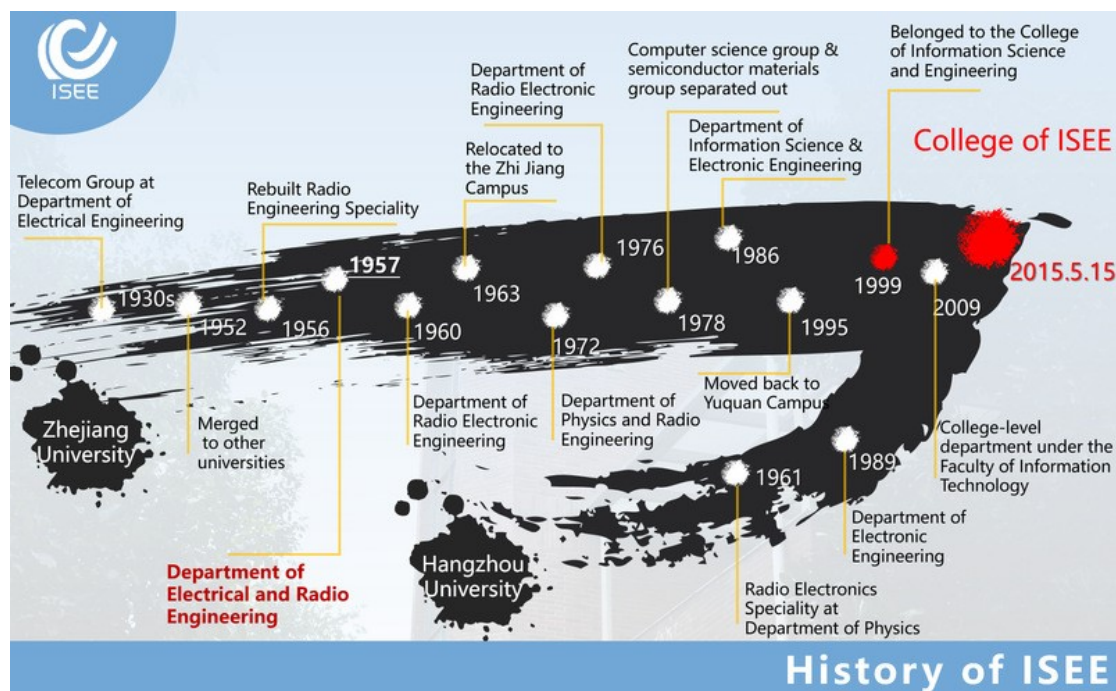


## BRIEF INTRODUCTION OF COLLEGE OF INFORMATION SCIENCE AND ELECTRONIC ENGINEERING (ISEE)



ISEE is presently one of the largest engineering colleges at Zhejiang University with an undergraduate enrolment of over 300 students per year. ISEE offers undergraduate academic programs in **Information Engineering** and **Electronics Science and Technology**, and covers the fields of communication and networks, signal processing, physics electronics, circuits and systems, microelectronics and optoelectronics, electromagnetic and photonics, etc.

ISEE is ranked **39th** in the QS University Rankings by Subject 2020 (Electrical and electronic Engineering). ISEE receives over **\$25.73 million** in research funding in 2019 and is backed by over 110 faculty members who have broad and diverse backgrounds with strong research and professional expertise.

ISEE works closely and consistently with diverse industry partners – local and multinational companies and start-ups to ensure that we are staying ahead of tomorrow's demands. Our partners include **Alibaba Group, Huawei, Hikvision, OPPO**, etc.

At ISEE, we are preparing creative engineers who are inspired and equipped to solve complex societal problems. Students work in an interactive learning environment with extensive laboratory and project content. There is broad multidisciplinary interaction among the programs.

### PROGRAM EDUCATIONAL OBJECTIVES

**Electronics Science and Technology** focuses on the design and application of large and small scale electronic systems to process and transmit energy and information in this professionally accredited degree. This program has a balanced core and a flexible elective structure designed to equip our graduates in electromagnetics, electronics and microelectronic, integrated circuit, digital signal processing and photonics, etc. We expect our graduates to advance within industry positions or in graduate study, or to carry the attributes of an engineering education into other

disciplines. These programs of study must include mathematics and basic sciences, fundamentals and applications in several engineering sciences, and team-based experience in the process of design, where theory is applied in the context of real needs and limitations, and where judgment must be exercised. Our graduates should be able to think critically when solving problems and managing tasks and communicates effectively in multidisciplinary professional environments. To be a responsible member of the engineering profession, each graduate must be aware of social, ethical, environmental and economic factors and constraints on engineering activity, and must understand the importance of these matters in a global context. We aspire to have our graduate exhibit intellectual depth and creativity, uphold high ethical standards, and show a commitment to the betterment of society through service and professional work.

**Modules:**

Please note that the curriculum of this course is currently being reviewed as part of a College-wide process to introduce a standardised modular structure. As a result, the content structures of this course may change for your year of entry.

<b>Orientation and Professional Development</b>
Engineering Orientation
<b>Foundational Mathematics and Science</b>
Calculus I
Calculus II
Calculus III
Intro to Differential Eq Plus
University Physics: Mechanics
University Physics: Elec & Mag
Univ Physics: Quantum Physics
<b>Electrical Engineering Technical Core</b>
Intro to Electronics
Photonic Devices
Probability with Engineering Application

Fields and Waves I
Semiconductor Electronics
Electronic Circuits
Digital Systems Laboratory
Computer Organization & Design
IC Device Theory & Fabrication
Signals and Systems
Final Year Project
<b>Composition</b>
Principles of Writing
Principles of Research
<b>Technical Electives</b>
Intro to Computing
Computer Systems & Programming
Data Structures
Embedded Systems
Communication Networks
Control Systems
Digital Signal Processing Lab
Digital Signal Processing
Electronic Circuits Laboratory
Artificial Intelligence

Digital IC Design
Analog IC Design
<b>Liberal Education</b>
Humanities & Arts
Social & Behavioral Sciences
Culture Studies
<b>Free Electives</b>
<b>ZJU Required Liberal Education</b>
Chinese I
Chinese II
Chinese III
Chinese IV
China Survey

## **STUDENT LEARNING OUTCOMES**

Our students will have the following capabilities upon completion of their degrees:

- An ability to apply knowledge of mathematics, science and engineering
- An ability to design and conduct experiments, as well as to analyze and interpret data
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability
- An ability to use the techniques, skills and modern engineering tools necessary for engineering practice
- An ability to identify, formulate and solve engineering problems
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context
- An understanding of professional and ethical responsibility
- A knowledge of contemporary issues
- An ability to communicate effectively
- An ability to function on multidisciplinary teams

- A recognition of the need for and an ability to engage in life-long learning

## **Careers**

Our graduates are highly sought after worldwide for a wide range of careers in fields such as **IC design, circuit and system design, communication and radar engineering, signal and image processing, artificial intelligence**, etc. Whether your careers starts off in China or anywhere across the globe, a journey started at ISEE will help you thrive.

## **Contact**

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