

Curriculum of PhD Program in Biotechnology Industry, Chang Gung University (For students admitted in Fall, 2026)						
Required/ Elective	Course Title	Credit	year	Fall	Spring	Note
Required Courses	Seminar	2	1	1	1	Required courses for a total of 4 Credits.
	Seminar	2	2	1	1	
	Industrial R&D	1	1		1	Required courses for a total of 2 Credits.
	Industrial R&D	1	2		1	
	PhD thesis	6				
Elective Courses in Principle Applications in Biotechnology	Biopharmaceutical Development	2	1	2		
	Advanced Biochemistry	3	1	3		
	Cell Biology	3	1	3		
	Vaccine Development	3	1	3		English as Medium of Instruction Offered bi-annually
	Bioinformatics Analysis	2	1	2		
	Advanced Immunology	3	1	3		English as Medium of Instruction
	Advanced Biostatistics	2	1	2		
	BioBusiness Awakening Forum	2	1	1	1	
	Molecular Biology	4	1		4	
	Special Topics in Industrial Pharmaceutical Biotechnology	2	1		2	
Elective Courses in Practical Applications in Biotechnology	BioBusiness Creative Market	1	1	1		
	Bioinformatics Analysis-Practice	1	1	1		
	Applied biostatistics in biotechnology industry	2	1	2		
	Health technology assessment in biotechnology industry	2	1	2		
	One Health: human, animal, and environmental health	2	1	2		English as Medium of Instruction
	GMP Introduction	1	1	1		
	Extracellular Vesicles	2	1	2		Summer Course
	Project Plan and Patent Writing	2	1		2	Offered bi-annually
	Biotechnology Industrial Analysis and Corporate Valuation	2	1		2	Offered bi-annually
	Knowledge and steps to become an entrepreneur in the bio-industrial	2	1		2	English as Medium of Instruction
	Precision Medicine and Molecular Diagnostic Industry	2	1		2	
	Special Topics in The Pharmaceutical Factory and Patent Application	2	2	2		

Note :

1. Core total: : 28 Credits

(1) Required Courses : 6 Credits

(2) Elective Courses : 16 Credits

- (3) PhD Thesis with 6 credits will be awarded after degree examination
2. Students have to take one of the following English proficiency test and meet its respective requirement before graduation :
- (1) Pass the High-Intermediate Test of GEPT.
 - (2) TOEFL score of 500 and above.
 - (3) iBT TOEFL score of 61 and above.
 - (4) FLPT-English with an average score of 65 and above.
 - (5) IELTS 5 and above.
 - (6) TOEIC Score 600 and above.
 - (7) Linguaskill score of 145 and above.
 - (8) BEST Test of English Proficiency score is 230 points (with no individual section score lower than 100 points), and the Speaking and Writing Test score is 610 points (with no individual section score lower than 280 points).
 - (9) Other equivalent international English proficiency tests (relevant examination documents must be provided).
 - (10) Englishscore B2 level (TEOIC : 785 , EnglishScore : 400) .
 - (11) Participate in the internal English proficiency test organized by the school and meet the internal test standards.
 - (12) Complete one semester of the remedial English course "English Workshop" and achieve a passing grade.
 - (13) Students should submit the score report to program office for the review of English requirement for graduation before applying the second stage of degree examination.
3. For master students with direct admission to PhD program, students have to earned 40 credits, including 8 credits of required courses, 26 credits of selected courses, and 6 credits of PhD thesis. The credits earned from master degree only can waive a maximum of 16 credits in PhD program; “Seminar” and “Industrial R&D” are rejected to waive.
4. With the consent of the advisor, students may also take courses offered by other graduate institutes in CGU to meet the credit requirement for graduation; only the total credits earned from other institutes cannot exceed 50% of the total elective credits for graduation.
5. Course selection and registration should be approved and signed by the thesis mentor.