



Your Application

Two programs are available for international students
http://www.eng.osaka-u.ac.jp/en/entrance/g_admissions.html

(1) Admission of Chemical Science Program (Start in October 2015)

Detailed information will be coming soon

Number to be Admitted:

About 13 students (including 5 Monbukagakusyo (MEXT) scholars)

Entrance Evaluation:

- 1.Examination on Chemistry Fundamentals
- 2.Interview
- 3.TOEFL or IELTS scores (submitted prior to the examination)

Schedule of Examination (tentative):

- 1.Late of October to middle of November, 2014: Application and payment of application fee (TOEFL or IELTS scores / two (or more) letters of recommendation are required at your application.), Prescreening by the documents
- 2.Late of November to the beginning of December, 2014: Entrance Examination (Chemistry Fundamentals and Interview) at Osaka University and/or Osaka University Bangkok/ Shanghai/Groningen/San Francisco Offices
- 3.December, 2014: Provisional Acceptance

The second admission round for the present program will be carried out on late of August, 2015.

(2) Admissions of Division of Applied Chemistry

Japanese-based postgraduate program

Number to be Admitted:

April Admission: A few students (Master and Ph.D. courses)

October Admission: A few students (Ph.D. course only)

Entrance Examination:

Subjects: TOEIC or TOEFL or IELTS scores, written examination (Physical, Inorganic, and Organic Chemistry for Master course), and interview

Schedule of Summer Examination for October (Ph.D. course only)/April Admissions:

Late of July: Application and payment of application fee
Late of August: Entrance Examination
Early September: Announcement of Examination Results

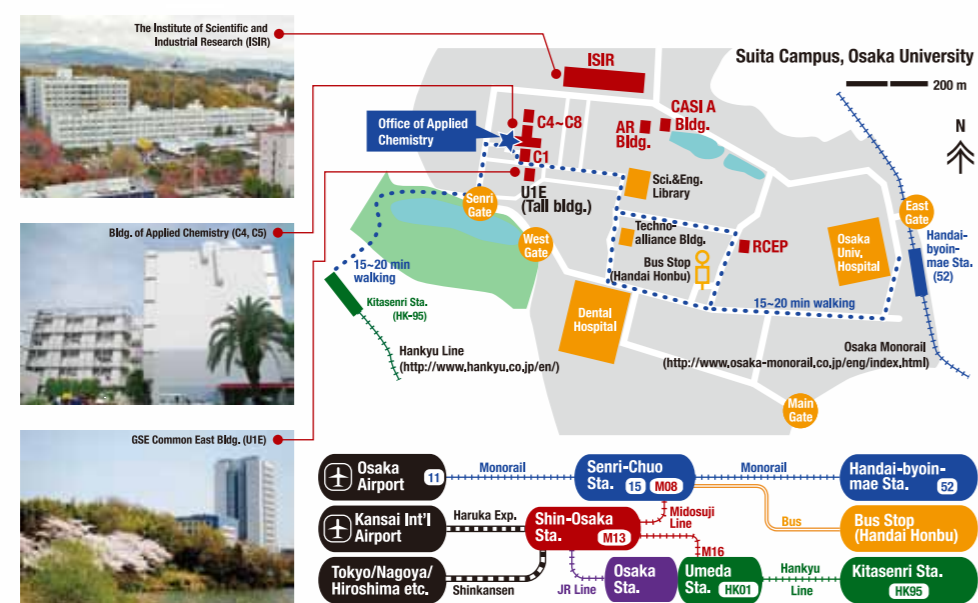
Schedule of Winter Examination for April Admission:

Early November: Application and payment of application fee
Late of November to the beginning of December: Entrance Examination
Middle of December: Announcement of Examination Results

Note: Please confirm the clocklike schedule in the website of admissions (as above)

Your Campus Information

Information of the division: Division of Applied Chemistry, Graduate School of Engineering, Osaka University
2-1 Yamadaoka, Suita, Osaka, Japan 565-0871 http://www.chem.eng.osaka-u.ac.jp/appl/eng/index_e.html



Support for international students (application, examination, enrollment and so on):

International Students Section, Academic Affairs Division, Graduate School of Engineering, Osaka University
2-1 Yamadaoka, Suita, Osaka, Japan 565-0871 <http://www.eng.osaka-u.ac.jp/en/index.html>

Chemical Science Program

@Graduate School of Engineering, Osaka University

New Launch in October, 2015

Your Degree: Master of Engineering and Ph.D.

Welcome!

~Chemical Science Program~

New Launch in 2015 @ Osaka University

The Chemical Science at Osaka University course offers postgraduate students both Masters and Ph.D. degrees covering all aspects of "Chemistry". The field of "Chemistry" encompasses the broad and indispensable basis of today's materials society, and, as such, the keys for the future. The Chemical Science Program is designed to provide a seamless postgraduate program that integrates both the Masters and Ph.D. degrees. In the initial years, you will acquire and establish a fundamental basis for applied chemistry through 18 intensive courses given by more than 40 professors in the fields of Physical Chemistry, Synthetic Chemistry, and Biological Chemistry. In the second year and subsequent years, the program is focused on the student's ability to do creative scientific research. Accordingly, the single most important facet of the curriculum for any individual is their individual research project. During the initial period of a student's research, the student will choose a research director, with the guidance of the faculty members and the advisory board of the course. This will occur after the student completes a few weeks of rotations in which they will become acquainted with the research specialties of the participating faculty members. Thereafter, students will become involved in library research on their projects and will soon begin actual experimental or theoretical work.

In keeping with the goal of fostering an atmosphere of scholarly, independent study, formal course requirements are minimal and vary among the various disciplines; advisors tailor course requirements to best prepare each student for their chosen research field. For example, a student who chooses to specialize in physical chemistry would normally be expected to take 2-4 courses during the first research student period chosen from such topics such as Statistical Mechanics, Polymer Physics, Interactions of Radiation with Matter, Electrochemistry, and many more; whereas an organic chemistry student would choose from the fields of Synthetic Chemistry, Physical Organic Chemistry, Homogeneous Catalysis (transition-metal catalysts as well as organic catalysts), Heterogeneous Catalysis, and related areas. Students are expected to learn the basic principles of synthetic transformations, organic reaction mechanisms, and physical organic chemistry including molecular orbital theory through such courses.

Your Curriculum

Master Course	Qualifying Exam	Ph.D. Course
Synthetic Chemistry		
<ul style="list-style-type: none"> >Organometallic Chemistry >Chemistry of Molecular Transformation >Chemistry of Organic Resources >Structural Organic Chemistry >Research Training for Master's Thesis 	<ul style="list-style-type: none"> >Chemistry of Biomaterials >Applied Chemistry, Adv. 1 >Applied Chemistry, Adv. 2 >Synthetic Chemistry Experiments >Synthetic Chemistry Seminar 	<ul style="list-style-type: none"> >Applied Chemistry, Adv. 3 >Applied Chemistry, Adv. 4 >Seminar on Research Proposal >Research Training for Doctor's Thesis
Physical Chemistry		
<ul style="list-style-type: none"> >Chemistry of Advanced Functional Materials >Condensed Matter Chemistry >Chemistry of Energy Conversion >Quantum Molecular Chemistry >Research Training for Master's Thesis 	<ul style="list-style-type: none"> >Applied Chemistry, Adv. 1 >Applied Chemistry, Adv. 2 >Physical Chemistry Experiments >Physical Chemistry Seminar 	<ul style="list-style-type: none"> >Applied Chemistry, Adv. 3 >Applied Chemistry, Adv. 4 >Seminar on Research Proposal >Research Training for Doctor's Thesis
Biological Chemistry		
<ul style="list-style-type: none"> >Bioinorganic Chemistry >Applied Biochemistry >Bioorganic Chemistry >Biophysical Chemistry >Research Training for Master's Thesis 	<ul style="list-style-type: none"> >Applied Chemistry, Adv. 1 >Applied Chemistry, Adv. 2 >Biochemistry Experiments >Biochemistry Seminar 	<ul style="list-style-type: none"> >Applied Chemistry, Adv. 3 >Applied Chemistry, Adv. 4 >Seminar on Research Proposal >Research Training for Doctor's Thesis

Your Support

Support is available from Monbukagakusyo (MEXT) scholar ship (approx.. 5 persons/year), Japan Society for the Promotion of Science (JSPS) for Ph.D. candidates (in FY2014, 75 % of our Ph.D. candidates received support from JSPS, at ~200,000 JPY/month/person), from Japanese Chemical Company Consortium (1 Ph.D. candidate /year, 200,000 JPY/month), from private companies (Toray Industries Inc., Mitsubishi Rayon Co. Ltd., Asahi-Kasei Co. Ltd., Sumitomo Bakelite Co. Ltd., Sanyo Chemical Industries Ltd., JSR Corporation, Kuraray Co. Ltd., Furukawa Electric Co. Ltd., etc., 50,000-100,000 JPY/month/person), and from Japan Student Services Organization (JASSO) for both Masters course students and Ph.D. candidates (loans; 85 % of applicants were accepted in FY2014).

Your Internship

We are currently offering an "Internship-on-Campus" sub-program ,the "Work Together" concept, in which major Japanese private sector companies have established "on-campus" branches to promote collaborative research with students and professors in the Chemical Sciences program. This is a unique opportunity to join an internship program with a private company during your Ph.D. course of study, saving time, and leading to enhancing your skills and job prospects for your future career. (In cooperation with Panasonic Co. Ltd., Kaneka Co. Ltd., Hitachi Zosen Co. Ltd., Nittodenko Co. Ltd., Agilent Technologies Inc., etc.)



Your Career after your degree program

The following organizations are participants in the program: **Osaka University**, Columbia University, Nagoya University, Kyoto University, Keio University, Institute for Molecular Science, JSPS Fellow, Panasonic Co. Ltd., Mitsubishi Chemical Co. Ltd., Sumitomo Chemical Co. Ltd., Nippon Shokubai Co. Ltd., Hyundai Heavy Industries Co. Ltd., Fujifilm Co. Ltd., Shin-Etsu Chemical Co. Ltd., Bridgestone Co. Ltd., Kuraray Co. Ltd., Shionogi Co. Ltd., Toshiba Co. Ltd., Canon Inc., Kyocera Co. Ltd., Teijin Ltd., Toyota Motor Co. Ltd., Mitsubishi Motor Co. Ltd., Idemitsu Kosan Co. Ltd., Ube Industries Ltd., Kansai Electric Power Co. Inc., etc.

Your Seniors



I am working on tissue engineering research. To bring chemistry to useful applications is what I have wanted to do, especially for medical applications. In this department of applied chemistry engineering of Osaka University, principles of chemistry are applied to development of new materials and technologies to deliver to the industry, including construction of living tissues. I am currently conducting research on development of tissue models for in vitro evaluation of drug carriers instead of using animal. What I have found in my laboratory encourages me that academic research can be utilized for people and environment.

Paninee Chetprayoon, Thailand



Proteins are the fundamental chemical machines of living system: they are regulators, messengers, transportation molecules and major constituent of cytoskeleton. Understanding the structure and function relationships of protein is thus a prerequisite for designing effective drugs for direct translational applications in the future. My research primarily focuses on the understanding of molecular function of protein involved in epigenetics through X-ray crystallography, taking advantage of the synchrotron X-ray source and the newly developed X-ray free electron laser. I am passionate about proteins and therefore am highly determined to make the most of my degree and achieve my ambition to become an experienced protein crystallographer.

Tse Ka Man Carman, Macao



I became to have a big interest in organic chemistry when I was a fourth year undergraduate student . Department of Applied Chemistry of Osaka University has a creative research environment and has produced a great many outstanding world-recognized research results in the field of organic chemistry. For the above reasons, I made a

decision to take the entrance exam and now I feel very happy to become a member of here.

My present research focuses on the synthesis of chiral catalysts using dipeptide units combined with a ferrocene scaffold. In the beginning, I could not make smooth progress in experiments because I was a new hand in this field. But fortunately, I am very gratified that I can ask for guidance and advices or get continuous support and encouragement from all the teachers and seniors when I am confused. With their help, I am obtaining personal growth every day and keeping moving forward to achieve more success.

Studying at Osaka University is not only can learn a lot about the specialized knowledge, experimental skills and the way of thinking, but also be able to learn about different cultures and share my own customs with a lot of overseas students from all over the world. Join us and make your life more splendid from here.

Wu Hao, China



Solar energy has emerged as one of the most promising energy resources to replace current ones in the near future. Utilizing solar energy via inorganic solar cells has been already developed to the feasibility level, however, materials needed are still expensive. To overcome these expenses, organic solar cells are extensively studied. My research concerns about synthesizing photoactive materials for organic solar cell applications. Personally, being from oil producing country keeps me always wondering how the situation will be without oil; a terrifying nightmare. For this reason working with full passion and enthusiasm to improve the life style for our next generations.

Eman Rashid Said Al Naamani, Oman

