

Curriculum of the Bachelor Program at the Department of Department of Artificial Intelligence

Chang Gung University(For students admitted in Fall, 2025)

April 15, 2025 Revision

Required / Elective	Subject	1st Y		Subject	2nd Y		Subject	3rd Y		Subject	4th Y	
		1st Sem.	2nd Sem.		1st Sem.	2nd Sem.		1st Sem.	2nd Sem.		1st Sem.	2nd Sem.
Required	Computational Thinking and Programming	3		Linear Algebra	3		Capstone (1)(2)	1	1	Capstone (3)	1	
	Introduction to Intelligent Computing		3	Data Structure and Algorithms	3		Computer Vision	3				
	Discrete Mathematics		3	Machine Learning	3		Data Analytics	3				
	Programming Language for AI		3	Probability and Statistics		3	Deep Learning	3				
	Calculus	3		Data Mining		3	Seminar	1				
	General Physics	2		Algorithm Design		3	Cloud Systems		3			
	Organic Chemistry	2					Natural Language Processing and Applications		3			
	General Biology		2				Information Security		3			
Elective				Mobile Application Development		3	Introduction to Human Diseases	2		Internship (1)(2)	4	4
				Brain and Cognitive Science	3		Data Science	3		International Study Course	1	
				Web Application Development	3		Introduction to Omics		2	Genomic Data	3	
				Computer Networks		3	Artificial Intelligent & Internet of Things		3	Virtual and Augmented Reality	3	
							Parallel Programming Design		3	Intelligent Cyber-Physical System	3	
							Operating System	3		Special Topics on Machine Learning	3	
							Blockchain Technologies: Foundation and Application	3		Multiagent Systems	3	
										Introduction to Quantum Computing	3	
										Bioinformatic Analysis	3	
										Medical Image Processing	3	
										Quantum Machine Learning		3
										Clinical Informatics		3
										Health Data Management and Analysis		3
										Special Topics on Deep Learning		3
										Applications of Deep Learning		3
										Introduction to Cybersecurity		3
										Speech Processing		3
										Information Retrieval and Extraction		3
										Generative Artificial Intelligence Applications		3
										Advanced AI Programming		3
									Academic Skills for AI Scientists		3	
Note	1.Graduation Credits: 128 credits. (1) Required Courses: 61 credits. (2) Elective Courses: 43 credits, with a minimum of 33 credits from elective courses offered by the department, and a maximum of 10 credits from elective courses in other departments (general education courses, physical education, and military training courses for national defense education are not included). (3) Elective courses offered by the Department of Computer Science and Information Engineering at the junior level (third year) or above may be counted as elective credits for this department, up to a maximum of 12 credits. These credits will not be included in the credit limit for courses taken from other departments as mentioned in Item (2). (4) General Education Courses: Please refer to the regulations of the General Education Center. Holistic Domain, English field, Core, and Diverse Curriculum, 25 credits are required. After completing the mandatory "AI Programming Language" course, which is credited towards the Diverse - Computational Thinking domain, the total becomes 24 credits. 2. Physical Education is required for freshmen and sophomores with 0 credits. 3. Undergraduate students have a credit limit of 25 credits and a minimum of 12 credits per semester (9 credits for seniors in their fourth year). 4. The university has set an English graduation threshold. Graduation is contingent upon meeting the university's standards; please refer to the Language Center regulations for details. 5. Students who wish to take "Quantum Machine Learning" must first complete "Introduction to Quantum Computing."											