Department of Computer Science and Information Engineering
Curriculum of International Ph.D. Degree Program

I. Curriculum

1. Ph.D. student shall take more than 18 credits of doctoral courses; master students who transferred to doctoral program without finishing master's requirements shall have at least 30 credits before graduation. Through the consent of the advisor and chair of the department, can select other graduate school's related courses as the credits required for graduation. The degree dissertation is not included in the above credits.

2. Ph.D. student must take "Research Ethics Education", which is an online course, and pass the examination of the course during the first semester.

3. Ph.D. student shall get permission from the advisor to take courses every semester.

4. Due to different background information of Ph.D. students, this department shall designate related courses for students to retake.

5. According to the Regulations of the credit exemptions of this University, the student can exempt the credits, but is limited to the half of the total credits required for graduation, and the credit exempted should be the course that is opened by this department.

II. Qualification Exams

Qualification exams method: divides into curriculum qualification exams and research skills qualification exams, the student must pass at least one of them.

A. Curriculum Qualification Exams

The student shall pass 3 curriculum subjects at the qualification exams of this department. Within the deadline of the qualification exams regulations, students whose grades passed and the ranking is before 1/3 of the total class students can apply, and shall be approved by the Graduate School Affairs Group.

If the Ph.D. student has taken courses of this department before the enrollment and meets the qualification exams regulations, he/she shall apply for credit exemptions before the first semester enrolled finishes, otherwise, it is regarded as abandonment.

B. Research Skills Qualification Exams

Before the deadline of the qualification exams regulations, the student present one SCI/SSCI paper to apply, and it is approved by the Graduate School Affairs Group. The paper must be above Grade B (Ranking: 15%~80%) of SCI/SSCI, the student and advisor are the authors of the paper, and the student has to be the first author (it's not including advisor). The points of the paper which is passed for qualification exam have to be downgraded, i.e., grade A is

downgraded as grade B, grade B is downgraded as grade C.

III. The general and vocational Ph.D. students should pass qualification exams within three years after enrollment and Ph.D. students with disabilities should pass qualification exams within four years.

IV. Subjects of qualification exams:
   A. Computer Algorithms
   B. Computer Networks
   C. Operating Systems
   D. Computer Architecture

V. Dissertation Advisor
   1. The Ph.D. student shall choose one assistant professor, associate professor or professor as his/her advisor within half year after enrollment, and report to the department for review. Under special reasons, professor of other department can be chosen under consent of this department, but it has to choose one professor as co-advisor (please see Attachment 1 – "Consent of Guidance")
   2. Under special reasons, if the student wants to change the advisor, he/she shall receive the consent of the previous and new advisor, and report to the department (please see Attachment 2 – "Consent of changing advisor")

VI. Dissertation Guidance Committee
   1. The Guidance Committee shall form at least one month before the scheduled dissertation oral exam.
   2. The Chair of the Department should form the Guidance Committee members from two of the assistant professors, associate professor or professors, and one of them is chosen as the convener.
   3. The main task of the Guidance Committee is to assist the dissertation research of the Ph.D. student, and the main works are:
      A. Review the feasibility of the Ph.D. students' dissertation plan
      B. Review the research skills of the Ph.D. students
      C. Provide suggestions and revisions on the dissertation
      D. The Guidance Committee members are the members of the dissertation oral exam and the dissertation review group.

VII. Ph.D. students can use "Dissertation". "Patents, University-Industry Collaboration, Technical Transfer", "Implementation" methods to regard as the researches. The minimum requirement for the points of researches are separately formulated in the "National Chung Cheng University Department of Computer Science and Information Engineering Addendums on the Research Findings Counting System of the Ph.D. Students".

VIII. Proposal for Dissertation
   1. The student must pass the qualification exams before applying for the proposal.
   2. The general students should pass the proposal within four years and vocational students should pass it within five years after enrollment.

3. Members of the proposal examinations committee are invited from the Ph.D. degreed, above assistant professor ranked, or professors belonging to a rare or special discipline in the academic or professional achievements, or have much accomplishment in this field, composed of Dissertation Guidance Committee and advisor, one of the members without advisor is chosen as the convener..

4. Upon application, the convener of the proposal examinations committee should convene the members and proceed the oral examination, after passing the approval of all the members present, and archived all the member's views on the dissertation oral examinations, the student is notified after the chair of the Department signs.

5. If the student is using implementation method to apply the graduation, the dissertation must set out the detailed background, research methods and specific objectives etc. The regulations on the review includes:

   A. The importance and usefulness of the proposed topic
   B. Innovation of the expected results
   C. The complexity of the implementation system
   D. Expression of the things that should be completed with the implementation

6. The student who failed the proposal can apply again, however, the student will lose the right to study Ph.D. degree if he/she fails twice,

7. The proposal have to re-apply if the student changes the advisor.

IX. Ph.D. degree dissertation and the review of research counting

1. The Ph.D. student must have passed the proposal six months before the Ph.D. degree dissertation review begins.

2. The Ph.D. degree dissertation Review Committee is consisted from Guidance Committee members and as well as the Advisor, and one member is chosen as the convener.

3. Upon application of the Ph.D. degree dissertation review, the convener shall convene the members and proceed the review on the dissertation results and value as well as the academic performance of the student over the years etc, in a written format, and shall convene the The Ph.D. degree dissertation Review Committee Meeting within one month, and must pass the approval of two-third of the all members present.

4. During the dissertation review, the Ph.D. student must be asked to answer interpellation, clarify the contents of the dissertation.

5. The dissertation review results and research findings points are sent to Graduate School Affairs small group to confirm and the student will be notified after Chair of the Department signs.

6. If the student is using implementation method to graduate, the dissertation review must include System demonstration (including operation and commentary) and publicly hold achievements' description.

7. The student who failed the dissertation review can apply for the dissertation review again, but if the student fails twice, he/she will lose the right to study Ph.D. degree.

X. Ph.D. degree examinations

1. The Ph.D. must have passed the dissertation review and review on the research findings counting one month before the Ph.D. degree examination begins.

2. The Ph.D. student who passed the dissertation review and review on the research findings counting, and got the consent of the chair of the Department, the dissertation findings have reached the standard of the Ph.D. degree dissertation, as well as passed the minimum standards formulated by this Department, in addition, the student has to present the certification of passing the "Research Ethics Education" course can apply for the Ph.D. degree examinations. The Ph.D. degree examinations are handled in accordance with the provisions of the university.

3. The Ph.D. degree examination committee consists of five to nine members, one member recommended from the Department, and the members who are not from the University must be consisted of one-third of the total member, the Advisor is the definite member and each member shall comply with the qualifications prescribed by the Ministry of Education.

4. In addition to the members recommended by the Department, name list of the other members and the convener can be suggested by the Advisor, with the consent from the Department, submitted by the Chair of the Department and appointed by the University Principal.

5. During the Ph.D. degree examinations, at least five members should be present, and the members who are not from our university should be their one-third.

6. The results of the degree examinations are decided through a secret ballot, and can only vote once. The student is deemed failed if the one-third of the members present has failed the student (below 70). The student, who failed and couldn't graduate during the study period expiration year, can apply for re-examination only once. If failed again, the student loses the eligibility to Ph.D. Degree.

XI. Others:

1. The student of this degree shall not part-time outside the campus, without the consent from the Departments Affairs Meeting. During the part-time period, the student shall not receive scholarship form the Ministry of Education. If the student has part-timed outside the campus secretly, once discovered, in addition to the punishment decided through the meeting, the least amount of period for graduation is automatically extended for one year. Furthermore, one semester before the graduation, with the consent from the Department, can work full-time.

2. The limit of study to the Ph.D. degree students (excluding Vocational students) is at least 2 years and seven years at most. To vocational students, it's at least three years and eight years at most.

3. If the Ph.D. students have poor English foundation, Advisor may designate them to

participate in relevant certification examination in English or attend English courses.

4. If the Graduate Degree students who have transferred into Ph.D. degree without completing the Graduate Degree fails to meet the standard of Ph.D. degree, but reached the Graduate degree standard, can be changed into Graduate degree.

XII. Matters that are not entirely mentioned in these guidelines shall be handled through the "Degree-granting law" and "Degree-granting law enforcement Rules" of the Ministry of Education.

XIII. These regulations are enforced upon the approval of the Department Affairs Meeting. The same should apply to the amendments.

National Chung Cheng University Department of Computer Science and Information Engineering
Addendums on the Research Findings Points Counting system of the Ph.D. Students

I. The principles of the research findings accumulation

1. Ph.D. students can use "Dissertation". "Patents, University-Industry Collaboration, Technology Transfer", "Implementation" methods to accumulate the research finding.

2. The research finding can be accumulated with the Type A "Dissertation-oriented approach to graduation", Type B "Patents, technology transfer, cooperation-oriented approach to graduation" and Type C "Implementation-oriented approach to graduation", accumulated in accordance with the following addendums.

   A. Got total points at least 4 points, deemed as reached the minimum standards of the Department. While accumulating the points, can use the method of using both A and B types to accumulate.

   B. The student who is using the Type A to accumulate, must have at least one Grade B dissertation.

   C. The student who is using the Type B to accumulate, must have at least one Grade C dissertation.

3. The minimum standards of the student who is using "Implementation" method to accumulate are as follows:

   A. Must have presented at the international journal or conference, that's topic is related to the dissertation, and the student must be the first author, and the whole dissertation must be reviewed.

   B. Completed the Implementation System and Ph.D. degree dissertation, as well as his personal contribution to the accredited advisor

4. Regulations on the Dissertation points counting

   By the impact factor, ranked into A, B, C three grades. The Dissertation point counting meeting is separately regulated.

   A. Grade A journal: impact factor ranking $< 15\%$，full paper 3.5 points，short paper 2.5 points

   B. Grade B journal: impact factor ranking 15%-80%，full paper 2.5 points，short paper 1.5 points

   C. Grade C journal: impact factor ranking >80%，other SCI or EI journals 1.5 points

   D. International Conferences 0,5 points

   E. Top-level international conferences can be deemed as Grade B points, must pass the approval of the Advisor and reported to the Department Affairs Meeting for approval.

5. Regulations on the Patents counting

   1. Patents must qualify following conditions to be counted as the points; the same research

findings can't be counted again.

      A. Has obtained the new patent or the invention

      B. Applied during the study in this Department and the contents are within the scope of the research

  2. American Invention Patent 2,5 points

  3. Taiwanese Intention Patent 1,5 points

  4. Other countries' Invention Patent: reviewed by the Graduate School Affairs small group.

6.   Regulations on the Technical Transfer Counting

  1. Technical Transfer must qualify following conditions to be counted as the points; the same research findings can't be counted again.

      A. Technical Transfer must be paid in money

      C. Signed a contract during the study in this Department, and the contents are within the scope of the research

      B. Project shall be undertaken by the guidance of Professor

      C. In technical Transfer, the Ph.D. student must have obtained the results derived from the invention or new patent; or enterprise of his/her internship or practical technology research and development work; or results derived from the project commissioned by the government unit case

  2. The point ratio is determined by the Advisor.

  3. The cumulative amount paid has reached sixty thousand NTD, 2.5 points

  4. The cumulative amount paid has reached forty thousand NTD, 1.5 points

  5. The cumulative amount paid has reached twenty thousand NTD, 0.5 points

7.   Regulations on the Industry - University cooperation Counting

  1. The Industry - University cooperation Counting must qualify following conditions to be counted as the points; the same research findings can't be counted again.

      A. Project case already closed

      B. Undertaken during the study in this Department, and the contents are within the scope of the research

      C. Advisor as the project host

      D. The project case must be the enterprise of his/her internship or practical technology research and development work; or results derived from the project commissioned by the government unit case

  2. The points ratio is determined by the Advisor.

  3. The cumulative amount of the case has reached 1,2 million NTD, 2.5 points

  4. The cumulative amount of the case has reached 0.8 million NTD, 1.5 points

  5. The cumulative amount of the case has reached 0,4 million NTD, 0.5 points

8.   Points Counting Method

  1. These regulations are calculated in accordance with the "Regulations on the National Chung Cheng University Academic Journals Publication Reward for the Professors".

2. After deducting the Advisor's from the every dissertation or invention patent, the Ph.D. student and other authors are counted in accordance with the ranking.

    A. One-authored, points counted 100%

    B. Co-authored, are counted in accordance with the number of authors:

        B.1. First author or main author 3 points

        B.2. Other authors 1 point

    C. The points percentage of each authors is: The points of the author/the total number of points of the authors, for example:

    C.1. Two co-authors

    Total points of the authors 3+1=4

    First author or main author obtains 75% (3/4), second author obtains 25% (1/4).

    C.2. Three co-authors

    Total points of the authors 3+1+1=5 First author or main author obtains 60% (3/5), second and third authors obtain 20% (1/5).

    C.3. Four co-authors

    Total points of the authors 3+1+1+1=6 First author or main author obtains 50% (3/6), second, third and fourth authors obtain 17% (1/6).

    C.4. If more authors, please use the above counting methods.

9. During the Technical Transfer and Industry-University Cooperation, the points obtained by the Ph.D. student mentioned in these regulations are multiplied to the ratio determined by the Advisor.