2023 Swinburne Youth Innovation Space Challenge

Supported by the Australian Space Agency and Rhodium Scientific, this 11-week program teaches secondary students in Years 10 and up all about the space industry and how to design solutions to unique space-based problems.

Program details

Eligible participants: Students in Years 10 – 12
Program duration: 11 weeks
When: Term 2, 2023 (24 April – 23 June)
Cost: New reduced price of $295 per student

What's included?

- Concepts and materials taught in Swinburne's undergraduate astronomy and space units
- Mentorship from Swinburne staff and students
- Analysis @ School experiment kit containing real samples from space
- ATAR boost of 2 aggregate points* for eligible students
- The chance to win a prize that's out of this world!

*Bonus ATAR boost

Year 11 and 12 students who successfully complete Stage II of the Challenge will receive an ATAR boost of 2 aggregate points towards their Swinburne course application.

What students are saying

'The ability to learn, then bounce ideas and share with mentors was incredible and motivated me much more than other learning models.'

'This has opened my eyes to the various different courses that I didn't even know existed.'

'I thoroughly enjoyed this taste of university life and am looking forward to my future experiences there.'

Register your school now

Don't miss out! Registrations close Wednesday 8 March.

forms.gle/Fa5VQVNcXAMeAiyQA

Program overview

There is still much to learn when it comes to the microgravity environment. How will organisations like NASA support astronauts as they travel to the Moon, and beyond to Mars? Your students can contribute to this important area of research while developing STEM skills.

Frequently asked questions

What can students expect to learn?

This challenge is about more than microgravity. Students will learn about the challenges of the space environment while discovering what a career in space research really holds.

Students will also take a hands-on approach to what they've learned by developing their very own solutions to challenges in the space environment. Past solutions include teaching plants to grow without gravity using genome editing technology, testing fungi as a food source in space, and improving astronaut health with good bacteria.

How many students are in each team?

There are four to six students per team. Schools can have multiple teams. Individual applicants may be considered.

What is the expected workload?

Approximately two to four hours per week. Students will attend a weekly virtual meeting with mentors, and work through recorded lectures and tutorial materials in their own time.

Curriculum-aligned

This curriculum-linked program can be run as a unit of work, enrichment program, or extracurricular offering. Students will work in teams across three phases:

Stage I **Micro unit and mentoring (online)**
Weeks 1 – 6

The Space Applications micro unit teaches students how to research and design solutions to unique space-based problems. Content includes space experimentation, applications and regulation, solar system astronomy, global space ecosystems, and the local space industry.

Stage II **Pitch Challenge**
Weeks 7 – 9

Taking what they've learned in Stage I, students will develop their own space solution concept. Each team will pitch their concept to a panel of space industry experts with a five-minute multimedia presentation for the chance to win a prize that's out of this world!

Stage III **Lab work**
Weeks 10 – 11

Every team will receive an Analysis @ School kit, allowing students to run their own space experiments in the classroom. These instructional kits contain real samples returned from the International Space Station that students can keep!

Have more questions?

Contact Dr Sara Webb and the team at spacechallenge@swinburne.edu.au.