Human resources to be nurtured by the department

The Department of Digital Green Technology, Faculty of Science and Technology, Sophia University aims to foster leaders who possess the knowledge and insight to perceive environmental issues on a global level and understand their nature, pursue theories related to digital technologies, including data science, and various fields of science and engineering, and can transform the future society into a more sustainable one by addressing environmental issues from a perspective that integrates all of the above areas.

In order to develop such human resources, the Department confers a bachelor's degree in engineering to those who have completed the prescribed courses, earned the required credits, passed the examination and review of their undergraduate research project, and acquired the abilities and qualities outlined below.

Diploma Policy

DP1 The ability to logically analyze environmental and other social issues based on basic knowledge of humanities, social sciences, and natural sciences, as well as a combination of these

DP2 The ability to comprehend various methods for extracting the characteristics of, attaching meaning to, and effectively utilizing diverse data generated from natural processes and human activities

DP3 The ability to understand the fundamentals of environmentally oriented science and technology that contribute to the maintenance and development of a sustainable society and their application to real-world problems

DP4 The ability to discover and solve problems through a data-driven approach and, at the same time, develop environmentally oriented science and technology to explore the possibilities for social change

DP5 The ability to independently define and solve issues that should be considered toward the realization of a sustainable society based on experience in studies and various activities

DP6 The ability to drive social change by applying science and technology through entrepreneurship and social activities, with a deep understanding of how a sustainable society should be

Curriculum Policy

CP1 Students will take general subjects and language courses in order to acquire knowledge required to understand the current state of society and develop a global perspective. They will also study subjects that will help them understand Christian humanism in order to appreciate human dignity and cultivate a rich sense of humanity.

CP2 Students will take courses covering the fundamentals of data science and digital technologies in order to acquire fundamental knowledge related to understanding and applying data. They will also take courses related to programming exercises to learn about their implementation.

CP3 Students will take basic courses in chemistry, biology, mechanical engineering, and electrical and electronic engineering, all of which are closely related to environmental issues. This will enable them to learn the basics of modern science and technology. They will also take laboratory courses to deepen their understanding of these basic subjects while learning appropriate data acquisition methods.

CP4 Students will take lecture and laboratory/exercise courses intended to provide an understanding of the significance of data-driven approaches in the development of science and technology.

CP5 Students will conduct research for their graduation thesis, enabling them to acquire the ability to identify and solve problems using the knowledge and practical skills gained through their studies.

CP6 Students will take courses on entrepreneurship and participate in internships in order to learn how industries address social issues and the mindset necessary to lead an organization.