

Hiroshima University Graduate School of Science

**INFORMATION for APPLICATION to
HIROSHIMA UNIVERSITY**

(Master's Program)

October 2011 Enrollment

**Graduate School of Science
HIROSHIMA UNIVERSITY
1-3-1 Kagamiyama, Higashi-Hiroshima
739-8526 Japan
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The Graduate School of Science, Hiroshima University, is seeking for foreign student applicants to the Master's program for enrollment in October 2011.

Preliminary selections will be done to reduce the number of applicants to within 30 by evaluating submitted application documents. Those selected will be given a written examination on Chemistry (Department of Chemistry) or Mathematical and Life Science¹⁾ (Department of Mathematical and Life Sciences) in English or in Japanese, after the briefing session. Applicants will be further reduced to within 10 by this test according to scores and those selected will proceed to the oral examination (interview) held the next day. Those qualifying are to contact supervisors-to-be and carry out discussions. Those who pass this final process, will be sent enrollment application forms.

Since lectures in the Master's program will be held in Japanese, successful applicants are to take Japanese training courses provided by the Hiroshima University Beijing Research Center, located on the campus of Capital Normal University.

Among acceptees, those who have already received a Bachelor's degree or are expected to receive one by March 31, 2011, and also have efficient Japanese language skills may be exempted of the Japanese training course and may enroll in April, 2011.

Remark:

1) The written examination will be on knowledge of the applicant's specialized field. Applicant can choose the four categories (Mathematics, Physics, Chemistry and Biology).

Schedule until enrollment

2010	October	1 to 22	Application period for the Briefing Session
	November	4	Invitations to the Briefing Session will be distributed.
		23	Briefing Session and Written Examination
	December	24	Interview
1		Announcement of examination results	
2011	January	1 to 24	Discussion period
		4 to 21	Application period for admission
	February	7	Announcement of admission
	July		Japanese language training (till September)
	September		Arrival in Hiroshima and enrollment procedures
	October	1	Enrollment

[1] Enrollment Capacity

Department of Chemistry: up to 3.

Department of Mathematical and Life Sciences: up to 3

[2] Enrollment Application Requirements

A person of non-Japanese citizenship fulfilling one of the following conditions:

- (1) Has received a Bachelor's degree at a four-year university or college.
- (2) Is expected to receive a Bachelor's degree by the end of September 2011.

[3] Briefing Session

A briefing session will be held for prospective applicants for the Master's Program of the department of Chemistry and the department of Mathematical and Life Sciences, Graduate School of Science.

For details on the briefing session, refer to the homepage of the Graduate School of Science.

(<http://www.sci.hiroshima-u.ac.jp/sci/>)

Place	The Hiroshima University Beijing Research Center (on the campus of Capital Normal University), Beijing, Peoples Republic of China
Date	Nov. 23(Tues.) · Briefing Session and Written Examination Nov. 24(Wed.) Interview

The maximum number of participants for the briefing session is 30. Preliminary selections based upon the submitted application documents will be carried out if the number of applications exceed this number.

- (1) Application period for the briefing session: Oct. 1 to 22, 2010.
- (2) Where the application documents should be sent to:
Student Affairs Office, Graduate School of Science, Hiroshima University
1-3-1, Kagamiyama, Higashi-Hiroshima 739-8526 Japan
- (3) Required documents for Application (All documents are to be filled in English unless specified otherwise.)

Documents	Remarks
Application Form	Use the official form provided by the Graduate School of Science, Hiroshima University. Download from the homepage of the Graduate School of Science. A photo taken within three months must be attached in the upper right-hand corner for identification.
Grade Transcript	Official document(s) issued by the institution from which the applicant graduated or is expected to graduate.
Certificate of Graduation or Expected Graduation	Official document(s) issued by the institution from which the applicant graduated or is expected to graduate.
Two Letters of Recommendation	A letter of recommendation from the head of the department from which the applicant graduated or is expected to graduate using the official form issued by the applicant's department, and a recommendation using the official form provided by the Graduate School of Science, Hiroshima University filled out by the applicant's supervisor for the Bachelor's thesis.
Statement Sheet	Use the official form provided by the Graduate School of Science, Hiroshima University. Download from the homepage of the Graduate School of Science.
Grade Certificate(s) for Foreign Language Tests	TOEFL(R) scores, Japanese Language Proficiency Test scores, and/or certified material of equivalence.

Note 1: Official documents written in languages other than English or Japanese must be translated into English or Japanese. Submit both the original and the translated documents.

Note 2: Submitted documents will not be returned.

Note 3: Qualifiers of the examinations carried out following the briefing session will be asked to submit additional documents.

- (4) Invitations will be sent around Nov. 4. If the number of applications exceeds 30, a preliminary selection process based upon the submitted documents will be held. Those invited may participate free of charge.
- (5) Results of the written examination will be posted at 10 am, Nov. 24 on a bulletin board at the Beijing Research Center.
- (6) Results of the interview will be posted similarly around Dec. 1 Enrollment application forms will be sent out to all qualifiers.
- (7) Qualifiers are to contact supervisors-to-be and carry out discussions during the period of Dec. 1 to 24. Those who pass are to receive recommendations from the staff member.

(8) Those who have passed and wish to enroll are to proceed according to the procedure given in the following section.

[4] Application for Enrollment

(1) Application period for enrollment: Jan. 4 to 21, 2011. Mail including all required documents must arrive by the deadline.

(2) Required documents (All documents are to be filled in English)

Documents	Remarks
Application Form	Use the official form provided by the Graduate School of Science, Hiroshima University.
Letter of Recommendation	Letter of recommendation from the supervisor-to-be.
Application Fee	¥30,000. Only Japanese Yen is acceptable. The payment method is informed by each applicant's circumstance.

Note 1: No changes in application materials will be allowed after submission.

Note 2: Submitted documents and fees cannot be returned.

(3) Where the application documents should be sent to:

Student Affairs Office, Graduate School of Science, Hiroshima University
1-3-1, Kagamiyama, Higashi-Hiroshima 739-8526 Japan

[5] Selection Procedure and Admission Notice

The submitted enrollment application documents will be reviewed.

Admission will be announced on Feb. 7, 2011. Notices will be sent to admittees.

[6] Enrollment Fees

Entrance Fee: ¥282,000

Tuition: ¥535,800 per year (or ¥267,900 per semester)

Notes

(1) The entrance fee is not refundable.

(2) Entrance and tuition fees are those as of April 2010 and are subject to change.

(3) The enrollment procedure must be completed during a specified period that will be notified later.

(4) After enrollment, students having financial difficulties can apply for exemption of the tuition fee.
However, there is no guarantee of an exemption.

[7] Japanese Training and Inquiries

(1) Admittees can take Japanese language training courses at the Hiroshima University Beijing Research Center, located on the campus of Capital Normal University.

(2) Details on Japanese language training and procedures on coming to Japan will be given along with the admission notice.

For further information, please contact:

Student Affairs Office of the Graduate School of Science, Hiroshima University

1-3-1, Kagamiyama, Higashi-Hiroshima, 739-8526 JAPAN

Fax : +81-82-424-0709

E-mail: ri-gaku-daigakuin@office.hiroshima-u.ac.jp

Inquiries by phone are unacceptable.

Or look up the homepage of the Graduate School of Science: <http://www.hiroshima-u.ac.jp/en/sci-en/>

Majors, Academic Staff, Research Subjects

Graduate School of Science, Hiroshima University

As of June 1, 2010

Department of Chemistry

Laboratory	Academic Staff	Research Subjects
Structural Physical Chemistry	EBATA, Takayuki (Professor) INOKUCHI, Yoshiya (Assoc. Prof.)	Studies on the structure and dynamics of molecular complexes and functional molecules by uses of nonlinear laser spectroscopy and ab initio molecular orbital calculations.
Solid State Chemistry	INOUE, Katsuya (Professor) NISHIHARA, Sadafumi (Assoc. Prof.)	Synthesis, crystal structure, magnetic, optical, and conducting properties for molecule-based materials, studied by SQUID, magnetic resonance, MCD, and X-ray diffraction.
Coordination Chemistry	MIZUTA, Tsutomu (Assoc. Prof.)	Preparation, structures, and properties of transition metal complexes having higher-period elements as ligand atoms with particular reference to their peculiarities in valency.
Analytical Chemistry	FUJIWARA, Terufumi (Professor) TSUKAHARA, Satoshi (Assoc. Prof.)	Reverse micelle as a microreactor, chemical separation coupled to spectrometries, analysis of macromolecules with external fields, and microspectroscopic measurements of reactions at liquid-liquid interface.
Structural Organic Chemistry	HAINO, Takeharu (Professor)	Studies on molecular recognition and self-assembly of supramolecular structures.
Photochemistry of Advanced Materials	SAITOW, Ken-ichi (Assoc. Prof.) *	Spectroscopic study on supercritical fluid. Advanced nanomaterials fabricated by laser ablation. High-density molecular storage in confined systems.
Physical Chemistry of Kinetics	YAMASAKI, Katsuyoshi (Professor) KOHGUCHI, Hiroshi (Assoc. Prof.)	The mechanisms of the chemical reactions and energy transfer of vibrationally and/or electronically excited molecules have been studied. Experiments based on the selective detection of a single quantum state by laser spectroscopy and theoretical studies by quantum chemical calculation have been elucidating the details of reaction dynamics.
Quantum Chemistry	AIDA, Misako (Professor) ISHIBASHI, Taka-aki (Assoc. Prof.)	Chemical reactions in solution or specific recognition reactions in biological systems using quantum mechanical and molecular dynamics simulations. Structures and dynamics of molecules at surfaces and interfaces using linear and nonlinear vibrational spectroscopies.
Organic Main Group Chemistry	YAMAMOTO, Yohsuke (Professor) KAWACHI, Atsushi (Assoc. Prof.) KOJIMA, Satoshi (Assoc. Prof.)	Synthesis and reaction mechanism of organic compounds of main group elements. Chemistry of hypervalent molecules.
Organic Reaction Chemistry	ABE, Manabu (Professor)	Reactive intermediate chemistry, including singlet and triplet diradicals. Stereoselective synthesis of functional molecules..
Chemistry of Aggregated Materials	OKADA, Kazumasa (Assoc. Prof.)	Studies on the reaction mechanism and dynamics of inner-shell excited molecules and clusters using synchrotron radiation spectroscopies and quantum mechanical calculations.
Radiation Reaction Chemistry	NAKASHIMA, Satoru (Professor) *	Chemistry related to radiation or studied by Mössbauer spectroscopy. Control of mixed-valence state and spin state by crystal construction.

*Staff member of the Natural Science Center for Basic Research and Development

Department of Mathematical and Life Sciences

Laboratory	Academic Staff	Research Subjects
Nonlinear Studies	SAKAMOTO, Kunimochi (Professor) OHNISHI, Isamu (Assoc. Prof.)	Theory and application of nonlinear evolution equations, Infinite dimensional dynamical system theory, Geometric singular perturbations, Nonlinear analysis of mathematical models, Functional analytic approaches to nonlinear phenomena.
Phenomenology and Mathematics	NISHIMORI, Hiraku(Professor) SHIBATA, Tatsuo (Assoc. Prof.)	Nonequilibrium nonlinear phenomenology, Theoretical biophysics and complex systems.
Complex Systems	KOBAYASHI, Ryo (Professor) SENO, Hiromi (Assoc. Prof.)	Phase transitions and nonlinear dynamics far from equilibrium, Mathematical Biology.
Mathematical Analysis	NAKAKI, Tatsuyuki (Professor) IRIE, Haruyuki (Assoc. Prof.) * HIRAOKA, Yasuaki(Assoc. Prof.)	Mathematical analysis for natural phenomena. System of differential equations, Dynamical system, Analysis for chaotic phenomena.
Molecular Biophysics	TATE, Shin-ichi (Professor) KATAYANAGI, Katsuo (Assoc. Prof.)	Biophysical studies of protein structure, dynamics and their relations to the biological function. Structural biology by NMR and X-ray crystallography of proteins.
Physical Chemistry	NAKATA, Satoshi (Professor) FUJIWARA, Yoshihisa (Assoc. Prof.)	Spatio-temporally developed phenomena under nonequilibrium conditions (Self-motion and mode-switching, chemical oscillation, and artificial sensation). Magneto-Science (Magnetic field and magnetically simulated microgravity and hypergravity effects on phenomena in chemistry, physics, and biology and on advanced nano- and micro-materials).
Biological Chemistry	IZUMI, Shunsuke (Professor)	Biological Chemistry; Natural Product Chemistry; Biocatalytic Chemistry; Bioorganic Chemistry; Protein Chemistry.
Molecular Genetics	YAMAMOTO, Takashi (Professor) SAKAMOTO, Naoaki (Assoc. Prof.)	Elucidation of a cascade of transcription factors regulating temporal as well as spatial expression of genes in sea urchin embryo. Study on genes related to cell fate determination in sea urchin embryo. Comparative and evolutionary studies on function of transcription factors related to vertebrate morphogenesis.
Molecular Plant Biology	SAKAMOTO, Atsushi (Professor) SHIMADA, Hiroshi (Assoc. Prof.)	Molecular biology, biochemistry and physiology of plant function; Reactive nitrogen biology; Chloroplast development; Genetic and metabolic engineering for improved plant performance.
Gene Chemistry	IDE, Hiroshi (Professor)	Molecular and cell biology of DNA repair and mutagenesis.

* Staff of the Information Media Center

Application forms

【The official form provided by the Graduate School of Science, Hiroshima University】

Application Form for Participation to the Briefing Session

Graduate School of Science (Master's Program), Hiroshima University

firmly attach
your photo
here

*Application Number:				
Name in both English and native language	English	Family Name:	First Name:	Middle Name:
	Native Language	Family Name:	First Name:	Middle Name:
Date of birth:	Month/Day/Year	Sex:	<input type="checkbox"/> Male <input type="checkbox"/> Female	
Age as of Oct. 1, 2011:		Nationality:		
Awarded or Expected Degree				
Name of Institution:				
Location:				
Degree:				
Period of attendance:				
Awarded or expected date:				
Address				
Current Mailing Address:				
Permanent Address:				
* Registration Date	Month/Day/Year			

Fill within the bold line area. Do not fill spaces with the * mark. (For official use only.)

Educational Background

	Name and Location of School	Duration of Schooling	Diploma / Degree
Elementary Education		(from) month/year ~(to) month/year	
Secondary Education		(from) month/year ~(to) month/year	
Higher Education (Undergraduate Studies)		(from) month/year ~(to) month/year	

Total years of schooling: _____ years

Occupational Experience

Name and Location of Organization	Period of Employment	Position	Type of Work
Name: Location:	month/year from: to:		
Name: Location:	month/year from: to:		
Name: Location:	month/year from: to:		

I hereby swear that the information given above is true and accurate.

Date: _____

Signature: _____

HIROSHIMA UNIVERSITY

Graduate School of Science

Recommendation Form for Admission to Graduate School

Note to the candidate: Please fill in your name below. Deliver or mail this form to the person who will write a letter of recommendation for you. Ask the person to return the recommendation form to you in a sealed envelope written "recommendation". Submit the envelope with your application and other required documents. The envelope must not be opened or tampered with in any way.

Name of Applicant _____
Family name First name Middle name

Applicant's Signature _____

Note to the recommender: Please type or print in the blank spaces for the items below. If you feel it more convenient, you may use separate paper for responding to some or all of the items.

How long have you known the applicant, and in what capacity?

In making this evaluation, which group (i. e., class, lab members, etc.) are you using as the basis of comparison?

Please rank the student for each item according to the listed scales by filling a checkmark. (Note the scale is nonlinear.) If you feel that you cannot make a proper judgment, mark the "cannot judge" box.

	Top 1%	5%	10%	20%	50%	Below cannot 50% judge	
Motivation and initiative							
Creativity							
Intellectual ability							
Overall potential for graduate studies							
English Language Proficiency							
Japanese Language Proficiency							

Please respond to the following:

1. Describe special talents, the strengths, and the weaknesses of the applicant.
2. If you have worked with the applicant on any specific project, please give an evaluation of his or her performance.
3. Please describe any favorable or unfavorable aspects concerning individual (or team) research potential, and the ability of the applicant to do independent work.
4. Additional information (including evaluation of personality)

Recommender (Please type or print.)

Name _____

Title or Position _____

Institution or Company _____

Address _____

Telephone/Fax _____

E-mail address _____

Signature _____ Date _____

Thank you for taking your time to write this recommendation. The admission committee considers recommendations most valuable for making selections.

If you require further information, please contact:

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