Graduate Student Handbook
Ph.D. version
Updated April 2014
The first year

Thesis advisor
The most important milestone of your first year is the selection of a thesis advisor. Your advisor will be responsible for helping you develop an academic plan, identify a research project, and develop a research plan. Your advisor will also be primarily responsible for funding your studies. Finally, your advisor will play a crucial role in identifying your post-graduation career options.

In order to choose an advisor wisely, you must learn about the research of faculty in the department (primarily) and in related departments. The department organizes a series of research presentations by faculty to enable you to learn about the research activities in the different labs. **You are required to attend these presentations!**

As you identify faculty with research projects matching your own interests, you should contact them and start to interact with students in their labs. This is of crucial importance. **Remember that you will spend the next five years in daily contact with these people!**

**By the end of October,** you will be asked to provide the Graduate Program Director with a list of faculty members you have contacted about research opportunities in their labs. During the next 4 weeks you must learn as much as possible about these labs. On the Friday
prior to the AIChE Annual Meeting, you must provide the Graduate Program Director with a **rated list** of labs you would like to join. Your list must contain at least 3 distinct labs. Note that for some students and some research projects, the best choice is joint-advisors.

The Graduate Program Director will compile the selections from all graduate students and match them to the open positions in the labs. Every effort will be made to assign students their top choices, but this cannot be guaranteed. The name of your advisor will be communicated to you by early December.

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Figure 1. Timeline for completion of graduate studies

**External fellowships**

External fellowships such as those sponsored by NSF, DoE, or DoD, are **extraordinarily prestigious and they typically provide a higher stipend than the department.** The Department strongly encourages you to apply for these fellowships.

You can gather additional information at the fellowship office on campus or by visiting their website.

Office of Fellowships  
1940 Sheridan Road  
Evanston, IL 60208  
Phone: 847-491-2617  
Web: [http://www.northwestern.edu/fellowships/](http://www.northwestern.edu/fellowships/)
Training grant funding
Northwestern University has been awarded a number of training grants. These grants can support the studies of selected graduate students for 2 to 5 years. Typically, applications are requested from **first and second year students** during the spring or summer quarters.

If your research project falls within the areas identified in a training grant, you should apply for a fellowship from the training grant. **Note that these fellowships are very competitive, so you need to have performed at a high level in your coursework and research in order to be competitive.**

Even if you do not apply or receive a fellowship, you should make yourself familiar with the training grant activities, as those can enrich your experience and enable you to establish contacts across the university.

The second year

Continuation decision
At the end of the summer quarter of your first year, the Department’s faculty will evaluate your academic performance. Namely, the faculty will assess whether you have made adequate progress in your studies. Have you been able to **maintain a GPA of at least 3.5?** Have you made progress in your research plans? **The outcome of your evaluation will be communicated to you by October 1st.**

Selecting a thesis committee
Your Ph.D. proposal and your Ph.D. thesis will be evaluated by a group of faculty known as your thesis committee. Your thesis committee is made up of a chair, who is the thesis advisor, and at least three additional members. One of the members of the committee must be a faculty member outside the Department of Chemical and Biological Engineering. At least two of the other three members must have a core appointment in the Department of Chemical and Biological Engineering. One of these two can be your advisor if he/she is a core ChBE faculty member. If your advisor is a courtesy faculty member or does not have a formal affiliation with the Department, then he/she counts as the outside member. You should consult with your advisor(s) about who should serve on your committee. Committee members will become more familiar with you and with your research than the typical faculty in the Department. They may even become reference letter writers for you when you apply for jobs. **Select thoughtfully!**

**Should you have any concerns about the program or your coursework, please see the Chair of the Department or the Graduate Program Director; if they are unable to resolve the issue, see the Dean of the McCormick School of Engineering on the second floor, L-wing of the Technological Institute.**
The third year

Ph.D. proposal

If you came to Northwestern with a B.S., then you are expected to defend your Ph.D. proposal during the fall quarter of your third year. **Note that if you came with a M.Sc., you are expected to do it during the winter quarter of your second year.** The presentation of your proposal comprises two tasks. The first task is preparing a 30-page (double-spaced) description of your research plans for the course of your doctoral work; see Appendix A for proposal guidelines. The second task is an oral defense of the proposal.

**Writing strong proposals is an extraordinarily important skill.** You must allow ample time to edit and polish your proposal. You must make every effort to develop your writing skills. There are several books that can help you hone your writing skills. A good starting point is, for example, *The Craft of Scientific Writing* by Michael Alley.

Your written proposal must be in the hands of your committee members two weeks prior to your proposal defense so that the committee members have adequate time to review it and to provide feedback. The defense comprises a 30 minute seminar, followed by a question and answer period. The committee will: (a) ascertain your command of the material you are presenting, (b) help you better develop your plan, and (c) help you develop contingency plans. Typically, students and their committee members schedule a two-hour block in which to conduct the proposal.

**Developing the ability to make strong oral presentations is an extraordinarily important skill.** You must give a lot of thought to your presentation. You must also rehearse your presentation numerous times prior to the defense in order to hone your skills. **Seek as much feedback on your presentation as possible, from as many people as possible!**

**When you know the date of your review, you should log onto Caesar and fill out the form for the PhD Prospectus.** If you successfully defend your Ph.D. proposal, you become a doctoral candidate. You are now on your way to becoming an independent researcher. **You should feel proud!**

The fourth year

Fourth year review

The fourth year review is a chance for your committee to reconvene and assess your progress toward completing your thesis work. You must plan a 20-30 minute oral presentation that updates your committee members on your work since your proposal
defense. A two-page written summary should be provided to the committee members one week prior to the date of the oral presentation. This is the perfect time to obtain feedback on your research and to discuss your post-graduation plans.

You should schedule your review sometime during the winter or spring quarters of your 4th year. Note that if you came with a M.Sc., you are expected to do it during the summer quarter of your 3rd year or the fall quarter of your 4th year. **When you know the date of your review, you should log onto Caesar and fill out the form for the DGS PhD Final Exam.** Once entered, an email will be sent to the Graduate Program Assistant and the form will be printed out for the day of your review. You should schedule about one hour for the meeting.

The fifth year and beyond

**Presidential Fellowship**

The Presidential Fellowship is the most prestigious fellowship awarded by Northwestern. Fellowships are awarded for up to two years, and recipients become part of Northwestern University’s Society of Fellows. The fellowship is awarded to candidates who combine outstanding intellectual or creative ability with the capacity to play an active part in the life of the Society of Fellows. The Society of Fellows, which meets twice per quarter, enables stellar students from across the university to have interdisciplinary interactions with their peers in other fields. The goal is to create future leaders who are enthusiastic and literate about the broad scholarship of the university. Applications are by nomination only.

**Departmental Seminar**

One to two quarters before your thesis defense, you must make a 20-25 minute presentation to the entire Department. This presentation will be scheduled during one of the Departmental Colloquia slots. You must keep in mind the broad range of interests and expertise of your audience. **Prepare a talk low on technical details and high on motivation and insight.** Your audience will thank you for your effort!

Be sure to schedule your seminar well in advance of your desired graduation date and to provide the Graduate Program Assistant with a brief summary of your presentation for posting in a flier.

**Dissertation**

Your dissertation is the document detailing the work you have completed for your thesis. In your dissertation, you must demonstrate the relevance of your work to the greater scientific enterprise. You must also place your work in the context of both its narrow and broader fields. Additionally, you must describe your results and demonstrate their technical validity. Finally, you must detail the conclusions to be drawn from your
results, how those conclusions advance the field and what questions are still left open or are opened by your work.

Your dissertation is an important document, but not nearly as important as your ability to publish your research in top-quality peer-reviewed journals. You must aim to submit and publish your work prior to completing your dissertation.

**Thesis defense**
Your defense is the 40-50 minute presentation that you give to your thesis committee. After the presentation, the faculty will ask questions about your research and then meet privately to evaluate and decide whether to award the PhD. You should typically schedule a two-hour block with your committee for the defense, but check with your advisor.

**Graduation and beyond**
The Graduate School offers quarterly graduation for graduate students. Students working towards a Masters or PhD degree may be awarded the degree in Fall, Winter, Spring, or Summer, assuming all work is completed before the published deadlines. Deadlines for graduation are posted at [http://www.tgs.northwestern.edu/academics/academic-services/calendar/](http://www.tgs.northwestern.edu/academics/academic-services/calendar/)

At the conclusion of your stay at Northwestern, you must print and fill out the Exit Form ([http://www.chem-biol-eng.northwestern.edu/docs/ChBE_Exit_Form1.pdf](http://www.chem-biol-eng.northwestern.edu/docs/ChBE_Exit_Form1.pdf)). Consult your advisor and the Graduate Program Assistant to make sure that there are no forms left to fill out and that all graduation requirements have been met.
Degree Requirements

Coursework

Graduate students holding B.S. or B.E. degrees in chemical engineering must complete 10 courses according to the distribution below. If you entered with a B.S. or B.E. in another engineering or science discipline, then see c) below. Students entering with a M.S. degree from another university must meet the total distribution and class requirements noted below with the added stipulations that at least six (6) of the ten classes be taken at Northwestern and that at least two (2) of these classes be taken in the Chemical and Biological Engineering Department. **M.S. degree holders must make sure that the graduate classes they completed to earn their degree are acceptable as replacements for courses required by our program.**

All graduate students must enroll in **CHEM ENG 510** for four quarters, typically Fall, Winter and Spring of their first year and Fall of their second year. This is a zero-credit, S/U course that was created with the goal of impressing upon all students the importance that the program places on colloquium attendance and participation in departmental activities. A satisfactory grade will be awarded based on attendance of no fewer than 7 seminars (6 seminars plus retreat in Fall Quarter). After the Fall Quarter of their first year, students working at the downtown campus may use seminars other than our departmental seminar to fulfill the requirements.
All graduate students must enroll in **CHEM ENG 519** for one quarter in their first year. This is typically offered in the Fall Quarter. This is a zero-credit, S/U course that emphasizes professional development skills necessary to succeed as a graduate student and educates students about responsible conduct of research. You must also complete an on-line course offered by CITI. You will be given instructions via email about how to enroll in and complete this course. **Students who do not complete the in-person course and the required on-line training before the end of their first year will have their funding terminated.**

You should plan to take four courses your first quarter. In subsequent quarters, PhD students should enroll in sufficient credits of research to fill up to four credits. The specific research course in which you enroll depends on where you are in your degree program. For the first eight quarters, it is **CHEM ENG 590**. In the ninth quarter, it is typically **TGS 500**. Please check The Graduate School website for details on the timeline and courses.

Our department’s course requirements for the PhD degree are:

a) Courses in the department (6 total, no P/N allowances)
   a. Two transport phenomena courses. Choose from:
      i. **CHEM ENG 421** Fluid Mechanics,
      ii. **CHEM ENG 422** Heat and Mass Transfer,
      iii. **CHEM ENG 437** Selected Topics in Fluid Mechanics,
      iv. **CHEM ENG 462** Viscoelasticity and Flow in Polymer Systems.
   b. One reaction engineering/kinetics course. Choose from:
      i. **CHEM ENG 408** Chemical Engineering Kinetics and Reactor Design,
      ii. **CHEM ENG 409** Advanced Reactor Design,
      iii. **CHEM ENG 410** Principles of Heterogeneous Catalysis,
      iv. **CHEM ENG 414** Modern Analytical Techniques for Chemical Engineering,
      v. **CHEM ENG 463** Polymerization Reaction Engineering.
   c. One thermodynamics course. Choose from:
      i. **CHEM ENG 404** Advanced Thermodynamics,
      ii. **CHEM ENG 406** Selected Topics in Thermodynamics.
   d. Two departmental electives.

b) Other electives (4 total, with 3 P/N allowances)
   a. At least 2 must be non-departmental electives: Choose from 300 or 400 level courses in other science and engineering departments. Note that most 300 level courses required for the B.S. degree at Northwestern in other science and engineering departments cannot be taken for credit toward a graduate degree. **CHEM ENG 341** Process Dynamics and Control is the only exception, if this course does not duplicate a course taken for a previous degree.
c) Non-chemical engineering B.S.
   a. You will have to take up to six additional undergraduate chemical engineering
courses for credit: CHEM ENG 210 or 212, 211, 307, 321, 322, and 323; in order to
prepare you for the required courses listed in (a). These graded classes will not
contribute toward your other graduate degree course requirements.

Grading

Most courses you will take will be graded. No CHEM ENG graduate courses are open to
registration under the P/N (Pass-No Credit) option except for 500 level courses (see below).
Depending on your incoming degree, you have the option of taking some courses as P/N.

A student will be placed on academic probation at the close of any quarter if his/her overall
grade average is below 3.0. **Failure to improve may lead to dismissal by the Graduate
School.** Additionally, our Department requires that students receiving research or teaching
assistantships/fellowships maintain a minimum GPA of 3.5.

Graduate student teaching

The Department believes that teaching experience is an important part of the graduate
program and expects an appropriate level of commitment. Every year, the Graduate
Program asks graduate and undergraduate students in the Department to nominate graduate
students who perform their TA duties outstandingly. The winner receives a plaque and a
cash award.

The teaching apprenticeship

A special opportunity for students interested in academic careers is the Department’s
Teaching Apprenticeship Program (TAP). Graduate students admitted to the TAP work
closely with faculty mentors to teach two to four weeks of a core undergraduate chemical
ingineering class. The apprentice teaches the course as a faculty member would, preparing
lectures, assigning homework, and writing and grading quizzes and exams. The faculty
mentor attends the apprentice’s lectures and provides feedback. The apprentice’s
performance is also evaluated formally by the students in the class.

Interested students typically apply to the Teaching Apprenticeship Program (TAP) in their
fourth or fifth year. The Graduate Committee evaluates applicants to the program and selects
2-3 qualified students. TAP participants are excused from the usual teaching assistant
assignment during the year in which they serve as an apprentice. You can find profiles of
participants in the TAP who have recently started careers in academia under alumni profiles.
Other pre-candidacy requirements

Residency
A student pursuing a doctoral degree must complete eight quarters of residency consecutively over two years, including summers (see http://www.tgs.northwestern.edu/studentsvcs/doctoral). Any alterations in the residency timeline can be managed through Leave of Absence requests. Per the continuous registration policy, all doctoral students must be registered at Northwestern University in each of the Fall, Winter and Spring Quarters until all degree requirements have been completed, including dissertation submission to The Graduate School. The typical progression of a PhD student’s career is found at http://www.tgs.northwestern.edu/academics/academic-services/phd/timeline/index.html.

Residency and Transfer Credit
No residency credit will be awarded by The Graduate School for work completed in a graduate program outside of The Graduate School. Individual programs may waive course requirements based on work completed at another institution (either prior to or after enrollment at Northwestern), but all students must complete nine graded courses in The Graduate School and maintain a B average (3.0 GPA). Students may register for 590 Research within their programs to maintain full-time registration during quarters in which they are not enrolled full time in graded coursework.

Tuition levels
Tuition rates and fees are found at http://www.tgs.northwestern.edu/financial-aid/Information/tuition-fees/index.html. PhD students in quarters 1-8 are charged the Full Rate of tuition and register within their program. Students in quarters 9 and above are charged the Advanced Rate and typically register for TGS 500. Please see the PhD timeline at http://www.tgs.northwestern.edu/academics/academic-services/phd/timeline/index.html to determine registration and tuition charges while being funded or unfunded.

Internships & Fellowships

Crown Family Internship
This elective program enables doctoral candidates to gain practical experience in industry or at national laboratories in areas closely related to their research. These internships can provide impetus for the intern’s thesis and may provide future employment.

The experience is best suited for the middle to latter stages (e.g., 3rd year) of PhD study. The 3 to 6 month full-time internship is generally a paid position. Proper placement is determined by the student’s PhD advisor, the Associate Deans for Graduate Studies and Research and Cooperative Engineering Education. The intern’s performance will be evaluated by their sponsor and forwarded to the Associate Dean for Graduate Studies and
Research and Cooperative Engineering Education. The intern’s performance will be evaluated by their sponsor and forwarded to the Associate Dean for Graduate Studies and Research and the PhD advisor. Eight quarters of residency tuition will still be required even though the sequence will be interrupted. However, it is expected that this experience will not require additional time to complete degree requirements. Interns should have progressed to the level of candidacy, but candidacy is not required. During the internship, you register for the Crown Family Internship course in TGS.

If you make satisfactory progress (defined as meeting the normal degree requirements specified in later sections) you will usually be provided with financial support in the form of fellowships or assistantships with available Department funds. See the Department’s Financial Assistant or Business Administrator for funding details. The Graduate Program Director and the Graduate Program Assistant are also resources for funding details, as are the pages at http://www.tgs.northwestern.edu/post-docs/resources/finding-funding/index.html.

**Dr. John N. Nicholson Fellowships**

These fellowships are for doctoral and master's degree students in the basic sciences and engineering, and doctoral degree students in management. Preference is given to United States citizens of Greek heritage.

**Ryan Fellowships**

Ryan Fellowships support the finest students of nanoscale science in the country, providing them with the education and experience to assume leadership roles in the realm of nanotechnology.
Student Affairs

Academic standing

To be in good academic standing in The Graduate School, you must meet both the standards set by the degree program in which you are enrolled and those set by TGS. Moreover, you must make satisfactory progress toward fulfilling all requirements for the degree (see Section 1). Failure to make satisfactory academic progress may be a result of (but is not limited to): unsatisfactory performance in classes, unsatisfactory performance on qualifying exams, unsatisfactory research progress, or failure to meet other program requirements (such as language proficiency). A student’s failure to make satisfactory progress must be reported by the student’s program to the student, as well as to TGS, in its annual academic progress report.

Probation

A student whose overall grade average is below B (3.0 GPA) or who has more than three incomplete grades will be placed on probation by The Graduate School and will not be in good academic standing.

A student’s failure to maintain satisfactory academic progress in his or her program will be placed on probation and will not be in good academic standing. Failure to make satisfactory academic progress, as determined by the program, may be a result of (but is not limited to): unsatisfactory performance in classes, unsatisfactory performance on qualifying exams,
unsatisfactory research progress, or failure to meet other program requirements (such as language proficiency). A student’s failure to make satisfactory progress in a given academic quarter must be reported by the student’s program to the student and to TGS.

**Exclusion**

Exclusion is defined by the University in the [Student Handbook](#). A student who fails to resume good academic standing after at most two quarters (excluding summers) after the quarter of being notified of his or her placement on probation by either The Graduate School or the program will be excluded from The Graduate School.

A student can also be excluded by a program without first being put on probation, but only if the criteria for exclusion has been stated clearly by the program and have been disseminated to the students effectively. Prior to exclusion, a student should have reasonable opportunity to remediate the deficiency. Exclusion always requires approval from both the Director of Graduate Program and the Chair of the Graduate Program’s Student Advisory Committee or the Chair of the student’s department.

**Notification of Exclusion**

When a decision to exclude is made, both the student and TGS must be informed in writing within three business days of the decision being made. The notification must include the effective date of the exclusion, a clear statement of the reason(s) for exclusion and any relevant documentation.

**Appeal Process**

Students wishing to appeal a program’s decision to exclude must first appeal directly to the program. The program must inform both the student and TGS of the outcome of the student’s appeal(s) in writing.

A student may appeal program decisions to TGS. Appeals will only be considered by TGS on the basis of procedural errors or failure to comply with established program or TGS policy. The Graduate School will not consider appeals based on academic decisions.

Appeals to TGS must be made in writing within ten days of the program’s final written determination of exclusion and include any supporting materials at that time. The Dean of The Graduate School will determine if an appeal should be administered within TGS, UHAS (University Hearing and Appeals System), or other sanctioning body within the University. The Dean may request additional information from, or a meeting with, the student and/or program before making a final decision. The Dean’s decision will be made in a timely manner, and will be communicated in writing to the student and program. This decision is final and cannot be further appealed.
Improper conduct

Cases of improper academic and/or research conduct, and inappropriate or unprofessional behavior are considered outside the boundaries of “satisfactory academic progress”. These cases are covered separately under TGS’s Academic Integrity policy, as well as the published policies of the Office for Research Integrity, the Office of Equal Opportunity and Access, and the Student Handbook. These cases are addressed according to the University’s existing disciplinary procedures, and may result in a range of sanctions up to and including exclusion from the University.

Discrimination and harassment

All members of the Northwestern community - faculty, staff, students, and contracted vendors - share a collective responsibility for creating a harassment-free environment. To this end, we encourage you to familiarize yourself with Northwestern’s policies against discrimination, harassment, and sexual harassment and the myriad resources available on campus dedicated to the prevention, investigation, and resolution of claims of discrimination and harassment. Information can be found at www.northwestern.edu/sexual-harassment/policy/discrim_harass.html

McCormick has four on-site Discrimination and Harassment Prevention Advisers:

Emphasis on Undergraduate Students but also available for other cases:

- Joe Holtgreive, Assistant Dean Undergraduate Engineering, Tech L268 or 1-3332
- Ellen Worsdall, Assistant Dean Undergraduate Engineering, Tech L291 or 1-5173

Emphasis on Faculty, Staff and Graduate Students but also available for other cases:

- Deneen Bryce, Business Administrator EECS Department, Tech L358 or 1-3376
- Alice Kelley, Associate Dean Administration, Finance & Planning, Tech L366 or 1-2606

Northwestern University does not discriminate or permit discrimination by any member of its community against any individual on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, parental status, marital status, age, disability, citizenship or veteran status in matters of admissions, employment, housing or services or in the educational programs or activities it operates.

Harassment, whether verbal, physical or visual, that is based on any of these characteristics, is a form of discrimination. This includes harassing conduct affecting tangible job benefits, interfering unreasonably with an individual’s academic or work performance, or creating what a reasonable person would sense is an intimidating, hostile or offensive environment.

While Northwestern University is committed to the principles of free inquiry and free expression, discrimination and harassment identified in this policy are neither legally
protected expression nor the proper exercise of academic freedom.

Examples of discrimination and harassment may include:

- refusing to hire or promote someone because of the person's protected status
- demoting or terminating someone because of the person's protected status
- jokes or epithets about another person's protected status
- teasing or practical jokes directed at a person based on his or her protected status
- the display or circulation of written materials or pictures that degrade a person or group
- verbal abuse or insults about, directed at, or made in the presence of an individual or group of individuals in a protected group.

For sexual harassment matters, you should contact the Sexual Harassment Prevention Office, which is located in the East Tower of the Rebecca Crown Center, above the Registrar’s Office. Consultations are also available on the Chicago campus by appointment. Please call or e-mail for additional information.

Joan Slavin, Director
University Sexual Harassment Prevention Office
Rebecca Crown Center
Room 2-636 (East Tower)
633 Clark Street
Evanston, Illinois 60208-1117
Phone: 847-491-3745
Fax: 847-491-2506
Email: sexual-harassment@northwestern.edu

Confidential Counselors
If you wish to speak with someone who is legally privileged to keep communications confidential, you may contact a confidential counselor. After consulting with a confidential counselor, you may decide to take no further action; such a decision is completely within your discretion. Because of the confidential nature of the counselor/patient relationship, seeking advice from a confidential counselor does not constitute reporting an incident.

EthicsPoint Hotline
Northwestern has selected EthicsPoint to provide you with a simple way to report activities that may involve misconduct or violations of University policy. You may file a report online or by dialing 866-294-3545. This service is not a substitute for, nor does it supersede, any existing reporting methods or protocols already in place at Northwestern for reporting suspected problems or complaints. Instead, the EthicsPoint system provides an additional means of reporting such issues. Individuals who report concerns of sexual harassment via the EthicsPoint online option are encouraged to check the status of their report periodically, in order to receive updates as to the status of the investigation. Any suspected problems or complaints reported via EthicsPoint will be reviewed in accordance with relevant University policies and/or procedures and other requirements stated in the relevant Handbooks.
Life on Campus

Identification

**WildCard**

You will be assigned an official Identification Number (ID) that is used on all student records (such as transcripts, financial accounts, library records, etc.). You will also be issued a photo ID card (a.k.a., the WildCARD) with your ID number, status (student), bar code for library and fitness center access, and a “cash strip” for money put on the card.

You can obtain your ID card in the WildCARD main office, located in the basement of Norris Center. For more information on the WildCARD check [www.univsvcs.northwestern.edu/WildCard/](http://www.univsvcs.northwestern.edu/WildCard/).

**NetID**

Your NetID is your electronic identity at Northwestern. Many systems and records are defined as services associated with your NetID, including: e-mail; the online University directory; many NU Library online resources; access to grades and transcripts; access to the Electronic Time Entry System (ETES); access to the campus wireless network; off-campus access to the NU network. Most NetIDs have access to all these services, but some are restricted by school affiliation or the purpose of the NetID.

To get your NetID, you must be in the University database (which means a NetID has been
assigned to you). New students are entered into the database by the University Registrar.
You must activate your NetID before you can use it. You will be notified when your NetID has
been created so that you can begin this process. Students will receive their NetID Activation
Code from their school or from the Admissions Office.

When you activate your NetID, you will be asked for a password, a PIN number for online
identification and a question and answer combination. If you need to reset your password
(because you lost your current password) you can use your PIN. If you did set a question and
answer combination, you may alternatively call the NUIT Support Center to have your
password reset by a consultant. If you do not have a PIN or a question/answer combination,
you must bring your WildCARD to the NUIT Support Center or the NUIT Support Office to
have your password reset by a consultant.

**Vacation time & holidays**

If you receive financial aid through the University (Research Assistantships, Fellowships,
Teaching Assistantships) you are entitled to staff holidays including Memorial Day,
Independence Day, Labor Day, Thanksgiving & the day after, Christmas Eve & Day, New
Years Eve & Day. For a full list of the dates by year please reference the following link:
http://www.northwestern.edu/hr/holiday.html for a current listing.

Two weeks vacation is considered normal for a satisfactory student. **Paid vacation or
excused absences must be arranged in advance with your faculty advisor.**

**Student health services**

The Student Health Service provides medical care for you (and your dependents, if desired).
Services provided include: General Medicine, Health Education, Pharmacy, Radiology,
Specialty Clinics, Women’s Health, HIV Testing Options, and Travel Health Services. All
new entering full-time graduate students must complete the "Coverage Selection Form"
through CAESAR no later than October 1.

The student health service is located at:

633 Emerson Street
Evanston IL 60208-4000
(847) 491-8100

**Flu Shot Information**

The flu vaccine is available to students only; the student’s dependents are not included in
the eligible group. Vaccines will be given on an appointment basis. Call (847) 491-2204,
weekdays 8:30 a.m. to 5 p.m, to schedule an appointment. Students must present a valid student ID (WildCARD) and pay a fee of $25 at the time of the appointment to be eligible for the vaccine. The fee may be paid at the time of service or may be billed to the student’s NU account.

Eligible students may call to schedule influenza vaccines at the Health Service/Evanston Campus around mid October.

**Counseling and Psychological Services (CAPS)**

Starting anew can be quite challenging and at times your research may not be going as well as you would wish. CAPS serves as the primary mental health service in aiding students in overcoming their developmental, emotional, and/or psychological hurdles. CAPS has offices on both the Evanston and Chicago campuses; it provides a set of core services, including clinical services, psycho-educational programming, and consultation/collaboration with faculty and staff. CAPS’s services aim to address the psychological and developmental needs of students in order to help them thrive individually and in their relations with others. Furthermore, CAPS provides these services in a manner that is appreciative of the individual within a diverse and multicultural context.

**Parking and transportation**

The best advice for students about parking on campus is: **DON’T BRING YOUR CAR!** Parking is extremely limited, so most students walk, bike or take public transportation. If you do choose to park on campus, permits are available at the parking office at 1819 Hinman Ave. Ryan Field remote parking is an option for those students who have a vehicle and live within the walking perimeter and for those who would like to park near campus for a lower cost.

**Biking**

Biking is strongly encouraged on Northwestern’s Evanston campus! You have the opportunity to register your bicycle with University Police by either using the online bicycle registration (PDF) or in person at the University Police station. Registration serves as a deterrent to theft and aids in the recovery of stolen bicycles. The University Police also sell Kryptonite brand U-shaped locks at discounted cost than which you would find in a typical cycle shop.

**Shuttle services**

University Services manages transportation options for both the Chicago and Evanston campuses. These services include shuttle buses that operate on or near both campuses and reserved buses for special trips. **A WildCARD is required to board.**

**Chicago Shuttle** – The Intercampus Shuttle provides service between the Evanston and Chicago campuses. This shuttle serves to unite the two campus communities, ease
congestion and decrease the demand for parking on both campuses. For a schedule, see http://www.northwestern.edu/uservices/docs/transportation/StudentShuttleBrochure.pdf.

**SafeRide** – A service provided to members of the Northwestern community as a safe and free alternative to walking alone after dark. SafeRide drivers provide rides to and from destinations in and around Northwestern’s Evanston campus. SafeRide is not a taxi; it is a safety service meant to be used in conjunction with other strategies such as traveling in groups and using Northwestern’s Shuttle Service. SafeRide is staffed by student employees and administrators dedicated to enhancing campus safety. Need a Ride? Call 847-491-7000.

**Evanston Shuttles**

**Purple Route and Purple Express:** The Purple & Purple Express Shuttles provide the University community a safe way to get around the Evanston campus during evening and early morning hours throughout the academic year. The Purple Route Shuttle provides transportation between the Campus and downtown Evanston, while the Purple Express connects the Northern and Southern ends of campus.

**Shop-N-Ride** - The Shop-N-Ride Shuttle provides student’s access to Target, Best Buy, OfficeMax, Jewel and the Lincolnwood Towne Center shopping areas in the Evanston vicinity on select Sundays during the academic year.

**Frostbite Express** - The Frostbite Express provides service to the Evanston campus on days with a temperature in the single digits or a windchill factor below zero. Check the website to see if it is running. The Office of Student Affairs determines when the Frostbite Express runs.

For more information on the following Evanston and Chicago Shuttle services please visit the website: http://www.northwestern.edu/uservices/transportation/shuttles/.

**Airport Services** – For directions to and from Chicago’s airports, see http://www.northwestern.edu/uservices/transportation/commuter/airport_transportation.html.

**Evanston Campus Parking**

The University Police continuously monitors the parking lots and area surrounding the campus. All vehicles parked on the Evanston campus must display a valid permit year round, Monday through Friday from 7:30 am until 4:00 pm, unless otherwise posted. (*Note that some parking lots require permits 24 hours per day.)*

Quarterly breaks are not holidays; thus permits are required. Vehicles may not be stored on campus beyond 48 hours. To obtain permits and further information on eligibility, tickets, refunds and more, please visit the parking office.

Parking Services (Hours: Monday-Friday, 8:00 am-4:00 pm)  
1819 Hinman Avenue  
Evanston, Illinois 60208  
Tel: 847-491-3319  
Fax: 847-467-3613  
E-mail: parking@northwestern.edu  
Website: http://www.tgs.northwestern.edu/studentlife/parking/
For your reference, the table of fees for Oct 2010 to Sept 2011 was:

- Student $510.00
- Student 9-Month (Expires June 15, 2012) $425.70; decreases by $46.18 monthly
- Employee $322.20; decreases by $26.38 monthly.
- Daily $7.50.

**Ryan Field Parking**

Ryan Field remote parking is available to all current faculty, staff and students. Ryan Field is an inexpensive option for those who do not require main campus parking, or for those who live within the walking zone and need a place to park their car. Ryan Field (D) permits are available at the Parking Services office Monday-Friday 8:00 am-4:00 pm. Faculty, staff and students are required to present a valid Wildcard upon purchase. Payment for a Ryan Field permit can be made via cash, check or credit card (Visa/MasterCard/American Express). Evanston campus students may also bill the cost of the Ryan Field permit to their student account. Payroll deduction for faculty/staff is not available on the Ryan Field permit. **The cost of a Ryan Field permit is $25.00.**

Ryan Field (D) permits are not valid on the main campus during Fall, Winter and Spring quarters. Vehicles with Ryan Field permits parked on the main campus during regular enforcement hours will be ticketed for "unauthorized permit". During summer quarter, vehicles with valid Ryan Field (D) permits are permitted to park on the main campus in commuter student lots.

Please note that there is a difference between the standard Ryan Field (D) permit and the Ryan Field Athletic Department (A) permit. Ryan Field Athletic (A) permits are available only to members of the Athletic Department and NU student athletes. Student athletes interested in the Ryan Field Athletic Department (A) permit should contact the Athletic Department. Ryan Field Athletic Department (A) permits are never valid on the main campus.

You can find the Shuttle schedule at:

[http://www.northwestern.edu/up/parking/parking_ryan.html](http://www.northwestern.edu/up/parking/parking_ryan.html)
Departmental Services

Staff

Sarah Johnson
Business Administrator
Grant Administration
Department Budget Planning
Special Permissions

Iman Nasser
Graduate Program Assistant
Admissions
Department Seminars
Departmental Newsletters
Graduate Recruiting
Departmental Website

Hanna Pahr
Program Assistant
Purchasing/ Reimbursements
Room Reservations
TA Books
Copier codes
Keys
Essentials

Keys
When you arrive on campus you may be granted access to a key for the outside doors of the Technological Institute and the ChBE Graduate / Post-Doc Mailroom. Once you have chosen an advisor you can get a key to your group’s lab. To request a key, see the Program Assistant in Tech E136. A $15 deposit will be required for each key issued to the holder. The $15 deposit will be refunded upon return of the key.

Mail and Phone
Each group has a mailbox located in Tech E136 (department office). All mail received in the department office will be delivered to these boxes each day.

Telephones are available in each student office. Outgoing calls on these lines are limited to the local area. Research related long distance calls may be made using a long distance billing code provided by your advisor. Personal calls are prohibited.

Payroll
There are multiple ways that graduate students are funded while at Northwestern. First year students are typically on Murphy Fellowships for both the Fall and Winter quarters, and are supplemented by a Research Assistant (RA) position. Beginning with the Spring quarter, funding typically results from being a Research Assistant (RA), Teaching Assistant (TA) or through other fellowships. Consult with your advisor about the various fellowships and training grants available.
Knowing the particular type of funding you are receiving is helpful when completing your Federal W4 and Illinois W4 tax forms. If funded in full by an RA or TA position, then the total amount of your pay is taxable. If on a fellowship, then only the supplemented amount of your pay will be taxed, but the fellowship portion may still be taxable according to IRS guidelines. It is important to note that the supplemented amount of your pay is a much smaller amount than your stipend amount. Based on this, you may wish to adjust your tax withholding information on both the Federal W4 and Illinois State W4 forms. This information can be changed at any time by contacting the Payroll Department. More information can be found by visiting the Payroll Department’s website, www.northwestern.edu/hr/payroll/.

Northwestern no longer issues paper checks for pay. Pay can be received either by direct deposit into a designated bank account, or by way of a “Paychek Plus” pay card, which can be used similarly to an ATM bank card. You can set up direct deposit online through Northwestern’s HRIS Self Service website, http://nuhr.northwestern.edu. You will be prompted to enter information relating to both your bank and bank account, including account number and routing number. In lieu of using the HRIS Self Service website, you can also fill out a direct deposit form, attach a voided check, and then submit both to the Payroll Department. The direct deposit form can be found online at www.northwestern.edu/hr/payroll/DirectDeposit.pdf.

If you have any questions relating to payroll, contact the Financial Assistant responsible for payroll.

**Purchasing**

Graduate students can be given access to iBuyNU, Northwestern’s online shopping catalog, should they need to purchase items for research. Security access will need to be granted prior to creating any orders in this system.

**To purchase lab equipment and supplies**

1. Obtain a purchase order form from the department website: http://www.chem-biol-eng.northwestern.edu/docs/ChBE_PO_Form_3-21-11.pdf
2. Write in the company name, address, phone number, fax number, and FEIN (Tax ID).
3. Itemize each product you want to purchase. Add pertinent details in the "Notes" section.
4. Make sure that the pricing is accurate to possible Northwestern discounts.
5. Show the purchase order to your faculty advisor for approval signature and chart string.
6. Turn the purchase order in to Program Assistant in the department office (E136) for processing, since all purchases are officially made by the department office staff. An official purchase order from Purchasing will be faxed to the company and your products will arrive after.

**Plan ahead for any purchasing so that your research is uninterrupted!**
Reimbursements

Security access is also typically granted for graduate students in order to submit expense reports for travel or event expense reimbursement. Once you have submitted the security access request form, you will receive an email with a link on how to access the NU Financials system where you can create your expense report.

Supporting documents such as itemized receipts, credit card statements, and written explanations of business and educational purposes are just a few examples of documents that will need to be included with the expense report.

Receipts are always taped on 4 sides to either a printed Expense Report Receipt page or a clean white sheet of paper so that they can be scanned and copied easily. Do not tape over text and numbers because the glue fades the script beyond legibility. Paper clip the receipt pages to the reimbursement form. Be mindful of putting too many receipts on a page or going in too many directions; many people have to approve these documents and often make notes beside the receipts.

To create your expense report, start at http://cafe.northwestern.edu/ and click on “Access Café Systems,” then click on NU Financials to log-in. Select Employee Self-Service and then “create” expense report to get you to the window to enter your expense details. Expense reports are used for travel and previously approved event expense reimbursements.

Non-Travel Reimbursement -- Used when you make purchases for events, aid in student recruitment, or purchase lab supplies (lab supply purchases require exceptions, usually based on urgent need).

1. Go to the Project Café NU Financials website, to log-in to HRIS Employee Self Service: http://cafe.northwestern.edu/
2. Fill out all information completely and in detail and include supporting documents.
3. Chart string: ask your faculty advisor for the chart string where the purchases should be charged.
4. Sign the form yourself and get your advisor to sign it.
5. Include receipts. If the receipt does not indicate how you paid for the product, include your credit card statement with the purchase indicated. Black out all other purchases and all but the last 4 digits of your credit card number.

Travel Reimbursement -- Used when you attend conferences or meetings outside of campus and use your own funds for the trip.

1. Go to the Project Café NU Financials website, to log-in to HRIS Self Service: http://cafe.northwestern.edu/
2. Fill out all information completely and in detail.
3. Business Purpose: Briefly write the title of the conference attended and where it was, or, if it was a meeting, a very brief explanation for the trip and where you went in the comments section.
4. **Chart string:** Ask your faculty advisor where you should charge your travel expenses. Sometimes you will receive a grant for travel from the Graduate School. All travel grants funds go into a department account; see Financial Assistant for the account number. This will be combined with other account funds to reimburse you for your travel expenses. List both account numbers and the amount that should be charged to each.

5. **Dates:** Make sure to put the start and end dates of your trip.

6. **Airfare:** This can be paid from your pocket or through a Northwestern travel agency. We strongly suggest you pay it with the Northwestern travel agency (i.e. Compass) so that it can be paid well in advance and charged directly to an account. If you do charge your airfare to an account, list the cost on the travel expense report and the account where you charged it, and include your boarding passes and itinerary. Make sure to list it as “non-reimbursable.”

7. If you pay for your airfare out of your own funds, include your boarding passes, itinerary and receipt as supporting documents. Please see Program Assistant for exception form.

8. **Public Ground Transportation:** Include any receipts from bus, railroad, or taxi rides. If tips for taxi rides are not included on the receipt, indicate the tip next to the receipt. If you are unable to get a receipt for taxi rides, write where you went and how much it cost and we may be able to reimburse you.

9. **Personal travel:** If you take your own car, we will reimburse you according to the mileage rate of $0.555 per mile. **We do not reimburse gas separately.** Look at the second page of the travel & entertainment reimbursement. Include a Google map printout which shows the mileage and directions as supporting documentation.

10. If you must rent a car, please include the rental car receipt as well as any gas receipts. We will reimburse both in full.

11. **Hotel:** Include the itemized hotel receipt indicating what was charged each day. Enter the date of the first night’s stay as the expense date. Any internet or phone charges must be put in the “phone & communications” category. You are limited to 2 long distance phone calls during your stay.

12. **Meals:** Include itemized receipts for your meals. Alcohol will not be reimbursed on a grant account, and since most of you are traveling on grants, remember that we will not reimburse you for alcoholic beverages. Non-itemized receipts will require an exception form available online. There is a limit to the exceptions allowed, so be mindful to ALWAYS get itemized receipts. The limit for meals per person is $65; be respectful of the amount of limited grants funds and order below this.

13. If you pay for a group on your credit card, enter this as a Domestic-Meal Group. You must put the date of the meal, list valid Northwestern colleagues or appropriate guests along with their title and the name of the company or university they represent. Be sure to get a detailed receipt.
14. Conference fees: Include the receipt for your conference fee. If you paid beforehand and charged it directly to a chart string, still include the receipt, record the price and write the chart string on which you put the charge, list as “non-reimbursable.” When entering the Conference information in Project Café within the “Details Tab” check the box “Non-Reimbursable.”

15. Additional information: Include the meeting badge or a copy of the itinerary for the trip as proof of your attendance and business purpose. If you choose or if some receipts lack payment information, include credit card statements indicating payments as further support.

16. Turn in all materials shortly after you return. We cannot guarantee that your reimbursement will be approved after 90 days (this is a university and a federal rule). If you want your money sooner, turn in your receipts as soon as possible!
A good proposal should be concise and convey all of the following in less than 30 pages (double spaced). (1) The objective(s) of the research-- what is planned to be accomplished. (2) The significance of the research--what impact would the accomplished objective(s) have, assuming that the research is successful as planned. (3) Literature background--enough description of prior knowledge for readers to understand what is deficient that makes the proposed work important and useful, and what is known so that the proposed work has a reasonable chance of success. (4) Logical plan of attack-- in a logical manner, describe foreseen difficulties, options and plans to overcome the difficulties. (5) Brief description of the procedure, which could be theoretical, analytical, computational, or experimental. (6) A brief description of work completed by the student. This may be included under (3) if appropriate, as a separate section, or as an appendix. The proposal should also contain an Abstract and a Table of Contents.