

Master's Student Handbook

University of Washington

Department of Chemical Engineering

This handbook collects information and rules affecting ChemE graduate students enrolled in the Master of Science Degree (MS). Content will be updated periodically and the version posted at http://www.cheme.washington.edu/graduate_students/ms_handbook.html represents the current Departmental rules and procedures that are in effect and must be satisfied. In case of any conflicts or change to University of Washington Graduate School policies and procedures, those take precedence over Departmental procedures outlined here. In addition, individual research groups may have additional procedures, requirements, and expectations. Those may go beyond the requirements articulated in this document, but this document takes precedence if contradictions exist. Consult with your Research Advisor for any research group specific requirements.

Acknowledgements

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I. Orientation (Getting Started at UW ChemE)

A. Staff and Facilities Overview

Most of the Chemical Engineering graduate students, facilities, staff, and faculty are in Benson Hall (abbreviated BNS). However, some research groups have offices and/or labs that are located outside Benson. The [directory on the ChemE website](#) will have the most up-to-date information for faculty and staff locations.. Some of the key locations and facilities are:

Assistance & Supplies	Room
• Main ChemE office (Andrea Gleichweith,)	105
• ChemE Grad Program Advisor, GPA (Barry Wall)	137B
• ChemE Grad Program Coordinator, GPC (Prof. Cole DeForest)	353
• ChemE Business Office (Debbie Carnes, Katsu Park, Nhan Myint)	105
• Computing and Technology Manager (Jesse Chiem)	107
• ChemE Chair (Prof. James Carothers)	101
• Copy Machine & Mailroom	
Shared Labs	
• Graduate student computer lab	356
• Undergraduate computer lab	125
• Shared Instrumentation Facility (SIF)	121
• Colloids Laboratory	123
Shops & Services	
• Instrumentation shop	B49
• Computer support (Jesse Chiem)	105

B. Graduate Program Advisor and Coordinator (GPA and GPC)

The ChemE *Graduate Program Advisor* (GPA) is Barry Wall.¹ The GPA's responsibilities include:

- Advising and assisting graduate students to help them successfully satisfy the Program and Degree requirements
- Assisting graduate students with course registration and submission of Graduate School forms.
- Handling Graduate Program administrative duties.
- Tracking graduate student progress through the program.
- Referring students to the GPC as needed.

¹ Office: Benson Hall Room 137B; Contact: (206) 685-9785, barry77@uw.edu

The ChemE *Graduate Program Coordinator* (GPC) is Prof. Cole DeForest.² The GPC's responsibilities include:

- Advising first quarter graduate students on course selection.
- Advising first quarter graduate students on the research advisor selection process.
- Advising and assisting all graduate students on any topic that may not be appropriate to discuss with their primary Research Advisor.
- Advising all graduate students with regards to Teaching Experiences.
- Ensuring that all graduate students receive special attention as appropriate.
- Evaluating petitions and waivers to Departmental Graduate Program policies and procedures.
- Chairing the Graduate Program Committee. This is the committee that sets policy for the Graduate Programs (articulated in this document) and ensures that high academic standards are maintained.
- Chairing the Graduate Admissions committee. This is the committee that evaluates potential graduate students and selects recipients of recruiting fellowships.

C. Practical Advice for all Graduate Students

Below is a list of helpful advice and information on a wide range of topics. For additional information on UW graduate studies and details of related UW policies and procedures see the [UW Graduate School home page](#). Also, the [Graduate and Professional Student Senate \(GPSS\)](#) maintains a website with topics that concern all graduate students.

1. After Accepting the Offer of Admission

After you have officially accepted the offer of admission, you should go to the [Graduate School Application](#) page, enter your login information, and then click on the "Status" link under the "Action" heading. Follow the instructions to:

- Establish your UW NetID. This will be your email address at UW. Also, note and record your 7-digit UW Student ID number. You will need this number to obtain your Student ID Card (also called a "Husky Card").
- Send official transcripts to the Graduate School
- Request a visa application (if necessary)
- Pay the enrollment confirmation deposit
- Access information on immunization requirements

These steps should be completed as soon as possible and well ahead of your arrival on campus.

2. Finding a Place to Live

There are several options for housing close to campus. Some things to consider are the proximity to bus routes and proximity to the [Burke-Gilman Trail](#) if you plan to ride your bike or walk into campus, and proximity to grocery or other shopping. Some important resources include [UW Housing](#), which has specialized information and options for graduate students and families. Also, our current graduate students report the best success finding houses, apartments, or rooms for rent by using [Craig's List](#). Craig's List is most useful for finding housing from independent owners. [HotPads](#) and [Zillow Rentals](#) also have a wide range of listings including some apartment complexes.

² Office: Benson Hall Room 353; Contact: (206) 616-8128, profcole@uw.edu

Many students reduce housing costs by partnering with other students and renting a house or a multiple bedroom apartment. Please contact the GPA for contact information of other UW ChemE graduate students looking for housing.

3. Getting to Campus and Parking

On-campus parking is limited and expensive. We strongly encourage graduate students to avoid driving a car to campus. Instead, walk, bicycle, or take advantage of the [U-PASS system](#), which provides low-cost public transportation. For details on parking and other commuting options see [UW Commuter Services website](#). Your U-PASS will be activated one week prior to the start of classes or after you obtain your Husky Card (see item 4 below), whichever is later. Also, there is an app written originally by a UW graduate student (he now works at Google), called “[One Bus Away](#).” In addition to having maps of the bus routes, it has up to date information on when buses can be expected to arrive and depart.

You can also consult [the King County Trip Planner](#) and Sound Transit's [Ride the Wave](#), which the state runs to help people determine which routes they need to make trips through mass transit. Additional information on bus routes may be found at [King County Metro's website](#). Further, there are excellent [bicycling routes](#) through the city including the [Burke-Gilman Trail](#).

If you must drive to campus, temporary parking (loading/unloading only) is available at Benson. Day parking permits may be purchased for \$19.50/day or \$4.00/hour at a gatehouse or through [Transportation Services Parking Portal](#). However, if you carpool with another student who has a valid husky card; parking is \$283.80 a quarter – cost is split between the carpool members. Please check the [Transportation Services Carpool webpage](#) for quarterly and annual rates. The closest garage is the [Central Plaza Parking Garage](#). The main entrance is Gate 1 which is at the east side of the intersection of 15th Ave NE and NE 41st St. A parking permit may be purchased at the entrance booth or you can use the [self-service Pay by Phone app](#) and park on levels C02, C03, and C04. The Chemical Engineering building (Benson Hall) is just a 5-minute walk to the South of the Central Plaza Parking Garage.

4. Finding Your Way Around

A campus map is available at <http://www.washington.edu/home/maps/>. This may also conveniently be accessed from a smart phone. If you do not have a smartphone, you can pick up a free campus map from the booth at any campus entrance or from the staff in 105 Benson. The UW campus is relatively compact, and most all destinations are easily reached by a less than 15-minute walk.

5. Obtaining Your Student ID Card (Husky Card)

UW has a universal student ID card and account that is used to access a range of services on campus including dining, access to sports facilities, borrowing books at the library, building access, and public transportation around the Seattle area (U-PASS). It is called a [Husky Card](#) (see link for more information). After you arrive on campus, obtain your Husky Card as soon as possible. The main Husky Card office is in the Odegaard Undergraduate Library on the ground floor (phone: 206-543-7222). The office is open , 9am to 12pm and 1pm to 4pm, Monday to Friday. You will need to give them your UW student ID number and show proof of identity with an official photo ID.

6. University Computing Services (MyUW and Email)

The UW provides each student with an account for email and web-based services by assigning them a “UW NetID.” If you have not already obtained a UW NetID (see item 1 above), you can set one up by using a web-based form at <https://uwnetid.washington.edu/newid/>.

[MyUW](#) is the portal for a vast array of web-based resources. To access MyUW, you will first need a UW NetID (see above). Once you have entered your UW NetID, you have authenticated access to your employment information, pay checks, tax information, your library account, online research databases (such as Web-of-Science), online research journals, grades, UW software, etc.

Once you have your UW NetID, you may use your UW email address. Your address is *yourUWNetID@uw.edu*. Note that the following addresses are functionally identical to the address just mentioned: *yourUWNetID@u.washington.edu* and *yourUWNetID@washington.edu*. However, we ask that you use the @uw.edu alias. For more information regarding the UW email system, please visit the website at <http://www.washington.edu/itconnect/email/uwemail.html>. You can also have your UW email forwarded to another email address. Use the "Change Email Forwarding" option on the MyUW page.

The main access point for more information about computing resources is [UW IT Connect](#). The site also details UW computing policies and procedures. *You must be familiar with the policies on accepted computer usage*. If you violate the policy, you are subject to loss of computer privileges.

7. Software and Security

A vast array of software is available to UW graduate students that may be installed on your own personal computer and on University owned computers. The access point is [UWare](#), also accessible through IT Connect. Microsoft Office (*Word, PowerPoint, Excel*, etc.) may be installed for free along with computational software such as *Mathematica*.

Also, it is important to install anti-virus software immediately. UW provides [Sophos Anti-Virus software](#) free of charge to all students, faculty, and staff. It should be installed on all your computers. The virus definitions are updated regularly.

8. Departmental Email Communication

Electronic mail is the primary communication channel within the department. Please be sure that you check your UW email frequently. ChemE maintains email group listings for faculty, staff, and students (*e.g.*, all faculty or all ChemE graduate students), and you will receive regular emails with important information and notices.

9. Departmental Computing Resources

ChemE maintains computers for grad student use in room BNS 356. BNS 356 has a printer, which you can use by loading money on your department account (charges are per printed page). Check with the front office on how to set up printing. Undergraduate students have priority for the computers in BNS 125. Grad students wanting to work there should consult ChemE computer support. ACES (Association of Chemical Engineering Students) maintains the grad computer lab (including paper supplies). If you see a problem, for instance, the printers are out of paper, etc., notify the appropriate ACES representative. The Computing and Technology Manager, Jesse Chiem (jchiem@uw.edu) is in charge of these rooms and computing resources generally.

10. Keys and Building Security

Benson Hall keys are issued by the Chemical Engineering Business Office (BNS 105) and require a \$50 deposit. For security and safety, close and lock all doors when a room is not in use. Be careful not to leave valuables in view. If possible, store them in a locked desk or cabinet. Campus buildings are typically open to the public from 7:30am to 5pm, Monday through Friday. If you are in Benson, Benjamin, or MoES at other

times, please do not admit anyone unless you know they are authorized (carrying a faculty or staff ID or a valid Building Use Permit)

Faculty and staff members should carry their staff cards, which will be considered the equivalent of a valid Building Use Permit. Permits may restrict access of individuals to specific areas of the building if the person authorizing the permit so requests. Access to Benjamin and MoES are controlled by authorized Husky Card access.

Report all suspicious persons or activities to the ChemE Business Office or the UW police (dial 911). Please see the official [UW Building Security Regulations](#) for more information.

11. Desk Space

New graduates in need of space may request a temporary desk at any time through the department, which will be available on a first-come-first-serve basis. After you have chosen your research project, your advisor will supply you with permanent desk space near their lab while you are at the UW.

12. Phones

For on-campus calls (campus telephone numbers are 543-xxxx, 685-xxxx, 616-xxxx, and 221-xxxx), dial the last five digits. For example, the ChemE main office phone number is (206) 543-2250. From on-campus dial 3-2250.

For local calls outside the UW, dial a 9 to get an outside line (you should hear a dial tone). Then dial the local area code and the seven-digit number. See a local telephone directory for more information on the local calling area.

To use a campus phone for long distance calls (including international calls) on official UW business you need an authorization code. See your advisor for this. To make the call, first dial 77. You should get a new dial tone. Then dial the number (starting with a 1 and the area code for domestic calls). You will hear a “beep.” Then dial the seven-digit authorization code. ***Do not share your authorization code with others for any reason. Your advisor will receive a record of all calls made using the authorization code. NOTE: Some campus phones are restricted to on-campus calls only. If you are trying to dial off-campus but it isn't working, that is probably the reason.***

You may use campus phones for occasional personal calls. You must charge personal long-distance calls to your own credit card, however.

13. Fax

UW uses a digital fax service. If you need to send a Fax message, visit <https://fax.uw.edu>.

14. Sending and Receiving USPS Mail, Packages, and Equipment

Mail pickup and delivery occurs once a day at 9 am. Grad student mailboxes are in the mailroom, BNS 101. Mailboxes are *not secure*. Also, it's often necessary for a mailbox to be shared by two grad students.

Your address for normal U.S. Postal Service mail is:

(Your Name)
University of Washington

Department of Chemical Engineering
Box 351750
Seattle, WA 98195-1750

For deliveries to your laboratory or deliveries that require a street address and perhaps a phone number, please have items sent to:

Benson Hall (Express mail, FedEx, DHL, small packages, etc.):

(Your Name or Research Group Name)
Department of Chemical Engineering
University of Washington
Benson Hall, Room 105
4000 15th Ave NE
Seattle, WA 98195-1750
Phone: (206) 543-2250

Benson Hall (large packages or equipment):

(Your Name or Research Group Name) Department of
Chemical Engineering
University of Washington
Benson Hall, Room B37 (or specify your lab #)
4000 15th Ave NE
Seattle, WA 98195
Phone: (206) xxx-xxxx (specify your phone or lab phone number)

Benjamin D. Hall Building:

(Your Name or Research Group Name)
Benjamin Hall Interdisciplinary Research Building
Lab Suite # (specify the room or lab number)
616 NE North Lake Place
Seattle, WA 98105
Phone: (206) xxx-xxxx (specify your lab number)

Note: Program Coordinator is Brie Hawman, (206) 616-5653

Molecular Engineering and Sciences Building:

(Your Name or Research Group Name)
University of Washington Molecular Engineering & Sciences Building,
Room # (Specify your room or lab room #)
4000 15th Ave NE
Seattle, WA 98195

Note: Contact the Building Coordinator at MolES@uw.edu

To send mail (official UW business only), bring it to the mail room and put it in the appropriate bin (these are marked “Campus,” “Stamped,” and “Budget Number”). Instructions for sending each of these types of mail follow. For all other mailing or Postage Account questions, visit the [UW Mailing and Postage Account webpage](#).

On-Campus Mail: The UW uses a box numbering system (6 digits, Box 35__ __). The ChemE box number is 351750. To send mail to another *on-campus location*, write the recipient’s name and box number on the outside of the envelope (if recycling a used envelope, cross off any old addresses) and place it in the outgoing campus mailbox. Used envelopes in good condition may be recycled (large envelopes are particularly valuable). Collect them for sending your own on-campus messages. Deliver any excess accumulation to the BNS 105 staff.

Off-Campus Mail: Regular mail going off-campus requires a postage barcode label, a sticker with a barcode and Work Tag (formerly, “budget number(s)”), affixed in the upper left-hand corner of the envelope, just below the return address. The ChemE department uses UPS for most express mail. Air bills, mailing envelopes, and other assistance are available from the support staff in BNS 105. All express mail requires a Work Tag, either a department Work Tag or a research grant Work Tag. The staff will also instruct you on mailing packages.

NOTE: It’s fine to receive personal mail in your departmental mailbox, but UW policy prohibits use of Departmental facilities for outgoing personal mail. Stamps may be purchased in the Husky Union Building branch of the University Bookstore. The closest post office dropbox (“blue box”) is located just north of the MoES building, between Gerberding and Meany Hall. The closest U.S. Post Office station is on University Way and 42nd.

15. Getting Your Paycheck

Before you are eligible to receive your appointment as a research assistant and be added to payroll, incoming PhD students must complete the National Science Foundation (NSF) training. Once training is complete, send the completion report to the GPA (Barry Wall). Delays in completion of the training beyond the standard start date of your first RA appointment will result in a loss of pay. There are no exceptions to this requirement.

There are two pay periods per month (1st-15th and 16th-30th/31st). Paydays are on the 10th and 25th of each month. If payday falls on a Saturday, you will receive your check the prior Friday. If payday falls on a Sunday, you will receive your check the following Monday.

Individuals who start employment between the 1st and 15th of the month will receive their first paycheck on the 25th. Those who start between the 16th and the end of the month will receive their first paycheck on the 10th of the following month. You should sign up for direct deposit to ensure you receive your paycheck. To do so, please sign into [Workday](#) and then use the "Pay/payment elections" portal to input the necessary information.

16. Health Care and Insurance

Hall Health: Hall Health Primary Care Center (located on Stevens Way across from the Husky Union Building or “HUB”) is an outpatient clinic that provides health and medical care to currently enrolled students and their dependents. Services include preventive care, health education services, diagnosis and

treatment of illness or injury, and mental health care, including individual and group therapy. The pharmacy fills prescriptions and provides over-the-counter drugs, contraceptives and other products at reasonable costs. Appointments are recommended. For more information call (206) 685-1011 or browse <https://wellbeing.uw.edu/unit/hall-health/>

Insurance: Those not receiving ChemE financial support (virtually all MS students) may purchase UW Student Health Insurance at reasonable rates and are strongly urged to do so. If unsure whether or not you are being covered, contact the ChemE Administrator (Debbie Carnes). The GAIP [website](#) provides details on the health insurance provided to Academic Student Employees (ASEs) and can help with the self-pay option should it ever be necessary.

17. Student Organizations (ACES, GPSS)

Associated Chemical Engineering Students (ACES) is a student-run organization formed to improve the education and enjoyment of ChemE grad students. ACES deals with a variety of events and communication. For example, ACES runs the annual Graduate Student Symposium, conducts educational outreach and serves as a medium for exchange between faculty and the student body, among other functions. The current organizational positions are President, Treasurer, Professional Development Chair, Outreach Chair, Graduate Student Symposium Chair(s), M.S. Student Representative, Graduate and Professional Student Senate Representative, Webmaster and Social Media Chair and Social Chair. To get involved, please contact the GPA for the names of current officers.

The *Graduate and Professional Student Senate (GPSS)* represents all UW graduate students – both on campus and in the Washington State Legislature. In addition, GPSS acts as a resource center to fund graduate programming and departmental resources.

18. Departmental vs. Personal Expenses

A common point of confusion is the distinction between departmental and personal expenses³. As a general rule, graduate students must supply (and pay for) all materials required for their personal education. This includes, for example, textbooks, writing materials, photocopying, and printing (as needed for thesis/dissertation preparation, courses taken by the student or in exams required for the degree) and personal computer software and hardware⁴.

On the other hand, expenses related to your research should be charged to a UW research account. These expenses include materials and supplies used directly in the lab, long-distance telephone calls when ordering lab supplies, photocopies of journal articles needed as research background, technical services (shop, literature searching), and research-related travel. All expenses related to research must have approval of the person in charge of that account, typically your research advisor. Some faculty members pre-approve students to spend up to a certain amount while others choose to approve purchases as they come up.

When you are helping with course instruction during one of your Teaching Experiences, charges for instructional photocopies and supplies should be charged to the appropriate departmental Work Tag (formerly “budget”)⁵. If it is not clear where something should be charged, ask the course instructor, your research advisor, or the ChemE Business Office.

³ Departmental expenses are paid from research and instructional budgets. Personal expenses are paid from student’s personal funds.

⁴ The ChemE department provides access to computers with pre-installed software. Many graduate students find it convenient to supplement this with their own personal computer system, at their own expense.

⁵ If in doubt about the Work Tag (aka “budget number”) for a ChemE course, ask the BNS 105 staff.

19. Purchasing guidelines and procedures

There are currently four methods available to purchase goods and services in ChemE. If you have any questions, please contact Katsunobu Park or Nhan Myint at cefiscal@uw.edu. For further assistance please contact your specific Lab's Grant Manager

Workday Requisition

Create Requisition in Workday *Requires Requisition Requestor Role

If you do not have the proper role or want to do it yourself, Please use the following Job Aid PRO-J-05 for a step by step guide. Please complete the form, upload appropriate documentation, and submit it. Shortly after you submit the request you will get a ticket number via email from the UW Connect system. From there, ESE staff will submit the request and reach out to you if they have any questions or need additional information.

If the supplier doesn't exist in Workday please submit the Supplier Request Form

Engineering Shared Environment (ESE) Purchase Request

If you are unable to request your purchase in Workday, you may submit your request to ESE by providing a quotation or link to purchase. Requests can be submitted through the UWConnect Finance Portal. Please click the following link and login using your NETID.

Reimbursement Request

Students also have the option to purchase the item themselves and then request reimbursement. Please follow the guidelines provided above for ESE and initiate with the request form Non-Travel Reimbursement Request

Departmental Credit Card (UW Procurement Card)

You can use this departmental credit card only for the stated purpose/expense.

Please note:

- a. You cannot use this card for any other purchases or expenses.
- b. You must turn in the itemized receipt that shows each item that was purchased.
- c. Turn in the credit card receipt with your signature.
- d. Please state what the organization and purpose are for the purchase.
- e. Turn in a list of all the people who were at the event.

Return the card immediately after using it. This card is frequently needed for departmental expenses.

Approvals: You must obtain approval (email is fine) from your advisor for all substantial purchases unless: (1) you are in the DeForest or Schwartz groups AND the cost is less than \$500, (2) you are in the Jenekhe group AND the cost is less than \$750, or (3) you are in the Adler, Baneyx, or Carothers groups AND the cost is less than \$1000.

Purchase Requisitions:

There are two routes to purchasing in Workday. You can either:

1. Submit a [Purchase Request form via UW Connect Finance](#) for services and supplies you'd like purchased. Your request form will be routed to the [Engineering Shared Environment \(ESE\)](#) and the ESE team will submit the requisition request in Workday on your behalf.
 - UW Connect Finance Request Forms "Purchase Request" form
 - Note: Please choose the form for UW Academy (not School of Medicine)
2. Create a Requisition yourself and submit it in Workday.

- You must have the required security role in Workday – “Requisition Requester.”
- To receive this security role, contact your PI via email for approval and forward it to Kelly Thornton (kthorn2@uw.edu) for processing.
- **Note:** Only UW employees can have this security role.

M&E Sales Tax Exemption:

Some research equipment may qualify for an M&E sales tax exemption. In order to qualify, the purchase must: (1) Have a useful life of more than one year, (2) Be used more than 50% annually on qualifying research; and (3) Have an acquisition cost of \$200 or more. Please see this [website](#) for more information.

An M&E Statement will be **required** at the time of purchase. The M&E Statement must detail the type of research to be performed and the desired outcome. Please see this [website](#) for M&E statement examples. This statement will be entered into Workday with the purchase request for review by the EIO (Equipment Inventory Office).

A Sales & Use Tax Exemption Certificate will also be **required** at the time of purchase. Please download the editable PDF template [here](#). Enter the supplier’s name in the “Seller’s/Marketplace facilitator’s name” section and enter a date in the “date” section. This certificate will be attached to the purchase request in Workday. Make sure the attachment is visible to the supplier.

Note: M&E sales tax exemption can ONLY be applied to purchases made in Workday. We cannot apply M&E tax exemption on procard orders (credit card), reimbursement requests, and non-PO invoices.

Capital Equipment and Fabrication of Capital Equipment:

Please contact a Grant Manager for more information on Capital Equipment and Fabrication of Capital Equipment.

Related Resources

[Capital Equipment](#)
[Equipment Fabrication](#)

Sole Source Justification:

A sole source justification is required for every purchase over the Direct Buy Limit (\$10,000 including shipping and handling, but excluding tax) unless the purchase is being made from an [existing contract](#), the supplier is specifically named in the funding source award, or the purchase is being [competitively solicited](#).

A "Sole Source" purchase means that only one supplier (source), to the best of the requester's knowledge and belief, based upon thorough research (i.e., conducting a market survey), is capable of delivering the required product or service. Similar types of goods and services may exist, but only one supplier, for reasons of expertise, and/or standardization, quality, compatibility with existing equipment, specifications, or availability, is the only source that is acceptable to meet a specific need. Often it is because they are the only vendor who carries the item or have proven to be the most efficient in processing.

Please contact a Grant Manager for more information on the required steps for Sole Source purchasing.

Related Resources

[Sole Source Purchasing](#)

[Buying from UW Contracts](#)

20. Supplies and Equipment

General office supplies (pens, paper clips, mailing supplies, transparencies, *etc.*) in BNS 105 and 303 are for faculty/staff use only. Blank paper stored in BNS 105 is for office staff only, not for use in student laser printers, etc. Printer paper supplies are a student responsibility and generally managed by ACES. ACES maintains the grad computer lab. In a pinch, an ACES representative may ask the office to loan a ream of paper, which must then be returned ASAP because the two sources are from different inventories. For inexpensive, miscellaneous items purchased *off-campus* with your personal funds, you may apply for reimbursement. Make sure you get a receipt for all purchases.

Laboratory/office supplies: Many are available *on-campus* from *Chemistry Stores* in Bagley Hall or *University Stores*.

- TEs purchasing instructional supplies from Chemistry Stores should use the name of the course instructor when making the purchase.
- RAs purchasing research supplies from Chemistry Stores should first obtain a budget number from their research advisor, then apply for a budget-specific charge card in the Chemistry Stores office.
- Place orders for University Stores items using a Stores Order Form, available from the ChemE Business Office.

Bottled compressed gases: Most common gases (O₂, N₂, H₂, *etc.*) are available through Praxair. To order, use Ariba (UW's eProcurement system described above in the section on purchasing). The vendor will deliver your cylinder to the cylinder storage dock (for Benson labs) and will deliver directly to your lab in the Molecular Engineering building or Benjamin Hall. At Benson, you will find the cylinder temporarily stored in the special locker on the outside wall (inspect the tags to find yours – do not remove a cylinder unless you know it belongs to you). THIS IS NOT A STORAGE AREA. You must move your cylinder to your lab as soon as possible after delivery. Obtain the key from Debbie Carnes (BNS 105). When the cylinder is empty or you are finished with it, cap it, position the tag to label the cylinder as “empty,” bring it back to the loading dock, and secure it. Praxair picks up the empties on a weekly basis.

Surplus Equipment: The [UW Surplus Office](#) maintains an inventory of equipment that is no longer needed by the original purchaser. Check it before making an outside purchase. You might find the item you need at a reasonable cost.

21. Machine, Instrumentation, and Glass Shops

Chemical Engineering Shop: The Facilities Manager supervises the Fabrication Shop in BNS B037. It supports undergraduate instructional laboratories, graduate research, and undergraduate research (in that priority order). Rules on student access are: (1) You must obtain permission and training from the Facilities Manager

before using the shop or any of its equipment and (2) The Facilities Manager must be present at all times while you are working in the shop. The Facilities Manager may be able to help with some items or give

additional guidance. Contact: Benjamin Hornburg, Facilities Manager, (206)543.4364, email/Slack: bhornbu@uw.edu.

Physics Machine Shop: The Physics Machine Shop specializes in the manufacture of experimental apparatuses. The shop is fully equipped to handle most machining, inspection, fabrication, and assembly tasks. They have extensive experience machining all conventional materials, exotic alloys, rare-earth metals, plastics, composites, and some ceramics. Contact: Bob Scott, Instrument Shop Manager, bjs24@uw.edu, 206-685-4266

Physics Glass Shop: The Physics Glass Shop is fully equipped to fabricate and repair research or instructional glassware. The Glass Blower, Eric Lindahl, works on a part time basis. For scheduling work when Eric is not available, or for any other shop inquiries, contact the Physics Shop Manager at: (206) 6854266.

Chemistry Machine Shop: The Chemistry Machine Shop is located in Bagley Hall 82A and supports both research and graduate teaching activities. Staff members are highly skilled in design, development, construction, repair, and maintenance of scientific apparatus and instrumentation. The shop staff has extensive experience working with conventional materials, exotic alloys, plastics, and machinable ceramics. Ultra-high vacuum welding and soldering capabilities are also available along with a wide variety of woodworking and general assistance tasks. A student accessible portion of the shop (Bagley 82) is on a first come first serve basis. Machine tools, hand tools, and materials are provided for normal repair work or construction of research equipment.

Chemistry Electronics Shop: The Electronics Shop (Bagley Hall room 74) supports graduate teaching activities and research. The staff are skilled in design, development, construction, repair and maintenance of scientific apparatus and instrumentation. A supervisor is available to discuss apparatus design requirements as well as possible solutions to instrumentation repair.

22. Analytical and Fabrication User Facilities

Chemical Engineering Shared Instrumentation Facility (SIF): The first floor in Benson Hall houses a shared instrumentation facility (SIF) located in room 121 that is available for use by all graduate and undergraduate students in the Department of Chemical Engineering. The facility houses several advanced instruments for analysis of thermodynamic (TGA, DSC, calorimetry), spectroscopic (fluorimetry and UV/VIS plate reader, Raman microscope), structural (DLS), and mechanical properties (rheometry) of materials; for performing analytical separations (HPLC) of complex mixtures; and for micro fabrication (3D printer and laser cutter). In order to gain access to instrumentation in the facility, students first have to be trained. The contact person responsible for training and access is listed on the placard outside room 121. The following rules must always be followed when using the SIF:

- Instrument time must be reserved in advance, using online calendars. Cancellations should be done in advance in order to allow others to use that time.
- ChemE courses have scheduling priority over individuals using instruments for research due to their time constraints. Currently the Polymer Lab occupies several afternoons a week in Spring quarter.

- Instrument access is restricted. Training by the lab manager or a delegate approved by the lab manager is required for each instrument.
- Users must also log their time and any instrument observations (including any unexpected problems encountered) in the physical logbooks associated with each instrument. And must notify the lab manager of any unexpected behavior via email immediately.
- Absolutely no samples or chemicals may be stored in any SIF facility. All consumables are the responsibility of the lab user.
- Tools, manuals, software and any other materials stored in the SIF must never leave that room.
- Problems with instrumentation must be immediately reported to the Lab Manager (listed on the door).
- Laboratory safety is of utmost importance, be sure to abide by laboratory best practices, safety rules specific to the SIF lab and the specific instrument/equipment, and the safety standard operating procedures associated with the chemical or sample under investigation.
- Inability or unwillingness to follow these rules will result in access restriction.

Note: the use of SIF instrumentation may sometimes carry associated charges to research groups. It is therefore important that students interested in using SIF instrumentation discuss this in advance with their advisor.

The Molecular Analysis Facility: The MAF is a staffed instrumentation facility located in the Molecular Engineering & Science building (MoES). Lab capabilities include microscopy, spectroscopy and surface science. For up-to-date details on the lab, its services, and other info, please see the website: <http://www.moles.washington.edu/maf/>

The UW NNIN Washington Nanofabrication Facility: The WNF is located in Fluke Hall and provides a wide range of deposition and microfabrication capabilities. Please see the lab's website for detailed and current information on its services and capabilities: <https://www.wnf.washington.edu/>

23. Lab safety

The UW requires training for incoming students who will work in labs. The training covers general safety issues (Laboratory Fire Safety, Chemical Safety in the Laboratory, and Chemical Waste Disposal). It normally takes place in mid-September. The UW also requires that each lab train its users in all safety procedures relevant to that lab. The lab supervisor is responsible for making sure this happens.

The Department strongly urges you to be proactive regarding safety training. So, when you join a group, be sure to ask about safety training specific to the research group. In addition, UW EH&S has compiled a very nice resource page to provide safe work practices and procedures at <https://www.ehs.washington.edu/research-lab-safety>. Further, The Dow Chemical Company has created and posted an excellent safety resource for chemical laboratory safety at <http://safety.dow.com/en>. There are several short video modules that are of particular interest to small labs including modules on personal protective equipment, waste handling, electrical safety, fume hoods, gas cylinder usage, vacuum equipment, cryogenics, and interpreting MSDS sheets.

Review the [Lab Safety Checklist](#), and familiarize yourself with the hazards and countermeasures for your situation by reviewing the [Hazardous Materials](#) section that follows the checklist if in doubt, initiate a discussion with your supervisor. This is especially important when going in a new direction or performing a new procedure.

24. Emergency Response and Disaster Preparedness

For Immediate Emergency Assistance, call 911. For non-emergency assistance, contact the UW Campus Police at (206) 685-8973, TTY: (206) 543-3323. Note that AM radio station 710 is the official Emergency Broadcast Station for the Seattle area.

Discover and utilize other safety-related resources at the UW [Campus Community Safety portal](#), [Transportation Services Safety portal](#), or through the [SafeZone app](#).

[SafeCampus](#) — (206)-685-7233 — is another supportive, safety-related resource where individuals can anonymously discuss safety and well-being concerns for themselves or others. SafeCampus is the University of Washington's violence-prevention and response program. We support students, staff, faculty and community members in preventing violence.

It is the responsibility of each person to know the proper actions to take during an emergency. Therefore, all departmental personnel are responsible for reading the contents of the [University Emergency Plan](#) and the [Department Emergency Plan](#).

The following are some highlights from the Departmental Emergency Plan:

General Preparedness: All staff, faculty, and students should be aware of evacuation routes and procedures. Personnel should know the location of first aid kits, fire alarms, and extinguishers. Floor monitors are responsible for walking through their assigned areas in case of evacuations and for reporting to the emergency plan coordinator at the assembly point. These activities must not significantly delay departure from the building or put the monitor in danger. If an evacuation of the building is necessary, key personnel for each laboratory will make an effort to shut down the lab before exiting the building.

Building Evacuation:

When an alarm sounds, close all doors and windows; shut off heat-producing equipment and gas, steam and water flow sources; return hazardous materials to storage.

- Use emergency flashlights or lightsticks (located in each laboratory) if necessary to find exits.
- Assist wheelchair users to the stairwell at the east end of the building. Contact the emergency coordinator (in the red hat) in the assembly area and tell her the location of the wheelchair user.
- Assist visually or hearing-impaired individuals to evacuate the building. Evacuate the building, using stairwell exits only.

DO NOT USE THE ELEVATOR.

- Assemble on the south lawn between the Benson front steps and the garden. Remain there until an emergency official gives the "all clear" to re-enter the building.

IMPORTANT: If you hear an alarm, you should evacuate immediately following the route on the building evacuation plan. Close doors behind you.

Medical Emergency:

- Call 911 and provide your name, building name, floor, location, and details about illness or accident.
- Provide first aid assistance only to the extent of your personal training and ability.
- Do not move the injured or ill person unless it is necessary to avoid further injury.
- Have someone meet the emergency personnel to direct them to the location.

Fire:

- If the fire is no larger than a wastebasket and you have fire extinguisher training, you may attempt to put out the fire.
- Otherwise, pull the fire alarm (which notifies UW Police and Seattle Police Department).
- If the fire alarm does not work, call 911 from a safe location.

Earthquake:

- Take cover under a desk, table, or in a doorway.
- Stay away from outside doors, windows, and objects that could fall.
- Call 911 to report any injuries. Give first aid only to the extent of your personal training.
- After the trembling ceases, evacuate the building and assemble on the south lawn between the Benson front steps and the garden. Stay away from overhead lines, poles, or other objects that could fall or shatter. Be prepared for aftershocks.
- Report structural damage or other problems to the Plan Coordinator (in the green hat) at the assembly point.
- Wait for clearance to leave the area or to return to the building.

Bomb Threat:

Always take written or verbal bomb threats seriously.

Listen to the caller carefully. Obtain and write down as much information as possible, especially regarding where the bomb is supposed to be located and when it is set to explode. Try to remain calm and polite.

If possible, identify characteristics of caller (e.g., age, sex, accent, voice) and any background noise.

Report the bomb threat immediately by calling 911. They will determine if the building should be evacuated.

Do not search for a bomb or touch any suspicious objects.

Active Shooter Scenario: An active shooter is defined as an armed suspect that is discharging a firearm at people or into an area where it is reasonably expected that persons could be struck by suspect fire. These situations require law enforcement units to take immediate action to end the danger. Every incident varies, making it impossible to provide an absolute answer for every situation; however, here are some brief tips: Find a room where you can secure it so that the shooter cannot enter.

Do not stand in front of windows.

Do not run down hallways or hide in bathrooms since neither are securable.

If you are outside, find a wall or bushes where you can hide.

If possible, call 911 from a mobile phone, but only after seeking shelter

When the police arrive, make sure the shooter is no longer active before exiting your shelter

Shooter: **An active shooter is defined as an** armed suspect that is discharging a firearm at people or into an area where it is reasonably expected that persons could be struck by suspect fire. These situations require law enforcement units to take immediate action to end the danger. Every incident varies, making it impossible to provide an absolute answer for every situation; however, here are some brief tips:

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- If you are outside, find a wall or bushes where you can hide.
- If possible, call 911 from a mobile phone, but only after seeking shelter
- When the police arrive, make sure the shooter is no longer active before exiting your shelter.

25. Libraries

The [UW Library system](#) maintains an excellent website, where you will find links to search the entire catalog, specialized databases, etc. During orientation you will participate in a session highlighting some of the main electronic library tools used by our department including Web of Science, EndNote, and Google scholar. There are many libraries on campus. They include the main Suzzallo and Allen libraries and special libraries for Engineering, Physics, Mathematics, and Health Sciences.

26. Photocopies

The photocopier machine in BNS 101 requires an authorization code. Grad students may use it for the following purposes:

- To make photocopies for a ChemE class when it is part of their TE. Get the authorization code from the course instructor or the staff in BNS 105.
- To make photocopies related to research. In this case the authorization code is the last 4 digits of the research budget. Get this from your advisor, who will receive a record of all photocopies charged.

Before using the photocopier for the first time, ask the support staff in BNS 105 for an orientation. The photocopier also has scan capability. There are several copy centers on campus that provide specialized and general copying services. See <http://f2.washington.edu/fm/c2/printing-copying/hours-locations> for more information.

NOTE: When photocopying journal articles or book extracts, be sure you are complying with US copyright laws.

27. Graduate student lounge

The grad student lounge (BNS B54) includes table space for eating lunch, a microwave oven, current newspapers and magazines, and snack foods⁶. Entry requires a standard grad student key. There are also general-use tables in the main entry of Benson.

28. Shower facilities

The basement-level bathroom includes a unisex locker room and shower for grads and faculty (BNS B08B). If you need a locker you should bring a lock and select an unused locker. Please have your name on the outside in case staff need to get into the locker.

29. Recycling and trash disposal

The UW has an active paper-recycling program involving daily pickup of sorted office paper/newspaper by the custodial staff. In addition, Benson Hall has recycling bins for mixed paper, newsprint, plastic and glass bottles, and aluminum cans at multiple locations (hallways on each floor). If you'd like recycling bags or a desk-side container for your office or lab, see the ChemE Business Office.

Boxes need to be broken down (flattened). They can then be left in the hall for the custodian or taken to the trash room in the basement (next to the Student Shop). One of the dumpsters there is devoted to cardboard recycling. Other garbage goes in your office's garbage can. If it doesn't fit there, take it to the dumpster in the basement trash room.

Take surplus supplies and equipment purchased with UW funds to the research engineer for proper handling. Don't just throw them away. This is especially important for items having a UW equipment tag number.

30. Change of address (while enrolled at the UW)

To ensure timely delivery of official UW documents and ChemE notices, report all changes in your mailing using the [MyUW](#) on-line system. When you are ready to leave the department there is a process you are required to follow. Please access the [checkout lists](#) available on [MyChemE](#).

31. Events, recreation, and the experimental college

The UW offers many cultural and recreational opportunities. Some campus news and events are highlighted at <http://www.washington.edu/discover/visit/uw-events/>. In addition, the UW's recreational sports program for faculty, staff, and students includes an Intramural Activities (IMA) Building. The facilities include racquetball, tennis, swimming, intramural sports, golf, handball, and squash. For more details, see: <http://depts.washington.edu/ima/>.

32. MyChemE

There are a number of helpful documents (including a link to this document) at the [department website](#). Select MyCheme in the top right corner to log in.

⁶ Pay on the honor system. Profits help fund ACES events.

33. Books

Although it's possible to order textbooks using the Internet, most students use the [University Bookstore](#) (4326 University Way N). If you collect your receipts, you can apply for a 10% refund. Please see the University Bookstore [website](#) for details on this patronage refund and other matters.

D. International Students

1. Tax ID number

If you receive a scholarship or fellowship in excess of tuition and fees, then you may need to apply for an ITIN (Individual Tax Identification Number). Refer to the [International Student Services website](#) for the most up-to-date information on requirements and steps for applying for the ITIN.

2. Additional Tax Information

Rules regarding taxes are complex! Please consult the section on the [International Student Services website](#) for up-to-date information.

3. Language Requirements

Students from non-English-speaking countries who did not receive their undergraduate degree at a primarily English speaking institution **must** pass certain language exams (see [Graduate School Policy 3.2](#)) to be considered to be making satisfactory progress. These requirements should be taken seriously and must be met in order to progress in your degree and eventually graduate.

4. Offices for International Student Matters

The [International Students Services](#) office (ISS) handles all matters related to international student services including tax (see above), travel signatures, and so on. All international students are assigned to a counselor at the ISS for personal inquiries. Emails are encouraged, but drop-in advising is available (see website for drop-in hours). The ISS front desk is open Monday - Friday 10:00 a.m. - 4:00 p.m. in Schmitz Hall 459.

The [Foundation for International Understanding Through Students](#) (FIUTS) office takes care of cultural and social matters related to international students, including homestay, communication classes and international student orientation. The FIUTS office is located at HUB 206.

The UW also provides additional special services for international students. These services also include language instruction, coordination with community-based social support organizations, insurance, *etc.* Please see <http://www.washington.edu/students/genocat/front/International.html> for more details.

II. University Policies and Procedures

A. Grading System

1. Numerical Grading Scale

The University of Washington and the Department of Chemical Engineering uses a numerical grading system. Instructors may report grades from 4.0 to 0.7 in 0.1 increments, and the grade 0.0. The latter denotes failing work or unofficial withdrawal. The lowest possible passing grade for a graduate student is a 2.7. The equivalence between our numerical system and the traditional letter grades is as follows:

A	4.0-3.9	C	2.1-1.9
A-	3.8-3.5	C-	1.8-1.5
B+	3.4-3.2	D+	1.4-1.2
B	3.1-2.9	D	1.1-0.9
B-	2.8-2.5	D-	0.8-0.7
C+	2.4-2.2	E	0.0

You may obtain additional information on grades and scholarship rules from the Graduation and Academic Records Office, 264 Schmitz.

2. Non-Numerical Grades

You may also receive one of the following non-numerical grades (as determined by the instructor):

CR Credit awarded in a course offered on a credit/no-credit basis (see next section). You receive credit, but your GPA is unaffected.

NC Credit *not* awarded in a course offered on a credit/no-credit basis (see next section). Your GPA is unaffected.

I Incomplete. An instructor may assign this grade only when you have been attending and doing satisfactory work until within two weeks of the end of the quarter, and you furnish proof satisfying the instructor that you can't complete the work because of illness or other circumstances beyond your control. The instructor must file (with the head of the unit offering the course) a written statement listing the reasons for the incomplete and indicating the work required to remove it. To obtain credit (and a final grade), you must convert an *I* into a passing grade no later than the last day of the next quarter in residence. *NOTE: Do not reregister for the course!* The Dean of the college offering the course may waive this rule, but in no case can you convert an *I* into a passing grade if more than two years elapse.

N This grade effectively means "Not Yet." It indicates that you are either undertaking an extended multi quarter project or your grade is contingent on the outcome or conclusions you make. A final grade will be given at the end of the quarter the work is completed. This is used only for courses not

completed in one quarter, such as undergraduate or graduate research projects and thesis work, *e.g.*, ChemE 600 and 700.

You may also receive one of the following non-numerical grades if the student initiates the appropriate process:

W Official withdrawal or drop from a course from the third through the seventh week of the quarter. A number designating the week of the quarter is recorded with the *W* when a course is dropped. It doesn't affect GPA calculations, but it will be present on your transcript to let reviewers know you withdrew from the course.

HW Assigned when a student is allowed a [*hardship withdrawal*](#) from a course (for example, due to serious medical or family situations) any time after the 14th calendar day of the quarter. It doesn't affect GPA calculations.

RD Registrar drop. Assigned when a student drops a course through the Current Quarter Drop process between the third week of the quarter through the end of the quarter and/or through the Former Quarter Drop process when a student completes the process to have a grade changed to RD for a quarter that has passed. RD. grades are not calculated in GPA calculations.

NOTE: If you withdraw unofficially, you will receive a grade of 0.0.

The student may also elect to take a regular numerically graded course on the basis of receiving only a Satisfactory / Not Satisfactory grade. The student must initiate the processes, and the instructor is not aware that the student is taking the course as S/NS. The grades are:

S Satisfactory grade for courses taken on a satisfactory/not-satisfactory basis. The instructor actually gives you a numerical grade, but the Registrar converts it to either an *S* or an *NS*. You receive credit for the course on the transcript, but the grade has no effect on your GPA. In addition, the course ***will not count towards satisfying your degree requirement for numerically graded courses.***

NS Not-satisfactory grade for courses taken on a satisfactory/not-satisfactory basis. You receive no credit, but your GPA is unaffected.

3. Grade Changes and Appeals

No instructor may change a grade submitted to the Registrar *unless* the instructor erred when assigning it⁷. If you think you received a grade in error, discuss the matter with the instructor. If you are not satisfied with the instructor's explanation, submit a written appeal to the Department⁸ Chair, with a copy to the instructor. The Chair consults with the instructor to ensure that the evaluation has not been arbitrary or capricious. Should the Chair believe the instructor's conduct to be arbitrary or capricious, and the instructor declines to revise the grade, the Chair appoints one or more faculty members to evaluate the student's performance and assign a grade. Once a student submits a written appeal, this document and all subsequent actions are recorded in written form for deposit in a department or college file. If you do plan to appeal, please read the information on the process before beginning the process to get the timeline and details correct.

⁷ In no case can a grade be changed after a degree has been granted.

⁸ *i.e.*, the department offering the course, not necessarily Chem E. If a non-departmental program offered the course, submit the appeal to the college dean.

4. Grade Reports

Use [MyUW](#) or contact the instructor to check final grades. They are usually available within two weeks after the quarter ends.

5. Scholarship & GPA Requirements

You must achieve a cumulative GPA of 3.00 or above to graduate. Your GPA depends on numerical grades earned in 400- and 500-level courses *only* (so any remedial coursework in 300-level courses will not be calculated into the GPA). This is true of 400- and 500-level classes regardless of the department offering the course (so a STAT 500 level class will count toward your GPA). Failure to maintain a 3.00 GPA, either cumulative or for a given quarter, constitutes low scholarship, and the Graduate School may take action, which – depending on the circumstances – can be a warning, probation, or dismissal.

6. Repeating a Course

As a graduate student you may repeat any course. Both the first and second grades count in your cumulative GPA. Subsequent grades will *not* affect your GPA, but will appear on your permanent record. In any case, only one instance of the course applies toward total degree credit requirements.

B. Full-Time Enrollment

IMPORTANT: The content that follows in the first and second paragraphs is geared toward those on F-1 status. Whether you are F-1 or have another status, you should address all questions to the University of Washington International Student Services (ISS) office and clear the viability of all plans that might affect your visa status with them.

Full-time enrollment is an important matter for international MS students. In order to avoid visa issues, students must be registered full-time unless the student has registered 700 credits (detail on this exception is below). A student may not register for 700 credits unless the student is working on an approved thesis. Therefore, all international students who are either (1) on a non-thesis track or (2) have not yet obtained thesis approval must register for 10 or more credits during autumn, winter and spring quarters. The only exceptions are summer quarter, which is the default "vacation" quarter (see: <https://iss.washington.edu/procedures/annual-vacation/>) or your last quarter of study during which you plan to graduate (see the third paragraph of this section for more detail). If you have completed three consecutive quarters (usually autumn, winter and spring) you may either enroll part-time or not at all during summer quarter. However, summer is not the only time eligible for vacation quarter. For more detail, please refer to the International Student Services information on this subject located here: <https://iss.washington.edu/requests/time-off/drop-withdrawal-leave/>

For international MS students writing a thesis under 700 credits, it is possible to register less than 10 credits and be considered "full-time" for immigration purposes. **Please note that full-time status is retained only with regards to immigration. You will be considered part-time for other university purposes.** The department requires that you register for **5 credits of Chem E 700** once you are accepted into the thesis MS track, except for your final quarter in the program, when you may register for 2 credits of Chem E 700. This registration pattern begins in the autumn quarter of the second year. Also note that you can register for other classes while you are a part-time thesis student without disturbing your full-time immigration status.

Non-thesis students may register part-time in their final quarter without endangering their visa status as long as they obtain proper permission from UW ISS. Students should review the information on [final quarter part time registration](#) and submit the required [form](#) to International Student Services.

Although the vast majority of Chemical Engineering MS students are self-supporting, full-time enrollment is also an important matter for those who have some manner of financial aid or an assistantship. The most common form of this is when students find a TA position in another department that comes with a tuition waiver – these always require full-time enrollment. Please check the requirements of your program if you do have one - most of them require full time enrollment. If this is a problem for any reason, please contact the GPA or the GPC.

C. Summer Quarter Enrollment

Whether summer registration is practical depends on a student's track (thesis or non-thesis), and on the pace the student is completing the degree. Students with summer enrollment will usually register for independent study credits or thesis credits, and will often do so on a part-time basis. For others, it may make sense to waive summer enrollment. Please contact your PI and/or the GPA if you are unsure whether to enroll during summer.

Other considerations:

- In some cases loan payback will be initiated if the student is registered less than ½ time during the summer. Contact the Financial Aid office to confirm.
<https://www.washington.edu/students/osfa/graduate/>
- International graduate students should verify requirements for their visa. If unsure, please contact [International Student Services](#).
- Building access using your husky card can be an issue when a student is not enrolled in summer. Please ask your PI to acknowledge your continuing need to access the building and work with the building coordinator to restore access.

D. On-Leave Status

Graduate students are required to maintain graduate status during their program of study. Failure to maintain continuous enrollment constitutes evidence that you have resigned from the Graduate School and requires reinstatement to the University of Washington (see below). To maintain graduate status, you must be enrolled on a full-time, part-time, or official On-Leave basis from the time of first enrollment in the Graduate School until completion of all degree requirements. See the [summary of the leave policy](#) and [Graduate School Policy 3.5](#) for eligibility and procedures.

NOTE: You must be registered when applying for the Master's degree, passing the Master's final examination, filing the thesis, and receiving the degree.⁹

NOTE: The Graduate School normally allows six years to complete requirements for a Master's degree. Periods spent On-Leave or on an unofficial leave status count when computing the total elapsed time.

On-Leave status entitles you to use the UW libraries and maintain access to email accounts. You are *NOT* entitled to extensive faculty and staff counsel, examinations of any type (except for language

⁹ This rule includes the Summer Quarter.

competency), thesis filing, residency credit, University housing, student insurance, or any form of financial assistance. You may use the Hall Health Primary Care Center on a pay-for-service basis and may pay to use the IMA.

E. Reinstatement to the Graduate School

Students previously registered in the Graduate School who have failed to maintain graduate student status (on-leave status was not secured or registration was not maintained) but wish to resume studies within the same degree program must file a request for reinstatement to the Graduate School. Requests will first be reviewed and approved by the department. Once the department has approved the request and the Graduate School has confirmed students' eligibility for reinstatement, students will be notified to pay a non-refundable reinstatement fee before registering for the requested quarter of reinstatement. For questions regarding on-leave status, please contact the ChemE Graduate Program Advisor and/or Graduate Enrollment Management Services at uwgrad@uw.edu or (206) 685-2630.

F. Dropping Courses and Withdrawals

Important: Consult the quarterly [Time Schedule](#) for specific deadlines.

1. Dropping courses

You may drop courses without restriction through the second week of the quarter. No record of such dropped course(s) will appear on your transcript. You may drop one course each academic year (defined as September through August) after the 14th calendar day of the quarter but no later than the seventh week of the quarter. In this case, the withdrawal will appear on your transcript.

2. Withdrawal for the quarter

It is your responsibility to withdraw if you are unable to attend for the quarter. You may withdraw by using MyUW (only through the 7th week of the quarter), by email from your UW linked email account to regoff@uw.edu, in person, or by writing to the Registrar's Office, Box 355850, University of Washington, Seattle, Washington 98195-5850. Withdrawals by mail are effective on the date of the post-mark. Courses dropped as part of a complete withdrawal from the University during the first two weeks of the quarter are not recorded on your UW transcript. The date of a complete withdrawal is recorded, however.

III. Departmental Policies and Procedures

A. Departmental Degree Programs

Each graduate student is admitted into a specific Degree Program in the Department of Chemical Engineering. The Degree Program that a student is admitted into defines additional specific rules, procedures, and requirements. The two Degree Programs are the Doctoral Program and the Master's Program. In general, most students admitted into the Doctoral Program receive financial support while students admitted into the Master's Program do not receive financial support. See sections IV and V below, respectively, for Program specific rules, procedures, and requirements.

B. Academic Advising

The Academic Advisor is a ChemE faculty member who helps the student to select a course of study and monitors progress toward the degree. New ChemE graduate students receive academic advising during the ChemE orientation event. The Graduate Program Coordinator (MS GPC, currently Prof. David Beck) advises students who have not been assigned to a research group. Once a student joins a research group, however, their Research Advisor acts as the student's Academic Advisor. The Graduate Program Advisor (GPA, Barry Wall) will also help you navigate through the program successfully.

C. Registration and Scheduling

You must use the web-based [MyUW](#) service to register for courses. You will find a button for this on the [UW homepage](#). To gain access, you'll need your UW NetID, which you can establish using a web-based form if you have not already done so. If you need help with registration or have a question, don't hesitate to telephone or drop in to see the ChemE Graduate Program Assistant.

Before attempting to register, consult the [Time Schedule](#) to see what's available and discuss options with your academic advisor. Certain courses require an *entry code*. (The time schedule notes such courses.) You will need to obtain the entry code from the department offering the course prior to registering (you'll be asked for the code during the registration procedure).

Most graduate courses have plenty of space available, and you should have no trouble registering. Certain courses – especially 400-level courses – have limited enrollment and demand that exceeds capacity, and thus you should register for them at the first opportunity. See the [Academic Calendar](#) for registration dates.

D. Research Credits

Research credits are credits accrued from taking one of the following courses:

- ChemE 600 Independent Research
- ChemE 700 Master's Thesis

Please see the specific procedural requirements on these courses in section IV below.

E. Seminars

You must register for and attend the main ChemE seminar (ChemE 523) each autumn, winter, and spring quarter unless it conflicts with another course required by your advisor during your first year. If you remain for a second year, you should plan on attending the seminar at the discretion of your advisor but you need not register for the class. This seminar generally features a guest lecture series providing students the opportunity to meet experts in the field and learn about a variety of specialty areas. Many other seminars are worthwhile, and you should make it a habit to attend seminars that are outside your specialty area as a way to enhance breadth.

F. Funding, Fellowships, and Awards

It is advisable to vigorously pursue internal and external fellowships as they bring recognition, prestige, and financial reward. National awards such as the [National Science Foundation's Graduate Research Fellowship](#) and the [American Society of Engineering Education's NDSEG Fellowship](#) are highly competitive and extremely prestigious. The Graduate School maintains a [list of fellowships](#).

Note that the Department does not support students in the M.S. in Chemical Engineering program. Students enrolled in this program are not eligible for tuition waivers, graduate assistantships, or fellowship funding that originates from within the department.

The department currently has one award to recognize outstanding scholarly achievement among M.S. students:

Outstanding Thesis Award: The Outstanding Thesis Award is awarded every November to the best overall thesis submitted during the previous fall, winter, spring and summer quarters. A student's advisor must nominate candidates detailing the thesis's merit. The winner will be selected based upon the quality of the research and writing represented in the thesis presented for consideration. The winning student will receive a \$500 award.

G. Becoming a Washington State Resident

Eligible U.S. citizens, permanent residents, and those on certain immigrant visas often consider applying for Washington State residency (international students on standard student visas are ineligible). The main advantage is that you become exempt from out-of-state tuition. However, it is extremely difficult to receive residential status. See <http://www.washington.edu/students/reg/residency.html>, for the latest information and procedures.

H. Waivers

To request a waiver of a ChemE requirement such as minimum GPA for the thesis track *etc.* you must submit a petition by email to the ChemE MS Graduate Program Coordinator (Prof. David Beck). The petition should include an explanation of the student's current situation and detailed plan and timeline for how they will meet the requirement. Requests for waivers of UW Graduate School requirements must go to the Graduate School. If you're not sure who's responsible for the requirement, see the ChemE Graduate Program Assistant or Graduate Program Coordinator for advice.

I. Grievances and Difficulties

The UW has established a procedure to handle formal grievances. For details, please see [Graduate School Policy 3.8](#). Students seeking complaint resolution under this policy must initiate either an informal conciliation or file a formal complaint within three months of the incident(s) leading to the complaint.

We encourage you to try less formal means first, however. If you are uncomfortable dealing directly with the person(s) involved, please contact the ChemE Graduate Program Coordinator or the ChemE Department Chair for advice and assistance in the resolution.

J. Checking Out

We ask that you complete a formal checkout procedure when you leave the Department (at graduation). The [checkout form](#) is available on the department website.

IV. Master of Science Program

The Master of Science Program is for students seeking an MS degree in Chemical Engineering. The goal of the MS in Chemical Engineering program is to enhance the mastery of core and specialized areas of chemical engineering through graduate level course work and supervised research projects.

All students begin on a non-thesis track, and petition to do a thesis MS toward the end of the first year (see Project Requirements below for details). To successfully petition for the thesis option, students must have done well in their coursework and demonstrated efficacy and diligence in their independent study. Students whose goal is to join a PhD program at UW or elsewhere are encouraged to select their thesis option and publish at least one first-authored peer-reviewed article in a good journal.

A. Master of Science Degree Requirements

Graduate School Requirements. The Chemical Engineering Master of Science Degree is subject to the [Graduate School Minimum Requirements](#) for a Master's Degree. The Grad School's minimum requirements are incorporated into the departmental requirements and cannot be waived.

The requirements, which are summarized below, are those that are in force *at the time of graduation*, not when you entered the degree program. Check their website (link above) periodically to make sure you are current on the requirements.

- Numerically graded courses must be scored 2.7 or above to count toward the total credits.
- At least 18 credits must be in courses numbered 500 and above.
- A maximum of 6 credits transferred from other institutions may count towards total credits.
- The minimum allowable GPA is 3.0.
- Master's students must complete the degree in six years.
- Master's students must maintain registration through the end of the quarter in which they graduate.
- Thesis track students must take at least 12 thesis credits (Chem E 700) and must submit their thesis to the Graduate School. (See [instructions on submitting your thesis in preparation to graduate](#))

1. Course Requirements:

- a. Complete at least 39 credits. Of these:
 - i. At least 18 credits must be in courses numbered 500-599, of which at most three may be seminar credits (*i.e.*, CHEM E 523).
 - ii. Complete at least 18 graded credits in courses numbered 400-599 (499 excluded).
 - iii.
 - iii. Meet the core course requirement. For most students, this includes Chem E 512, 525, 530 (autumn quarter) and Chem E 514 and 560 (winter quarter). For people in the DIRECT program/DSO option, the two three-credit required winter courses will substitute for Chem E 514 and 560¹⁰

¹⁰ If a DIRECT/DSO student opts to take either Chem E 560 or Chem E 514, they will count as elective credits.

- iv. Elective courses must be 500-level courses or approved 400-level courses. Examples can be found in the approved “Elective Courses” list below. Complete at least 8 credits of electives.¹¹
- v. Satisfactory completion of at least six CHEM E 600 credits for the non-thesis MS or nine CHEM E 600 credits for those planning to pursue the thesis MS. A member of Chem E graduate faculty must supervise. Non-thesis MS students must submit a written report while thesis MS students must prepare a thesis. See “Project Requirements” below for more details.
- vi. Students must receive numerical grades for all credits of course work and CHEM E 600, except seminar credits. Any numerical grade lower than 2.7 does not count toward the degree’s required credits. vii. The cumulative GPA for 500 level courses must be at least a 3.0 to qualify for graduation.

For example, a typical student’s program entails:

CHEM E core class(es)	17 total credits: (Chem E 512 525, 530, 560 and a special 3 credit lab for MS students)
Chem E Seminar	3 total credits – 1 credit per quarter (523)
Chem E Independent Study	<u>Non-Thesis Track</u> : minimum 6 credits Chem E 600 <u>Thesis Track</u> : Minimum 9 credits of Chem E 600 plus minimum 12 credits Chem E 700
Chem E Electives	minimum 8 credits (seek approval if more than 2 non Chem E classes, <i>and</i> non Chem E credits must be approved)

Achieve a cumulative GPA of at least 3.0 in the Chem E core courses
Pass a final exam consisting of an oral presentation of the principal project

2. Typical Work Trajectory

Non-Thesis MS, fast track

Graduation in Spring of Year 1

Quarter #1 (Fall) 13-16 credits

CHEM E 512 (3)	Methods of Engineering Analysis (math)
CHEM E 523 (1)	Seminar

¹¹ Students must register a total of 19 credits of electives and independent study credits. Within that total, students must have at least 8 elective credits and no fewer than 6 Chem E 600 credits for non-thesis students or no fewer than 9 Chem E 600 credits for thesis students. Achieving this balance is more critical for non-thesis students. Thesis students nearly always have more than enough independent study credits to meet requirements, but non-thesis students may have to pay more attention to ensure they register enough Chem E 600.

CHEM E 525 (4)	Thermodynamics
CHEM E 530 (4)	Transport I
CHEM E 600 (1)	Independent Study
CHEM E xxx (3)	Electives (For slower track, take in later quarters)

Quarter #2 (Winter) 10-13 credits

CHEM E 523 (1)	Seminar
CHEM E 560 (3)	Reactions at Solid Surfaces
CHEM E 600 (3)	Independent Study
CHEM E 514 (3)	MS student lab course
CHEM E xxx (3-6)	Electives

Quarter #3 (Spring) 10 credits

CHEM E 523 (1)	Seminar
CHEM E 600 (3-6)	Independent Study
CHEM E xxx (6-3)	Electives

Graduation in Summer of Year 1

Same as Q1-Q3

Quarter #4 (Summer) 2 credits

CHEM E 600 (2) ¹²	Independent study
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Non-Thesis MS, slower track

Graduation in Fall of Year 2

Same as Q1-Q3

Quarter #4 (Summer) Allowed to not register any credits; Off-campus internship or on campus research

Quarter #5 (Fall)

CHEM E 600 (10)	Independent study
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Graduation in Winter of Year 2

Same as Q1-Q4

Quarter #5 (Fall)

CHEM E 600 (5-10)	Independent study
CHEM E xxx (3-6)	Take remaining elective requirements if necessary

Quarter #6 (Winter)

CHEM E 600 (2-10)	Independent study
CHEM E xxx (3-6)	Take remaining elective requirements if necessary

¹² Remember that as an international student, summer is the only time you may register for part-time or no credits *unless* you are on the thesis track and registered for Chem E 700 credits.

Thesis MS

Graduation in Spring of Year 2

Same as Q1-Q3 above

Quarter #4 (Summer) Permissible to not register any credits; work on a primary project during this time is strongly recommended.

Quarter #5 (Fall) and Quarter #6 (Winter)

CHEM E 700 (5) Independent study (minimum 5 credits for each quarter)

CHEM E xxx (3-6) Take remaining elective requirements

Quarter #7 (Spring)

CHEM E 700 (2) MS Thesis

Graduation in Summer of Year 2

Same as Q1-Q4 above

Quarter #5 (Fall), Quarter #6 (Winter), and Quarter #7 (Spring)

CHEM E 700 (5) Independent study (minimum 5 credits for each quarter)

CHEM E xxx (3-6) Take remaining elective requirements

Quarter #8 (Summer)

CHEM E 700 (2) MS Thesis

3. Elective Course Guidelines and Requirements:

Students may follow a general track, or they may concentrate their efforts in one of three different tracks in the course of the MS degree - the bio track, the energy track and the nano track. Students taking the general track have the ability to choose elective courses from 500 level courses throughout the College of Engineering as well as some 400- and 500-level Physics or Chemistry courses. However, elective choices outside of ChemE should usually be chosen at the suggestion of the student's PI and elective choices should be concentrated in ChemE wherever possible. Please consult the [UW Time Schedule](#) to view available courses.

Appropriate elective choices for students following the bio, energy or nano track are more restricted and can be found in the following chart (please note that this list is not exhaustive nor must a student take all of these courses, but taking some selection of them will be essential to the chosen research track). Any student who has a doubt whether an elective is acceptable should consult with the GPA (Barry Wall) or the MS GPC (David Beck).

Table 1. MS tracks and electives. (Classes are ChemE unless otherwise noted)

Time	Bio Track	Energy Track	Nano Track
Autumn	511 (1) 490 (3) BIOEN 504 (4) 599 ¹³ (browse for relevant offerings)	584 (3) 599 (browse for relevant offerings)	599 (browse for relevant offerings)
Winter	511 (1) 599 (browse for relevant offerings) 491 (3) BIOEN 455 (4) 556 (3) 593 (3) ¹⁴	442 (4) MSE 565 ¹⁵ (3) PHYS 423 (3) 599 (browse for relevant offerings) 556 (3) 593 (3)	491 (3) MSE 565 (3) BIOEN 455 (4) PHYS 423 (3) 599 (browse for relevant offerings) 556 (3) 593 (3)
Spring	511 (1) 558 (3) 599 (browse for relevant offerings)	558 (3) 599 (browse for relevant offerings)	558 (3) 599 (browse for relevant offerings)

4. Project requirements: Non-thesis MS

Students completing a Non-thesis MS must take at least 6 independent study credits which they will use to work on an independent project (CHEM E 600). Each student must have a project supervisor drawn from the core Chem E graduate faculty. Projects should be suitable for completion in two or three quarters. Students must either produce a final written report or submit the draft of an article that will be submitted for publication. In either case, the project supervisor must approve the report/article and issue a grade. The final exam will consist of an oral presentation of the project. Only the student's Chem E advisor needs to be present and approve the exam. A non-thesis MS typically requires 12-18 months to complete.

5. Project requirements: Thesis MS

Students completing a thesis MS must take at least 9 credits of independent study (CHEM E 600) in the first year and 12 credits of MS thesis credits (CHEM E 700) after they are accepted to the Thesis MS track. A member of the core Chem E graduate faculty must supervise the student on an independent

¹³ The 599 designation is used for courses that are typically offered for that quarter only. 599 offerings are often not repeated and their content varies from quarter to quarter. Students should browse the offerings every quarter to

¹⁴ Offered in winter during odd-numbered years

¹⁵ Not offered every winter. Please check the UW time schedule for availability.

project. All students begin on a non-thesis track. To exercise the thesis option, students must obtain approval of a thesis project. Students are to submit a thesis petition (see below for details) that will outline the proposed Master's thesis topic/project toward the end of spring quarter during the first year. Projects should be suitable for completion within six to eight quarters. If a student needs to either stop working on a topic or change topics, the student should first request permission from the PI. If the PI either agrees that enough work has been done on the stopped topic to graduate or agrees that the student should shift focus to be successful, the student should obtain further approval from Professor David Beck.

In addition to the project itself, the student must produce a thesis describing the original research and assemble an examining committee. The committee should consist of at least two members of the UW graduate faculty and the committee chair must be a member of the core Chem E graduate faculty. This committee must approve the thesis, and it will administer the final exam, which consists of an oral presentation of the thesis. A thesis MS typically requires 21 months to complete (*i.e.*, graduation is normally in the spring quarter of the second year).

Requirements for the Thesis MS Petition: In order to be successful, any petition to complete a Thesis MS must include the following:

- A cumulative GPA of at least 3.0 in the ChemE core courses
- At least 9 completed credits of original research under a core ChemE faculty member by the end of Spring Quarter of the first year
- A research progress report that demonstrates strong ability to make independent progress in research, to understand the technical details of the research topic, and to communicate and write effectively. The report should not be longer than 5 pages single-spaced with 11 pt font, including figures and tables, but not including references.

Once these elements are compiled, submit this report along with a request to be considered for the Thesis MS track by email to Prof. David Beck, Prof. Cole DeForest, and the student's ChemE research advisor **by the end of the 10th week of the spring quarter.**

The Department will make decisions whether students will continue with Thesis MS or finish with a Nonthesis MS. The department will send decisions to students and their advisors in the 11th week of spring Quarter.

If the petition is approved, the student must complete the following requirements:

- Complete at least 12 Credits of Chem E 700 (Master's Thesis) with a grade of CR or a numerical grade of 2.7 or above
- Submit a Master's Thesis.
- Pass a Final Examination for the Master's Degree (In this department, the exam will consist of an oral presentation of the thesis and the committee's approval of the thesis).

6. Guideline for Registering Research Credits

Use the following guidelines when registering each quarter for research credits (Chem E 600 or 700)

- First (Autumn) Quarter: Register for 1 credit of Chem E 600 under Prof. David Beck's faculty code (10709).
- Second and Third (Winter & Spring) Quarters: Increase registration for Chem E 600 to 3-6 credits depending on the amount of work you are putting into your project, the remainder of your course load during the winter and spring quarters, and whether you are planning to apply for the thesis MS. Be sure to use your PI's faculty code. (A common pattern is to register 3 credits in 600 during winter and 6 credits of 600 during spring).
- Register for 2 research credits in Summer quarter if you are planning to graduate during that quarter. Otherwise, it is permissible not to sign up for research credits in the summer.
- Register for Chem E 700 if you are working on a MS Thesis, otherwise register for Chem E 600.

7. Data Science Degree Option

The Data Science Option (DSO) is geared toward students with little or no prior data science knowledge who wish to improve their understanding of these tools and how to apply them within the Chemical Engineering field.¹⁶

There are two ways of taking the DSO, each of which will show up in the title on the student's degree.

The primary route to the DSO is through the one-year, non-thesis dedicated data science MS ("DSMS"). These students take the standard core ChemE coursework in the first (autumn) quarter, the core data science courses in the second (winter) with some electives and complete the capstone project in the third (spring quarter) while rounding out the elective requirement in the final third quarter. DSMS students do not join a research group, and are guaranteed access to the data science courses.

Research MS students who wish to complete the data science option have largely the same requirements as the DSMS students. However, they are not guaranteed a place in the core data science courses as the DSMS students are. Instead, they need to petition for a place when registration for those classes opens during autumn quarter. In addition they may opt *not* to do the capstone but instead choose alternate coursework listed below.

The course requirements for the DSO option for the Chemical Engineering degree programs follow:

- Take the two following required classes (offered each winter quarter)
- ChemE 546, Software Engineering for Molecular Data Scientists (3)
- ChemE 545, Data Science Methods for Clean Energy Research (3)
- Take the capstone project offered spring quarter under ChemE 547 (3)

After completing these courses, DSMS must complete the capstone while research MS students can either complete the capstone or choose one of the following:

- Complete an approved capstone experience with a grade of 3.0 or higher under ChemE 547.
- Complete one of the following approved courses in the area of data science, from the ChemE Advanced Data Science Option (ADSO) or its introductory counterpart ○

¹⁶ (Note that at its beginning this was referred to as the DIRECT program and the degree option was added later. Students accepted into DIRECT or who complete the DIRECT courses of ChemE 546 and 545 plus the capstone or additional course and seminars are eligible to claim the DSO).

Data Management

- CSE 414 ,Introduction to Database Systems (4)
- CSE 544, Principles of DBMS (4)

Machine Learning

- CSE 546, Machine Learning (4)
- STAT 535, Statistical Learning: Modeling, Prediction and Computing (3)
- CSE 416/STAT 416, Introduction to Machine Learning (4)

Data Visualization

- CSE 512, Data Visualization (4)
- CSE 412, Introduction to Data Visualization (4)

Statistics

- STAT 509, Introduction to Mathematical Statistics:
Econometrics I
- STAT 512-513, Statistical Inference (4 credits ea.)

Non-thesis and research MS students should register for and attend any combination of at least three quarters of the following seminars:¹⁷ ○ Clean Energy Institute Seminar ○ eScience Community Seminar ○ Molecular Engineering Institute Seminar

B. Project Selection

Course work and extracurricular activities are important, but for most students research determines the quality of the graduate school experience. Therefore, **choosing a research project is probably the most important decision you will make.** It is important both for you and your project supervisor that your choice be informed.

The advisor will be responsible for helping you develop an academic plan, identifying a research project and developing a research plan. The advisor you have and the research you do will play a crucial role in identifying your post-graduation career options. In addition to finding a research fit, keep in mind the importance of finding a good personality fit. This applies to you and your advisor as well as you and the other members of the research group. Remember - you will be working closely with these people for the duration of your MS studies.

Selection works in the following manner:

Members of the core Chem E graduate faculty submit titles of projects open to MS students. They also specify whether they are for non-thesis MS students, thesis MS students or either. At the beginning of the first year autumn quarter, the department announces the projects and schedules presentations where the faculty explain their projects in more detail. Students should attend *all* the presentations in order to make

¹⁷ Meeting the seminar requirement can be challenging for non-thesis DSMS students. If meeting the requirement conflicts with a desired elective, please raise the issue with Prof. Beck to petition for a partial waiver of the seminar requirement.

informed choices about this important decision. Students then submit their top three choices of project to the GPA (Barry Wall). Advisor assignment will be announced at the end of autumn quarter.

If you have questions about the selection process, please feel free to ask the Graduate Program Coordinator, the ChemE Chair, or any ChemE professor.

Student Guidance and Evaluation

Prof. David Beck and the Graduate Program Coordinator (GPC), Prof. Cole DeForest are the student's primary advisors. Once the student begins the project, the project advisor also plays a major role.

C. Graduation and Future Plans

1. Graduation Procedures

You must apply for graduation by the ninth week of the quarter in which you plan to graduate. Late requests are not accepted. Refer to the [Graduation Requirements for dates and deadlines](#).

You apply online: <https://grad.uw.edu/for-students-and-post-docs/mygrad-program/>

Once you've applied, the Graduate School will evaluate your transcript to see whether or not it satisfies the Graduate School's minimum requirements.

NOTE: You must maintain registration through the end of the quarter in which the degree is conferred.

When you are close to graduating, we will help advise you about when you should start looking for either work or further academic studies, and on how you should communicate with companies and universities. MS students interested in further study should apply to a variety of PhD programs, including UW, but your application will be judged against all our PhD applications. You should only apply once your successful completion of the UW program is imminent and your project/thesis advisor has ample data and information to write an appropriate letter of recommendation. Competition for funded PhD positions at reputable U.S. universities is fierce. A cumulative UW graduate GPA greater than 3.6, a first authored journal publication, and a strong letter of recommendation from your thesis advisor will make you competitive at UW and other top 30 departments (though there are never any guarantees). However, strong research performance and strong recommendation letters can balance a lower GPA.

2. On-campus Career Resources

The [career center](#), located in Mary Gates Hall, provides many services for students including: counseling, workshops on a wide variety of topics (including job searching for international students), job and internship listings, mock interviews and more. After you register your UW net ID and email, you can use this to log onto [Husky Jobs](#) to look at on and off-campus job and internship openings.

D. Tuition and Fees

Tuition information can be accessed through the [Current Tuition and Fees Dashboard](#). You should enter the quarter/year of interest, select your degree level, residency and the Chemical Engineering graduate program. The Department does not support students in the M.S. in Chemical Engineering program. Students enrolled in this program are not eligible for tuition waivers, graduate assistantships, or fellowship funding. International students' annual budgeting recommendations are [here](#), and domestic students' annual budgeting recommendations are [here](#).

V. Appendices

Lab Safety Inspection Checklist

The Department uses the following checklist during periodic inspections to evaluate the safety of each lab. We include it here to make you aware of possible hazards in your lab.

I. RIGHT TO KNOW AND PERSONAL PROTECTION (Please check (√) answer)

1. Is a lab map showing the location of the safety book, spill kits and ventilation systems displayed in a conspicuous area?
 - a. Yes
 - b. No
2. Is a lab map showing the location of safety book, spill kits and ventilation systems displayed in a conspicuous area?
 - a. Yes
 - b. No
3. Is the “Emergency response guide” posted conspicuously?
 - a. Yes
 - b. No
4. Is the “Emergency telephone numbers” sheet posted conspicuously near the phone? a. Yes
b. No
5. Is the Safety Book location obvious and known by lab occupants?
 - a. Yes
 - b. No
6. Are SOPs available for each chemical?
 - a. Yes
 - b. No
7. Is the reading of SOPs documented?
 - a. Yes
 - b. No
8. Is there a system for SOPs update?
 - a. Yes
 - b. No
9. Are spill kits easily accessible and properly stocked?
 - a. Yes
 - b. No
10. Is personal protection equipment (lab coats, gloves, goggles, aprons, UV glasses and shields, face shields, laser glasses, earmuffs, respirators) available and stored in a designated area?
 - a. Yes
 - b. No
11. Have the personnel been trained in the proper use of the safety equipment (e.g. respirators)? a. Yes
b. No
12. Are appropriate signs posted (e.g. laser, hot surface, wear goggles...)?
 - a. Yes
 - b. No
13. Do the personnel know the location of fire extinguishers? Are they charged?

- a. Yes
- b. No
- 14. Do the personnel know the location of safety showers and eyewashes? Is this equipment operational?
 - a. Yes
 - b. No
- 15. Are the personnel aware of “sharps” regulations?
 - a. Yes
 - b. No
- 16. Are the personnel aware of “hazardous waste regulations”?
 - a. Yes
 - b. No

II. CHEMICAL INVENTORY AND STORAGE

- 17. Do the personnel have access to LSS?
 - a. Yes
 - b. No
- 18. Do the personnel know how to use LSS?
 - a. Yes
 - b. No
- 19. Are new chemicals entered on LSS as they are delivered?
 - a. Yes
 - b. No
- 20. Is there a system for LSS updates?
 - a. Yes
 - b. No
- 21. Are chemicals stored on shelves with lipped edges?
 - a. Yes
 - b. No
- 22. Are all chemicals labeled?
 - a. Yes
 - b. No
- 23. Are chemicals labeled with the proper inventory adhesive dot?
 - a. Yes
 - b. No
- 24. Are chemicals dated?
 - a. Yes
 - b. No
- 25. Are chemicals properly stored?
 - a. Yes
 - b. No
- 26. Are acids and bases segregated?
 - a. Yes
 - b. No
- 27. Are reactive chemicals stored under appropriate conditions?

- a. Yes
- b. No
- 28. Are toxic or carcinogenic chemicals stored under appropriate conditions?
 - a. Yes
 - b. No
- 29. Are gas cylinders properly secured to prevent them from being knocked over?
 - a. Yes
 - b. No
- 30. Are specifically designed carts used for the transport of gas cylinders (e.g., liquid nitrogen)?
 - a. Yes
 - b. No
- 31. Are dangerous compressed gases stored and used with appropriate ventilation?
 - a. Yes
 - b. No
- 32. Are used chemicals or mixes properly disposed of?
 - a. Yes
 - b. No
- 33. Are waste chemical containers properly labeled with "Hazardous Waste" tag?
 - a. Yes
 - b. No

III. LABORATORY AND EQUIPMENT

- 34. Is food prepared, stored or consumed in the laboratory?
 - a. Yes
 - b. No
- 35. Are all microwave, refrigerators, freezers and cryogenic units labeled with "No Food or Drinks" tags?
 - a. Yes
 - b. No
- 36. Is the general laboratory set-up appropriate for an emergency evacuation?
 - a. Yes
 - b. No
- 37. Are the aisles blocked by equipment, boxes...?
 - a. Yes
 - b. No
- 38. Are freestanding shelves and cabinets secured to the walls?
 - a. Yes
 - b. No
- 39. Are fire escape hatches blocked?
 - a. Yes
 - b. No
- 40. Is general housekeeping satisfactory?
 - a. Yes
 - b. No
- 41. Are sharp objects lying around?
 - a. Yes

- b. No
- 42. Are sharps properly disposed of?
 - a. Yes
 - b. No
- 43. Are Bunsen burners supplied with gas using black vacuum tubing?
 - a. Yes
 - b. No
- 44. Are equipment electrical cords in good condition?
 - a. Yes
 - b. No
- 45. Are extension cords on the floor?
 - a. Yes
 - b. No
- 46. Are "High Voltage" signs posted where appropriate?
 - a. Yes
 - b. No
- 47. Are precautions taken with liquid streams to prevent short circuits?
 - a. Yes
 - b. No
- 48. Are heavy objects stored on lower shelves?
 - a. Yes
 - b. No
- 49. Are precautions taken to prevent accidents with equipment containing moving parts?
 - a. Yes
 - b. No
- 50. Are transmission belts and chains (e.g. on vacuum pumps) guarded and in good condition?
 - a. Yes
 - b. No
- 51. Are hood sashes kept below the "100 fpm face velocity with sash at this line" tag?
 - a. Yes
 - b. No
- 52. Is rarely used equipment stored permanently under the hoods?
 - a. Yes
 - b. No
- 53. Is equipment blocking the airflow to the hood exhaust?
 - a. Yes
 - b. No