理工学部 Curriculum Tree

物質生命理工学科 グリーンサイエンスコース GREEN SCIENCE COURSE, FACULTY OF SCIENCE AND TECHNOLOGY, DEPARTMENT OF MATERIALS AND LIFE SCIENCES

※ Red letters show Compulsory Sujects.

DP1
Understanding of the fundamentals of natural science disciplines and safety and ethical/moral values regarding science and technology

DP2
The ability to understand physical, chemical and natural/living phenomena based on the fundamentals of physics, chemistry and biology.

DP3
The ability to systematically understand the fundamentals of materials and life and contribute to the creation of substances ranging from atoms and molecules to polymers and biological materials as well as technology development.

DP4
The ability to contribute to solving science and engineering issues leading to substances and nanotechnology, harmonization of environment and life, and the creation of high-performance material by acquiring the ability to apply and develop what one has learned theoretically and technologically.

Level

400

DP1 DP4 GRADUATION RESEARCH 1
DP1 DP4 GRADUATION RESEARCH 2

DP1 DP4 TOPICS OF PLANT SCIENCE

DP2 DP3 ELECTROMAGNETISM

DP3 CHEMISTRY LAB. 2
PHYSICAL CHEMISTRY LAB.
BIOLOGY LAB. 2
BIOLOGY LAB. 3

DP3 DP4 POLYMER CHEMISTRY

DP4 SEMINAR 1
SEMINAR 2
ATOMIC AND MOLECULAR SPECTROSCOPY
INSTRUMENTAL ANALYSIS
ORGANIC AND NATURAL PRODUCT CHEMISTRY
ENVIRONMENTAL ANALYTICAL CHEMISTRY
GREEN CHEMISTRY
CATALYSIS CHEMISTRY
THEORY-AIDED MOLECULAR DESIGN
QUANTUM REACTION DYNAMICS
RESEARCH TOPICS IN PHYSICAL CHEMISTRY AND CHEMICAL PHYSICS
RESEARCH TOPICS IN ORGANIC AND INORGANIC CHEMISTRY
RESEARCH TOPICS IN LIFE SCIENCES
STRUCTURAL CHEMISTRY
RADIATION PHYSICS AND CHEMISTRY
SEPARATION CHEMISTRY IN ANALYSIS
METALLIC AND ELECTRONIC MATERIALS
NATURAL PRODUCT AND DRUG DISCOVERY

300

DP1 ENVIRONMENTAL SCIENCE
SUSTAINABLE DEVELOPMENT

DP2 ENGL.FOR SCI/ENGINEERING ENVIRONMENT
MATHEMATICS C1(STATISTICAL DATA ANALYSIS)
FOURIER & LAPLACE TRANSFORMS
ATOMIC & MOLECULAR SCIENCES
PHYSICAL CHEMISTRY
TECHNOLOGY & INNOVATION
APPLIED MECHANICS

DP2 DP3 MATERIALS AND LIFE SCIENCES LAB. B
MATERIALS AND LIFE SCIENCES LAB. C

DP3 THERMODYNAMICS
CELL BIOLOGY
INTRODUCTION TO QUANTUM MECHANICS
GEOSCIENCE
FUNDAMENTAL BIOCHEMISTRY
CHEMISTRY LAB. 1
BIOLOGY LAB. 1

DP4 ATMOSPHERIC CHEMISTRY
SCIENCE, TECHNOLOGY AND ENVIRONMENT

200

DP2 INTRODUCTION OF SCIENCE AND TECHNOLOGY
MATHEMATICS A (LINEAR ALGEBRA)
MATHEMATICS B (CALCULUS)
MATHEMATICS EXERCISE 1
BASIC PHYSICS 1
BASIC BIOLOGY
BASIC CHEMISTRY
BASIC INFORMATICS
MATERIALS AND LIFE SCIENCES (PHYSICS)
BASIC PHYSICS 2
INORGANIC CHEMISTRY (ANALYTICAL CHEMISTRY)
BASIC DIFFERENTIAL EQUATIONS
ORGANIC CHEMISTRY

DP2 DP3 EXPERIMENTS & EXERCISE OF BASIC SCIENCE
MATERIALS AND LIFE SCIENCES (CHEMISTRY)
MATERIALS AND LIFE SCIENCES (BIOLOGY)
MATERIALS AND LIFE SCIENCES LAB. A
MATHEMATICS B2
(CALCULUS OF SEVERAL VARIABLES)

DP3 MOLECULAR BIOLOGY

100

This curriculum tree is designed for students enrolled in 2023.