

Curriculum of the Bachelor Program at the Department of Artificial Intelligence

Chang Gung University (For students admitted in Fall, 2026)

April 16, 2026 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 | Data Mining | 3 | | Data Analytics | 3 | | | | | |
| | Programming Language for AI | | 3 | Probability and Statistics | | 3 | Deep Learning | 3 | | | | | |
| | Calculus | 3 | | Machine Learning | | 3 | Seminar | 1 | | | | | |
| | Object-Oriented Programming | | 3 | Algorithm Design | | 3 | Cloud Systems | | 3 | | | | |
| | Practical Applications of Artificial Intelligence | 3 | | | | | Natural Language Processing and Applications | | 3 | | | | |
| | | | | | | Information Security | | 3 | | | | | |
| Elective | Choose one of the three | General Physics | 2 | | Mobile Application Development | | 3 | Introduction to Human Diseases | 2 | | Internship (1)(2) | 4 | 4 |
| | | Organic Chemistry | 2 | | Brain and Cognitive Science | | 3 | Introduction to Omics | | 2 | International Study Course | 1 | |
| | | General Biology | 2 | | Web Application Development | | 3 | Parallel Programming Design | | 3 | Special Topics on Deep Learning | | 3 |
| | Introduction to Computer Science | 3 | | Computer Networks | | 3 | Operating System | | 3 | Information Retrieval and Extraction | | 3 | |
| | | | | | | | Virtual and Augmented Reality | | 3 | | | | |
| | | | | | | | Health Data Management and Analysis | | 3 | | | | |
| | | | | | | | Speech Processing | | 3 | | | | |
| | | | | | | | AI and Internet of Things ★ | | 3 | Intelligent Cyber-Physical System ★ | | 3 | |
| | | | | | | | Blockchain Technologies: Foundation and Application | | 3 | Multiagent Systems | | 3 | |
| | | | | | | | Genomic Data | | 3 | Introduction to Quantum Computing ★ | | 3 | |
| | | | | | | | | | | Bioinformatic Analysis ★ | | 3 | |
| | | | | | | | | | | Medical Image Processing | | 3 | |
| | | | | | | | | | | Applications of Deep Learning | | 3 | |
| | | | | | | | | | | Clinical Informatics ★ | | 3 | |
| | | | | | | | | | | Generative Artificial Intelligence Applications | | 3 | |
| | | | | | | | | | Advanced AI Programming ★ | | 3 | | |
| | | | | | | | | | Introduction to Cybersecurity ★ | | 3 | | |
| Note | <p>1. Graduation Credits: 128 credits. Advanced Courses : </p> <p>(1) Required Courses: 61 credits. English-taught courses : </p> <p>(2) Elective Courses: 43 credits:</p> <p style="margin-left: 20px;">a. 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).</p> <p style="margin-left: 20px;">b. Common elective courses: "General Physics", "Organic Chemistry" and "General Biology" are required, and students must choose one of them and pass the course.</p> <p style="margin-left: 20px;">c. 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 a.</p> <p>(3) 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.</p> <p>2. Physical Education is required for freshmen and sophomores with 0 credits.</p> <p>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).</p> <p>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.</p> <p>5. All elective courses offered by the Master's program can be counted as departmental elective credits. (Please select courses offered in the department's master's program for the fields marked with dotted lines.)</p> | | | | | | | | | | | | |