

National Taiwan Normal University Department of Chemistry Regulations for Undergraduate Program Study and Degree Awarding

Article 1 List of Degree Titles in English for Awarding:

Department/Institute Name: Department of Chemistry

Degree Name: Bachelor of Science

Abbreviation: B. S.

Applicable Starting from the Academic Year 111 for Incoming Students

Article 2 Undergraduate Program Curriculum Regulations:

(1) Minimum Total Credits Required for Graduation: 128 credits

(2) General Education Credits Required by the University: 32 credits (Refer to the National Taiwan Normal University General Education Regulations)

(3) Required Credits in Chemistry Department Major: 59 credits (See Appendix A)

(4) Elective Credits in Chemistry Department Major: 16 credits (See Appendix B), and must meet the following requirements, choose one of the two options:

I. Groups A, I, O, P, etc. - At least one course must be selected from each group.

II. Select any three groups of major electives, and among the three groups, at least one group must take two courses.

(5) Free Elective Credits: 21 credits

(6) Introductory Service-Learning Credits: 0 credits

Article 3 For international or Hong Kong/Macau graduating high school students who have completed equivalent education to the second year of senior high school in Taiwan and have equivalent academic qualifications upon admission, they should increase the required free elective credits for graduation to at least 12 credits.

Article 4 Educational Programs: The selection of teacher preparation students in the Department of Chemistry at National Taiwan Normal University is carried out in accordance with the "Operating Guidelines for the Selection of Teacher Preparation Students in the Department of Chemistry at National Taiwan Normal University." For matters not specified in the guidelines, relevant legal regulations shall be followed.

Article 5 These regulations are approved by the Departmental Meeting and the College of Science Curriculum Committee and are announced for implementation. The same process applies when amendments are made.

Appendix A

1 st year (22 credits)	2 nd year (21 credits)	3 rd year(16 credits)
General Chemistry A (I)(3,0)	Organic Chemistry (I)(4,0)	Inorganic Chemistry(I)(3,0)
General Chemistry A (II)(0,3)	Organic Chemistry (II)(0,4)	Inorganic Chemistry(II)(0,3)
General Physics B (I)(3,0)	Organic Chemistry Lab (I)(1,0)	Physical Chemistry-Thermodynamics (3,0)
General Physics B (II)(0,3)	Organic Chemistry Lab (II)(0,1)	
General Chemistry Lab(I)(1,0)	Analytical Chemistry(I)(3,0)	Physical Chemistry-Kinetics(0,3)
General Chemistry Lab (II)(0,1)	Analytical Chemistry(II)(0,3)	
General Physics Lab (I)(1,0)	Analytical Chemistry Lab(I)(1,0)	Physical Chemistry Lab(I)(1,0)
General Physics Lab (II)(0,1)	Analytical Chemistry Lab(II)(0,1)	Physical Chemistry Lab(II)(0,1)
Calculus B (I)(3,0)	Physical Chemistry-Quantum Chemistry(0,3)	Special Topics in Chem(I)(1,0)
Calculus B (II)(0,3)		Special Topics in Chem(II)(0,1)

Appendix B

Grade	Group	List of Departmental Elective Courses – Course name [credits]
1		Online Aids for General Chemistry(I)[1], Online Aids for General Chemistry(II)[1], Chemical Principles and Science Introduction (I) [1], Chemical Principles and Science Introduction (II) [1]
	C	Scientific and Technical Japanese(I)[2], Scientific and Technical Japanese(II)[2]
2		Frontiers in Chemistry (I) [1], Frontiers in Chemistry (II) [1]
	I	Introduction to Coordination Chemistry [2], Chemical Applications of Group Theory [2]
	O	Organic Spectroscopy[3], Organic Chemistry Laboratory Techniques(I)[1], Organic Chemistry Laboratory Techniques(II)[1]
	P	Mathematics for Chemistry[3]
3		Materials and Methods in Teaching Chemistry Laboratory (I)[1], Materials and Methods in Teaching Chemistry Laboratory [1], Frontiers in Chemistry[1]
	A	Instrumental Analysis(I)[2], Instrumental Analysis(II)[2], Instrumental Analytical Chemistry[3]
	C	Polymer Chemistry[3], Industrial Chemistry[3], Special Topics in Industrial Chemistry[3]
4		English for Science and Technology[2], Seminar(I)[2], Seminar(II)[2], Scientific Literature Study(I)[2], Scientific Literature Study(II)[2], Operation of Scientific Cases (I)[2], Operation of Scientific Cases (II)[2]
	A	Instrumental Analysis Laboratory(I)[2], Instrumental Analysis Laboratory(II)[2], Special Topics in Analytical Chemistry[3], Conservation of Cultural Relics Based on Instruments and Chemistry (I)[2], Conservation of Cultural Relics Based on Instruments and Chemistry (II)[2]
	I	Photochemistry[3], Chemical Bonding [3], Application of computer simulation in inorganic chemistry [3] · Introduction and Synthesis of Materials Chemistry [3] Inorganic Chemistry Laboratory [2], Syntheses and Characterizations of Nanomaterials [3]
	O	Special Topics in Organic Chemistry[3], Topics in Organic Chemistry [3], Biochemistry[3], Special Topics in Biochemistry[3], Advance Biochemistry(I)[3], Advance Biochemistry(II)[3], The Introduction and Analysis of Translational Medicine on Industry of Chinese and Herbal Medicine [3], Organometallic Chemistry[3]
	P	Atomic and Molecular Spectroscopy [3], Molecular Simulation [3], Special Topics in Physical Chemistry [3] · Quantum Chemistry [3], Organic Photochemistry [3] Chemical Thermodynamics [3], Chemical Kinetics [3], Nanomaterials and Sustainable Chemistry [3]
Remarks	There will be further announcements if new courses are available.	