ie)) has managed the CanSat Ireland competition since 2012 and currently in conjunction with the National Organiser, MTU Blackrock Castle Observatory (BCO), manages the competition in Ireland.

To-date 8 colleges have participated as third level project partners which have recruited and trained teams as well as managed regional competitions.

The winner of the CanSat Ireland National Competition will represent Ireland in the European CanSat Competition subject to ESA running a European Competition.

This document will describe the agreed role of any project partner which participates in the CanSat Ireland competition.

## Third Level Partners

CanSat Ireland is run regionally in partnership with third level colleges. There are 7 higher level campuses currently involved in CanSat Ireland 2023 competition:

- Technological University of the Shannon: Midlands Midwest, Athlone
- Munster Technological University (Cork)
- South East Technological University Carlow
- Technological University of the Shannon: Midlands Midwest, Moylish (Limerick)
- Technical University of Dublin (Blanchardstown, Tallaght, and former DIT Campuses)
- Munster Technological University (Kerry)
- South East Technological University Waterford

Membership is welcome from any third level college (subject to terms and conditions and budget). All third level partners which participate in the CanSat Ireland project should agree to the terms and responsibilities as set out in the document.

## The Project

The primary role of the colleges is to recruit teams from second level schools, and then to offer the relevant training and support which includes mentoring and liaising with local school teams throughout the competition. This includes facilitating and delivering a number of workshops where the students can become familiar with the various elements of the project.

The CanSat Ireland experience provides the participating teams the opportunity to go through all the phases typical of a real satellite project, from selecting the mission objectives, designing the CanSat, integrating the





components, testing the system, preparing for launch and then analysing the scientific data obtained. Through this process the students:

- Learn by doing
- Get acquainted with the inquiry-based methodology typical of real-life scientific and technical work
- Acquire and/or reinforce senior cycle curricular concepts in STEM subjects
- Understand the importance of coordination and teamwork
- Enhance their communication skills

The third level mentors should assist the teams throughout the project to help the students achieve the goals set out above.

### **Benefits of participating in CanSat Ireland for a third level college**

- Building relationships with secondary schools and their teachers. This in turn gives the teachers knowledge of the college to share with the wider student body.
- Teachers develop relationships with the college lecturers and have contact to college expertise if it's required outside of CanSat Ireland.
- Opportunity to build relationships with local industry which may lead to other projects.
- CanSat Ireland may fulfil a Corporate Social Responsibility for the college with local community.
- Supports awareness of physics in the face of low numbers of physics students/teachers
- There is an opportunity to track long term impact of earlier CanSat Ireland participants, where are they now?
- PR opportunity for the colleges.

### **Benefits to the school and student teams**

- The competition serves as a showcase for the school's teaching competencies
- CanSat Ireland is an interdisciplinary project, bringing subjects that are generally taught in isolation together in a practical and meaningful learning experience
- The project promotes inter-class education, where the CanSat Ireland participants are encouraged to deliver presentations to their younger peers
- Community engagement – Students are encouraged to deliver presentations to local community groups and to engage with local media
- CanSat Ireland offers a real-world teaching environment, bringing classroom theory to a practical application
- Students are exposed to industry standards in the associated skillsets, and get direct feedback from industry leaders/potential employers early in their career development
- Students develop strong communication and presentation skills
- Develops collective problem solving
- Students are given a degree of responsibility and independence
- Students report increased self-confidence and strong leadership skills
- Students find it rewarding to see their work culminating in a launch at a regional/national competitions
- Students report increased proficiency in STEM subjects
- Increased awareness of space industry careers in Ireland





- Increased receptiveness to pursuing STEM courses/careers
- Students may receive mentorship from competition sponsors
- Provides teachers with a practical application by which to facilitate learning
- Continuous Professional Development opportunities for the teachers
- Participation helps students in making CAO choice

### **ESERO Ireland Role**

- Liaise with ESA on all matters relating to CanSat Ireland
- Purchase of the CanSat kits
- Sign off on the CanSat Ireland Guidelines
- Sign off on the Partner Guidelines
- Procurement of National Organiser
- Sign off on all publicity items
- Procurement of the Rocket (and Drones if required)
- Overall responsibility for the CanSat Ireland National Final
- Provide certificates for students

### **National Organiser Role**

MTU Blackrock Castle Observatory, in consultation with ESERO Ireland, will:

- Update CanSat Ireland guidelines to reflect current ESA guidelines
- Continue to update to reflect dates for regional finals etc.
- Ensure all participants qualify under the rules and each school follows the rules
- Order the CanSat Kits
- Liaise with supplier to ensure CanSat kits are delivered and contain all necessary guidelines and manuals
- Maintain communication channels with third level partners
- Organise dates for regional competitions with regional partners
- Communicate the details surrounding training dates to relevant partners
- Drone operations where applicable
- Collate and report feedback from national and regional competitions
- Generate national media coverage and providing third level partners with draft press releases to facilitate local media coverage.
- Oversee CanSat Ireland National Finals in association with ESERO Ireland

- Secure dates for National Finals
- Secure rocket providers/operators
- Secure a launch location
- Select and coordinate a panel of judges
- Communicate with teams regarding the national final
- Book hotel rooms etc. for participants in the national final





### Third Level Partner Role

The project will be launched during Space Week Ireland, Oct 4th – 10<sup>th</sup>. Schools can be contacted ahead of the launch to make them aware of this opportunity as we ascertain the number of teams participating and inform the national PoC. CanSat kits and instructions will be sent out for commencement of the project and the first mentoring/training session.

The team eligibility guidelines are set by ESA on an annual basis and form the basis of a national guideline document. Should the ESA guidelines diverge from the national guidelines these updates will be communicated to the relevant teams by the National Coordinators; refer to the CanSat Ireland Competition Guidelines for full eligibility details (at <https://esero.ie/wp-content/uploads/2018/12/2023-CanSat-Ireland-Guidelines-Final.pdf>).

Each team must complete the registration form prior to the regional competition to ensure compliance and be granted permission to enter the competition. The college is responsible for ensuring teams complete the application and evaluation forms with consideration to consent for GDPR and safety. These forms are online and can be found from [https://esero.ie/cansat\\_resources/](https://esero.ie/cansat_resources/).

In addition, all third level partners will:

1. Ensure each team receives the link to and completes the application form. This can be accessed at [https://esero.ie/cansat\\_resources/](https://esero.ie/cansat_resources/).
2. Host a number of training sessions for the teams so that they become familiar with the technical and non-technical aspects of the project and maintain a record of the training sessions which is required for ESA reporting. Your report can be submitted at [https://esero.ie/cansat\\_resources/](https://esero.ie/cansat_resources/).
3. Ensure all participants complete the pre-participation evaluation survey (<https://forms.office.com/r/MiE1mzdEg2>) on applying to participate, and ensure all participants complete the post participation evaluation questionnaire before commencement of the regional competition or at the regional competition.
4. Share the CanSat Ireland guidelines with all participating teams, including technical and non-technical elements of the project and ensure that teams are familiar with the contents.
5. Assist teams in securing test data.
6. Liaise with BCO, the national Organiser, regularly on the teams, attendances and number of training sessions.
7. Ensure that the teams are compliant with the eligibility criteria as set out in the National/European guidelines (as above).
8. Confirm adherence to the requirements of the Children First Act 2015 (“CFA”) and the National Guidance for the Protection and Welfare of Children, 2017 (“Children First Guidance, 2017”) developed by the Department of Children and Youth Affairs including any necessary garda vetting.
9. Liaise with the teams and organise the regional competition dates and event. This includes:
  - ✓ organising judges
  - ✓ facilitating the teams’ communications with schools
  - ✓ securing an appropriate launch and drop zone site
  - ✓ organising the drop mechanism (i.e., drone etc)
  - ✓ organising light refreshments for the participants





- ✓ securing a venue for the teams to present and the judges to deliberate
- ✓ perform impact evaluations at regional levels and assist at the CanSat Ireland national competition.
- ✓ deliver on PR and Branding at Regional Levels
- ✓ for the regional competitions ensure the teams are allocated unique frequencies for their transmitters.
- ✓ where possible, liaise with local industrial partners to invite them to act as mentors to the teams or judges for regional competitions.

