National Taiwan Normal University
Department of Computer Science and Information Engineering
Master Program Regulations
(Applicable for Students Enrolled in School Year 2022 Onwards)

Article 1   The Regulations are established based on the University's Regulations and Degree Conferral and Graduate Degree Exam Regulations.

Article 2   The degree conferred by the Department's master program is Master of Science (M.S.).

Article 3   Graduate students must complete at least 27 credits before graduation. The mapping for field are detailed in the Exhibit.

Article 4   Graduate students must complete the following courses:

I.   Required electives: 3 credits. In principle, each student may only take one credit for each semester.

(I)   Seminar on Communication Networks (I) and (II).

(II)   Seminar on Information Systems (I) and (II).

(III)   Seminar on Multimedia Engineering (I) and (II).

(IV)   Seminar on Information Science (I) and (II).
Graduate students who completed 24 credits of English-Taught Program may apply and waive Seminar on Information Science (I) and (II) for 3 credits with an English-taught professional curriculum offered for the Department's master program with the consent of the Department's Curriculum Committee.

II.   Electives in the field: Students shall take two courses in one of the following three fields for 6 credits.

(I)   Communication Networks: Data Communication, Advanced Computer Networks, Distributed Processing Systems, Queuing Theory

(II)   Information Systems: Advanced Operating Systems, Advanced Algorithms, Advanced Computer Architectures, Information Security

(III)   Multimedia Engineering: Artificial Neural Network, Data Visualization, Data Mining, Advanced Image Processing, Advanced Computer Graphics, Machine Learning
International students can complete any two courses conducted in English in the three fields as an alternative for the completion of electives in the field.

III.   Free electives: at least 18 credits.

Article 5   Waiver

I.   Students who took courses offered for a master's program whose credits are not included in the minimum number of credits for a degree may apply for a waiver with relevant evidence.

II.   The maximum number of credits waived may not exceed two-thirds of the

approved number of credits needed for graduation.

    III. Granting of credit waivers will be reviewed and determined by the Department's Curriculum Committee.

Article 6   Graduate students who enrolled in courses offered in other universities may not exceed a quarter of the minimum credits required for graduation.

Article 7   Except for the courses mentioned above, selection of other courses need to be consented by the student's thesis advisor. Where the student has not had a thesis advisor yet, consent of the professor of the course is required.

Article 8   Thesis Advisor

    I.   Only the Department's faculty members at the assistant professor level or above may serve as thesis advisor of students in master program. Students may choose a co-advisor. In certain unique circumstances, the Curriculum Committee may agree to a choice of thesis advisor outside of the Department, provided that a full-time faculty member of the Department serves as a co-advisor.

    II.   Master students shall confirm their thesis advisor within the first semester of enrollment and submit the "Thesis Advisor Confirmation form" to the Department for reference. (In the event an thesis advisor is not confirmed in time, the advisor of master students will be appointed as a temporary advisor.)

    III.   Permissions from both the current and new thesis advisors are required for any replacement of thesis advisors. "Thesis Advisor Change Form" shall be submitted to the Department for reference.

Article 9   Students of master program shall submit the thesis proposal within the first week of the graduating semester. After signed by the thesis advisor, the proposal will be submitted to the Department's office for reference. Students need to submit a certificate for completion of "Research Ethics Education Online Courses".

Article 10   Students of master program shall complete application and prepare the following documents for qualification review when applying for conducting thesis defense.

    I.   A copy of the transcript that includes all courses completed (including a list of the courses enrolled for that semester).

    II   A copy of the first draft of the thesis and its abstract (in principle, the thesis, including the abstract, will be written in Chinese or English).

    III.   An originality report provided by online plagiarism check system.

    IV.   A copy of the **Statement for Academic Ethics**.

Article 11   Thesis defense will be conducted orally for "students of master program", with a grade of B- (or 70%) or above considered passing. The grade will be determined by the average of the scores given by the attending committee members.

Where the defense is conducted through video conferencing, it shall be approved by the Department Affair Meeting and the defense shall be recorded in its entirety.

The thesis committee shall consist of 3 to 5 members including the thesis advisor, among which members from other universities shall consist at least a third (inclusive) of the committee. In principle, the committee chair shall be a non-NTNU member, provided that the thesis advisor may not serve as the chair.

Article 12   To serve as a committee member, one must have specialized in the research field of the master candidate and satisfies at least one of the following qualifications:

    I.   Being a current or former professor, associate professor or assistant professor.

    II.   Being an academician of Academia Sinica, a current or former research fellow or associate or assistant research fellow.

    III.   Having received a doctoral degree and had attained substantial achievement

academically.

IV. Being in a field that is uncommon or unique, and had attained substantial achievement academically or professionally.

The determination of Subparagraphs 3 and 4 of this section shall be at the discretion of the thesis advisor in principle. The proposed committee member candidates may only be invited after approval from the thesis advisor and department chair is obtained.

Article 13   Students of master program shall satisfy one of the following with respect to foreign language proficiency:

I. Scoring 110 points or above in the University's English examination (equivalent to 800 points in Lexile Online Reading Level).

II. Passing the first stage of GEPT Intermediate Level.

III. Scoring 650 points or above in TOEIC.

IV. Scoring 61 points or more on the new internet-based TOEFL.

V. If a student provides a copy of failing any of the above examination (except for absence and 0 points), the student may be considered satisfying the graduation requirement for foreign language proficiency:

(I) Take and pass the University's English Grammar course (400L).

(II) Participate in exchange program (or joint degree program) in a non-Mandarin speaking country for at least one semester.

VI. Students who graduated from universities in English speaking countries or who was admitted as foreign student and whose English proficiency is recognized by the Department's Curriculum Committee to meet the same requirement or exceed the same.

Article 14   Regulations not covered will be handled in accordance with the University's Student Regulations and other relevant laws and regulations.

Article 15   These Regulations involves the graduation qualification and degree conferral will be submitted to Academic Affairs Meeting for review after being passed by the Department's Department Affairs Meeting and the relevant meetings of the college. Other provisions will be submitted to the Academic Affairs Office for reference after passed by the Department's Department Affairs Meeting. The same applies to any amendments.

National Taiwan Normal University
Department of Computer Science and Information Engineering
Master Program Regulations Appendix

Mapping for Master Program Concentrations:
    Suggested Curriculum:
    Total Number of Credits: 27
    I. Required courses: 3
    II. Elective courses: 24
Mapping:
    I. Required electives (3): Seminars, choose three out of six courses
        Seminar on Communication Networks (I) and (II)
        Seminar on Information Systems (I) and (II)
        Seminar on Multimedia Engineering (I) and (II)
        Seminar on Information Science (I) and (II) (EMI)
    II. Electives in the field (6): Choose two courses in any of the field
        1. Field of Communication Networks
        2. Field of Information Systems
        3. Field of Multimedia Engineering
    III. Free electives (18)
    IV. Master program curriculum mapping

	Communication Networks	Information System	Multimedia Engineering
Required Courses Limit to one courses per semester	Seminar on Communication Networks (I) and (II)	Seminar on Information Systems (I) and (II)	Seminar on Multimedia Engineering (I) and (II)
Electives in the Field (Choose two courses in any of the fields)	1. Data Communication (EMI) 2. Advanced Computer Networks (EMI) 3. Distributed Processing Systems 4. Queuing Theory	1. Advanced Operating Systems 2. Advanced Algorithms 3. Advanced Computer Architectures 4. Information Security	1. Artificial Neural Network (EMI) 2. Data Visualization (EMI) 3. Data Mining 4. Advanced Image Processing 5. Advanced Computer Graphics 6. Machine Learning
Free Electives (Offered irregularly)	Seminar on Information Science (I) and (II) (EMI) Real-time Systems (U, M) (EMI) Wireless Communications (U, M) (EMI) Cyber-Physical Systems (EMI) Computer Vision (EMI) Special Topic: Information Systems (I) Special Topic: Communication	Parallel Algorithms (M, D) Theory of Computation (M, D) Speech Recognition (M, D) Advanced Database Systems (M, D) Embedded System Design (M, D) Information Retrieval and Extraction (M, D) Digital Signal Processing (M, D) Bioinformatics (M, D) Natural Language	Mathematic Analysis of Algorithms (M, D) Multimedia System Design (M, D) Special Topic: Multimedia Engineering (II): Introduction to Multimedia Streaming (U, M) Object-Oriented Analysis and Design (U, M) Web Computing and XML (U, M)	Trends and Practices in Information Technology Industry (U, M) Meta-heuristics and Problem Solving (U, M) Speech Processing (U, M) Compiler Design (U, M) Computer-Aided Design for VLSI Design (U, M) Introduction to and Application of Internet of Things (U, M) Information Security: A Hands-On Approach (U, M)

Networks (I) Data Compression (M, D) Fuzzy Theory (M, D) Pattern Recognition (M, D)	Processing (M, D) Stochastic Processes (M, D)		Projects in Computer Music and Audio Technology (U, M)	

Courses conducted in English offered in the master program of Department of Computer Science and Information Engineering:

	Course Name	Remarks
Required Courses Limit to one courses per semester	Seminar on Information Science (I) and (II) (EMI)	Graduate students who completed 24 credits under English Conducted Courses Program may apply and, with consent of the Department's Curriculum Committee, waive a three-credit course of Seminar on Information Science (I) and (II) offered by the Department for master program and conducted in English.
Electives in the Field (Choose two courses in any of the fields)	1. Data Communication (EMI) 2. Advanced Computer Networks (EMI) 3. Artificial Neural Network (EMI) 4. Data Visualization (EMI)	
Free Electives (Offered irregularly)	1. Real-time Systems (U, M) (EMI) 2. Wireless Communications (U, M) (EMI) 3. Cyber-Physical Systems (EMI) 4. Computer Vision (EMI)	1. Electives in the field conducted in English offered by the Department may be considered free electives conducted in English. 2. Students who enrolled in courses conducted in English in other universities or other departments may apply for a waiver.

國立臺灣師範大學資訊工程學系碩士班課程架構表
全英語組（GPE）

適用入學年度	系必修學分	系選修學分	自由選修學分	畢業最低總學分
111	0.0學分	9.0學分	18.0學分	27.0學分

註：課名前面標示E，係為全英語授課

一、系必修課程，應修0.0學分

二、系選修課程，應修0.0學分

三、分組課程

組必修課程，應修0.0學分

組選修課程，應修9.0學分

科目代碼	科目名稱	學分	上課時數 正課時數	實驗(習)時數	備註
	1 專題討論 應修2.0學分，每學期至多修習一學分為原則。 修滿24學分全英語授課學程之研究生可申請直接本系課程委員會同意後以一門三學分的本系碩士班全英語畢業課程抵專題討論：資訊科學（一、二）學分。				
	1-1 E 專題討論：資訊科學（一）	1.0	0.0	2.0	可重複修
	1-2 E 專題討論：資訊科學（二）	1.0	0.0	2.0	可重複修
	2 領域選修 應修6.0學分				
CSC0056	2-1 E 資料通訊	3.0	3.0	0.0	
CSC0036	2-2 E 高等計算機網路	3.0	3.0	0.0	
CSC0032	2-3 E 類神經網路	3.0	3.0	0.0	
CSC9005	2-4 E 資料視覺化	3.0	3.0	0.0	
	3 系自由選修				
CSC0029	3-1 E 電腦視覺	3.0	3.0	0.0	
CSC0010	3-2 E 無線通訊	3.0	3.0	0.0	
CSC9008	3-3 E 網宇實體系統	3.0	3.0	0.0	
CSC9006	3-4 E 即時系統	3.0	3.0	0.0	

四、自由選修課程，應修18.0學分

五、自由選修課程，應修18.0學分