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College of Arts and Sciences
Northwestern University

Department of Chemistry
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NORTHWESTERN
UNIVERSITY

Chemistry Majors:

We invite you to explore the Northwestern University Graduate Chemistry Program. We are proud of our program and hope you include it as you consider possible options after graduation. Northwestern University is one of the finest research universities in the United States. Among doctoral programs in the U.S., the Department of Chemistry is ranked within the top five. Eight of our world-class faculty are members of the National Academy of Science and one is also in the National Academy of Engineering. Since its founding in 1884, Northwestern Chemistry has established itself as a center for excellence through a strong tradition of collaborative research. These collaborations have led to the creation of many highly successful and cutting edge research Institutes and Centers within the university that focus on 21st century challenges for society such as health, energy and the environment.

All PhD students receive broad training that prepares them well for careers in industry and academia. Northwestern's chemistry department enjoys strong ties with the chemical industry: our Industrial Associates Program is a continuing partnership with leading chemical-based industries, and includes campus visits, seminars, joint research and support. At present, approximately 60 percent of our alumni hold industrial positions, 30 percent have academic careers and 10 percent are employed by government or independent research institutions.

The Northwestern campus is situated in Evanston, IL just north of Chicago and directly on the shore of Lake Michigan. With a bustling downtown center full of shops and restaurants, Evanston is a wonderful place to live, work and study. One can easily enjoy the local beaches and excellent bike paths, take a short "L" ride downtown to Chicago to catch a show at the Oriental Theater, visit art galleries and museums or enjoy a day in the sun at the annual music festivals in Grant Park. While many students choose to live in Evanston, its proximity to Chicago and the excellent public transport available means many students opt to live in Chicago and commute each day.

The options are endless. The choice is yours!

Please take a look at the attached pdf and contact us with questions or for more information at: Chemphdapplicant@northwestern.edu. Also, please call the graduate office toll free at: 877-491-0026

We look forward to welcoming you to our program!

Sincerely,

Professor Karl Scheidt
Director of Graduate Admissions
Department of Chemistry
Northwestern University

Northwestern University PhD Program in Chemistry

Welcome to Our Department

We welcome your interest in the graduate chemistry program at Northwestern University, and are certain that you will find that Northwestern and Evanston provide a stimulating and supportive environment for exciting research and rewarding graduate studies.

The outstanding accomplishments of our doctoral students and alumni reflect the department's selective admission standards. All PhD students receive broad training that prepares them equally well for careers in industry or academia. Northwestern's chemistry department enjoys strong ties with the chemical industry. Our Industrial Associates Program, an intimate partnership with leading chemical-based industries, includes campus visits, seminars, joint research, and support. Approximately 60 percent of our alumni hold industrial positions, 30 percent have academic careers, and 10 percent are employed by government or independent research institutions.



World-class Faculty and Facilities



Since its inception in 1884, the Northwestern Chemistry Department has established itself as a center for excellence by attracting innovative faculty and outstanding students. Among doctoral programs in the U.S., the Department of Chemistry is ranked in the [top five](#). Our current 62 faculty includes eight members of the National Academy of Science and one Knight Bachelor.

There is a strong tradition of collaborative research within our department that has led to the foundation of many research institutes and centers within the University. Many faculty are involved with the following exciting initiatives: the International Institute for Nanotechnology, the Institute for Catalysis in Energy Processes, the Institute for Bioengineering and Nanoscience in

Advanced Medicine, the Center for Integrated Nanosystems, the Center for Catalysis and Surface Science, the Nanoscale Science and Engineering Center, the Materials Research Science and Engineering Center, and Lurie Comprehensive Cancer Center, and the Center for Drug Discovery and Chemical Biology.

Construction is complete on a brand new research facility named Silverman Hall, which holds the recently established Chemistry for Life Processes Institute. This exciting venture situates chemists, biologists and engineers next to each other and thus continues to foster the spirit of the collaborative enterprise that flourishes at Northwestern University.

Admissions Requirements

The Graduate School only accepts online applications. The Graduate School offers the following three features online: submit your application, view your decision, and submit your enrollment decision. For your convenience, you will use the same website, pin and password to access all of these features. Below is a link to the online application.

APPLY ONLINE

Supplemental Materials

The admissions committee will consider the complete application when making admission decisions. All supplemental materials must be sent directly to the Chemistry department.

GRE Exams:

The Chemistry department requires the general GRE scores as well as the chemistry subject scores from ETS. Official scores must be taken no more than five years before the intended quarter of entry and must come directly from the Educational Testing Service (ETS). For example, to be considered valid for Fall 2016 admission, GRE scores must be no older than September 1, 2011. To have scores sent directly to Northwestern University, please request that ETS (1-888-GRE-SCORE) send your General and Chemistry GRE scores to Northwestern University (school code 1565). Do not use a department code.

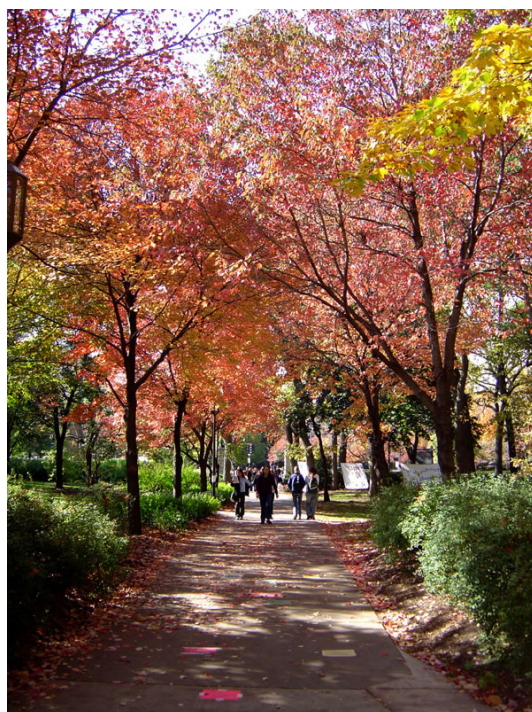
Certifying English Proficiency (TOEFL, IELTS):

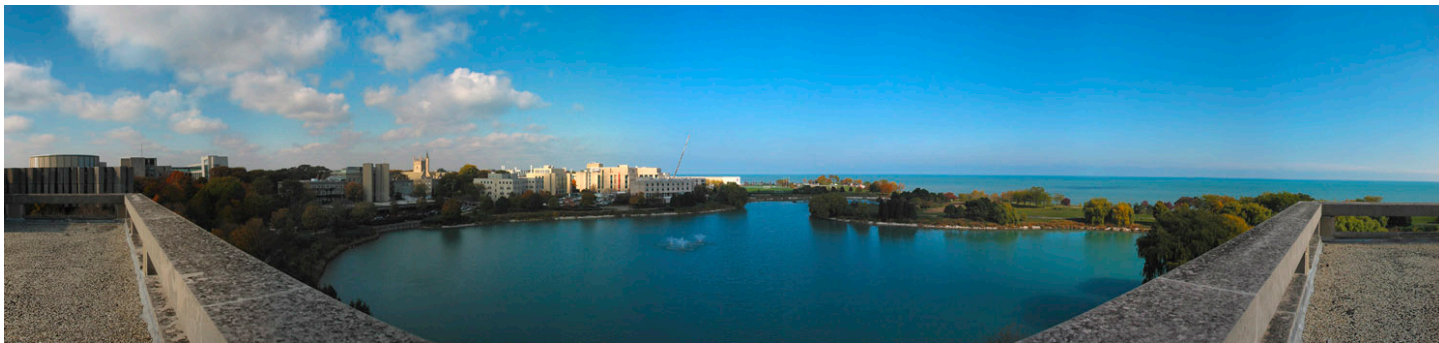
Much of your success in graduate study will rely on your ability to understand, read, write and speak English. If your **native language** is not English, you must certify your proficiency in the English language in one of the following three ways.

1. Providing official scores for either the TOEFL or IELTS exam. The test must be taken no more than two years before the intended quarter of entry. (If you are applying for Fall 2016 entry, test scores must be no older than September 2014.) For the TOEFL, you must score 600 or higher on the paper-based test, 250 or higher on the computer-based test, 100 or higher on the internet based test. For the IELTS, you must receive a score of 7.0 or higher.

2. Providing official transcripts verifying an undergraduate degree from an accredited four-year institution or equivalent, where the language of instruction is English.

3. Providing official transcripts verifying a graduate degree from an accredited institution where the language of instruction is English.





Letters of Recommendation:

Three separate letters of recommendation are required. All letters of recommendation can be uploaded by the NU application software. The NU application software will ask you for the names and email addresses of three references. As you submit your application, an email will be sent to your references providing them with instructions for submitting their letters of recommendation. The NU application software will send you a confirmation email once your references have uploaded their letters of recommendation. If your references are uncomfortable using the web, you may wish to consider sending hard copies.

ALL MAILED documents should be sent to:

**Graduate Program Assistant
Department of Chemistry
Northwestern University
2145 Sheridan Road
Evanston, IL 60208-3113**



Transcripts:

While completing your online application, you will be required to submit one scanned copy of your transcript from each school you have attended. Scanned transcripts should be exact duplicates of the official transcripts issued by your institution (bearing the institution's seal). Please do not upload foreign language transcripts unless English language transcripts are impossible to obtain. If you only have access to foreign language transcripts, your foreign language transcripts must be accompanied by an official English translation bearing the original ink signature and seal of the issuing university.

Please make sure your scanned transcripts are legible before uploading them. Illegible transcripts will not be reviewed.

If you are recommended for admission and decide to enroll, you will be required to mail one official copy of each of your transcripts to The Graduate School Admission Office as soon the transcripts are available. Your transcripts should be sent in sealed, unopened envelopes, directly from the issuing institution. Please be sure that your official transcripts list all the degrees that you have earned prior to enrolling at Northwestern University.



Frequently Asked Questions:

1. What is the profile of a successful applicant?

The successful applicant plans early. Typically they will have a GPA above a 3.7 /4.0; GRE scores for Fall 2015 class averaged 78% Verbal, 83% Quantitative, 65% Writing Analysis and 740 on the Chemistry GRE, and strong letters of recommendation from research advisors which demonstrate laboratory and critical thinking skills. Recommendations from undergraduate laboratories, internships, or industrial settings are best. In addition, copies of one's publications list will enhance one's application and should be included, although publications list are not required.

2. What is the deadline for submitting an application?

You should have your application and all supporting materials submitted as soon as possible, and no later than **December 15th**. Because the faculty admissions committee reviews applications during the fall and winter, your chances of admission is greater the sooner you submit your application and materials.

3. I am currently attending another graduate school and want to transfer?

The application process for transfer students is the same as for other applicants. However, we do not encourage students to transfer from our sister institutions in the U.S. as this tends to create bad feelings with our colleagues at those institutions. The student should be well aware of the consequences of applying for a transfer before beginning this process. If the student is leaving their institution with a Masters degree and this is the highest possible achievement there, then he will not be viewed by the Admissions Committee as a transfer student. However, if the student is departing from an institution that offers a PhD program, he will be considered as a transfer. We do occasionally make exceptions under extenuating circumstances (e.g., if the student has a spouse in our department or their advisor was denied tenure.) If you feel that you meet either of these criteria, you should let us know and have a letter of recommendation from your main advisor. If you are an international student, TOEFL scores are good for two years only. You will need to ask ETS to forward all of your scores in order to receive financial aid.

4. When will I be notified whether I have been admitted?

The faculty admissions committee reviews applications during the fall and winter. Most decisions will be made by the end of February.

5. Can I apply to begin the program in the spring rather than the fall?

No. We have Fall Admissions only. If you are admitted to the program, you are more than welcome to arrive in the summer to conduct research. You need to find a faculty member who is willing to employ you on a temporary basis. Although you cannot officially commit to joining a group before the advisor selection process in the fall of your first year, students who come early are often invited to join the group in which they were temporarily working.

6. If I am admitted and then decide that I would like to take a year off, can I defer my start date until the following fall?

Yes. Admission may be deferred up to one year from the quarter of admission. You will need to submit the request to The Graduate School. If you decide to take more than a year off, you will need to reapply to the program.

7. What can I expect during the visit weekends?

Students who have received an acceptance letter will be invited to attend a visit weekend. Dates for **Spring 2015 are March 12-14 and March 19-21**. Prior to the weekend, each student will be asked to forward the names of four professors they would like to meet with during their stay. Visit weekends typically begin on a Thursday evening and conclude on a Saturday afternoon. Students will be given an overview of the curriculum and requirements. They will also have the opportunity to meet the faculty and tour the facilities. The purpose of the weekend is to give the student a broader sense of the research opportunities available at Northwestern. It is highly recommended that you visit the institution in order to make an informed decision on attending Northwestern.

8. How can I get more information about the admission process or program?

Please feel free to contact our Graduate Program Assistant for additional information:

E-mail: ChemPhDapplicant@northwestern.edu

Telephone: 847/491-2968 or toll free at 877/491-0026

Fax: 847/491-7713



Admission Checksheet

This checklist is for your convenience during the admissions process

Domestic Students:

- ☐ Application
- ☐ Statement of Purpose
- ☐ CV
- ☐ GRE Test Scores (no older then Sept. 1, 2011)
 - ☐ General
 - ☐ Chemistry
- ☐ Letters of Recommendation
 - ☐ Letter 1: _____
 - ☐ Letter 2: _____
 - ☐ Letter 3: _____
- ☐ ONE copy of Transcript

International Students:

- ☐ Application
- ☐ Statement of Purpose
- ☐ CV
- ☐ GRE Test Scores (no older then Sept. 1, 2011)
 - ☐ General
 - ☐ Chemistry
- ☐ English Proficiency (Need 1 of 3 listed below)
 - ☐ TOEFL
 - ☐ IELTS
 - ☐ Degree from accredited English speaking institution
- ☐ Letters of Recommendation
 - ☐ Letter 1: _____
 - ☐ Letter 2: _____
 - ☐ Letter 3: _____
- ☐ ONE copy of Transcript

Requirements for the Doctor of Philosophy Degree in Chemistry

Course Requirements and Placement Exams

Upon entering the PhD program at Northwestern University, each student must take (for a letter grade and credit, not P/N) nine courses. These nine courses include the three Principles Courses discussed in Section A and six courses that are required to satisfy the specific requirements of a division or a program.

All entering students must take a set of three Placement Examinations, one each in Organic, Inorganic, and Physical Chemistry. These Placement Examinations cover undergraduate material at a level comparable to that of the corresponding courses offered by Northwestern. A student who does not achieve a suitable score on a Placement Examination will be required to take a specific graduate course in that area. Any or all of the three Principles Courses can be waived as a result of performance on the Placement Exams. For each Principles Course that is waived, the number of required courses is reduced by one.

Teaching Assistant (TA) Requirements

Satisfactory performance of assigned teaching duties is a requirement for all advanced degrees in the Department of Chemistry. Regardless of the method of support, or whether any support at all is provided, every full-time graduate student is assigned to teach. Inadequate performance of teaching responsibilities shows a lack of progress toward the Ph.D. degree.

Research

Graduate study should be considered full-time employment. One of your most important tasks during the fall quarter is to gather information that will enable you to choose a thesis topic and a research adviser. It is important that you select a problem that you find interesting and exciting, and a research group in which you will be comfortable. There are many faculty members and a wide variety of research topics; you will have no difficulty in finding several interesting problems and compatible research groups. Students are expected to be fully involved in laboratory research under the supervision of their advisers.

Qualifying Exam (QE)

After completion of at least five quarters of graduate study and prior to the end of seven quarters of graduate study, each doctoral student must take a qualifying examination administered by a committee appointed by the Dean of the Graduate School. The Qualifying Examination will be devoted primarily to an examination of the student's progress in research along with an examination of general knowledge, particularly in the major field. The exam has both written and oral components.

Final Defense/Thesis

Each PhD candidate must successfully pass a final examination based on work presented in the dissertation. A faculty committee, composed for the qualifying examination, conducts the examination. The examination requires a mandatory open and publicized oral presentation and discussion for the first hour followed by a closed examination with only the committee during the second hour.



**For more detailed information about PhD Requirements please go to
The Graduate Program Guide on our website.**