

AY 2013

Nagoya University
Graduate School of Information Science

Doctoral Program (Initial Two-Year Program)

Department of Computer Science and Mathematical Informatics

Department of Information Engineering

Department of Media Science

Department of Complex Systems Science

Department of Systems and Social Informatics

Second Round
Student Admission Requirements

Nagoya University
Graduate School of Information Science

2013 Nagoya University Graduate School of Information Science

Second Round Student Admission Requirements for Doctoral Program (Initial Two-Year Program)

The Graduate School of Information Science invites students wishing to apply for the Doctoral Program (Initial Two-Year Program, which is treated as a master's program) at the Graduate School for the 2013 academic year, according to the terms and conditions specified below.

1. Application Eligibility

Persons who fall under one of the following criteria:

- (1) Persons who have graduated, or are scheduled to graduate, from a university by March 31, 2013;
- (2) Persons to whom a bachelor's degree has been granted, or are scheduled to be granted, under the provisions of Article 104, Paragraph (4), item (1) of the School Education Act by March 31, 2013;
- (3) Persons who have completed, or are scheduled to complete, 16 years of schooling in a foreign country by March 31, 2013;
- (4) Persons who have completed, or are scheduled to complete, 16 years of schooling of a foreign country in Japan by taking courses offered by a school of said foreign country via distance education by March 31, 2013;
- (5) Persons who have completed a course of study in Japan offered at an educational institution positioned under the schooling system of a foreign country as offering university programs (limited to those where persons who have completed the program are treated as having completed 16 years of schooling of said foreign country) and designated separately by the Minister of Education, Culture, Sports, Science and Technology;
- (6) Persons who have completed on or after the day prescribed by the Minister of Education, Culture, Sports, Science and Technology, or are scheduled to complete by March 31, 2013, a specialized course of study at an advanced vocational school designated separately by the Minister of Education, Culture, Sports, Science and Technology (limited to those that meet the criteria prescribed by the Minister of Education, Culture, Sports, Science and Technology, including that the minimum duration of studies be at least four years);
- (7) Persons designated by the Minister of Education, Culture, Sports, Science and Technology (The Ministry of Education, Science, Sports and Culture Public Notice No. 5 of 1953);
- (8) Persons who will have been enrolled in a university for at least three years, or will have completed 15 years of schooling in a foreign country or a course of study in Japan at an educational institution positioned under the schooling system of a foreign country as offering university programs (limited to those where persons who have completed the program are treated as having completed 15 years of schooling) and designated separately by the Minister of Education, Culture, Sports, Science and Technology by March 31, 2013, who are found to have acquired the designated credits at the Graduate School of Information Science with an excellent academic record; and

Note: Persons applying under Application Eligibility criterion (8) must refer to Page 9, "For Applicants Applying Under Eligibility Criterion (8):

- (9) Persons who will be at least 22 years of age by March 31, 2013 and are recognized by the Graduate School of Information Science through individual screening of eligibility for admission as having scholastic ability equivalent to or higher than that of university graduates."

Note: Persons applying under Application Eligibility criterion (9) must inquire in advance at the

2. Availability of Places

Department of Computer Science and Mathematical Informatics	Limited
Department of Information Engineering	Limited
Department of Media Science	Limited
Department of Complex Systems Science	Limited
Department of Systems and Social Informatics	Limited

Be sure to consult or inquire in advance with your desired advisor; there are cases in which, even though you pass the examination to be accepted to the Graduate School, you may not be able to work with a desired advisor from whom you wish to receive supervision, due to educational considerations.

3. Application Acceptance Period for Admission

From January 9 (Wednesday), 2013 to January 16 (Wednesday), 2013 (excluding Saturdays, Sundays, and holidays.)

Acceptance hours/Office hours: 9:00am - 4:00pm (excluding 12:00pm – 1:00pm)

4. Application Documents to Submit

The following documents must be submitted by all applicants:

- (1) Application Form (filled in using form prescribed by the Graduate School)
- (2) Examination Form (filled in using form prescribed by the Graduate School)
Photograph Form (filled in using form prescribed by the Graduate School)
- (3) Statement of Reasons for Application (filled in using form prescribed by the Graduate School)
- (4) CV (filled in using form prescribed by the Graduate School)
- (5) Two Self-Addressed Return Envelopes (one for the receipt of examination form, one for the notification from the Graduate School)
Provide two self-addressed return envelopes as prescribed by the Graduate School, clearly indicating applicant's name, address/place of receipt, and postal code. Note that the return envelope for receiving the examination form must have a 350 yen stamp affixed (for overseas addresses/places of receipt, enclose a sufficient International Reply Coupon (IRC) to cover the required return postage with the submission).
- (6) Address Label (filled in using form prescribed by the Graduate School)
- (7) Certificate of (prospective) Graduation/Completion or document certifying the application eligibility of the applicant
- (8) Academic Transcript (created by the last institution attended)
- (9) Application Fee of 30,000 yen (not required for government (MEXT)-sponsored scholars)
* Please fill in the "Application Fee Payment Form" and make payment with cash at a post office counter (do not pay via an ATM). Note that payment by cash at the Graduate School or postal money orders will not be accepted. The payment will start to be handled at post

offices on Friday, January 4.

Applicants residing overseas who find payment via post office difficult should consult with the Graduate School.

* Applicants must enter their own name in the "payer" field" on the following documents:

A. Payment Handling Form - "*Haraikomi toriatsukai hyo*"

B. Bank Transfer Payment Invoice/Receipt - "*Furikae haraikomi seikyusho ken juryosho*"

C. Certificate of Bank Transfer Payment Received (application fee payment receipt) – "*Furikae haraikomi uketsuke shomeisho*"

* The applicant pays the bank transfer fee.

* After making payment, the applicant must affix "C. Certificate of Bank Transfer Payment Received (application fee payment receipt)" with a receipt stamp on it to the indicated position on the Application Form.

* The applicant must retain "B. Bank Transfer Payment Invoice/Receipt" as his/her record.

<Note> Under no circumstances will the application fee be returned or refunded following receipt of the application documents at the Graduate School.

However, received application fees will be returned or refunded if one of the situations described below apply. If this is the case, please contact the Graduate School Section, Graduate School of Information Science by Monday, February 4.

i.

If, after paying the application fee, no application is submitted, or the application is not accepted for submission.

ii. If the application fee is paid twice.

- (10) If there are other documents/materials that indicate the applicant's research ability, such as a bachelor thesis, it is desirable to submit one copy of each document and, as needed, a summary of each.

The following documents must be submitted only by the person concerned:

- (1) Persons applying for admission to the Department of Information Engineering, Department of Media Science, Department of Complex Systems Science, and the Department of Systems and Social Informatics will not be given a written English examination by the Graduate School. Applicants must therefore submit a copy of an official, written notification of the results of any of the following English language tests administered by external organizations: TOEIC (limited to a public test), TOEFL-PBT (paper-based test), TOEFL-CBT (computer-based test), or a TOEFL-iBT (Next-generation TOEFL, Internet-based test). This copy must have a signature and seal affixed, and state that "It is a true and faithful copy of the original". Note that the written notification of results must, in order to be deemed valid, refer to testing conducted no earlier than April 1, 2009.
- (2) As stated in section 6.1 (1) on Page 3, it is possible for persons applying for admission to the Department of Computer Science and Mathematical Informatics to make combined use of an external organization's English language test and a written English examination conducted by the Graduate School. Students wishing to submit the results of an external English test, as stated in (1) above, must submit a copy of an official, written notification of the test results. This copy must have a signature and seal affixed, and state that "It is a true and faithful copy of the original". Note that the written notification of results must, in order to be deemed valid, refer to testing conducted no earlier than April 1, 2009.
- (3) Applicants who are foreign nationals residing in Japan must submit a copy of their Resident Register (Certificate of Residence) or Certificate of Items Stated in Resident Register issued by the head of the city, town, or village of residence. This is not required for persons with permanent residence status in Japan. Applicants residing overseas must submit a document verifying nationality and residence status (e.g. a copy of the pages of their passport indicating nationality and residence status).
- (4) Persons applying for admission to the Department of Media Science must submit a Specialized Courses Selection Form.

- (5) Applicants currently employed by a government agency, company or organization, etc. who intend to continue such employment after enrolling to the Graduate School must submit a document indicating that they have approval for applying for admission (no prescribed form).
- (6) International students who have taken the Japanese Language Proficiency Test must submit a certificate indicating that they have passed the test, or official notification of their test results. When submitting a copy, the copy must have a signature and seal affixed stating that "It is a true and faithful copy of the original".
- (7) Applicants who are currently government (MEXT)-sponsored scholars must submit a certificate to this effect issued by the university they are currently attending.

5. Application Procedure

Applicants should prepare the application documents, place them in the envelope prescribed by the Graduate School, and either hand in or mail them to the Graduate School Section, Graduate School of Information Science.

Important points

- (1) When submitting application documents in person, applicants themselves should deliver them.
- (2) When submitting application documents by mail, they must be sent by registered mail to arrive no later than 4:00pm on Wednesday, January 16, 2013, to the Graduate School Section, Graduate School of Information Science.
- (3) An Examination Form will be mailed to the applicant. Contact the Graduate School Section, Graduate School of Information Science if the Examination Forms do not arrive two days prior to the examination.
- (4) Be aware that application documents not properly or adequately prepared will not be accepted.
- (5) Application documents cannot be altered or replaced after submission. The application fee will not be returned or refunded.
- (6) However, only the written notification of the results of an English language test conducted by an external organization may be submitted separately, after the deadline for submission closes. In this case, the written notification of test results must be handed in, or be mailed by registered mail, to the Graduate School Section, Graduate School of Information Science by 4:00pm on Friday, February 1, 2013. Written notification of results arriving after this deadline will not be accepted. Note that previously submitted written notification of results may not be substituted or replaced.
Be aware that acceptance of the application documents may be revoked if the notification does not arrive.

6. Selection Method

6.1 Use of results of an English language test administered by an external organization at the written examination

- (1) Applicants for admission to the Department of Computer Science and Mathematical Informatics Those who have submitted the results of any of the following English language tests administered by an external organization, in addition to taking a written English examination conducted by the Graduate School, will receive, as their final score on the English examination, the higher score between the converted score which is calculated based on the raw score of external test results and their score on the Graduate School's written examination of English: TOEIC (limited to a public test), TOEFL-PBT (paper-based test), TOEFL-CBT (computer-based test), or a TOEFL-iBT (Next-generation TOEFL, Internet-based test).

* Applicants who have submitted the results of an English language test administered by an external organization are not required to take the written English examination conducted by the Gradu

ate School; however, they should realize that the submitted external test results will serve as their final score.

- (2) Applicants for admission to the Department of Information Engineering, Department of Media Science, Department of Complex Systems Science, and Department of Systems and Social Informatics The results of any of the following English language tests administered by an external organization will serve as their final score on the English examination: TOEIC (limited to a public test), TOEFL-PBT (paper-based test), TOEFL-CBT (computer-based test), or a TOEFL-iBT (Next-generation TOEFL, Internet-based test). These applicants will not be given a written English examination conducted by the Graduate School.

Conversion standards are indicated in the table below. The table below is based on information regarding score conversion provided on the Educational Testing Network Service website.

TOEIC	TOEFL-PBT	TOEFL-CBT	TOEFL-iBT	Score after conversion
395	433	120	40	40
495	468	147	51	50
590	501	173	61	60
690	536	203	74	70
790	570	230	88	80
890	605	250	100	90
990	640	273	111	100

6.2 Details

- (1) The results of the English and specialization examinations and the oral interview will be considered along with the other submitted documents for a comprehensive evaluation for selection of students to be admitted to the Graduate School.
- (2) The English and specialization examinations and the oral interview will be conducted as specified in the respective tables below.
- (3) The locations of the English and specialization examinations and the oral interview will be posted at the first-floor entrance to the Graduate School of Information Science Building (see the Nagoya University Higashiyama Campus map) on the date of the examination.
- (4) Gather at the first-floor entrance to the Graduate School of Information Science Building. Plan to arrive 30 minutes prior to the examination. See the Nagoya University Higashiyama Campus map.
- (5) Late arrivals for the English examination and the Department of Computer Science and Mathematical Informatics' written examination will be permitted to take the examinations if they arrive within 30 minutes of the start of the examinations.
- (6) As a general rule, late arrivals will not be accepted at oral examinations or for the oral interview.

6.3 Outline of examinations

- (1) English - February 7 (Thursday)

Department	Examination times and test method	Remarks
Department of Computer Science and Mathematical Informatics	10:00am – 11:00am Written examination	Dictionaries prohibited

(2) Specialization - February 7 (Thursday)

Department	Examination times and test method	Scope of examination
Department of Computer Science and Mathematical Informatics	12:30pm – 2:00pm Written examination	Three problems from basic mathematics (linear algebra, calculus) and discrete mathematics will be presented. Examinees select two.
Department of Information Engineering	12:30pm - Oral examination	<p>Each person will be given a 30-minute examination consisting of (A) and (B) below:</p> <p>(A) An oral examination on information engineering (hardware, software and computer theory)</p> <p>(B) A presentation of the applicant's undergraduate graduation research/thesis</p> <p>* If no undergraduate graduation research/thesis has been done, the presentation will be given on the content of a seminar course taken at the applicant's undergraduate school or department; or, if neither graduation research/thesis nor a seminar course is available, a presentation can be given on the content of the research the applicant would like to engage in at the Graduate School.</p> <p>* The applicant must prepare and bring 15 copies (A4, one page) of material pertaining to the content of the undergraduate graduation research/thesis, etc. The form and layout of this material are at the applicant's discretion; however, note that the applicant's name and examinee number must be indicated on the material.</p> <p>* An LCD projector will be available and may be used when giving the presentation. However, the applicant is responsible for bringing a PC that can be connected to the projector.</p>

<p>Department of Media Science</p>	<p>12:30pm - Oral examination</p>	<p>The examination will be comprised of an oral examination and an interview. The oral examination will cover six subject areas as indicated below, from which the examinee selects two for the oral examination, and the interview will include more general questions such as the content of research work done up to the present (including undergraduate graduation research/thesis, etc.); the test will last 30-40 minutes per examinee. Examinees wishing to work with an advisor from whom they will receive supervision in Speech and Image Science or Intelligent Media Engineering must select at least one subject for the oral examination from among Analytical and Linear Algebra, Probability and Statistics, and Digital Signal Processing. Applicants for admission to the Department of Media Science must fill in and submit, at the time of application, a "Specialized Courses Selection Form".</p> <p>On the day of the examination, the applicant must prepare and bring 10 copies (A4, one page) of a summary of the content of research work done up to the present (undergraduate graduation research/thesis, etc.)</p> <ul style="list-style-type: none"> - Analytical and Linear Algebra - Probability and Statistics - Digital Signal Processing - Sensory Information and Sensation (questions will be asked on basic knowledge as related to sensory information and sensation). - Learning and Memory (questions will be asked on basic knowledge related to learning and memory). - Thinking and Problem Solving (questions will be asked on basic knowledge related to thinking and problem solving).
<p>Department of Complex Systems Science</p>	<p>10:00am - Oral examination</p>	<p>The examination will last approximately 30 minutes per person and be given in line with the details below:</p> <p>Using an LCD projector, examinees will give a verbal presentation on their graduate research/thesis or a substitute subject for approximately 10 minutes (15 minutes at the most). Based on this presentation, the examinees will be given an oral examination for the evaluation of four points: their academic ability, research ability, communication ability, and enthusiasm. To use the LCD projector in the presentation, the examinee must bring a PC that can be connected to the projector. Certain types of PCs cannot be used with LCD projectors. To allow for such cases, it is desirable that the examinee bring his/her presentation material stored as a file on a USB memory device or similar.</p>

Department	Examination times and test method	Scope of examination
Department of Systems and Social Informatics	12:30pm - Oral examination	<p>A 30-minute examination will be given to each examinee on the following content:</p> <p>(1) Presentation on undergraduate graduation research/thesis, etc. (approximately 10 minutes)</p> <p>The presentation shall be on the examinee's graduate research, his/her seminar coursework, etc. at a undergraduate institution in which significant effort was made, or specific research subjects to be studied after enrolling at the Graduate School. All examinees shall prepare and bring 20 copies of a piece of material which summarizes the content of his/her presentation in one page of A4 size paper (the form and layout are at the discretion of the examinee) to distribute at the examination.</p> <p>The presentation may be performed using this paper material or a PC, if the examinee brings his/her own PC. The LCD projector will be set up at the place of the examination for the use of the examinees.</p> <p>(2) Questions and answers (approximately 20 minutes)</p> <p>With due consideration given to the undergraduate institution the examinee is currently studying at (or graduated from), the examinee will be given an examination in the form of questions and answers to examine his/her basic academic ability. In addition, the examinee will be questioned on basic knowledge to support the content of his/her presentation. The examinee will also be asked questions on his/her purpose in applying to the Department and on what research he/she hopes to focus in the Graduate School, which will be used to evaluate the examinee's communication ability and academic diligence or enthusiasm.</p>

(3) Oral interview

Department	Examination times
Department of Computer Science and Mathematical Informatics	<p>Thursday, February 7, following the written examination.</p> <p>It may also be conducted on Friday, February 8, from 9:30am, if there are a large number of examinees.</p> <p>Examinees will be notified and informed of the date and time of the oral interview when the Examination Forms are sent out.</p>
Department of Information Engineering	Thursday, February 7, during the oral examinations.
Department of Media Science	Thursday, February 7, during the oral examinations.
Department of Complex Systems Science	Thursday, February 7, during the oral examinations.
Department of Systems and Social Informatics	Thursday, February 7, during the oral examinations.

7. Announcement of Results

Results will be posted at the entrance to the Graduate School of Information Science Building on Thursday, February 14, 2013 at 12:00pm. In addition, applicants will be notified of the results (pass or fail) by mail.

8. Admission/Enrollment Procedures

Successful applicants will be notified of admission/enrollment procedures in early March 2013. The date for undertaking these procedures is expected to be in late March 2013.

9. Enrollment and Tuition Fees

- (1) Enrollment fee: 282,000 yen
- (2) Tuition fees: 267,900 yen per semester (535,800 yen per year)

Note 1 The enrollment fee will be collected at the time of enrollment. Tuition fees are divided into two installments, one for the first semester and one for the second semester. First semester tuition is paid in April, and second semester tuition is paid in October; however, in the first year of enrollment, first semester tuition should be paid in May.

Note 2 If the tuition fees are revised at the time of or after enrollment at the University, the new fees after revision will be applied from the time of revision.

10. Application by International Students

- (1) The Written Statement of Reasons for Application may be written in English.
- (2) Aids in written examinations are provided as follows:

	English (written examinations)	Specialization examination (written examinations)
Department of Computer Science and Mathematical Informatics	No aids	Answering in English permitted. A language dictionary (one dictionary only) may be used.

* Electronic language dictionaries not permitted.

11. Other

- (1) Please inquire in advance if you are unclear about anything related to application eligibility, application documents or selection methods.
- (2) Applicants with special needs who require special support in undergoing the selection/examination process and/or studying at the Graduate School should consult the Graduate School of Information Science in advance before Tuesday, December 25, 2012.
- (3) Visit <http://www.is.nagoya-u.ac.jp/> to learn about the research work of faculty members, etc.
- (4) Nagoya University enforces regulations on the entry of vehicles to campuses. Please use public transportation when taking examinations.
- (5) For unsuccessful applicants, the results of each examination subject may be disclosed upon request, as follows.

Application Period: from Monday, February 18, 2013 to Thursday, February 28, 2013
between 10:00am – 4:00pm.
(excluding Saturdays, Sundays and holidays.)

How to Apply: Apply using the "Entrance Examination Disclosure Application Form".

- (6) Personal information such as the names, addresses, and dates of birth of applicants will only be used for admission and selection procedures, announcement of results, admission/enrollment procedures and related matters. Personal information obtained from applicants is properly managed and will not be used for other purposes.

* Notification of emergency information

In the event of changes in the examination procedure, schedule or selection process due to a natural disaster or epidemic, etc., information will be posted on our website: <http://www.is.nagoya-u.ac.jp/>. Be sure to check this site, especially before submitting applications, or before the examinations.

For further information, send inquiries to:

Graduate School Section, Graduate School of Information Science, Nagoya University

Furo-cho, Chikusa-ku, Nagoya, 464-8601 Japan

Tel 052-789-4721/4722

Website <http://www.is.nagoya-u.ac.jp/>

E-mail admission@is.nagoya-u.ac.jp

For Applicants Applying Under Eligibility Criterion (8):

1. Applicant Eligibility

Persons who will have been enrolled in a university for at least three years, or who will have completed 15 years of schooling in a foreign country or a course of study in Japan at an educational institution positioned under the schooling system of a foreign country as offering university programs (limited to those where persons who have completed the program are treated as having completed 15 years of schooling) and designated separately by the Minister of Education, Culture, Sports, Science and Technology by March 31, 2013, who are found to have acquired the designated credits at the Graduate School of Information Science with an excellent academic record.

2. Eligibility Review for Application

2.1 Documents for submission

Applicants applying under Eligibility criterion (8) must submit the following application documents in person or by registered mail in advance, to arrive at the Graduate School Section, Graduate School of Information Science, Nagoya University no later than 4:00pm, Wednesday, December 19, 2012, in order to apply for the eligibility review in which the applicant's eligibility will be scrutinized. Be sure to write "Eligibility Review for Application for the Doctoral Program (Initial Two-Year Program)" in red on the front of the envelope.

- 1) Eligibility Review Application Form (completed by the applicant on the form prescribed and issued by the Graduate School.)
- 2) CV (completed by the applicant on the form prescribed and issued by the Graduate School.)
- 3) Academic Transcript (created by the university/institution the applicant is currently attending; to include academic records up to the first semester of the undergraduate third year)
- 4) Letter of Recommendation from applicant's academic advisor at the university/institution he/she is currently attending (in English or Japanese, no prescribed form).

2.2 Notification of review results

The Graduate School will conduct the eligibility review, and notify the applicant of the result at least three days prior to the start of the Application Acceptance Period for Admission.

3. Examinations and Application Documents

3.1 First round selection

Documents to be submitted: As a result of the eligibility review mentioned above, persons recognized as 'qualified to apply' should prepare and submit the documents specified in "4. Application Documents to Submit" at the time of application. However, (4) CV, (7) Diploma or Certificate of Graduation, and (8) Academic Transcript, which are prescribed to be submitted by all applicants, are not required.

Pass requirements: Achieving superior results in regular graduate school entrance examinations (written/oral/interview), with the same questions and same procedures encountered by regular examinees.

3.2 Second round selection

Documents to be submitted: Submit the academic transcript for the third year before March 5 (or

the previous day if this date falls on a Saturday) of the year the applicant enrolls.

Pass requirements:

The applicant must meet the following two conditions. Even if an applicant passes the first round selection, he/she will not be accepted for admission to the Graduate School, unless the applicant satisfies the conditions of the second round selection process.

- (1) The applicant must have acquired at least three-quarters of the required credits for graduation by the end of his/her third year (credits of optional courses will not be included).
- (2) By the end of the third year, the applicant must have received at least "Excellent" (or "A") grades for at least 70 percent of his/her credits (credits of optional courses or of courses evaluated on a Pass/Fail basis will not be included as the base number for the calculation of the "Excellent" grade ratio).

Graduate School of Information Science, Nagoya University

● Fundamental Principles of the Graduate School

With the advancement of the Information Age, information, together with materials and energy, has become an important element of human society. The Nagoya University Graduate School of Information Science studies Information Science as an academic subject from such vantage points as Engineering, Natural Science, Computer Science, the Humanities, Social Sciences, Cognitive Science, and Bioscience. Our aim is to create a new field of scholarship in a way that lends itself to system development and the integration of fields of study.

The Graduate School aims to contribute to the advancement of culture and to train academic researchers and highly professional technical experts and educators, by working with students to engage in in-depth study and research activity that will enable students to grasp academic theories and applications. Our aim is to enable students to acquire a wealth of academic knowledge and superior skills needed to pursue careers that require high levels of expertise. In addition, this Graduate School is not only dedicated to engaging in advanced research in information science, it also makes every effort to ensure that students deepen their understanding of social and cultural questions and that they acquire ethical principles and a sense of social responsibility.

The goal of the Graduate School is to develop human resources with these qualities. By offering students a comprehensive education as they engage in research, the School assists students to engage with new challenges in both academia and society.

● Graduate School Education

Academic studies of information-related subjects will be of great use in scholarship in various academic fields, and it can be seen that such studies will contribute to further development in diverse fields. The Graduate School thus seeks to admit students from various schools and fields to engage in studies ranging from the basics of information science to its application in an integrated fashion with a high level of scholarship. To do this we engage in the educational activities outlined below.

1. We offer education enabling students to systematize a wide range of data-based knowledge.
2. We offer education that gives students the ability to clarify information phenomena in the various sciences from necessary perspectives or standpoints.
3. We offer education that enables students to understand social norms and that imparts proper ethical principles pertaining to technology, engineering, and information handling.
4. We offer education that enables students to understand social needs and gives them the ability to analyze problems in that area.
5. We offer education that helps students develop communication skills and enables them to express themselves.

6. We offer education that provides training for students to give them the ability to operate actual information systems.

In this way, the Graduate School seeks to help students not only learn how to engage in cutting-edge research in the information science field; it also endeavors to help them grasp the social and cultural ramifications of their work. An important goal is the education and development of human resources with solid social values and ethical standards.

We offer a curriculum with unique content that reflects these policies. For example, to give students a broad perspective, we have adopted a system which enables them to interact with several academic advisors, and a system in which they are required to take programs in other disciplines. In addition, we also provide opportunities for students to attend lectures on topics related to state-of-the-art developments given by temporary instructors, and opportunities to take part in research internships where they can learn about research and development work at private companies. The Graduate School is also making every effort to test new forms of education such as on-the-job-learning experiences to foster the development of leading IT specialists and other experts.

- **Admissions Policy**

The influence that information science has on scholarship and society is fully understood at Nagoya University. Accordingly, the Graduate School seeks to recruit students with solid academic foundations and with a strong desire to excel in theoretical and basic engineering study and research and to acquire solid skills in the practical applications of information science.

- **Degrees**

The Doctoral Program at this Graduate School (Initial Two-Year Program) includes the conferral of master's degrees (in Information Science) to those students who complete the prescribed work and meet the required conditions. However, when special reasons for doing so are recognized, the Graduate School also confers master's degrees in Engineering or in Arts on deserving students.

- **Outline of the Department**

The Graduate School is comprised of five Departments: the Department of Computer Science and Mathematical Informatics, Department of Information Engineering, Department of Media Science, Department of Complex Systems Science, and the Department of Systems and Social Informatics. The names and contact information of the faculty members of each Department can be found at <http://www.is.nagoya-u.ac.jp/>.

- 1) **Department of Computer Science and Mathematical Informatics**

The Department of Computer Science and Mathematical Informatics offers education and research opportunities in the fields of computer science and mathematical informatics, which are the foundations of the information sciences. Specifically, the department engages in the study of such subjects as mathematical logic, discrete mathematics, probability analysis, numerical analysis, calculation volume theory, correspondence theory, code theory, algorithm theory, calculation model theory, program meaning theory, quantum information, quantum calculation, and optimization.

The research goals of this department include work on the development of information science with a focus on mathematical models for deeper, richer analyses of structures. Our goals on the education side include giving our students an opportunity to acquire necessary knowledge of computer science and mathematical informatics and the ability to develop and apply concepts in these fields. The department seeks to foster the development of engineers and researchers who will play central roles in the field of advanced information science.

2) Department of Information Engineering

This department offers an education in the use of information technology to contribute to a more convenient, safer and more comfortable society. We seek to train students to design and build information systems for diverse purposes, and to be able to make decisions on optimum configurations of hardware and software for these purposes. Another department aim is to contribute to further information system development in response to the remarkable advances made in semiconductor integrated circuits technology and information communications technology.

The advances in semiconductor integrated circuits technology have made astounding developments possible in integrated systems and miniaturization that have led to new devices and products in home electronics and the automotive industry. In addition, the large-scale information systems that bring data processing devices together in mobile environments have led to the need for ever-larger software configurations in highly complex systems. It is against this background that the department engages in education and research activity that can offer students the opportunity to grasp the techniques and scientific principles needed to design and build state-of-the-art information systems. We wish the engineers and researchers we develop to play leading roles in the further development of the science of information systems.

3) Department of Media Science

The ability to rapidly and accurately extract and express information sustains a great deal of human activity in such diverse areas as industry, economics, social activity, education, the arts, medicine, welfare and home life.

Seeking to contribute to further advances in information society, this department, with the study of basic science and engineering, cognitive science, and basic media science theory as its core activity, strives to apply scientific knowledge to systems creation and to the clarification of human cognitive functions. We expect the engineers and researchers being nurtured in our department

to be future leaders in these endeavors.

4) Department of Complex Systems Science

The complex systems found in nature and in society are networks of multiple elements such as molecules, neurons, and agents that transmit, convert and store information. They can be viewed as distributed information systems. A key characteristic of complex systems is how the interaction between their constituent elements generates a structured order with dynamic, self-regulating functions that cannot be anticipated from the characteristics of each single component.

The study of complex systems seeks to develop universal perspectives enabling us to see the processes of self-organization in these structures and functions as information system processes. Theories, experiments and calculations are combined to reveal the universal principles that are hidden among a diverse range of subject matter, and to develop applied technologies.

This department engages in education and research activity to develop innovative calculation methods needed to analyze complex systems. Rather than conventional element reduction methods, we seek to create model systems that will enable us to understand complex systems and the development of structural theories. In addition, the department seeks to develop information system designs and distribution methodologies based on the processes of self-organization of distributed elements. The aim is to train engineers with superior conceptual capabilities, engineers who can develop new ideas in this area of science.

5) Department of Systems and Social Informatics

The department engages in education and research activity in an attempt to yield further advances in information technology, in order to bring to the advancing information society new perspectives and integrated processes for the study of real-world physical objects and phenomena and of theoretical subjects in the virtual world. The department employs an integrated approach to the study of environmental, structural and functional phenomena. The aim of the department's education and research activity is to make a contribution, through the application of information technology, to the establishment of new paradigms and models to open up more space for creative activity supported by human wisdom and creativity. The overall aim is to contribute to the creation of knowledge-based social systems and social environments through the use of information technology applied to the evaluation of a range of diverse issues.

From the standpoint of contributing to the development of human resources and helping students acquire the skills and knowledge needed to meet the challenges of the information age, the department provides instruction and guidance in such areas as data processing, information engineering, development and applications, the design of functions for social information systems, database creation and development for social information environments, and user interfaces. Its overall goal is to develop and deploy capable graduates who will serve as the seeds of further social progress.