

Global Summer School



Space Environment Ground Simulation Technology & Applications

July 11–16, 2026

Harbin Institute of Technology, Harbin, P.R. China



Contact Information

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General Information

The International Summer School on Space Environment Ground Simulation Technology & Applications is hosted by the Institute of Space Environment and Material Science (ISEMS) at Harbin Institute of Technology (HIT). Centered around the theme “Space Environment Ground Simulation Technology and Its Applications,” the program offers a unique opportunity to engage with one of the world’s most advanced research facilities — the Space Environment Simulation and Research Infrastructure (SESRI), also known as the “Ground-based Space Station.”

Participants will gain hands-on experience with cutting-edge simulation systems, including near-zero magnetic field environments, plasma stimulators, particle irradiation devices, and more. The curriculum integrates interdisciplinary knowledge from space physics, materials science, life science, and electronic engineering, combining theoretical lectures, technical workshops, and practical laboratory sessions. This summer school aims to cultivate innovative talents with global perspectives and cross-disciplinary capabilities in space science and technology.

Attendance Requirements

- Open to third-year undergraduate students from Chinese universities (expected to graduate in 2027) or international undergraduates of equivalent standing.
- Applicants should have an academic background in a relevant field (e.g., physics, materials science, aerospace engineering) or a demonstrated strong interest in space science and technology.
- English proficiency in listening, speaking, reading, and writing is required.

Lectures and Talks (Tentative)

Topic (preliminary)	Units (50 mins/unit)
Space Environment Ground Simulation Facility: From Concept to Reality	2 (talk)
Aerospace Control Systems in the Age of Intelligence	2 (lecture)
Development of Mixed Perovskite Solar Cells	2 (lecture)
From Microscopic Plasmas to Macroscopic Space Systems	2 (lecture)
Simulation and Application of Space Ionizing Radiation Environment	2 (talk)
Astrobiology and Space Environment Ground Simulation	2 (talk)
Space Plasma Environment and Ground Simulation Technology	8 (lecture and practice)
Near-zero Magnetic Field Environment and Simulation Technology	8 (lecture and practice)



Program Highlights

- Laboratory tours and real-time experiment observation at SESRI.
- Group discussions, academic exchanges, and cultural activities.
- Welcome dinner, cultural night, and city tour in Harbin.
- Certificate of completion awarded to all participants.

Program Schedule

- Day 1: Registration, Opening Ceremony, Welcome Dinner
- Days 2–3: Lectures, Lab Visits, Group Projects
- Day 4–5: Outdoor Cultural Activity / City Tour
- Day 6: Final Presentation, Closing Ceremony