

**DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
GRADUATE TEACHING ASSISTANT (GTA)
HANDBOOK**

GENERAL PROCEDURES AND POLICIES

The purpose of this handbook is to provide a reference on matters specific to students holding Graduate Teaching Assistantships (GTAs) in the Department of Chemistry and Biochemistry. By having accurate information about departmental policies, procedures, and resources each GTA will be able to contribute to the smooth, efficient, and effective delivery of the department's teaching mission.

The contents of this handbook will be modified as necessary to reflect changes in policies and procedures at the departmental, collegiate, campus, or system levels. Every effort will be made to communicate these changes in a timely way.

The Department maintains an extensive website for graduate students at <http://www.d.umn.edu/chem/graduates/>. You are encouraged to become familiar with this site. This handbook is available electronically at this website.



May 2019

**UNIVERSITY OF MINNESOTA DULUTH
SWENSON COLLEGE OF SCIENCE AND ENGINEERING**

EMERGENCY CONTACTS TELEPHONE POSTING

Laboratory/Service Area Information

Department: Chemistry & Biochemistry

Room: 126 HCAMS

Supervisor Name: Steven M. Berry (126A HCAMS)

Phone: 726-7087

Research Safety Officer: Randall Helander (215 HCAMS)

Phone: 726-7858

Research Safety Officer: Greg Mielke (SSB 241)

Phone: 726-8308

Campus-wide Emergency Coordinators

Work

Home

Andrew Kimball

726-6764

724-1405

Laura Lott

726-6917

Jean Cranston

726-7273

Alternate Contacts (Emergency Only):

Pager 1: (612) 680-1599

Pager 2: (612) 680-1545

Other Important Campus Emergency Numbers

Spill Response Team Andrew's Cell Phone: (763) 226-7011

Utility Problems – Facilities Mgmt. Dept. 726-8262

After Hours (4:30pm – Midnight) 726-8147

UMD Health Service 726-8155

Off-Site Emergency Numbers

Fire Department 911

Police Department 911

Minnesota State Duty Officer (800) 422-0798

National Response Center (800) 424-8802

Essentia Hospital Poison Control Center (800) 222-1222

St. Luke's Hospital Urgent Care Center (218) 249-6095

Location of Emergency Response Equipment

Fire Extinguishers: Located in ALL research labs and in the hall on ALL floors.

Fire Alarm: Pull Stations located in ALL hallways and near exit stairways of ALL floors.

Spill Control Equipment: 220 HCAMS

First Aid Kit: 220 HCAMS

SSB 141

This list MUST be posted near telephone in laboratories, shops and areas where hazardous waste is handled or stored.

This list will serve both OSHA and EPA/MPCA Emergency Telephone Posting Requirements

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I. WELCOME

The faculty and staff welcome you to the Department of Chemistry and Biochemistry. You have been admitted to graduate school on the basis of your academic record, chemistry background and letters of recommendation. We are committed to providing you with the coursework and research opportunities that will enable you to earn a master's degree in chemistry on which to base further education and a productive career. While you are here you will play an important part in our teaching and research mission.

As a Graduate Teaching Assistant (GTA), you will instruct in our undergraduate laboratories and discussions, grade and evaluate your students, and carry out other instruction-related duties. This is an opportunity for you to enhance your professional experiences and abilities. You will find teaching challenging, interesting, fun, and an excellent way to strengthen your chemistry and biochemistry knowledge, reinforce your laboratory techniques, and improve your communication and organizational skills.

Dr. Steven Berry, Department Head, is your supervisor and has the following responsibilities with respect to your GTA appointment: hiring, evaluation, reappointment, termination, and assignment of duties and workload. A 50% GTA appointment requires 20 hours of work per week for the department. These 20 hours are broken down into actual "contact" hours (i.e. hours you spend teaching in the laboratory or classroom), office hours, preparation time, grading, TA meetings, proctoring exams, grade book management, etc. If you have any questions about your GTA appointment, please see Dr. Berry.

When you are assigned to a course, the course instructor will be your immediate supervisor in terms of material to be taught, grading, TA meetings, lab revisions, etc.

The department has a number of policies and procedures that you need to know and follow. These were adopted to achieve effectiveness, efficiency, and excellence as we carry out our teaching and research mission. You are responsible for adhering to these policies and procedures during your appointment in the department.

II. INSTRUCTION

Graduate Teaching Assistants are an integral part of the departmental instructional staff, along with faculty and instructors. All University of Minnesota employees are required to know and abide by the UM Board of Regents Code of Conduct (http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf). The policy on Teaching and Learning (<http://d.umn.edu/academic-affairs/academic-policies/classroom-policies/instructor-and-student-responsibilities>) articulates your responsibilities for teaching and your students' responsibilities for learning. First and foremost, the department expects you to conduct yourselves professionally at all times when you work with students. As a member of the instructional staff, you are in an authority position with respect to your students because your judgment and evaluation of their work will directly affect their course grade. Therefore, you should not form personal relationships with your students that extend beyond your professional role as a teaching assistant. Secondly, the University of Minnesota has strict policies against sexual harassment and discriminatory actions based on race, ethnicity, sexual orientation, etc. Professional conduct requires that each of us acts and speaks in a manner that fosters critical thinking, learning, and equitable and respectful participation of all of your students. Actions and comments that are discriminatory or derogatory are not acceptable in our classrooms (https://regents.umn.edu/sites/regents.umn.edu/files/policies/Sexual_Harassment_Sexual_Assault_Stalking_Relationship_Violence.pdf).

UMD is on the semester system, with 15 weeks of instruction followed by a week of final exams. The academic calendar is available on the UMD web site (<http://www.d.umn.edu>) under *Events & Calendars: Campus Calendars: Academic*.

Absence from Class

Teaching assistants are responsible for meeting their assigned classes. Occasionally there are circumstances that might prevent this. Some are known in advance (e.g. attendance at a professional meeting, visits to other campuses) and others are unexpected (e.g. illness, family emergency). When you know **in advance** that you will miss class, you should make appropriate arrangements for someone to cover your classes and inform the course instructor. GTAs can usually switch with another GTA in these situations. If your absence is **unexpected**, please immediately call **AND** email Neil Weberg (726-8600, nweberg@d.umn.edu), Dawna Carlberg (726-7979, dcarlber@d.umn.edu), or the main department line (726-7212) and your instructor so that arrangements can be made to cover your class.

Appointment

The 50% GTA is a nine-month appointment from late August through late May (actual appointment dates will vary slightly; please refer to your GTA offer letter for your appointment dates). You are expected to meet all of your instructional obligations during this period, including final exam week and the semester break. During final exam week and the semester break, you will be completing your grading obligations, proctoring final exams, summarizing and submitting your grades according to the course instructor's instructions, turning in textbooks you will not need during the following semester,

checking out textbooks for the next semester's assignments, and contacting the instructor for the next semester to see what he/she wants you to do prior to the beginning of the next semester (Graduate Assistant Employment Policy [<https://policy.umn.edu/hr/gradstudentemployment-policycontactlink>], Graduate Assistant Work Rules [<https://policy.umn.edu/hr/gradstudentemployment-appg>], Graduate Assistant Health Plan [<https://shb.umn.edu/health-plans/gahp-home>], Leaves of Absence [https://policy.umn.edu/sites/policy.umn.edu/files/appendix/gradstudentemployment_appf.pdf]).

Academic Integrity

All UMD students are expected to adhere to the UM Board of Regents Policy on Academic Integrity which strictly forbids cheating, plagiarizing, turning in work done by others, etc. If you suspect cheating during an exam or quiz, or have evidence of plagiarism, notify the course instructor (<http://www.d.umn.edu/academic-affairs/academic-policies/classroom-policies/student-academic-integrity>).

Class Lists

You, the course instructor, or departmental staff will generate your class list via the "My Teaching" tab on your personal "My U" (<https://www.myu.umn.edu>) account. Do not check anyone into lab until they are officially registered (i.e. on the class list). If a student wants to register for your lab, s/he must first meet with the course instructor to get an override number. After s/he registers, you may check the student into lab.

Classroom Environment

Teaching assistants are responsible for creating a classroom environment that fosters learning, thinking, and equitable participation by all students. Efforts to promote non-discriminatory behavior, language, materials and discussion are encouraged and supported (http://www.d.umn.edu/sites/champ.d.umn.edu/files/classroomdisruption1_000.pdf).

Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) is a federal law that is intended to protect the rights of students and to ensure the privacy and accuracy of educational records. As a Graduate Teaching Assistant, you may have access to certain student educational records (grades, student IDs, disability status, etc.); which must be kept confidential. Do not put graded papers and lab reports in public places for students to pick up. Work should be handed back in lab or discussion and not left unattended. Please consult <https://onestop.d.umn.edu/terms-and-conditions/student-records-privacy> for additional information on FERPA requirements.

Grading

Each TA is responsible for grading lab reports, homework, quizzes, and exams in a manner that is consistent, equitable, and clear. In addition, work should be graded and

returned in a timely manner so students are aware of their course progress, but unable to learn the grades of other students.

Laboratory

This section includes information about laboratory policies, procedures, and practices. You are responsible for reading and implementing these practices.

Policies and Procedures

The policy of the University and the department prohibits food and drink in all laboratories. Microwave ovens in labs are for lab materials only. In addition, you may not use the waste containers in the labs for disposing of food/drink containers. Your students must dispose of these items outside of the lab before they enter the lab (see Appendices).

Checking into Lab

Teaching assistants are responsible for checking students into lab. In the larger classes (general, organic, and quantitative analysis), several students will be dropping or adding courses or changing lab sections during the first two weeks of class. To avoid having to check students in to and out of one laboratory drawer and then into another, teaching assistants should not check any student into lab unless they are actually registered (i.e., on the class list). Students who are trying to get into your lab section must register first and then check into lab. Contact the stockroom first if there are any issues or concerns.

Making up a Laboratory

A lab experiment may be made up the week the experiment is missed or the week following the missed experiment. Policies on making up labs are course instructor and/or course/lab dependent so rules of make-up labs should be specifically discussed the first week. The student must see the course instructor to schedule a make-up time. This must be done at least 24 hours prior to the scheduled make-up lab. This needs to be communicated to the students. Please see Lab Makeup Policy in Appendices.

Checking out of Lab

Students must check out with their TA and return the drawer key to the stockroom during the last week of the semester. Failure to check out by the end of final exam week will result in fees to the student of \$20.00 per lock to change the locks, \$35.00 to check him/her out of the lab drawer, plus any stockroom charges incurred during the semester. See the Chemistry and Biochemistry Department Policy for Stockroom Charges in Appendices.

Borrowing Equipment

Students must have a picture ID (UCard, driver's license, etc.) to check out anything from the stockroom. If any items are missing or damaged in any way, the student will be held accountable and charges will be deducted from his/her UCard or billed to the student's account.

Needs of Students with Disabilities

UMD is a handicapped-accessible campus that encourages students with physical disabilities to enroll in our programs. Disability Services provides services for these

students and information for faculty and staff. Disability Services has published a booklet entitled *Access for Students with Disabilities*. You are responsible for the contents of the UM Board of Regents Policy on Disability Services (<https://regents.umn.edu/sites/regents.umn.edu/files/policies/DisabilityServices.pdf>).

Office Hours

Teaching assistants with 50% time GTA appointments are required to maintain two office hours each week during regular work hours (8-4:30) in SSB 121. For safety and security reasons, you are not to hold your office hours in your research lab or in the GTA offices. You may hold office hours in the appropriate instructional lab, pending instructor AND stockroom approval. Your office hours should be communicated to your students and to the office staff so they can post them. It is very important that you keep your office hours.

SSB 121 is an office hour/study room for graduate students. There are a number of textbooks on the shelves for student use. These are books that faculty no longer require so you and your students are welcome to take or borrow them as needed.

Excused Absences

Students are expected to attend all scheduled classes (labs, discussions, and lectures). There are two policies that govern the circumstances under which student absences are excused and, therefore, students must be allowed to make up the work. These circumstances are presented in <http://www.d.umn.edu/academic-affairs/academic-policies/classroom-policies/excused-absences> and <https://policy.umn.edu/hr/religiousholidays>. The former includes subpoenas, jury duty, military duty, religious holidays, illness, bereavement for immediate family, and participating in NCAA varsity athletics. The second provides additional information about excused absences for religious holidays.

Student Complaints

Students are instructed to express their concerns about the lab instructions, content, safety, and other issues to the GTA in charge of the lab. If the issue is not resolved, the student should bring the matter to the attention of the course instructor. Issues that are not settled should be discussed with the department head.

Student Opinion Survey

Towards the end of the semester, your students will be asked to evaluate your performance using a standard survey form from ITSS. When the results are available, the department head may meet with you individually and discuss them. In addition, the department head will ask course instructors for their evaluation of your performance. These evaluations provide helpful feedback to you and are used to inform future employment decisions. They become part of your Graduate file.

Teaching Assignment

Toward the end of the fall semester, you will be asked to provide your class schedule for the following semester and any other requests you want us to consider as we determine the spring teaching assignments.

Textbooks

Teaching assistants are issued departmental copies of the required textbooks and related materials for the course(s) to which they are assigned. You are responsible for turning these materials in to 126 HCAMS (Departmental Office) at the end of each course taught.

Tutoring

The Tutoring Center (KAML 225: Learning Commons, second floor) provides free tutoring services to students in general and organic chemistry. The tutors have completed the courses for which they tutor and have a specified minimum GPA. The tutors are trained and are available several hours each week. The Tutoring Center publishes a semester tutoring schedule.

III. DEPARTMENTAL STAFF

Departmental staff members are hardworking, knowledgeable, and highly valued members of the department. Please submit all requests in writing for work, chemicals, equipment and purchases to the appropriate individual. Include the budget number to be charged for purchases (see your research advisor or supervisor).

Clerical Support is provided by Dawna Carlberg (Executive Secretary), Jen Bucsko (Principal Office & Administrative Specialist), and Carrie Misuraco (Principal Office & Administrative Specialists), 126 HCAMS.

Dawna: Office manager and supervisor, faculty and staff searches, payroll and appointment documents, visas for international faculty and staff, curriculum, class scheduling, teaching assignments

Jen: Graduate program coordinator, textbooks and lab packets, keys for HCAMS, Chem & SSB buildings, instructional support, supply orders, new graduate student orientation, Student/Staff Mid-semester Orientation & Training Program, Summer Undergraduate Research Program, Spring Undergraduate Research Symposium and Senior Banquet

Carrie: Receptionist, keys for HCAMS, Chem & SSB buildings, supply orders, Seminar Program, Honors Program, Awards Program

Laboratory and Instrumentation Support is provided by Greg Mielke (Laboratory Services Coordinator), SSB 241, Neil Weberg (Senior Laboratory Services Coordinator), SSB 241, and Randall Helander (Senior Laboratory Services Coordinator), 215 HCAMS.

- Greg: Preparation of chemicals for instructional labs, hazardous waste disposal from instructional labs, chemical inventory, support lab demonstrations, lab development and lab safety
- Neil: Stockroom services in Swenson Science Building, computer/equipment repair, maintenance and inventory
- Randall: HCAMS Building stockroom and prep room, safety officer, hazardous waste liaison, operation, training and maintenance of GC, GC/MS and NMR systems, maintenance and repair issues for HCAMS Building instructional lab equipment and spectrometers, HCAMS Building liaison with Facilities Management for repairs and maintenance issues and requests
- Patty: Purchasing, accounting and grant support, budget manager, travel and expense reimbursements

If you are instructed to order supplies or chemicals for any of the research labs you will fill out the ordering form. Each form must be completed in full and must have a chart string that can be provided to you by the instructor, advisor, or principle investigator (PI), must contain a detailed description of what the item will be used for, and must be signed by the PI. Turn the completed form into the Chemistry Accountant, Patty Sutliff-Opoien, in 110 HCAMS.

IV. DEPARTMENTAL RESOURCES

As employees of the University, you have a responsibility to use departmental resources conservatively and efficiently. In addition, all employees should treat their office and laboratory spaces with respect and care.

Email

Email is the official form of communication at UMD and you must check your email regularly (at least daily). All departmental and University announcements and requests for information are communicated via email. You may use the Graduate Student Computer Lab (SSB 240) or any of the terminals in the campus labs set up for basic computer access (e.g. email and internet access).

Graduate Student Computer Lab

The department maintains a Graduate Student Computer Lab in SSB 240 with eight computers and two networked laser printers. Only chemistry and biology graduate students are allowed to use these computers for activities related to coursework, chemistry Plan B papers and research. These computers are not for personal use.

Only authorized software will be installed onto these computers. Unauthorized software will be deleted. If you want to have software purchased and installed on these computers, your research advisor should make a request to the department head.

Graduate Student Offices

There are 7 graduate student offices: SSB 184, SSB 284, SSB 231, 119 HCAMS, 203 HCAMS, 303 HCAMS, and 313 HCAMS. These offices are provided with tables or locking desks, chair and a locking file cabinet. Each of you is responsible for keeping these offices clean. Do not hold office hours in the graduate student offices.

Ice/Dry Ice

Ice is available in 105 HCAMS and SSB 133A, 226, and 242. There is a dry ice machine in 105 HCAMS. Your research advisor has the key and can show you how to use the machine. Randall Helander can also provide assistance in making dry ice blocks in the HCAMS Building.

Mail

Each graduate teaching assistant is assigned a mailbox located on the third floor of the HCAMS Building. You should announce to your students that they can turn in work to your mailbox. The faculty and staff also place materials in your mailbox, including mail, telephone messages and University communications. You should check your mailbox regularly (at least daily).

Office Supplies

The department will provide the supplies you need for teaching your courses. Since these are locked up in the departmental workroom (104 HCAMS), you need to ask one of the office staff for office supplies.

Photocopying

Graduate students have access to the photocopier in 104 HCAMS. This is for professional use only. Personal copying can be done in the Library or Kirby Student Center.

Copyright laws must be strictly followed (e.g. photocopying textbooks is a violation of the copyright law).

The department cannot afford to allow TAs to distribute worksheets in discussion or in lab. While it is clear that students like these handouts, in General Chemistry I alone over 600 sheets of paper would be used each week. You are encouraged to use email attachments.

You are responsible for paying for copies of your thesis.

Stockrooms

There are two stockrooms in the department: 220 HCAMS services labs in the Heikkila Chemistry and Materials Science Building and SSB 137 services labs in the Swenson

Science Building. They are to be accessed by stockroom personnel ONLY. Ask for assistance from worker on duty, Neil, or Randall.

Telephone

You may give the departmental phone number (218-726-7212) as your work number. The office staff will place phone messages in your mailbox.

V. SAFETY, SECURITY, AND INCIDENTS

Safety is a priority in the Department of Chemistry and Biochemistry. We have a special responsibility in this area because of the chemicals housed in our buildings. You are responsible for maintaining a safe environment in your labs by making your students wear safety goggles, clean up spills, dispose of waste properly, cover reagent containers, and keep the lab clear of waste paper and other materials. Developing good safety practices is an essential part of your education as a chemist and biochemist.

Neil Weberg has prepared a TA checklist to help you make sure the labs are clean and orderly during and after lab. He and his staff monitor lab cleanliness and will follow up with the responsible TA about labs that fall below safe standards. If you or your students open a window in the lab, you must make sure that it is closed and locked before leaving the lab. Finally, you must lock the lab and turn the fan speed down at the end of the lab period.

You need to attend immediately to all **emergency situations** that occur in your laboratory.

Levels of Incidents

The Department (through the stockrooms) will be notified of all incidents.

I – Small cut or scrape: Student can take care of it themselves with provided first aid materials from the stockroom. No help needed; no report required.

II – Larger cut, scrape, or burn; small splash to face or eyes; feeling ill: Stabilize student and notify stockroom ASAP. Lab partner will escort student to Health Services for further care/treatment. Incident Report (from Greg or Randall) required. Experiment can be made up later that week, the following week, or data can be shared as per the instructor.

III – Major cut, scrape, burn; splash in eyes; fainting (any at all!): Stabilize student and notify stockroom ASAP. Stockroom will call 911. Incident Report (from Greg or Randall) required. Experiment can be made up later that week, the following week, or data can be shared as per the instructor.

If the incident requires that the TA or stockroom provide any aid, the student must be seen by a medical professional, i.e. Health Services or 911, and an incident report is required.

The TA will notify the appropriate instructor after the initial steps are taken so all will have knowledge of the incident.

Please lock your research labs and offices when no one is in them. We have had thefts in the buildings, including personal items like purses, as well as equipment and chemicals. We need to be particularly careful not to allow chemicals and solvents to be accessible to unauthorized individuals.

Eye Protection and Proper Laboratory Attire

The Department of Chemistry and Biochemistry designates areas and activities that require eye protection. Laboratory work in all laboratory courses requires eye protection. Where risk of a chemical splash exists, coverall goggles may be necessary. Additional personal protection is afforded by face shields. Please refer to the Department of Chemistry and Biochemistry Policy on Eye Protection in Appendices for detailed requirements.

You are responsible for ensuring that students working in the laboratory wear proper attire (no sandals, shorts, or above-the-knee skirts). A copy of the August 1, 2015 memo from the Department Head regarding laboratory attire describes this safety policy in the Appendices.

Make sure that you and your students wear goggles when required.

Hazardous Waste Disposal

Please refer to the departmental policy on Hazardous Waste Control in the Appendices.

The department must comply with all federal, state and university requirements for proper handling and disposal of hazardous waste. As a TA you are responsible for making sure all instructional waste is placed in the proper container. You need to explain to your students - clearly and firmly - the procedures for disposing of waste for each experiment (use blackboard or whiteboard). When you need additional waste containers or when waste containers are ready for removal from the lab, please notify one of the Lab Services Coordinators. Research labs are subject to the same hazardous waste handling and disposal requirements.

If you have questions related to the proper handling of waste you can also contact one of the Lab Services Coordinators.

Keys

You will be issued keys, prox card, or Ucard accesses to the HCAMS and Swenson Science Buildings, instructional labs, 104 HCAMS (copier/workroom), graduate student office and computer lab, and your research lab as needed. You must turn in all keys/prox cards issued to you at the end of your appointment. Lending your keys is strictly prohibited. If you lose a key, report it to the department office immediately, and file a Missing Key Report with the Campus Police. We cannot order replacement keys for you until this official report has been filed. A lost key may result in re-keying the entire building, a very expensive project.

For security reasons, the buildings are locked from 6:00 p.m. to 6:00 a.m. on weekdays and all day on weekends and holidays. When you work early, late or on weekends, do not prop the building doors open. Do not let unauthorized individuals into the building. Anyone authorized to be in the building after hours should have his or her own key. If you invite guests into the building, they are under your responsibility and should leave when you leave. Your key privileges will be revoked if you are found violating any of these policies (Please see Department of Chemistry and Biochemistry Key Policy in Appendices).

Safety Training

All student and non-student employees must complete required safety training in order to work in an environment involving chemicals. There are three requirements that everyone must complete:

1. Familiarize yourself with the Department of Chemistry's Laboratory Safety Plan.
2. Complete five online safety tutorials for Environmental Health and Safety compliance requirements.
3. Complete the Department Canvas Safety Training Complete information and instructions for fulfilling these requirements are outlined at <http://www.d.umn.edu/chem/research/safety.html>.

You cannot gain access or work in a laboratory until these requirements are completed.

APPENDICES

Laboratory Policies and Procedures for Teaching Assistants

Greg Mielke

1. *Eye Safety:* TA must wear proper personal protective equipment (PPE) and be sure to enforce students wearing their goggles during labs. READ POSTED SIGNS IN THE LAB.
2. *Safety Equipment:* TA must be aware of proper safety equipment including eyewash stations and use of sodium bicarbonate (in main prep hood) for acid spills, etc.
3. *Maintain Integrity of Chemicals:* All reagent bottles for the teaching labs performed must be tightened when the lab section is over.
4. *Maintain Integrity of Chemicals:* Dry chemicals that have been used for the lab should be brought back to the bin on the flammable cabinet and lids are to be tightened.
5. *Protect Waste:* All waste bottles in the prep hoods in each lab must be tightened once lab is over.
6. *Practice Conservation:* Be sure students take only what they need in terms of reagents, either liquid or solid.
7. *Be Informed:* Check your e-mail periodically for lab updates, unknowns, and comments to help the lab run smoothly along with checking your mailbox for hard copies of unknown keys.
8. *Practice Cleanliness:* Reagents and other items used such as pipettes and weigh paper must be left in neat appearance and the top of the flammable cabinet must remain clean.
9. *Practice Cleanliness:* All student hoods and prep hoods must be clean at the end of your lab period. You can make sure your students help on this even to the point of taking off points for the lab write-ups if the instructor agrees to it.
10. *Practice Energy Conservation:* In the Swenson Science Building (SSB) labs, save energy by turning room fans to MAX FLOW when lab starts and MIN FLOW when your lab is over, especially if you are a TA for Organic Chemistry.

For Research Students

If you are a member of a research group, your Research Advisor or Principal Investigator (PI) is responsible to make sure you have the proper training for waste disposal and specific laboratory safety precautions and training to safely carry out your research projects.

The proper disposal of hazardous waste is the responsibility for every member of the research lab. The training and proper disposal of waste can be viewed from the UMD page as follows:

<http://d.umn.edu/environmental-health-safety-office/training>

Andy Kimball is the Senior Environmental Health and Safety Technician, kimba013@umn.edu, ext 6764 if you have any questions.

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

LAB MAKE-UP POLICY (08/24/11)

A lab experiment may be made up the week the experiment is missed or the week following the missed experiment. **Policies on making up labs are instructor dependent so rules of make-up labs should be specifically discussed with the instructor the first week.**

The student *must* see the course instructor, not the TA, to schedule a make-up time. This must be done **at least twenty-four hours prior to the scheduled make-up lab.**

Instructors' Procedure:

- 1. Student must make up the lab experiment in the lab room containing his/her drawer if the student will need his/her own glassware to do the experiment. Otherwise, arrangements must be made with the stockroom to provide the necessary equipment.**
- 2. If lab is made up during week experiment is scheduled:**

- a. If there are less than eighteen students working in the lab, student may work as a group of three, using glassware in temporary partners' drawers or alone if there is an empty hood.

Instructor will email student's TA and the make-up TA, informing them of the scheduled make-up at least twenty-four hours before lab.

- b. If there are eighteen students in lab (full lab), student must work in reagent hood (closest to the door). Student must transfer glassware from his/her drawer to reagent hood.

Instructor will email Greg, Neil, Randall, and TAs twenty-four hours before lab as appropriate.

- 3. If lab made up the week following the scheduled experiment:**

Student must work in the reagent hood transporting glassware from his/her drawer to the Reagent hood.

Make-up TA will provide reagents for the experiment, contacting Greg if necessary.

* Instructor will email Greg, Neil, Randall and TAs twenty-four hours before lab as appropriate.

There may also be a make-up lab experiment scheduled for Monday, Tuesday, and/or Wednesday morning of Thanksgiving week for fall semester and one of the last weeks for spring semester.

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

POLICY ON STOCKROOM CHARGES (08/24/11)

Any and all charges *must* be paid at the time they are incurred. If adequate funds are not available on a 'UCard' or 'CampusCash' card, participation in laboratory will be suspended until the debt is settled. Common charges are as follows:

\$11.00	Goggle purchase - <i>Only approved goggles may be used</i>
\$1.00	Goggle rental (when purchased goggles are forgotten)*
\$1.00	Drawer unlock and lock-up (when lab key(s) are forgotten)
\$1.00	Booties
Market price	Glassware, equipment, computer, instrument damage...
\$20.00/key	Failure to return key(s)
\$5.00/key	Broken/unusable key(s)
\$35.00/drawer	Failure to check out completely by deadline

*Goggle rental is free for the first week of lab (not counting check-in)

It is suggested that, students enrolled in a chemistry laboratory course at UMD should start with a minimum of \$25.00 on their UCards to cover goggle purchase and laboratory expenses. If the UCard does not have sufficient funds for a necessary expenditure, the student must leave the laboratory and add sufficient funds to cover any cost incurred at the stockroom. **NO CREDIT WILL BE GIVEN BY THE STOCKROOM.**

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

POLICY ON EYE PROTECTION

BASIC PREMISE

The Chemistry Department shall designate areas and activities which require eye protection. The Department shall inform staff, students, and visitors of these requirements and ensure compliance.

Laboratory work often requires eye protection. Where risk of a chemical splash exists, coverall goggles may be necessary. Additional personal protection is afforded by face shields.

AREAS AND APPROPRIATE RULES

A. Research Laboratories

The principal investigator for each research laboratory shall determine the necessary eye protection for each activity expected to occur in his/her research laboratory. Note that when a hazardous operation is being carried out in the laboratory the eye safety of all personnel in the laboratory must be considered, not just the person carrying out the experimental operation.

Rules governing eye protection specific to this laboratory must be determined by the principal investigator and displayed on the door of the laboratory.

B. Instructional Laboratories

1. Students (individually or group) involved in carrying out that experiment must wear goggles while the risk of a chemical splash exists.
 - a) Other students in the laboratory must also wear goggles if they are exposed to the hazard unless the hazardous work is isolable. The work may be isolated by:
 - i) a physical barrier such as a row of tables, e.g., in the design of the new general and organic chemistry laboratories for the Swenson Science building, students could work without eye protection at the front row of tables even though other students continued hazardous work in the hoods.
 - ii) physical or virtual isolation such as specifying that experiments involving possible chemical splashes must be carried out on one wall of the laboratory. Care must be taken to ensure that such instructions are observed by the students.
 - b) Note that this does mean that the laboratory supervisor (TA) must wear eye protection when observing in or passing through areas in which eye protection is required for the students.
2. All students must be aware of and take proper precautions to avoid hazardous areas even though not actually carrying out the experiment labeled as hazardous.

August 1, 2015

TO: Graduate and Undergraduate Teaching Assistants
Faculty
Laboratory Support Staff

FROM: Elizabeth Austin-Minor

RE: Laboratory Safety

The University of Minnesota prohibits the wearing of sandals, above the knee shorts, and skirts in its laboratories. This department will consistently implement this policy, adopted January 9, 2009, by:

- Including this policy in all laboratory course syllabi (faculty);
- Announcing this policy in class (faculty) and lab (teaching assistants);
- Prohibiting students from working in the laboratory if they are wearing the items mentioned above;
- Providing opportunities for students to purchase long lab coats, thus covering bare legs; note that students wearing lab coats may not wear sandals; and
- Making sure that all of us adhere to this policy.

Each of us is responsible for maintaining a safe laboratory environment and teaching safe lab practices.

Thank you for your efforts toward these goals.

UMD DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

INSTRUCTIONAL LABORATORY

HAZARDOUS WASTE CONTROL

As a student in a chemistry laboratory, you will be generating some type of waste every time you perform an experiment. Because you are generating waste, you are responsible for the proper identification, handling and disposal of the waste. The following information will help you dispose of this experimental waste properly.

Waste is defined as either **hazardous** or **non-hazardous**.

Non-hazardous wastes do not cause harm to the environment and may be disposed of by using normal disposal methods (i.e., flushed down the drain or placed in the trash). Some non-hazardous waste includes **clean** filter paper, weighing paper, towels, etc. These wastes can be disposed of in the trash. A small number of inorganic compounds are non-hazardous and can be disposed of safely as trash or by flushing down the drain. These include some sodium, potassium, magnesium and calcium salts (i.e., NaCl, etc.)

However, **most** inorganic compounds are considered hazardous and must be collected and handled as **hazardous waste**. The majority of organic compounds are also considered hazardous and must also be collected as hazardous waste.

Government regulations state that the contents of hazardous waste containers must be known as accurately as possible to ensure the proper disposal. Placing wastes in the proper container will allow accurate waste determination and also avoid improper waste mixing. Improper waste mixing can cause serious hazards such as **explosions** or **poisonous gas**.

The laboratory teaching assistant will provide instructions on disposing of the experiment's hazardous waste. Usually, experiments will give instructions on the proper handling and disposal of the waste produced.

All labs will be equipped with **hazardous waste containers** labeled with the course number, experiment number and the chemical names listed on the bright yellow University Hazardous Waste Label. The proper waste container can be found by matching the experiment number with that listed on the container. If you can't locate a waste bottle, ask the teaching assistant or stockroom personnel and they will provide the appropriate container.

Do not place wastes in the wrong containers. If this occurs, inform the teaching assistant so that the waste label can be corrected. Do not place solids and liquids in the same container. Never place wastes in **unmarked** containers.

Following these procedures will ensure the proper disposal of laboratory waste in an environmentally safe manner.

Laboratory Safety Training

*Department of Chemistry and Biochemistry
University of Minnesota Duluth*

All departmental employees and volunteers must complete the following safety requirements:

I. Familiarize yourself with the Department of Chemistry's *Laboratory Safety Plan:**

1. You will be sent an invitation to join the UMD Department of Chemistry and Biochemistry Canvas Safety Training Site <https://canvas.umn.edu/>.
2. Click on the box and begin the training. There are quizzes along the way. You will not be able to continue if you do not pass the quiz.
3. Review the information at <https://scse.d.umn.edu/about/departments-and-programs/chemistry-biochemistry-department/lab-safety>. There is no test on this but **Environmental Health and Safety** requires that all students working in a laboratory know about the documents located on this page and how to access it.

**This is a lengthy document and contains a large amount of safety related information. It is there for you to access at any time for your lab safety requirements. Please familiarize yourself with this document and review portions related to your needs.*

II. The second requirement is that you complete the tutorials listed below in order to meet Environmental Health and Safety (EHS) requirements. These tutorials are completed by navigating to the EHS website at www.d.umn.edu/ehso/. Click on the **Training** tab, and then click on the **All Lab Staff** tab. You must complete the following trainings:

DEHS Introduction to Research Safety
DEHS Fire Extinguishers
DEHS Chemical Safety
Hazard Communication/MERKTA
DEHS Chemical Waste Management
Emergency Preparedness

Please contact the Chemistry and Biochemistry department office at 218-726-7212 with any access-related issues

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

KEY POLICY (8/25/10)

Faculty (Chem and Biochem)

Prox card for NMR (Chem 108), Swenson Building, including SSB research wing 24/7
Ucard access for Heikkila Chemistry & Material Science Building (HCAMS) 24/7
Master keys for HCAMS and Swenson Buildings

Executive Secretary, Principal Office and Administrative Specialists, Accountant, Lab Services Coordinators (Chem and Biochem)

Corridor Key for Chem Building
Prox card for Chemistry and Swenson Buildings, including SSB research wing 24/7
Ucard access or Heikkila Chemistry & Material Science Building (HCAMS) 24/7
Master keys for HCAMS, Chemistry and Swenson Science Building
Chem 104 – Prox & keys (as needed)

Stockroom

Submaster keys for HCAMS and Swenson Buildings
Key to stockroom, glass storage room

Graduate Students (Chem and Biochem)

Prox card for NMR (Chem 108), Swenson Building (SSB research wing 24/7)
Ucard access for Heikkila Chemistry & Material Science Building (HCAMS) 24/7
Submaster for Swenson Science Building
Ucard access/key to grad student office
Ucard access/key(s) to their research lab(s)

Undergraduate Students (UGRA, Chem 3194, or Volunteers in Chem and Biochem)

A prox card for the SSB research wing or Ucard access to HCAMS will be issued to undergraduate students with access hours of 6:00am-6:00pm. Monday-Friday, at the request of Chemistry and Biochemistry faculty who have research labs in SSB & HCAMS. Undergraduate students must be supervised in the laboratory.

SLAs – Prox/Ucard access is issued upon request from appropriate staff member for times relevant to assigned tasks.

Other Civil Service Personnel, Visiting Scholars, and Post-Doctoral Associates in Chemistry

Corridor Key for Chem Building
Prox card/Ucard for HCAMS and/or Swenson Buildings (24/7)
Office key
Research lab they are working in
Dry ice and ice machines (105 HCAMS)
Copier (104 HCAMS)
Other keys as needed

Other

The key to 105 HCAMS (dry ice machine) is issued to research lab groups.

- Upon termination of employment or study, all keys/prox must be returned to the Chemistry and Biochemistry Department Office.
- The Chemistry and Biochemistry Department will maintain a record of keys issued and returned.
- Because of special problems associated with security of chemicals and equipment, laboratories should be locked when not occupied. When you leave after normal working hours, please make sure that all doors, including the outside doors, are locked and shut.
- Outside doors should NOT be propped open.
- When the first floor fire doors at the east end of the Chemistry building (towards Darland) are closed, please use the metal door on the side of the hallway.
- The entrance/exit to Chemistry from the Medical School on the first floor is not a general-purpose passageway and should be used for emergencies only.
- All employees have mailbox keys.
- The Chemistry and Biochemistry Department shall have positive approval for all other keys issued for rooms.
- Geology Faculty and Grad Students – Keys/Prox access to the Chemistry and Biochemistry Department, as needed, for teaching.
- NRRI – Keys/Prox, as needed, to access equipment in the Chemistry and Biochemistry Department.
- Chem 129 keys are issued only to NRRI personnel (1 - Department Head and 1 - office staff).