Global Summer School

# A New Generation of Intelligent Information and Communication Technology

July 20–31, 2026

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

## Contact Information

For further inquiries, please contact: lihongzhi2014@hit.edu.cn

## General Information

The theme of this international summer school is “A New Generation of Intelligent Information and Communication Technology,” focusing primarily on cutting-edge technologies in 5G, artificial intelligence, cloud computing, edge computing, and related fields. The program aims to guide undergraduate students in understanding the latest developments and future trends in advanced information and communication technology through lectures and courses delivered by world-class scholars, thereby deepening their understanding of intelligent information technology, next-generation communication systems, and the Internet of Things. The summer school explores the increasingly intelligent information and communication technology within the context of intelligent manufacturing, artificial intelligence, and its profound impact on global patterns (political, economic, cultural, etc.) and human lifestyles. The program also aims to stimulate students’ innovative thinking and enthusiasm for learning, fostering their interest in the future of information and communication technology and related interdisciplinary research areas, and lay a solid foundation for their future studies and research careers in these fields.

## Program Dates and Times

The international summer school is tentatively scheduled from Jul 20th to Jul 31st, 2026. However, the final dates are subject to change based on actual conditions.

## Attendance Requirements

Participants should be at the undergraduate level, with a background in electronic information engineering, communication engineering, Internet of Things engineering, or related fields. Proficiency in English is essential, as all lectures and courses will be conducted in English. Participants are encouraged to bring their own scientific and technological innovation projects to share and exchange during the international summer school.





## Courses and Lectures（Tentative）

classroom teaching, and innovative practice. The detailed content of each stage is shown in the table below.

| Module | Content | Class Hours | Credit |
|---|---|---|---|
| Academic Lectures | Four academic lectures on 5G/6G, artificial intelligence, edge computing, and related topics. | 4*4 | — |
| Course Teaching | International cutting-edge technologies for 3D video signal compression and communication | 16 | 1 |
| Practical Innovation | Radio Direction Finding: Design and Practice | 24 | 1 |
| Total credit hours | | Total credits | |
| 56 | | 2 | |

## Group Research Project

**①International cutting-edge technologies for 3D video signal compression and communication**

The course begins with an overview of the developmental history and application scenarios of 3D video, followed by an explanation of the technical processes involved in its capture, encoding, transmission, rendering, and quality assessment. Through this course, students will gain insight into the evolution and compression standards of 3D videos, understand the compression process, and acquire proficiency in fundamental 3D video compression methods.

**②Radio signal source design and practice**

The "Radio Direction Finding Design and Practice" is a practical innovation activity for students majoring in electronic information. It is mainly based on students' hands-on practice with the teacher's guidance as a supplement. The goal is to cultivate students' engineering awareness and innovation consciousness. The project integrates software and hardware implementation, requiring students to apply knowledge from radio wave theory, direction-finding techniques, antenna design, and related engineering practices. Through processes such as demand analysis, data search, scheme demonstration, design debugging, performance testing, analysis and summary, the design and implementation of the radio direction finding activity are completed. This course takes "Directional Perception - Signal Processing - Spatial Positioning" as the technical mainline. By designing and implementing a VHF band direction finding system based on a 3-unit octagon antenna, it aims to cultivate students' cognitive ability of radio wave spatial characteristics and their ability to construct complex systems. Following the "Theoretical Explanation - Independent Practice - System Verification" model, it integrates electromagnetic field theory, RF engineering and signal processing technology to complete a complete engineering loop from antenna design to target positioning.

## Other Activity Arrangements

Museum Visits: Explore the School Museum and Space Museum to gain insights into the history and development of science and technology.

Lab Tours: Tour on-campus research laboratories and interact with researchers to experience cutting-edge research and innovation firsthand.

Project Sharing: Participate in the sharing and exchange of outstanding scientific and technological innovation projects to foster collaboration and inspire new ideas.

Networking Sessions: Connect with peers, faculty, and industry professionals through structured networking events to expand your professional network.

Outdoor Activities: Engage in outdoor activities to promote teamwork, relaxation, and a balance between academic and recreational experiences.