Department of Electrical Engineering

051-200-7732 http://electrical.donga.ac.kr

Introduction of the Department

Electrical engineering is like blood that gives life to all industrial equipment and machinery. Along with the development of civilization, the utilization of electrical engineering has also been diversified. The Department of Electrical Engineering is cultivating the talents that modern society needs by offering professional and various educational programs related to power generation, conversion, transport, renewable energy such as wind power and solar power, the system design and management for the automation of various power devices and industrial equipment systems, development and operation of intelligent control systems that apply computer and mechatronics, and advanced materials and sensor systems.

Main Subject

Science and Technology Philosophy, Environment and Industry, Future Studies, Modern Society and Biotechnology, Industrial Technology and Ethics, Rhetorical Story, Logic, Engineering Economy, CEO Lecture, College Mathematics, Physics and Experiment, Chemistry and Experiment, Battery Electronic Mathematics, Industry Mathematics, programming language, numerical analysis
Basic Eectrical and Elctronic Engineering Design, Logic Circuit and Design, Electromagnetics, AC Circuit Theory, Electrical Equipment, Automatic Control, Power Electronics, Power Engineering

Career after Graduation

1. Power System - an expert who understands the system including the entire process from power generation to consumption and can implement it to optimize the overall system target
2. Electric Equipment - a specialist on fundamental theory, interpretation and design concepts of a generator that converts mechanical energy into electrical energy, a transformer that converts electrical energy into electrical energy, and an electric motor that converts electrical energy into mechanical energy.
3. Power Electronics - signal processing circuit for driving motors / generators used in automation devices in the industrial field, and experts who can understand the characteristics of semiconductor devices and design motor / generator drive systems using them
4. Electrical Materials and Properties - Functional devices and electronic devices using thin films including sensors, micro-device manufacturing technology, design technology and evaluation technology, etc.
5. Control System - expert with ability to analyze and design mechanisms for various systems such as intelligent precision control technology, sensor and interface technology, digital signal processing technology, various control system design and networking technology, which are essential for various facilities and systems

Q&A

Q. What's the difference between Electronic Engineering and Electrical Engineering?

Electrical Engineering Department is for strong electricity, and Electronic Department is for weak electricity. Briefly, the process involved in the generation of electricity at the plant and the transfer of electricity to the factory or the home, and the motor, all of which are dealt with in the Electricity Department. The use of the supplied electricity, part and device semiconductor are dealt with in electronics department. Of course, it does not mean that you are not dealing with electrical transients or electronic devices. Students also study control and circuit design in the Electrical Engineering Department. In the case of electronics, it is specializing in general semiconductor manufacturing and design.

Specialty Program

Industrial tours, Field Practice, Club by each professor

Department of Electronic Engineering

051-200-7730 http://ee.donga.ac.kr

Introduction of the Department

The electronic engineering is the science and technology related to the movement and use of electrons. It is a science that leads IT and NT in the information society of the 21st century. Electronic engineering has been applied to each area of human civilization for the last 100 years and it is the core engineering of modern civilization which has no unapplied fields such as home appliance, computer, communication, semiconductor, aerospace. The Department of Electronic Engineering is characterized by the live knowledge of communication, nanotechnology and electronic components, video and signal processing, and automatic control of robots.

Main Subject

Career and Development, Chinese Characters, Economics in Life, Understanding of Business Administration, Introduction to Intellectual Property, Physics and Experiments, Chemistry and Experiments, College Mathematics, Differential Equations, Fundamental Quantum Physics, Probability and Statistics, Numerical Analysis and Practice Creative Mechanical Engineering Design, Basic Electronics Experiment, Circuit Theory, Computer Programming Languages, Electromagnetic Field, Electronic Circuits, Logic Circuits, Control Engineering, Solid State Electronics, Communication Theory, Microcontroller Experiment, Digital Signal Processing, Digital System Experiment, DSP Experiment, Capstone Design, Embedded System Experiment

Career after Graduation

1. Electronics Specialists: nanotechnology specialists, signal processing and information processing specialists, communication systems and network specialists, control industrial robots, and intelligent robot specialists. R & D, system design, circuit design, digital control and other projects are carried out at various national and enterprise research institutes.
2. Digital Image Processing Expert
3. Communication Design Expert: focusing on next-generation communication technologies such as optical communication and maximum-mimo, you can enter into the field of communication specialists who can achieve high speed and high efficiency with low cost and low power
4. Transmission Equipment Technician: a radio frequency (RF) engineer is a person who is responsible for the transmission of broadcasts, the operation of relay facilities, and the operation of broadcasting transmission facilities. It is responsible for the operation and maintenance of the equipment in the place called transmission station and relay station so that it is delivered to an unspecified number of listeners through the antenna. In addition, it is necessary to maintain transmission facility at the best condition and provide clear screen and clean sound quality.

Q&A

Q. What kind of laboratory is there in the Department of Electronic Engineering?

In the field of electronics, there are laboratories in the field of general electronics. There are lots of labs in the department such as pattern design laboratory, control laboratory, nano organic device laboratory, new media communication laboratory, ultra high frequency laboratory, SoC design laboratory, & Robotic Labs, RFIC Labs, Optoelectronics Labs, Mobile Network Labs.

Specialty Program

Specialization Linkage Major Smart Grid: Understanding of the basic principles of power system, solar power generation, and wireless network operation, which is the element technology of smart grid, is a process of fostering human resources with practical skills through practical training and design. The Department of Electronic Engineering runs this program in conjunction with other two departments.