



Doctoral Program in Materials Science and Engineering

Graduate School of Pure and Applied Sciences
University of Tsukuba

Independent Administrative Agency
National Institute for Materials Science
<http://www.pas.tsukuba.ac.jp/nims/>



For AY2010



Greetings



Hiroaki KUMAKURA
Professor, Chairman

The Doctoral Program in Materials Science and Engineering is operated jointly by the Graduate School of Pure and Applied Sciences at the University of Tsukuba and the National Institute for Materials Science (NIMS). Selected scientists from NIMS have joined the graduate school faculty and supervise the student's thesis research for a Ph.D.degree.

Materials Science and Engineering is a discipline that helps to develop and use materials for various engineering applications and is a key engineering field to support the infrastructures of the modern society, such as energy, environment, information, communication, construction, transportation, medicine and welfare. This program is comprised of three fields: Advanced Metallic Materials, Advanced Inorganic Materials, and Advanced Nano-Biomaterials and aims at educating students to become highly professional engineers or scientists in Materials Science and Engineering through hands-on research experience using the advanced experimental facilities and by participating in major research projects.

The faculty members of this program are involved in the education of the first two-year master course of Materials Science and Engineering in cooperation with the Frontier Science, Applied Physics, and Materials Science Programs of the Graduate School.

We would like to invite young graduate students to join the frontier research at NIMS.

Development of Doctoral Program in Materials Science and Engineering

1992~

Collaboration between the University of Tsukuba and NIMS/NIRIM (Former institutes of NIMS) as Cooperative Graduate Program

2004~

Started the Doctoral Program in Materials Science and Engineering as Joint Graduate Program (18 Professors, 6 Students)

2005

Opened the special lecture "Nano Materials and Engineering".

2007

9 new professors joined (total 27 professors)

2008

The special lecture in English started in the Master Course of Materials Science and Engineering

Framework of The Doctoral Program



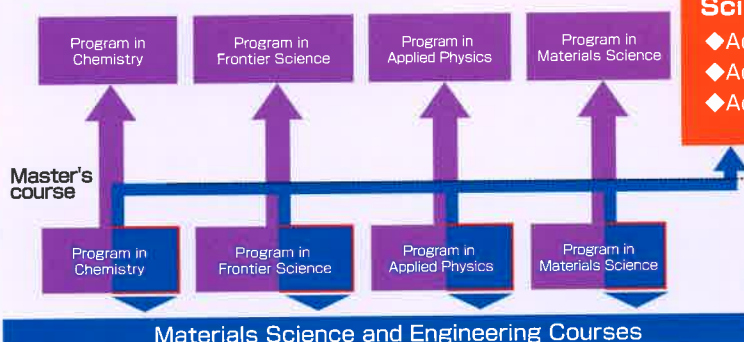
University of Tsukuba



National Institute for Materials Science

Department of Pure and Applied Sciences

Doctoral course



Doctoral Program in Materials Science and Engineering

- ◆ Advanced Metallic materials fields
- ◆ Advanced Inorganic materials fields
- ◆ Advanced Nano/bio materials fields

General adult population
Foreign students
Others with university / master's degree

※ Authorized Number of Students
Doctoral course : Total 9 people per a year
Entrance examination in August (5 people)
Entrance examination in February (4 people)



Training/Research

State-of-the-art training

In our doctoral program, selected researchers in NIMS supervise students as faculty members. The students belong to NIMS (Sengen, Namiki or Sakura site, Tsukuba City, Japan) and can study by using the advanced experimental facilities and by participating in major research projects.

【Latest facilities】



EC-3DAP with delay line detector



Atom-discriminating electron microscope

Seminar by Students



Our doctoral program adds a students' seminar to the curriculum. The seminar is conducted in English.

This seminar aims to confirm the student's progress in the doctoral thesis apart from improving presentation skill in the English language.

International programs

Our doctoral program admits students from all over the world. In fact, the half of students in our program are from abroad. (as of July 2010)

Most of official events (ex. orientation for enrollments and students' seminar) in our program are basically conducted in English. Moreover, the students are able to participate in some international exchange programs held by NIMS.



At Cambridge University

【Nano-tech summer school】

NIMS holds "Nano-tech summer school" by cooperation with Cambridge University and UCLA every year. Students from NIMS, Cambridge University and UCLA join it and report and discuss their latest research progress.

This summer school aims educating international young researchers who can play an important role in future materials science field.

Many students in our program take part in it.

NIMS Graduate Research Assistantship

The students in this Doctoral Program and the master course of Materials Science and Engineering can apply for the a NIMS Graduate Research Assistantship. Under this assistantship, students can have financial support as a NIMS Junior Researcher so that they can make research activities well in the university and NIMS.

Monthly Stipend

- Doctoral Course: about 190,000 JPY
 - Master Course : about 70,000-160,000 JPY
- (For International Students)



Statistics for Enrollment

Doctoral Program in Materials Science and Engineering

| | Examinees | | | Successful Applicants | | |
|---------|-----------|---------------|-------------|-----------------------|---------------|-------------|
| | Total | Univ. Tsukuba | Other Univ. | Total | Univ. Tsukuba | Other Univ. |
| FY 2006 | 14(9) | 1(1) | 13(8) | 12(7) | 1(1) | 11(6) |
| FY 2007 | 20(15) | 3(2) | 17(13) | 14(10) | 1(0) | 13(10) |
| FY 2008 | 26(12) | 5(1) | 21(11) | 20(7) | 5(1) | 15(6) |
| FY 2009 | 27(18) | 4(0) | 23(17) | 20(15) | 4(0) | 16(12) |
| FY 2010 | 32(24) | 3(0) | 29(24) | 16(11) | 3(0) | 13(11) |

※表中()は外国人学生の内数

Master Course in Materials Science and Engineering

| | Examinees | | | Successful Applicants | | |
|---------|-----------|---------------|-------------|-----------------------|---------------|-------------|
| | Total | Univ. Tsukuba | Other Univ. | Total | Univ. Tsukuba | Other Univ. |
| FY 2006 | 14(1) | 1(0) | 13(1) | 10(1) | 1(0) | 9(1) |
| FY 2007 | 13(1) | 0 | 13(1) | 10(1) | 0 | 10(1) |
| FY 2008 | 13(0) | 2(0) | 11(0) | 11(0) | 2(0) | 9(0) |
| FY 2009 | 14(4) | 0 | 14(4) | 12(4) | 0 | 12(4) |
| FY 2010 | 24(16) | 3(1) | 21(15) | 19(12) | 3(1) | 16(11) |

[() Shows Number of foreign students]

Statistics after Graduation

Career of the Alumni in the Doctoral Program in Materials Science and Engineering in FY2006-09

| Total | Education | Private Section | Public | Resear-chers | Other |
|-------|-----------|-----------------|--------|--------------|-------|
| 23 | 1 | 4 | 0 | 16 | 2 |