

Department of Plant and Environmental New Resources

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What is Plant and Environmental New Resources?

The resources and energy needs of the developed world are currently over-dependent on the utilization of the finite fossil fuel. While renewable-power technologies, such as wind and photovoltaics, may have major roles in the future for the production of electricity, provision must still be made for the supply of industrial chemicals, modern synthetic products and motor fuels that are currently produced predominantly from fossil fuel. Plant and Environmental New Resources is a scientific discipline which use a systematic approach combining material science and biotechnology to develop functional bio-materials from environment-friendly and renewable plant biomass resources for promotion of shared humanity and common wealth. Efficient and wise management of plant biomass resources is also required for solving the problems of human-nature interaction.

Plant and Environmental New Resources at Kyung Hee

Emerging biorefinery technologies by using plant biomass offer a sustainable alternative through the utilization of carbohydrates, the most abundant organic chemicals on the surface of the earth. Our department established to seek solutions for current worldwide problems, especially limited resources and pollutions, through wise utilization of renewable and environment-friendly plant biomass. To this end, students are educated and trained with the most advanced curriculum. Not only academics, but also various group and department activities are equipped to make enjoyable and instructive student-life in university, such as membership training, field practices, and annual training program in overseas universities.

Degree Requirements

To receive the Bachelor of Science in Plant and Environmental New Resources, a student must:

- complete a minimum of 130 credit units.
- satisfy the General Requirements of the School for professional degrees.
- complete 15 units of Required Courses.
- complete 49 units of Technical Electives for Plant and Environmental New Resources.
- complete 66 units stated in the common studies program and Humanities/Social Science Electives.
- acquire a minimum English proficiency test score of TOEIC 600.

Courses

Year 1

Statistics, General Physics, General Chemistry, General Biology, Differential and Integral Calculus, Applied Botany, Bio-Resources

Year 2

Economic Botany, Biomass Physiology, Environmental Soils, Biomass Quantitation, Climatology, Introduction to Natural Polymer Science, Biomass Chemistry, Engineering of Plant Resources, Biomass Formation, Practical Training I

Year 3

Management of Biomass Resources, Biomass New Materials, Biomass Functional Development, Plant Production and Environment, Environmental Plant, Instrumentation for Microclimate Measurement, Practical Training II, Research and Training Activity I, Theoretical Development and Analysis of Subjects, Study of Unit Plans, Logical Thinking and Statement

Year 4

Biomass Energy, Environment Aesthetics, Biomass Utilization, Introduction to Spatial Information Science, Research and Training Activity II, Graduation Paper

Careers and Graduate Destinations

Students graduating from Plant & Environmental New Resources at the undergraduate or graduate levels are very much in demand and will find rewarding careers in the following areas of specialization: specialist in environment impact assessment (soil, water, vegetation), GIS and remote sensing, weatherman, consultant. Also, they can acquire positions at subsidiary research organizations, such as Ministry of Agriculture (Rural Development Administration and Office of Forestry), Ministry of Environment and subsidiary part (Agricultural & Rural Infrastructure Corporation), and private companies. After the acquisition of a Master's or doctor's degree, advancement to a research organization or college is also possible.

Faculty

Young-Chai Kim, Ph.D. Kyung Hee University, 1982, Professor, Silviculture, yckim@khu.ac.kr

Jin-I Yun, Ph.D. Iowa State University, 1985, Professor, Agricultural Climatology, jiyun@khu.ac.kr

Hyun-O Jin, Ph.D. Tokyo University of Agriculture and Technology, Japan, 1988, Professor, Forest Soil Science, hojin@khu.ac.kr

Ung-Jin Kim, Ph.D. University of Tokyo, 2002, Assistant Professor, Biomaterial Sciences, sbpujkim@khu.ac.kr

Jae-Heung Ko, Ph.D. Yonsei University, 1997, Assistant Professor, Plant Functional Development, jhko@khu.ac.kr

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