

# **Degree Requirements of the Doctoral Program in Science, Technology, Environment, and Mathematics, National Chung Cheng University**

Amended on 28 October 2021.

1. **Applicable Objects:** Applicable to doctoral students of the “Doctoral Program in Science, Technology, Environment, and Mathematics” (hereinafter referred to as STEM PhD Program) enrolled in the 2021-2022 academic year. International students can apply for this program in accordance with relevant regulations. If a doctoral student is selected for the Industry-Academia Cooperative PhD Project (IA PhD) supported by the Ministry of Education at the time of enrollment, he/she will be an IA PhD student.
2. **Length of Study Period:** The minimum length of study period for the STEM PhD Program is two years and the maximum shall not exceed seven years.
3. **Course Selection:**
  - (1) All courses in the STEM PhD Program are taught in English. STEM PhD students (including IA PhD students) must earn at least 18 credits. A minimum of 12 credits must be of English-taught courses. Credits earned from courses offered by any departments of the College of Science and of the College of Engineering can be included in the required graduation credits. For those admitted through direct admission from Master’s program, at least 30 credits (including those earned in Master’s program) shall be obtained before the degree examination.
  - (2) Four credits of the seminar are obligatory among the aforementioned credits; registered dissertation credits are excluded.
  - (3) Approval from one’s advisor(s) must be obtained before taking courses offered by other colleges or departments. Only with the advisor’s approval will the credits be recognized as valid for graduation.
  - (4) According to the “Regulations on Academic Research Ethics Education for Graduate Students of National Chung Cheng University,” STEM PhD students (including IA PhD students) must complete a minimum of 6 hours of academic research ethics courses, and successfully passed the corresponding examination on the Center for Taiwan Academic Research Ethics Education (AREE) online platform no later than the end of the first semester. Those who fail to obtain the certificate of completion will not be allowed to apply for the degree examination.

- (5) STEM PhD students are eligible to apply for double degree or joint degree with partner institutions. Requirements should abide by the signed agreements and relevant regulations.

4. Advisor(s):

- (1) STEM PhD students (including IA PhD students) should select their advisor(s) before enrollment and submit the signed “Advising Agreement” to the STEM PhD Program Office within two weeks of enrollment. Students are allowed to apply for change of advisor(s) for once in principle.
- (2) Advisors should be full-time faculty members of the College of Science. Cases of the advisors going to other schools or special circumstances approved by the program committee are the exception.

5. Qualifying Examination:

- (1) STEM PhD students should pass the qualifying examination for doctoral candidates within four years of admission (IA PhD students, within three years). Failing to pass the qualifying examination within the prescribed time will lead to the revocation of one’s student status.
- (2) The qualifying examination will be public oral presentation. A proposal should be submitted to the STEM PhD Program seven days prior to the qualifying examination. The oral presentation and the proposal should address and focus on the applicant’s on-going research work and plan for future research.

6. Degree Examination:

- (1) STEM PhD students (including IA PhD students) are eligible to apply for degree examination only after completing the required course credits, obtaining the AREE certificate of completion, passing the doctoral qualifying examination, reaching the required English proficiency level, completing dissertation, and receiving approval from advisor(s).
- (2) A minimum level of competence in English is required before degree examination. The required minimum scores are: 527 on TOEFL ITP, 71 on TOEFL iBT, 5.5 on IELTS, 700 on TOEIC, or passing of the first stage of the High-Intermediate Level on GEPT. For those who fail to earn any of the above-mentioned English proficiency test reports, passing of an on-campus English proficiency test or passing of an English-taught academic writing course can be deemed as an alternative. International students from English-speaking countries or countries where English is the official language may apply for an English proficiency test waiver to be approved by the program affairs committee.

- (3) Dissertation must fulfill the following publication requirements that the candidate has at least one research article accepted by SCI journals and is the first author or corresponding author of the said research article.
- (4) In addition to meeting the aforementioned publication requirements, IA PhD students have to propose industry-related and innovative research result and submit any of the following to the Program Office.
  - (a) A copy of a formal patent application
  - (b) A copy of a formal industry-academia cooperative planning
  - (c) A copy of a formal project-based research and development planning
  - (d) Two copies of professional report jointly made by the candidate and the contracted industrial institution.
- (5) Application for the degree examination should be submitted two weeks prior to the oral defense, attached along with the following documents:
  - (a) Application form for dissertation examination
  - (b) Register of the doctoral degree examination committee
  - (c) Official transcripts of all semesters
  - (d) Certificate of a qualified doctoral candidate
  - (e) A plagiarism report with the similarity index below 25% (self-citation can be excluded)

The above-mentioned documents for application should be signed and approved by the advisor(s), Program Office, and supervisors of the relevant units, and submitted to the Division of Curriculum and Instruction within the prescribed time.

- (6) The grade of a student's degree examination is composed of dissertation assessment and oral defense assessment. Students have to attain 70 out of 100 to pass the degree examination. The final grade will be the average of grades given by all the degree examination committee members. However, the student fails if receiving grades below 70 from more than one-third of the committee members.
- (7) Students who fail the degree examination may apply for a retake within one academic year, provided that their study period has not expired. Retake is limited to one time only. Those who fail the retake will lead to the revocation of their student status.
- (8) The doctoral degree examination committee shall have five to nine members. At least one non-CCU member should be included. The advisor(s) cannot be the chairperson of the committee. The number of the committee members other than the advisor(s) shall reach one-half. The degree examination committee of IA PhD shall have five to nine members, inclusive of practitioners or industrial representatives. Non-CCU members (including

industrial representatives) shall reach one-third. Industrial representatives must meet the qualifications of the doctoral degree examination committee members set forth by the Ministry of Education.

- (9) The doctoral degree examination committee members must have one of the following qualifications:
- (a) Be currently serving or have served as a professor or associate professor;
  - (b) Have a doctoral degree and have significant academic achievements;
  - (c) Have expertise in an unusual or highly specialized academic area and have achieved significant results in their respective academic or professional field(s).

The criteria for determining the qualifications referred to in the subparagraph (b) and (c) of the preceding paragraph shall be set at the STEM PhD Program affairs committee meeting.

- (10) Once a student is found to plagiarize and the fact is confirmed by the degree examination committee, the student will be deemed failed.

7. Degree Conferral: A doctoral candidate who completes their program within the legally prescribed period, has completed the required course credits and satisfied the graduation requirements according to the university's regulation, and passed an examination conducted by a doctoral degree examination committee shall be awarded a doctoral degree.
8. A degree conferred shall be revoked if the thesis or dissertation, work(s), proof of achievement, written report, technical report, or professional practice report contains fabricated, altered, or plagiarized material, was written by someone else, or constitutes some other form of fraud. Once the matter is verified by the school review committee, the awarded degree diploma will be invalidated and should be returned to CCU on request. The offenders cannot continue their study even the study period has not expired.
9. If there are any issues that are not covered by this regulation, it will be handled in accordance with the relevant regulations of the Ministry of Education and National Chung Cheng University. This regulation is implemented after the approval of the program affairs meeting, and it will be the same when revised.