# National Yang Ming Chiao Tung University
# Department of Transportation & Logistics Management
# Academic Regulations for Doctoral Program

Article 1. The Academic Regulations for Doctoral Program (referred to as Regulation hereunder) were formulated in accordance with the "National Yang Ming Chiao Tung University (referred to as NYCU hereunder) Regulations for Graduate Degrees Conferment."

Article 2. The doctoral program of Department of Transportation & Logistics Management (referred to as TLM hereunder) of NYCU admits full-time and part-time students through recommendation-selection programs or examinations.

Article 3. Students having graduated from domestic (public or private) universities, colleges, or institutes registered in the Ministry of Education, or overseas universities, colleges, or institutes recognized by the Ministry of Education, and having acquired the master's degree or equivalent education level, are qualified to enter the doctoral program of TLM through recommendation-selection programs or examinations of NYCU.

Article 4. Undergraduate students in NYCU graduating in the current year, or master students having studied in NYCU for one academic year, may apply to TLM for the admission to the doctoral program in accordance with "National Yang Ming Chiao Tung University Regulations of Admission to Doctoral Program from master's Program." The application should be examined by all full-time faculty members of TLM in accordance with "National Yang Ming Chiao Tung University Department of Transportation & Logistics Management Regulations of Admission to Doctoral Program" and be submitted to the Committee of Departmental Affairs and NYCU for approval.

Article 5. Ph.D. students should select one course advisor according to their research interest for course selection advice.

Article 6. A Ph.D. student should select a faculty member (an assistant professor, an associate professor, or a professor) as the student's research advisor before the end of the midterm exam in the third semester after admission. When the advisor is selected, the student should fill out the "Ph.D. Dissertation Advisor Agreement." The invitation of advisor should be reported to the departmental office and submitted to the Administrator Meeting of the College of Management for approval. The dissertation examination should be applied at least three semesters after the selection of the advisor. If necessary, the advisor can invite an expert in the field as a co-advisor of the Ph.D. student. The co-advisor must be a full-time faculty ranked assistant professor or above in a domestic or international University recognized by the Ministry of Education. Similarly, for the invitation of co-advisor, the student should fill out the "Ph.D. Dissertation Advisor Agreement", which is reported to the department and the Administrator Meeting

of the College of Management for approval. It is noted that if a co-advisor is appointed, a student can only apply for the dissertation examination at least 2 semesters after the appointment of a co-advisor. If the advisor retires or resigns, the Ph.D. student must immediately invite a new advisor or co-advisor from the full-time faculty members ranked assistant professor or above in TLM. A faculty member of the department can advise at most two new Ph.D. students per year, and at most five Ph.D. students total at the same time in an academic year (including suspended student). A professor may advise up to additional two Ph.D. students in total if the faculty member is awarded a project of Ministry of Science and Technology and publishes more than four papers in SCIE or SSCI journals (titles included in the Journal Citation Reports (JCR) in the past five years) (including the papers in accepted condition), or if the faculty member has been awarded the flexible salary research awards of NYCU in the past three years.

Article 7. For the TLM Ph.D. program, the study term of full-time students is limited between two and seven years (the study term hereon should not include the suspension period). Part-time students may extend the study term for two more years. For students admitted to the Ph.D. program directly as promoted through the master program, the study term follows regulations of the Ph.D. program.

Article 8. Ph.D. students may select courses offered by TLM or other relevant departments or graduate institutes, and they should complete at least 27 credit hours, excluding Ph.D. Seminar, Dissertation, and foreign language courses. The credits should include 18 credits of 2 Core Courses and 6 courses offered by TLM, and 9 credits of 3 courses of Ph.D. program should be completed and passed (for example, the Ph.D. courses of TLM and other departments or institutes of College of Management). The minimum required credits of students admitted to the direct Ph.D. program are 42 (including credits earned during the master program before the admission to the direct Ph.D. program). Moreover, Ph.D. students should complete and pass Seminar courses in each semester before graduation. If the Seminar is not registered or failed twice during the study term, the Ph.D. student will be suspended.

Article 9. The core courses of Ph.D. program can be divided into mathematical and statistical categories. Each Ph.D. student should select at least one course from each of the two categories. Students can complete the core courses offered by other departments or graduate institutes if the core courses are not offered by TLM. The core courses are listed as follows:

1. Optimization Techniques category: Linear Programming, Dynamic Programming, Nonlinear Programming, Combinatorial Optimization, Integer Programming, Mathematical Programming, and Heuristics.

2. Statistics category: Stochastic Processes, Mathematical Statistics, Multivariate Analysis and Application and The Application of Econometrics in Transportation Data.

Article 10. Credit waiver

1. All credits of related core courses, passed during the period of Ph.D. program from all domestic and overseas universities, college, graduate institutes

recognized by the Ministry of Education, are eligible for credit waiver. At most half of minimum graduate credits can be waived.

2. For Ph.D. students admitted to the Ph.D. program of TLM once again after the expiration of the previous study term of the Ph.D. program, all credits earned during the previous study term can be waived. The qualification examination passed can also be waived, and the points of published papers earned during the previous study term can be counted towards graduation requirement in the second study term. However, the students must apply for graduation after two academic years since the second admission (suspension is not allowed), and the waiver is limited to be once.

3. Students who took Ph.D. courses during their master's program without having the credits counted towards graduation credits of master's program can apply to waive at most 9 credits in their Ph.D. program. Students must apply to waive the credits by the end of the 2nd week since the beginning of the semester. Otherwise, the delayed applications need to be examined and approved by the Committee of Departmental Affairs.

Article 11. A Ph.D. student can apply for the Ph.D. candidate qualification examination with the approval of the advisor if the student completes the course credit requirement. The Ph.D. candidate qualification examination is an open book written test and will be conducted once each semester. The examination committee is formed by the chairperson of TLM Academic Committee, and there are three disciplines in the examination, namely, "Policy and Planning", "Information and Technology", and "Operation and Administration". The exam should involve the application of quantitative analyses and courses from each of the three disciplines that have been taken by the Ph.D. candidate in their application form. The method of qualification examination will be announced by the committee one month in advance. The exam results and grades should be kept in the TLM office for reference. In general, the examination of each discipline will be in the form of 6-hour written test. There are two thresholds for exam grades. The candidate passes the exam if the grade is A⁻ (80 out of 100 in score) or above and fails if the grade is B⁻ (70 out of 100 in score) or below. If the candidate fails in two out of the three discipline exams, the candidate is required to drop out of NYCU. If the candidate fails one of the three discipline exams, the candidate can retake the exam of the same discipline with the current student status once and only once. If the candidate fails the retake exam, he/she is required to drop out of NYCU. If the candidate gets a score between B⁻ and B⁺ (70-79 in the 100-score scale), it is a conditional pass and the committee member of the discipline will require the candidate to take an assigned course, which does not count towards the graduation credit of the degree. The student should acquire A⁻ (80 out of 100 score) or higher in the assigned course(s); otherwise, the candidate will be considered to fail in the discipline(s) and must apply for a re-test (for one disciplines) or drop out of NYCU (for two disciplines). The committee should report the examination result to the Committee of Departmental Affairs within 6 weeks after the examination. Full-time students should pass the Ph.D. candidate qualification examination within three years, and part-time students should pass it within five years (including the suspension period). Otherwise, they will be required to drop out of NYCU. Before applying

for the qualification examination, the candidate should submit the "Form of Status Confirmation" to the department.

Article 12. After passing the qualification examination, the Ph.D. student should file the dissertation proposal within one year (excluding suspension period) and submit it to TLM office for transferring it to the student's "Advice and Review Committee of Ph.D. Dissertation" for oral review and approval by the advisor. Under special conditions, the period of proposal submission can be extended for one more year, subject to the approval of the Committee of Departmental Affairs. The dissertation advisors should fulfill the qualification of the full-time assistant professor of TLM or above, and they should publish papers on academic journals. The invited co-advisors being faculty members of other departments or universities should be reported to the Committee of Departmental Affairs for approval. TLM will select two or more members to form the "Advice and Review Committee of Ph.D. Dissertation" from the associate professors or above of related departments or graduate institutes of NYCU recommended by the student's advisor. The student's advisor must be one of the committee members, and there should be at least one professor among the committee members. Students who fail to pass the oral dissertation proposal review may apply for the retrial after six months. Only one retrial is allowed. Students who fail to pass the retrial of dissertation proposal review should be required to drop out of NYCU. Students who change the dissertation proposal should submit the written application to TLM and submit new dissertation proposal to newly formed "Advice and Review Committee of Ph.D. Dissertation" for review and approval. Only one change of dissertation proposal is allowed.

Article 13. Whenever the student would like to terminate the dissertation instruction relationship with the advisor or change the dissertation advisor, the student should submit an application to the departmental office. The process will be effective after the process is initiated. The relationship termination does not require any approval from the dissertation advisor.

Article 14. If the dissertation advisor wishes to terminate the dissertation instruction relationship with the student, a written application should be submitted to the departmental office for approval, and the results will be notified to the student by the department. After the termination of the dissertation instruction relationship, the department will assist the student to find a new advisor. The student's dissertation proposal should be rewritten and submitted to the newly formed "Advice and Review Committee of Ph.D. Thesis/Dissertation" for approval in accordance with the article 12 hereof.

Article 15 The research results related to the ideas or concepts of the original dissertation advisor under the dissertation instruction can only be used as part of the student's dissertation with the agreement of the original dissertation advisor.

Article 16. A Ph.D. student becomes a Ph.D. candidate if they pass the Ph.D. candidate paper-based qualification examination and fulfill the course requirement of the Ph.D. program.

Article 17. Before applying for Ph.D. degree defense, a Ph.D. candidates should have passed an English Test equivalent to the General English Proficiency Test (GEPT) High-Intermediate level or above (please refer to the Foreign Language Concordance Table) or completed and passed the Ph.D. student English training program offered by the Language Teaching and Research Center of NYCU. Students may apply to waive the course if they acquire the bachelor's degree or above in an overseas university which uses English as the primary language.

Article 18. A Ph.D. candidate may apply for the Ph.D. degree defense if the candidate has completed the dissertation and is recommended by the advisor. According to regulations, the candidate must have published at least two papers with the TLM advisor related to the research title, among which at least one of the papers should be published on SCIE or SSCI of JCR, and the other is published on TSSCI or international journals with peer-review process. The aforementioned journals must be included in the JCR within the recent five years at the time the candidate takes the degree defense. The papers should be published under the candidate's name and recognized by the candidate's "Advice and Review Committee of Ph.D. Thesis/Dissertation". The corresponding author of the paper must be either the candidate or the advisor (or co-advisor). For the papers published by multiple authors, the contribution should be calculated according to the rules as follows:

1. The advisor and co-advisor are NOT counted in the calculation of number of authors. (In the case where the candidate invites a co-advisor; the invitation process should be completed before the publication of the paper. It does not run back over the past.)

2. Two authors: the first author accounts for 60% of the contributions (0.6 paper count), and the second one accounts for 40% (0.4 paper count).

3. Three or more authors: the first author accounts for 50%, the second one 30%, the third one 20%; and the fourth or the rest should not account for any points.

Article 19. The degree defenses for PhD candidates are generally conducted orally, but written exams may be administered instead if necessary. All oral defenses must be conducted openly. The time and place of the oral defense and the title of thesis/dissertation must be announced in advance.

Article 20. The President of NYCU will select five to nine members to form a committee for the doctoral degree oral defense from the scholars and experts recommended by TLM. The scholars and experts, whether from NYCU or an external organization, must specialize in the area of research or study of the candidate and fulfill at least one of the following requirements, while the number of members from both inside of NYCU and outside of NYCU must be no less than a third of the total number of committee members. The head of the department must appoint a committee chairperson from amongst the members. The adviser of the candidate cannot serve as the chairperson. Besides the advisor, at least one full-time faculty member of TLM should be included in the committee. If there is no adequate committee member from TLM, full-time faculty members of other department or graduate institute of College of Management should be included. A committee member should fulfill at least one of the requirements below. The committee member must:

1. currently be (or have been) a professor or an associate professor.

2. currently be (or have been) an academician, a researcher, or an associate researcher at Academia Sinica.

3. hold a doctoral degree and has outstanding academic achievements.

4. have outstanding academic or professional achievements in certain rare or specific fields.

The criteria of qualification determination for items (3) to (5) should meet the requirement of publishing at least 4 papers in SCIE or SSCI journals (titles included in the Journal Citation Reports (JCR)) in the past five years.

Ph.D. candidates' spouse, or the blood relatives and the affinity within the third degree should not serve as a member of the committee.

Article 21. All members of an oral defense committee must attend the oral defense in person; stand-ins are not permitted. The oral defense process may only begin when attended by at least five committee members and at least one-third of the non-NYCU committee members.

Article 22. The passing grade of the oral defense is B- (70 out of 100 total score) or above with the highest grade being A+ (100). The results should be calculated by the average of the scores given by the members present, from a single evaluation. A doctoral candidate is deemed failed, and no average score should be calculated if the scores given by a third or more of the members present are below the passing grade. Students who failed to pass the degree defense may apply for the retrial in the next semester or next academic year of their extended study period. Retrial will be limited to be once. Students who fail to pass the retrial of degree defense is required to drop out of NYCU. A candidate is deemed failed when plagiarism or cheating is discovered in the thesis/dissertation and confirmed by the oral defense committee.

Article 23. NYCU will confer a master's degree on a doctoral student who passes the Ph.D. candidate qualification examination but fails the Ph.D. oral defense if the Ph.D. dissertation is approved by the oral defense committee as qualified for a master thesis.

Article 24. For candidates passing the oral defense, committee members should provide clear suggestions and constructive comments for the students' reference to revise the dissertation. After revising the dissertation, the students should apply for dissertation review. The review is passed if the advisor and all committee members approve the revision. The review is evaluated on a pass/fail basis and not or a score. For candidates passing the dissertation review, "The Authorization of Oral Members for Research Thesis/Dissertation" should be signed by all committee members of the oral defense. After the dissertation review is complete, the score of the oral defense is the score of the degree examination.

Article 25. After passing the degree examination, students must submit the Degree Examination Evaluation Form by the end of January 31st if the exam is taken in the Fall semester and by the end of July 31st if it is taken in the Spring semester.

The hardcopy of the Ph.D. dissertation shall be deposited no later than the last business day before the next semester starts. A student whose Ph.D. dissertation deposit is overdue must register the next semester if the student has not reached the limit of their study terms. If the student's limit of their study terms is reached, but the student did not submit the Degree Examination Evaluation Form by the last semester of the study term or deposit the Ph.D. dissertation by the last business day before the next semester starts, the student will be required to drop out of NYCU in accordance with regulations.

Article 26. Ph.D. dissertations (including abstracts) must be written primarily in Mandarin or English and comply with the NYCU Format for Thesis/Dissertation. After passing the oral defense, students must submit five hardcopies of the dissertation and upload an electronic version of the dissertation abstract and the full content of the dissertation on the website within one month (according to NYCU Library Abstract, Thesis and Dissertation Electronization Specification for details).

Article 27. If fraud, alternation, plagiarism, dissertation being written by others, cheating, or any unethical act is found in the student's Ph.D. dissertation after the doctoral degree is awarded to a graduate, the awarded degree will be revoked, and the graduate has to surrender the certificate of degree."

Article 28. These Regulation, reviewed by the Curriculum Committee of the College of Management and the NYCU Curriculum Committee, was formulated at the Committee of Departmental Affairs meeting and took effective after the approval of, and announcement by, the university assembly. The same procedure shall be applied if the Regulation is amended. When incomplete or in conflict, the Regulation is superseded by the National Yang Ming Chiao Tung University Regulations for Master and Doctoral Degrees Conferment, the National Yang Ming Chiao Tung University Guidelines for the Interaction between Thesis Advisor and Graduate Students, and the University Law.