

**Graduation Requirements for the Ph.D. Program, Artificial Intelligence
Division, Graduate Institute of Clinical Medical Sciences, Chang Gung
University
(For Students Incoming in 2025)**

I. Dissertation Advisor Qualifications

- (I) Dissertation advisor must be a full-time faculty member of the College of Intelligent Computing. A clinical professor or a faculty member from outside the College may serve as a co-advisor.
- (II) Each Ph.D. student must choose a dissertation advisor before the end of their fourth semester and receive the approval from the university.
- (III) Any change of the dissertation advisor must be approved in accordance with the relevant regulations of the University and the Graduate Institute.

II. Coursework Requirements

- (I) Required Courses
 1. Ph.D. Dissertation (6 credits, awarded upon passing the degree oral defense).
 2. Technical Literature Survey (Must pass at least two semesters prior to graduation).
 3. Introduction to Intelligent Methodologies.
- (II) Students must complete at least 15 credits of relevant courses; at least 6 credits of professional elective courses must be offered by the College of Intelligent Computing. The aforementioned credits do not include the Ph.D. Dissertation, Independent Study, and Scientific Paper Seminar. Relevant courses include: required and elective courses from the Graduate Institute of Artificial Intelligence, and required and elective courses from the Clinical Informatics Division of the Graduate Institute of Clinical Medical Sciences.
- (III) Students opting for taking courses from other CGU academic programs must submit an "External Course Registration Application" prior to course registration, and credits will be counted toward graduation upon only approval. Such external courses must be relevant to the student's research, with a maximum of 6 credits.

III. Qualification Assessment

- The assessment includes completing the Basic Coursework and passing of the research ability assessments.
- **Basic Coursework:** Students must pass at least one course from each of the following categories offered by the College of Intelligent Computing. Achieving a grade of A or

A+ (equivalent to a score of 80 or above) in the respective course is considered as passing the assessment.

- Artificial Intelligence Foundations: Natural Language Processing, Deep Learning Architecture, Advanced Computer Vision.
 - Biological and Medical Applications: Intelligence Medicine Engineering, Clinical Image Analysis, Digital Image Processing for Medical Applications.
- **Research Ability Assessment:** Students must complete a research report of publishable quality and submit it for the committee review before the end of their sixth semester in the program, in order to show that a student is able to conduct academic research.
- The content submitted for review must be research conducted after entering the Ph.D. program.
- Research assessments will be held once each semester. Students must submit an application within two weeks after the start of the semester. Students may apply for the assessment even during a semester taking a leave of absence.
- Each assessment committee shall consist of three professors appointed by the Dean of the College of Intelligent Computing; the student's advisor may not serve as a committee member.
- Students must submit their written research report to the committee two weeks before the exam.
- The assessment exam duration usually lasts for one hour, which includes a 30-minute presentation followed by a Q&A session.
- Research report format: There is no specific format for the submitted research report. Students may refer to common journal or conference paper formats.
- The research ability assessment may be held twice. Students who do not pass the second assessment must withdraw from the PhD program in the following semester.

IV. Dissertation Proposal Review

- (I) Applications may only be submitted after passing the qualification assessment.
- (II) The Proposal Review Committee will be composed of five faculty members who meet the University's qualifications for Ph.D. degree examination committee members.
- (III) The review shall be conducted in the form of an oral examination by the committee members based on the content of the dissertation proposal.
- (IV) Review committee members shall fill out a "Research Proposal Oral Exam Scoring Form" during the review. The dissertation advisor or convener shall compile all review comments into a "Research Proposal Oral Exam Evaluation Form," and submit the result to the Office of the College of Intelligent Computing within one week.

- (V) Each student is limited to two proposal examination attempts. Those who fail twice shall be dismissed from the program immediately.

V. Final Oral Defense

- (I) A student may apply for the Ph.D. Research Final Defense only after passing the dissertation proposal review. In general, the dissertation proposal review and the Ph.D. final defense may not be held in the same semester unless an exception has been submitted and approved by the Dean's office.
- (II) The defense shall be conducted in accordance with the University's "Guidelines for Thesis/Dissertation Writing for Master's and Ph.D. Students at Chang Gung University." At least half (inclusive) of the student's original dissertation proposal review committee members must serve as ex officio members.
- (III) The Ph.D. degree oral defense committee shall consist of five members, with at most one external member.

VI. Graduation Eligibility

- A Ph.D. student's research results must be published in at least two SCI journals (ranked in Q1 or Q2) or top-tier international conference papers, providing the scholarly foundation for the Ph.D. dissertation.

VII. General Provisions

- Any matters not covered in these regulations shall be handled in accordance with the relevant rules of the Ministry of Education and the University.