

2009 Applicant Guidelines for Doctoral Programs (Second Stage) of Graduate School of Information Science, Nagoya University

Important Notice: The Japanese version of Applicant Guidelines for Doctoral Programs of Graduate School of Information Science, Nagoya University serves as the official guidebook. This English translation is provided only for applicants' convenience.

The Graduate School of Information Science invites applicants for admission to the second stage of doctoral programs, in accordance with the following guidelines.

1. Qualifications for Application

Applicants must meet one of the following conditions:

- (1) Master's degree or professional degree holders, or those who are expected to obtain one of the above degrees by March 31, 2009
- (2) Persons who have obtained the equivalent of a master's or professional degree in foreign countries
- (3) Persons who have completed or will complete by March 31, 2009 a course of study in Japan through a correspondence course run by foreign educational institutes, to obtain the equivalent of a master's or professional degree
- (4) Persons who have completed a course of study in a foreign educational facility in Japan, which is recognized as forming part of the education system in that foreign country, and which is approved by the Minister of Education, Culture, Sports, Science and Technology, Japan as completing a designated course of study and who hold a master's or professional degree or the equivalent of such a degree
- (5) Persons who have been approved by the Minister of Education, Culture, Sports, Science and Technology (Notification No.118 of the Ministry of Education, 1989) (Note)
- (6) Persons who will be 24 years of age as of March 31, 2009, and who have been recognized by our Graduate School, based on the results of individual examinations, as having academic abilities equivalent or superior to master's degree holders (Note)

(Note) Applicants who meet condition (6) above must contact our Graduate School no later than December 10 (Wed.), 2009.

2. Number of Students to Be Admitted

Dept. of Computer Science and Mathematical Informatics	9(5)
Dept. of Information Engineering	10(7)
Dept. of Media Science	8
Dept. of Complex Systems Science	14(8)
Dept. of Systems and Social Informatics	7

Note: The number is still in the process of application to the Ministry of Education, Culture, Sports, Science and Technology. It is possible that the final number become the one in ().

3. Application Period

Applications will be accepted between January 14 (Wed.) and January 20 (Tue.), 2009 (except Saturday, Sunday and public holiday) from 9:00 to 16:00 (except between 12:00 and 13:00).

4. Application Documents

Documents required for all applicants

- (1) Application Form (Complete form prescribed by our Graduate School)
- (2) Examination Card and Photograph Card (Complete cards prescribed by our Graduate School)
- (3) Objectives and Study Plan (Complete form prescribed by our Graduate School)
- (4) Personal History (Complete form prescribed by our Graduate School)
- (5) Receipt of Payment, a copy of the Receipt of Payment (Enter only your name in forms prescribed by our Graduate School.)
- (6) 2 self-addressed return envelopes (one for sending Examination Card, the other for correspondence)
You must submit 2 self-addressed envelopes prescribed by our Graduate School with the address at which you will receive the envelopes, prefecture code, and name. You must attach a 350-yen stamp on the return envelope for sending Examination card.
- (7) Address label (Write necessary items on the label prescribed by our Graduate School.)
- (8) Certificate for (prospective) acquisition of master's degree, or certificate for (prospective) completion of master's course
- (9) Official transcript of academic records (issued by your last graduate school)
- (10) Examination fee (30,000 yen by postal money order, on which name and address of designated payee should not be written.) However, in the case of applicants who wish to advance to the second stage of our doctoral programs directly after finishing the first stage, examination fee and receipt-related forms listed in (5) above are not required.
- (11) A master's thesis (a copy is acceptable) and an abstract of the thesis (if applicant finished the master's course without submitting a master's thesis, a research paper can be substituted.) However, applicants who are expected to obtain a master's degree by March 31, 2009 need not submit a master's thesis, only an abstract of the thesis.
In preparing an abstract, applicants may either write in the form prescribed by our Graduate School or type the entire form using a word processor etc. Additional sheets may be used as necessary.

Documents to be submitted preferably for reference

- (1) If the applicant has material other than a master's thesis that indicates his/her research abilities, it is desirable to submit a copy of such material and, if necessary, an abstract.
- (2) If a foreign applicant studying in Japan has taken the Japanese Language Proficiency Test, it is desirable to submit a certificate or score report. When submitting a copy, write "This document is identical to the original" on the copy, which should then be signed and/or stamped with your seal.
- (3) If the applicant has taken an English proficiency test (STEP, TOEIC, TOEFL etc.), it is desirable to submit a copy of the certificate or score report. When submitting the copy, write "This document is identical to the original" on the copy, which should then be signed and/or stamped with your seal. The date of the examination covered by the certificate or report must be no earlier than April 1, 2005.

Documents to be submitted in special cases

- (1) Foreign applicants residing in Japan must submit an alien registration certificate issued by their municipality office. However, those with permanent residency need not submit this document.
Overseas residents must submit a document certifying their nationality and resident's eligibility (for example, a copy of your passport showing nationality and resident status.)
- (2) Applicants serving in government and other public offices, companies and other organizations and who will remain in service even after enrollment must submit the organization's written consent to application for admission (no fixed form).

5. Application Procedures

Applicants must put all documents required for application in the envelope prescribed by our Graduate School for sending application documents, and submit to the Academic & Students Affairs Section, Graduate School of Information Science or send it by registered mail.

Points of note

- (1) In case submitting by hand, it is recommended that the applicant him/herself brings the documents
- (2) When sending by mail, it must reach the office no later than **16:00, January 20 (Tue.), 2009.**
- (3) Admission tickets will be sent to the applicants by mail. (If the ticket does not arrive until two days before the examination, please confirm it with the Academic and Students Affairs Section of the Graduate School of Information Science.)
- (4) Be careful not to submit incomplete application documents since they will not be accepted.
- (5) After an application has been filed, we will not allow any changes to application documents, nor refund examination fees.

6. Selection

- (1) Successful applicants for admission to our programs will be selected on the basis of overall evaluation of the result of the oral examination and application documents.
- (2) The oral examination schedule is shown below. However, applicants who cannot meet the schedule due to exceptional circumstances may be allowed to take the examination at a later date. Be sure to contact the Academic & Students Affairs Section (kyomu-gakusei-gakari), Graduate School of Information Science, at the time of filing an application.
- (3) Announcement of the oral examination venues will be posted on the examination day at the entrance to the Graduate School of Information Science building (see attached map).

Oral examination

The oral examination comprises presentation of master's thesis or substituted research paper and research plan during the doctoral program (totally 20 minutes), questions and answers related to the presentation, and also questions about the major academic field that the candidate is applying for admission.

Department	Date	Time
Computer Science and Mathematical Informatics	February 13 (Fri.)	13:00 -
Information Engineering	February 13 (Fri.)	9:30 -
Media Science	February 13 (Fri.)	9:30 -
Complex Systems Science	February 13 (Fri.)	9:30 -
Systems and Social Informatics	February 13 (Fri.)	9:30 -

Notes: During the presentation, a PC projector can be used. It should be noted, however, that the personal computer connected to the PC projector needs to be brought by the applicant. Please confirm the time of examination with the supervisor of your choice in advance.

7. Announcement of Admissions

Announcement of admissions will be posted at noon, February 17 (Tue.), 2009, at the entrance to the Graduate School of Information Science building. The results will also be communicated to each applicant by mail.

8. Registration Procedures

Registration procedures will be communicated to prospective students in early March 2009. The procedures should be carried out toward the end of March 2009.

9. Registration and Tuition Fees

(1) Registration fee: 282,000 yen

(2) Tuition fee: 267,900 yen (535,800 yen for one full year)

Note1: Registration fee should be paid at the time of enrollment. Tuition fee should be paid for Spring semester in April and for Fall semester in October.

Note2: Tuition shall be directly charged from the account specified by the “excusing tuition payment” that should be submitted during the registration procedure.

Note3: If tuition and other fees are revised at time of enrollment or while you are enrolled in our institution, the revised payment amount will apply from time of revision.

10. Other Points of Note

- (1) If you have any questions about admissions to our Graduate School, such as application qualifications or documents and selection process, please inquire in advance at the office below.
- (2) Before deciding which research group or professor/lecturer’s laboratory you wish to belong to for filing the application, be sure to contact the professor/lecturer concerned.
- (3) For details of research activities of professors/lecturers, visit our website below.
- (4) Since Nagoya University restricts vehicle entry on to the campus, use public transportation when visiting University for examinations.
- (5) We will use personal information such as address, name, birthday, etc. only for admission selection, announcement of admissions, entrance procedures and related matters. We will strictly control personal information and will not use personal information for any other purpose.
- (6) For the case that natural calamity occurs or there is a possibility of its occurrence, please find relevant information to the examination via the homepage <http://www.is.nagoya-u.ac.jp>.

Academic & Students Affairs Section
Graduate School of Information Science, Nagoya University
Furo-cho, Chigusa-ku, Nagoya City, Aichi Prefecture
464-8601
Tel. +81-52-789-4721/4722
<http://www.is.nagoya-u.ac.jp/>
E-mail: admission@is.nagoya-u.ac.jp

Nagoya University Graduate School of Information Science

● Outline

Recent development in information technology has a profound influence in a wide range of fields covering human life, culture, art, science and economics. Nowadays, information is an essential element of human society as same as material and energy. With such a background, our Graduate School of Information Science was established in April 2003 by concentrating research and education in many different information-related fields.

In our department, information is treated from different views like engineering, nature science, computer science, literae humaniores, social science, cognitive science, life science and so on. While keep on making efforts to systematize information as a discipline, we also try to develop new research fields via syncretizing current research fields. With such an objective, various advanced researches are taken place in our department, including “mathematical systematism and computational models”, “Globalism-compatible practice system”, “symbiosis of human and machine via expression and explanation of information”, “interaction between individuals in nature and artificial phenomena”, “intelligent activities on fusing and aligning the real and virtual worlds”, and so on. In the purpose of research area syncretizing, we accept applicants from different departments/areas and aim at the education that enables the students to obtain not only the extensive knowledge of information science from foundation to application but also the view of social morals. Furthermore, in order to provide an information environment of rich humanity as well as keep on contributing to the society, many different trials of education and research activities are taken place here.

With a synthetic organization of research and education, our graduate school is responsible for the informative development of Japan and the world.

● Admission Policy

We welcome students who have a strong will and the necessary academic abilities to understand the influence of information science on science and society, to investigate their theories and technical foundations and to try to apply them in practice.

● Degree

In the doctorate course (second stage) in our Graduate School, those who have completed requisite studies will be awarded the degree Doctor of Information Science. However, under certain circumstances, Doctor of Engineering or Doctor of Arts could also be awarded.

● Outline of Departments

Our Graduate School comprises the Department of Computer Science and Mathematical Informatics, Department of Information Engineering, Department of Media Science, Department of Complex Systems Science and Department of Systems and Social Informatics. In regard to the names and contacts of professors and lecturers in respective departments, please refer to <http://www.is.nagoya-u.ac.jp/>

1) Department of Computer Science and Mathematical Informatics

The Department of Computer Science and Mathematical Informatics conducts research and education in the Computer science and Mathematical Informatics, which are foundations of information science. Concretely, our research contains mathematical logic, discrete mathematics, probability analysis, numerical analysis, computational complexity, coding theory, cryptography theory, algorithm, computation model theory, program semantics, quantum information, quantum computing theory, optimization and so on.

In the research aspect, our objective is to develop the information science deeply and abundantly by centering on reconstructing and analyzing of mathematical model, which relates to information. In the educational aspect, we hope to nurture highly specialized engineers and researchers who have essential knowledge of computer science and mathematical informatics.

2) Department of Information Engineering

In this department, we study and research optimal hardware and software for user-friendly and secure information systems by using information engineering methodology. We concern ourselves with the design and development of such information engineering systems. Furthermore, accommodating the remarkable development of semiconductor integrated circuit technology and information communication technology, we aim to create further developments in information engineering.

Through the development of semiconductor integrated circuit technology, compact size information systems which are embedded in electric home appliances, automobiles, etc. are realized as integrated systems. Such information processing machinery is, in turn, connected to a mega-sized information system, and can be used in the mobile environment. As a result the software architecture which underpins the information system being constructed becomes larger and more complex. In this department, by providing education and study of principles and technology, which can be applied to the design and construction of information systems for the next generation, we hope to nurture specialists who will be able to take leading roles as highly advanced information engineers and scientists.

3) Department of Media Science

Information plays a major role in various human activities in industry, economy, society, education, art, medicine/social welfare, and the home. In such an information-based society, information needs to be produced and expressed swiftly with precision.

In this Department, our purpose is to study and research the basics of media science, the creation of intelligent system which process and express media, and to study ways to clarify the recognition function of human beings that are indispensable in developing a functional information society, and eventually hope to nurture competent media scientists and media engineers.

4) Complex Systems Science

Complex systems in nature and society comprise the network of many and varied elements such as molecules, neurons, agents which can communicate, convert and accumulate information, and which can therefore be understood as a distributive information system. A main feature of such complex systems is to generate dynamically and autonomously an order structure and function, which cannot be expected from the basic component's features.

Complex systems science, by deeming self-organization process of such order and function as information processing, aims to acquire a universal viewpoint. The objective is to investigate various natural and artificial systems and through synthesizing theories, experiments and computation methods, we will attempt to clarify the principle of universal information processing, which is hidden in varied objects. In this course, we will study the development of innovative computation methodologies to analyze complex systems without using established reductionist methodology, but we will develop constructive method by "understanding by creating" model systems. By opening up distributive methodology which designs information systems based on self-organization of distributed elements, we hope to nurture engineers and scientists who are able to initiate new ideas through using organization theory thinking and distributive thinking.

5) Department of Systems and Social Informatics

In this Department, the social environment in which development of information technology enhances an information-intensive society, our research takes the viewpoint of physical matter/phenomena of the real world and fusion of logical objectives/processes. The study will be focused on environment, organization, and function which are cooperatively and complementarily fusion-capable and which are organized by the real world and virtual world that is superior for human society. Paradigm or model that fosters, creates and educates humans as well as that which is related to the construction of activity space supported by human wisdom and creative action is already established. Therefore, we would like to explore construction and architecture of a social system that is knowledge-dependent through the use of information technology, and for another, we would like to evaluate and consider the various problems that are generated in the social environment and social organization through the development of information technology. This will lead to research into the human role and organization of human society in an integrated space between the real world and virtual world.

In this course, from the standpoint of nurturing human resources that can meet the needs of the information age, we would like to raise for the awareness of the importance of information processing education, information technology development/application, functional design/development of social information systems, databases for social information environment, and development/construction of a user interface. Thus, we aim to educate competent personnel who can actively support and develop the information society.