

Department of Chemical Engineering, National Chung Hsing University

Graduation Requirements for Undergraduate Students Enrolled **after** 2023

Items		Items		
I. Period of Study :		Core Course Title		
1. Minimum period of study : 4 years (5 years for Veterinary Medicine)		(16)	Transport Phenomenon (I)	Semester
2. Can be extended for 2 more years (excluding 2 years of suspension)		(17)	Transport Phenomenon (II)	Semester
		(18)	Unit Operations	Semester
		(19)	Chemical Engineering Thermodynamics	Semester
		(20)	Chemical Reaction Engineering	Semester
		(21)	Process Control	Semester
		(22)	Undergraduate Research/Selected Reading	Year
		(23)	Instrumental Analysis	Semester
		(24)	Instrumental Analysis Lab	Semester
		(25)	Process Design	Semester
		(26)	Chemical Engineering Laboratory(I)	Semester
		(27)	Chemical Engineering Laboratory(II)	Semester
		Total		82
II. Minimum graduation credits: 137 credits (excluding PE credits).		VI. Professional elective courses within the department: A minimum of 27 credits must be completed is required.		
III. University Required Courses and Credits:		VII. Other Regulations:		
1. Physical Education (PE) Course: 2 credits, not included in graduation credits. Student Athletes with outstanding sports achievements will be handled according to the relevant regulations of the Office of Physical Education and Sports.		1. Biochemistry: Compulsory departmental elective		
2. Service Learning (I) and (II): Required non-credit courses; must be completed and passed in any two semesters. Service Learning (III) is not counted toward this requirement.		2. Introduction to Materials Science: Compulsory departmental elective		
3. English Proficiency Requirement: 0 credit.		3. Introduction to Polymer Science: Compulsory departmental elective		
4. General Education : 28 credits		4. Practice in Process Design: Compulsory departmental elective		
i. Core Competencies: at least 3 credits. International students do not need to take the "Information Literacy" course.		5. Undergraduate students may take graduate courses regardless of the number of credits.		
ii. Language Competencies: (at least 8 credits)		6. Moral and labor education shall be conducted in accordance with school regulations.		
➢ Native Language and Literature : 4 credits				
➢ Foreign Language: at least 4 credits and up to 6 credits.				
iii. Domain Competencies: at least 10 credits		VIII. Minor Degree: To earn a minor degree, students are required to take 20 (or more) credits in addition to the department's minimum graduation credits. For more details, please see the bulletin of Curriculum Division website.		
● Humanistic Domain, Social Science Domain, and Natural Domain: at least one course in each Domain, totaling at least 6 credits.		IX. Double Major: The graduation requirements for students in pursuit of a double major (department or degree program) shall be determined by relevant regulations in effect at the time when their application was approved. Double major students not only have to fulfill all graduation credit requirements of their first major (department or degree program), they must also complete all core courses for their second major (department or degree program). Only upon achieving a passing grade in these courses will students be eligible for a double major graduation qualification. Undergraduate students who have not complete or are short of 40 credits for the second major must make up for those credits by taking courses designated by the second major (department or degree program).		
● Integrated Domain: at least 4 credits.		X. Cross-Disciplinary Expertise Development Program: If the required professional courses of the program overlap with those of the affiliated departments (degree programs), double major, minor, or other cross-disciplinary expertise programs, students shall not take the said courses. Instead, they shall select other courses specified by the program's departments (degree programs) or colleges.		
● For National Defense Education courses can't be counted toward general education credits.		XI. Students who graduate from educational institutions equivalent to senior high school or junior college with a secondary education study period of less than 6 years are required to complete at least 12 extra credits as part of their graduation requirements. The additional credits and courses to be taken shall be departmental professional electives (no restrictions on subjects).		
● Our program belongs to the area of <u>Engineering Technology</u> , therefore, only one course from this area will be recognized.				
iv. Except for the Academic English Speaking and Writing course, extra credits <input type="checkbox"/> can <input checked="" type="checkbox"/> can't be counted toward the graduation credits				
IV. College Required Professional Courses and Credits: None				
V. Department Required Professional Courses and Credits: Minimum 82 credits.				
Core Course Title		Semester/Year	Credits	
(1)	Introduction to Chemical Engineering and Chemical Process Safety	Semester	3	
(2)	Calculus(I)	Semester	3	
(3)	Calculus(II)	Semester	3	
(4)	General Physics	Year	6	
(5)	General Physics Lab	Year	2	
(6)	General Chemistry	Year	6	
(7)	General Chemistry and Lab	Year	2	
(8)	Fundamentals of Computer Programming Languages	Semester	3	
(9)	Material and Energy Balances	Semester	3	
(10)	Engineering Mathematics (I)	Semester	3	
(11)	Engineering Mathematics (II)	Semester	3	
(12)	Organic Chemistry	Year	6	
(13)	Organic Chemistry Lab.	Year	2	
(14)	Physical Chemistry	Year	6	
(15)	Physical Chemistry Lab	Year	2	

Administrative Staff of the Department 系(所、學位學程)承辦人：

Signature of the Department Chair: 系所主管簽章：

2022/7