

# Department of Information Display

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## What is Information Display?

Nowadays, visual displays such as televisions, PC monitors, notebook monitors, and mobile phones, have become the most powerful way to deliver the information. Information Display is an inter-disciplinary science and technology dealing with these visual displays in design, simulation, manufacturing, processing, characterization of various types of electronic display devices and systems as well as the interaction between displays and human beings. the field of Information Display envelops all the various display categories in existence, including thin-film transistor liquid-crystal displays (TFT-LCDs), plasma display panels (PDPs), organic light-emitting diode (OLED) displays, field emission displays (FEDs), three dimensional displays (3Ds), and so on. Students majoring in Information Display study physics, chemistry, optics, materials science, manufacturing, electronics, computation, design and simulation for displays. Furthermore, students have the chance to study wearable displays, flexible displays, transparent displays and other novel displays.

## Information Display at Kyung Hee

Kyung Hee University has an Advanced Display Research Center (ADRC) in conjunction with the TFT-LCD National Lab, with facilities to fabricate and characterize TFT-LCDs, OLEDs and FEDs. Only Kyung Hee University has the facility to make TFT-based display panels among academic organizations all over the world. The Information Display major pursues three core educational goals: first, training students to become practical research scientists who will conduct R&D work on information displays, second, training students in display companies for six weeks as interns, and third, training students as technical managers who can manage display businesses and pursue globally competitive careers in display areas. In order to accomplish these goals, the department provides, 1) courses for students to acquire fundamental knowledge about information display and help them improve their creativity in areas of currently developed information displays such as LCDs, PDPs, OLEDs, etc. 2) several practical educational programs, such as experiments and display industry internships, for students to directly apply their knowledge to real world displays, and 3) opportunities for students to study the latest display technology at such world-renowned universities as the Ecole Polytechnique in France.

## Degree Requirements

To receive the Bachelor of Science in Information Display, a student must:

- complete a minimum of 130 credit units
- satisfy the general requirements of the College of Science
- complete 18 units of major foundation courses
- complete 21 units of required courses
- complete 68 units of Technical Electives for information display
- acquire a minimum English proficiency test score of TOEIC 700 or equivalent

## Courses

### Year 1

Introduction to Information Display, Introduction to Digital Circuits, Introduction to Computer Programming, Internship 1 (Information Display), Physics and Laboratory 1&2, Chemistry and Laboratory 1&2, Calculus and Recitation 1&2, Introduction to Semiconductor

### Year 2

Experiment Display System, Electric Circuit, Electric Circuits Lab, Polymer Materials, Engineering Mathematics 1&2, Fundamental of Quantum Physics, Display System, Introduction to Organic Chemistry, Major in Training 1 (Information Display), Electromagnetics 1, Internship 2 (Information Display), Basic Circuits Lab.

### Year 3

OLED, OLED Lab, Light Emissive Displays, Experiment Light Emission Display, LCD Optics, Display Optics, Display Technology, Semiconductor, Semiconductor Devices, Quantum Electronics, Major in Training 2 (Information Display), Electromagnetics 2, Intellectual Property Law, Circuits and Systems Simulation, Computer Coding and Practice

### Year 4

LCD Lab, Graduation Thesis, Thin Film Transistor Engineering, Solid State Physics, Display Circuits, Thin Film and Device Fabrication Technology, Device and System Simulations, Organic Electronics, Display Seminar, Solid State Device Physics, Information Electronic Materials, Circuits and Systems Simulation, AR/VR System, Intelligence Device, Semiconductor fabrication technologies, Semiconductor Circuits

## Careers and Graduate Destinations

Students have diverse opportunities in their career development. For example, they can be scientists or engineers in the development, research, or production of diverse display industry fields, including display materials, panels, systems, and equipments. Due to the high demand for skillful, knowledgeable and experienced individuals in information display research and industrial area, the department offers high quality education to its students and trains them to fulfil these requirements. Therefore, graduates will have more opportunities to utilize their knowledge, skill and experience, and contribute to the development of the display industry. The department also strongly recommends students to pursue graduate programs that are related to information display for their advanced studies.

## Faculty

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