

Curriculum Structure

(Applicable to Freshmen Admitted in the 2023 Academic Year)

Required Courses (51 Credits)	
<ul style="list-style-type: none">● GENERAL CHEMISTRY (4)● ORGANIC CHEMISTRY (I)(II) (3/3)● INORGANIC CHEMISTRY(I)(II) (3/3)● ANALYTICAL CHEMISTRY (I)(II) (3/3)● GENERAL PHYSICS (I)(II) (3/3)	<ul style="list-style-type: none">● PHYSICAL CHEMISTRY (I) (II) (3/3)● CHEMISTRY LABORATORY (I) (II) (III) (IV)(V) (2/2/2/2/2)● SEMINAR (1)● CALCULUS(I) (II) (3/3)
Special Topics (18 Credits)	
<ol style="list-style-type: none">1. ORGANIC REACTIONS (3)2. INTRODUCTION TO ORGANIC SPECTROSCOPY (3)3. ORGANIC SYNTHESIS (3)4. INTRODUCTION TO MATERIALS CHEMISTRY (3)5. BIOCHEMISTRY I (3)6. BIOCHEMISTRY II (3)7. ORGANIC SYNTHESIS LABORATORY (3)8. ORGANIC CHEMISTRY (III) (3)9. GROUP THEORY (3)10. NANO THIN LAYER STRUCTURE ANALYSIS (3)11. MATHEMATICS FOR CHEMISTS (3)12. 初等分子光譜(3)13. INTRODUCTION TO NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY AND IMAGING (3)14. FUNDAMENTALS OF AEROSOL SCIENCES (3)15. BIOMEDICAL SCIENCES OF PM2.5 AEROSOLS (3)16. PROGRAM APPLICATIONS FOR CHEMICAL EXPERIMENTS (3)17. INTRODUCTION OF OPTICAL MICROSCOPY (3)18. PHYSICAL CHEMISTRY (III) (3)	<ol style="list-style-type: none">19. INTRODUCTION TO NANOTECHNOLOGY (3)20. 金屬簇與超分子配位化學(3)21. BIOINORGANIC CHEMISTRY (3)22. MATERIAL CHEMISTRY (3)23. ORGANOMETALLIC CHEMISTRY (3)24. INTRODUCTION TO POLYMER CHEMISTRY (3)25. 奈米材料之合成鑑定與應用(3)26. INORGANIC CHEMISTRY(III) (3)27. CHEMISTRY FOR RENEWABLE ENERGY AND SUSTAINABLE CATALYSIS(3)28. ANALYTICAL ATOMIC SPECTROMETRY (3)29. APPLICATION OF MASS SPECTROMETRIC TECHNOLOGY IN INDUSTRY (3)30. NANOBIO MEDICAL ANALYSIS (3)31. 質譜分析導論(3)32. CHEMICAL SENSORS AND BIOSENSORS (3)33. 生物分析導論(3)34. INTRODUCTION TO BIOMEDICAL TECHNIQUES (3)35. ANALYTICAL CHEMISTRY (III) (3)
General Elective Courses	
<ol style="list-style-type: none">1. GENERAL PHYSICS LABORATORY (I) (II) (1/1)2. GENERAL BIOLOGY (I) (3)3. INDEPENDENT STUDIES(I) (II) (III) (IV) (3/3/3/3)4. 論文導讀(1)5. SPECIAL LECTURES ON INNOVATION AND ENTREPRENEURSHIP IN CHEMICAL AND SEMICONDUCTOR INDUSTRIES (3)	<ol style="list-style-type: none">6. ANALYSIS OF PESTICIDES AND TOXICANTS (2)7. INTRODUCTION OF FOOD SAFETY AND EXAMINATION TECHNIQUES (2)8. MASS SPECTROMETRY AND FOOD SAFETY (2)9. FOOD SAFETY, MICROORGANISMS, AND DISEASE OF DIGESTIVE SYSTEM (3)10. MICRO-CONTAMINATION ANALYSIS IN SEMICONDUCTOR MANUFACTURING (3)