

Ignite the next generation of space entrepreneurs

## 5-Day Summer Bootcamp 2025

28 July – 1 August, Hong Kong 5<sup>th</sup> Annual Intake



## OUR MISSION

The mission of the Orion Astropreneur Space Academy (OASA) is to champion and advance the growth and development of the space industry in Hong Kong and throughout the Greater Bay Area (GBA) by grounding Space education, innovation, collaboration, practical approaches, and entrepreneurship.





## Why Join our Space Boot Camp 2025?

- The WEO Forum forecasts that the global space economy, propelled by commercial aerospace, will reach \$1.8 trillion by 2035. The new Low Altitude Economy alone is estimated to surpass this. By 2030, the New Space Economy in Hong Kong and the Greater Bay Area will need thousands of new entrepreneurs, engineers, and innovators.
- AI doesn't work without data; most will be from our satellites. The future of space exploration is closely intertwined with AI. AI-powered technologies are revolutionising space exploration, enabling us to reach farther, understand more, and unlock new possibilities with new resources.
- We're looking for curious, ambitious secondary school students who want to shape the future.
- Will your children be ready to engage with leading satellite engineers and astronauts?



## Who do we seek for this intake?

- Future builders, entrepreneurs, and innovators
- Students aged between 14 and 18 with curiosity, STEM passion, and creative problem-solving skills
- Candidates who demonstrate strong teamwork skills, collaborate effectively with individuals from diverse backgrounds and prioritise understanding others before being understood.
- Must be able to handle small mechanical tools.
- English proficiency PETS/IELTS 5.0/IBT61+ (If not already assessed, applicants will be required to attend an interview.)
- Must attend 80%+ of sessions.
- Is this your candidate?



## Your Candidate's Mission

- Team up as astropreneurs to tackle real-world space challenges.
- Engage in hands-on workshops, debates, demos, and games.

#### They will tackle these questions:

- How to build a space business or any business?
- What's the mindset of an astropreneur?
- How to assemble a working CubeSat with a team?
- Why do astronauts work in pairs?
- How can satellites help with early warning/disaster responses?
- Why can't we just call someone working on the moon?
- How do we measure and track tree growth on Earth from space?
- How might we communicate with aliens? Are there aliens?
- If humanity is to live on Mars, should we eliminate other lives so we may live there?





# Learn to fail fail fast. Having fun

- Plan and pitch SpaceBiz ideas to real mission specialists and engineers. Learn and redo.
- Overcome tough, unexpected challenges (by aliens), just like true astropreneurs.
- Build a structure using spaghetti and failing as a team.
- Ask stupid questions but in an eloquent way.
- Play in Interactive workshops use games to raise awareness of the UN's 2030 Sustainable Development Goals.
- Build a mini satellite as a team, and break them apart and file them in proper sequence.
- Final team project: Design a business to remove space debris using CubeSats.



## Meet the Experts

Mentors & Guests



Dr. G

Visionary serial
entrepreneur and
educator renowned
for driving
innovation and
leadership across
industries



Prof. Quentin Parker

Leading astrophysicist and director of the Lab for Space Research at HKU, renowned for his groundbreaking contributions to space science.



TEDx Coach Perry Lam

Renowned TEDx coach and SDGs trainer, celebrated for empowering leaders to communicate effectively and champion sustainable development.



**Satellite Engineers** 

Satellite engineers
from across Asia bring
cutting-edge technical
expertise and regional
insights, driving
innovation in space
technology and
fostering international
collaboration.

Special Guest via Zoom



Astronaut Chris Altman

Accomplished NASAtrained space explorer and scientist, inspiring future generations through his pioneering achievements and extensive expertise in space missions.



## Tentative Timetable (Over 5 Days)

(Roughly 40 hours – 9 am to 4 pm each day)

#### **Day 1 - Engineering Systems and NewSpace**

#### Welcome from OASA and the world of NewSpace

- The 2030 SDGs Challenge: Setting the Stage for Sustainability in Space and on Earth.
- Team Formation and Icebreaker Activities: Meet your fellow astropreneurs.
- Introduction to the NewSpace Economy: Opportunities and Future Careers.
- Project Launch: What constitutes a NewSpace business?
- Systems Leadership & Mission Roles: Discover the roles of mission specialists, payload experts, and space pioneers.
- Astropreneur Mindset: What are the secret ingredients of innovators such as Jack Ma, Elon Musk and Jeff Bezos?
- Understanding Space Debris: The next significant challenge for humanity.
- Communication Practice: Enhance teamwork and presentation skills.
- Session Wrap-Up: Key takeaways and what comes next.

#### **Day 2 - Building Miniature Satellites**

- Building a CubeSat: How do I build a miniature satellite for Low Earth Orbit?
- CubeSat Applications: Exploring real-world applications and missions.
- Hands-On CubeSat Lesson: Introduction by professional CubeSat engineers.
- CubeSat Assembly: Acquire practical experience by constructing your model.
- Trade-Offs in Space Missions: Decision-making in engineering and life.
- The 5S of Management: Sort, Set, Shine, Standardise, and Sustain—essential elements for effective teamwork
- Communication Skills Workshop: Enhance how you convey ideas and collaborate.
- Interactive Quizzes: Test your knowledge and compete with fellow participants.
- Engaging Communication Activities: Practise teamwork and presentation in an enjoyable manner.
- Session Wrap-Up: Reflect on your learnings and look forward.



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## • Satellite Data in Action: Utilising satellite imagery for disaster monitoring and recovery.

- Habitat Location and Damage Assessment: How to Assess the Impacts of Disasters on Earth Using Satellite Data.
- Space Communication: Why can't we just call an astronaut on the Moon?
- Astropreneur Self-Assessment: What does it take to be a genuine space innovator? Reflect and contribute to your portfolio.
- Space Sustainability and Debris Removal: Insights from Prof. Quentin Parker and the HKU Lab for Space Research.
- Interactive Quizzes: Test your knowledge while having fun.
- Communication Practice: Improve your teamwork and presentation skills through engaging activities.
- Session Wrap-Up: Key takeaways and next steps.

#### **Day 4 - Measuring and Tracking Habitats**

- Stanford Marshmallow Challenge: Team building through creative problem-solving.
- Alien Challenge Orientation: "Are We Alone?" with Astronaut Chris Altman.
- Building a Space Business: What is required to launch a space venture on Earth?
- Searching for Space Business Ideas: Brainstorm and develop innovative concepts.
- Team Preparation & Mentoring: Guidance for presenting your satellite data business idea.
- Interactive Quiz: Test your knowledge in an enjoyable manner.
- Communication Practice: Strengthen teamwork and presentation skills through engaging activities.
- Session Wrap-Up: Reflect on your progress and set objectives for what's next.



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Day 5 - Engineering a Space Business	Best Team Awards	
<ul> <li>Team Presentations &amp; Peer Evaluation: Showcase your ideas and learn from one another.</li> <li>Final Feedback from Judges and extraterrestrial representatives.</li> <li>Exploring Space Careers: Discover future jobs and opportunities in the space industry.</li> <li>Space Dialogue: Potential live Q&amp;A with an astronaut.</li> <li>Programme Evaluation &amp; Feedback: Reflect on your learning journey.</li> <li>Certificate Awards Ceremony: Celebrate your achievements.</li> <li>OASA Student Membership Registration: Join our community of young space innovators.</li> <li>Programme Conclusion: End of the boot camp and next steps.</li> </ul>	<ul> <li>Best Team Presentation</li> <li>Best NewSpace Business Idea</li> <li>Best Questions to Astronauts</li> <li>Best Clean and Organised Workstations</li> <li>Best High Performing Team</li> </ul>	



## Details

Class size: 12-25 students

Venue: H6 Conet & other HK locations

Fee: HK\$22,000 (Early Bird: HK\$19,800)

Register by: 7 July 2025 (Early Bird ends 30 June)



## What You'll Gain

- Free Membership into OASA
- Project Portfolio to showcase your work
- Exclusive Alumni Network Access
- Special Prizes: Mentorship session with a space industry leader for the best teams



# Are You Ready For Lift-Off?

The Orion Astropreneur Space Academy
Empowering talent and startups to thrive in the
NewSpace Economy.

Launch your journey as a Space Innovator!

Registration opens now!





## Supporting Organisations











**P**Department of Aeronautical and Aviation Engineering 航空及民航工程學系



