

Handbook for NSCL Graduate Students

(December 2014)

This handbook is intended to serve graduate students as a guide to NSCL and it contains information that might be relevant during their time at NSCL. It covers topics that are specifically relevant to their research activities at NSCL and provides supplemental information to the handbooks of the respective academic departments and colleges. It is a work in progress. Suggestions for improvements and corrections are always welcome (email the Interim Associate Director for Education, Remco Zegers: zegers@nscl.msu.edu).

Contact information for each of the positions mentioned in this handbook can be found on the Graduate Student Wiki at <https://wikihost.nsl.msu.edu/gradwiki/doku.php?id=people:people>. This covers both faculty and student positions.

1 Introductory information for first year students

1.1 Meet with Administrative Assistant to the Associate Director for Education and HR Personnel Coordinator.

In addition to completing the administrative paperwork in the academic department (Physics, Chemistry, Engineering, etc.), a new graduate student should meet with the Administrative Assistant to the Associate Director for Education (Jennifer Carducci) and a HR Personnel Coordinator on his/her first day. They provide the graduate students with a checklist of administrative tasks that must be completed. In addition, they provide a brief administrative tour (places you need to know on the office side). An office, computer, and computer account should be available on the first day based on the “New Employee Advisory” form. If this is not the case, this form should be completed immediately by either the Administrative Assistant to the Associate Director for Education, the HR Personnel Coordinator, the supervisor or the AD for education.

1.2 Meet with the Associate Director for Education

A new graduate student should meet with the Associate Director for Education (ADE) soon after arrival, but certainly within the first week at the NSCL. At this meeting, general expectations and responsibilities of a NSCL graduate student will be discussed. In addition, the ADE will give graduate students in physics a list of faculty to talk to, even if you have already made an initial choice for whom to work with. This will allow students to discuss research opportunities with a large group of faculty.

Chemistry graduate students will be assigned a temporary advisor to meet with to discuss responsibilities for a chemistry NSCL student. Students should talk with nuclear chemistry professors to discuss research opportunities.

1.3 Where to find general NSCL policies, forms, and useful information

The graduate students have compiled a list of the most useful information for incoming students. You should have received this information from the graduate student space committee representative (This can also be found on the graduate student wiki under ‘Resources’ <https://wikihost.nsl.msu.edu/gradwiki/doku.php>). However, if you cannot find information you need or are confused about how things work in the lab, do not be afraid to ask someone! Your fellow graduate students have been there before, so get to know your office mates and your co-workers so you can ask them pertinent questions.

2 Assistantships and Fellowships at NSCL

All graduate students at MSU are appointed by an Academic Department (Physics, Chemistry, Engineering, etc.). Information on the University level of the appointments can be found at the MSU Human

Resources website for graduate assistants: <http://www.hr.msu.edu/hiring/>. This site includes a link to a Graduate Assistant Brochure: <http://grad.msu.edu/assistantships/>.

For students that do not have an assistantship, during the Fall and Spring semesters, a minimum of six credit hours are required, and in the summer a minimum of three are required. Students that have a graduate assistantship need only a minimum of three credit hours regardless of semester. This number can vary if on a fellowship, and should be verified with the fellowship issuer or the graduate student secretary.

2.1 Teaching Assistants

First year students are typically appointed as Teaching Assistants (TA) in one of the Academic Departments. If they have expressed interest in Nuclear/Accelerator Science, they are assigned offices at NSCL in order to facilitate an early transition to research. Classes and TA duties clearly take precedence, however an initial involvement with a research group is encouraged.

Some Departments require at least one semester of teaching, so if you were not a TA in your first year, you could be appointed a TA later on. In this case, you are expected to continue your research in addition to the TA duties. You should inform your advisor and discuss the expected research effort.

A normal TA assignment is for twenty hours. If the TA work necessitates a commitment in excess of twenty hours per week, you should talk to your graduate advisor in your academic department. You can also talk to the ADE about any concerns regarding your appointment.

2.2 Research Assistants / Fellowships

If you are appointed as a Research Assistant (RA) or received a fellowship in the first year, you are expected to spend an amount of time on research activities at least equivalent to that which a TA would spend in a given semester. Coursework and studying are not considered research activities. Advisors have discretion in defining research tasks. Especially in the first year, class work is both crucial and time-consuming, and it is therefore suggested that research schedules be arranged to allow concentration on classes while still permitting fulfillment of research responsibilities. For example, in coordination with the advisor, many students arrange to defer research tasks scheduled during exam periods, provided the time is eventually recouped. It is critical that RAs maintain close contact with their research groups and advisors.

The class schedule and research expectations should be discussed with the advisor at the beginning of the semester. Any subsequent changes should also be first discussed with the advisor.

Taxes applied to stipends and fellowships can vary: it is important to check with the department office to clarify your own status.

2.3 Mixed Appointment

The TA/RA mixed appointment consists of a TA appointment for one semester and an RA appointment for the other. In the first year, the TA assignment is typically in the fall semester, leaving the spring semester to gain research experience. The schedule and expectations should be discussed with the ADE at the beginning of the academic year.

3 Guidance towards the Ph.D.

It is important that the student develop a plan for their graduate studies with the ultimate goal of writing and defending a Ph.D. thesis.

3.1 Exploring research opportunities

In the first year, you are encouraged to explore the various research opportunities offered at the NSCL. Your initial choice to join a research group does not automatically mean you will remain working within that group for the duration of your graduate studies. Independent of whether you are in chemistry or physics, you should discuss with various faculty to make a choice for your initial research project and to gain an overview of a large variety of research options.

If you are in chemistry, this process is guided by the nuclear chemistry faculty in charge of recruiting, and if you area in physics, it is guided by the ADE. Scheduling appointments with faculty is much easier if you make use of the NSCL exchange calendar in Outlook. Make sure to learn to use it as soon as possible. Also, discuss with other graduate students about their research.

3.2 Research Advisor and Guidance Committee

According to the Handbook for Graduate students of the Dept. of P&A (<http://www.pa.msu.edu/academics/graduate-program/current-graduate-students>) you have to choose your major

Professor (usually referred to as the Advisor) before the end of the second academic year in the program, but you are highly encouraged to make a choice prior to the summer semester at the end of your first year. You have to form your guidance committee (of which the advisor is the chair) no later than 6 months after the completion of the comprehensive exam requirement.

In chemistry, it is required to choose an advisor by the end of your first semester. Committees are formed in the second semester. Details can be found at: <http://www.chemistry.msu.edu/graduate-program/graduate-program-guide/>.

It is important to read the Departmental Handbooks for graduate students carefully so you are aware of the regulations. Of course, you should contact faculty, the NSCL ADE, or the departments if you have any questions.

3.3 Progress Reports

Every student is required to write a one-page progress report every year. Until you have formed a committee, this is the main way to communicate your progress to the ADE. The report should be e-mailed to the ADE by March 1. It should contain everything related to the academic progress, including classes, exams, research, conferences attended, papers published, etc. The report is used during the annual faculty meeting to determine appointments for the next year.

3.4 Guidance Committee Meeting

The role of the guidance committee is specified by the MSU Graduate School (<http://grad.msu.edu/gsr/docs/GSRR.pdf>). The frequency of guidance committee meetings vary among the departments, but NSCL requires at least a yearly meeting. If you are in physics, your first guidance committee after you have finished the subject exams in CM, EM, QM and SM is combined with an oral subject exam, which is graded (see the physics department handbook). It is important that this oral subject exam is scheduled in a room that allows for a wide audience, and preferably during the regular “research discussion” slot on Thursday at 11 am. Announcements will be made by NSCL staff, and notices be placed on announcement boards and on hall-way monitors. For the oral subject exam, you have to prepare a 1-page abstract and prepare sufficient copies of the Guidance Committee Meeting Evaluation Form found on the gradstudent wiki: <https://wikihost.nscl.msu.edu/gradwiki/doku.php>. This evaluation form is filled out by the audience and serves as feedback for the guidance committee in determining the grade and as feedback for the student on detailed aspects of the presentation.

In the subsequent meetings, you should prepare a one-page progress report prior to the meeting. For physics, it is necessary to fill out an evaluation form to be signed by your committee, these can be obtained from the department office or on the graduate wiki.

For chemistry students, the second year oral fulfills these requirements. A copy of the completed forms (and the progress report) should be sent to the ADE by March 15 of each year. The reports are used during the annual faculty meeting to determine if satisfactory progress has been made and the continuation of appointments for the next academic year.

4 General Expectations

Working toward a Ph.D. is a full time job. In addition to the course work and the exams the Ph.D. thesis is a major part of the program. It requires independent and original research which the student performs under the guidance of a Ph.D. advisor. The research is conducted as part of the doctoral dissertation research (CEM999 or PHY999 for example). In addition, the RA gives the student the financial support necessary to concentrate full time on research.

4.1 Expectations of advisors

Since the advisor/student relationship is one that is supposed to benefit both parties, be aware that there are certain things you can expect your advisor to help you with in your pursuit of a degree. Do not be afraid to ask your advisor or the ADE for advice and help in making your time in the lab most productive. The following is taken from the Graduate School’s Guidelines for Graduate Student Advising and Mentoring Relationships (<http://grad.msu.edu/publications/docs/studentadvising.pdf>).

The responsibilities of the faculty advisor include:

- Ensuring that graduate students receive information about requirement and policies of the graduate program.
- Advising graduate students on developing a program plan, including appropriate course work, research or creative activity, and on available resources.
- Advising graduate students on the selection of a thesis or dissertation topic with realistic prospects for successful completion within an appropriate time frame and on the formation of a guidance committee.

- Providing training and oversight in creative activities, research rigor, theoretical and technical aspects of the thesis or dissertation research, and in professional integrity.
- Encouraging graduate students to stay abreast of the literature and cutting-edge ideas in the field.
- Helping graduate students to develop professional skills in writing reports, papers, and grant proposals, making professional presentations, establishing professional networks, interviewing, and evaluating manuscripts and papers.
- Providing regular feedback on the progress of graduate students toward degree completion, including feedback on research or creative activities, course work, and teaching, and constructive criticism if the progress does not meet expectations.
- Helping graduate students develop into successful professionals and colleagues, including encouraging students to participate and disseminate results of research or creative activities in the appropriate scholarly or public forums.
- Writing letters of reference for appropriate fellowship, scholarship, award, and job opportunities.
- Providing supervision and advising of graduate students when the faculty advisor is on leave or extended absence.

4.2 Working Hours

The working hours for graduate students are very flexible and it is difficult to determine standard working hours. It strongly depends on the individual student, the advisor, the research group and the topic. However, note that certain staff in the lab maintain regular schedules, so you should work your schedule with these times in mind if you need to interact with these people.

Although it is getting progressively easier to work from home, it is critically important that you maximize the overall time with your advisor, other members of your research group and the technical staff of the laboratory. Therefore, you are expected to be at NSCL during regular business hours. If you need to be absent for significant amounts of time, or work from home, please discuss first with your advisor.

There will be occasions during which you may need to work very long hours. For instance, experiments are a very demanding time. Extra hours worked do not entitle you to take time off without consent. Like vacation, any time off that you wish to take should be discussed with your advisor. At the same time, there will be occasions, like during exams, when you may have less time for research. This is understood but should be discussed with your advisor in advance.

4.3 Seminars and Research Discussions

There are an increasing number of colloquia, seminars and other presentations at NSCL and in the academic departments. Sometimes it is difficult to decide which talks to attend. In general, graduate students should attend the departmental colloquia, the nuclear seminars, and the research discussions. A list of upcoming NSCL seminars and research discussions are posted on IntraEnterprise (look under seminars and events). If you are uncertain about individual talks, ask your advisor for advice.

It is critical to present your data and learn to communicate results. As you obtain results and/or prepare for presentation at conferences, it is a good idea to prepare by giving a research discussion. At a minimum, you are expected to give at least one research discussion about six months prior to your defense. Contact the organizer of the research discussion (See Appendix B) to schedule a date.

There are opportunities to present your research to only your graduate student peers at the weekly NSCL graduate student meetings and PGO meetings. These are good ways to practice giving talks before presenting to more senior colleagues. Both of these opportunities will be discussed in Sections 9.2 and 10.1.

4.4 Illness/Injury/Pregnancy Leave/Vacation Time/Leaves of Absence Policy

Adapted from the Graduate School Guidelines on Graduate Assistantships (<http://grad.msu.edu/assistantships/docs/assistantship.pdf>):

A graduate assistant unable to fulfill the duties of his/her appointment because of illness or injury shall notify the administrator of his/her appointing unit (in our case the ADE) as soon as circumstances permit. Similarly, a graduate assistant unable to fulfill the duties of her appointment because of pregnancy shall notify the administrator of her major unit as soon as circumstances permit.

During the illness, injury, or pregnancy, the appointing unit shall adjust (reduce, waive, or reschedule) the graduate assistants duties as those duties and the assistant's physical circumstances reasonably dictate. If total absence from duties becomes necessary and the graduate assistant is still enrolled, the appointing unit shall maintain the stipend of the appointment for a period of two months or to the end of the appointment period or the semester, whichever occurs first.

The graduate assistant shall have the right to return to the assistantship, with the original terms of the appointment, at such time as he or she is able to resume their duties.

The following additional information is adapted from the Chemistry Department Graduate Program Guide:

Teaching Assistants should refer to Article 18 of the GEU Contract for information on Employee Leave Time (i.e., bereavement leave, adoption and parental leave, and jury duty).

Graduate assistants are allowed a total of two weeks of paid vacation time per academic year. A period of absence beyond two weeks must have the approval of the student's research advisor; an absence of 3 weeks or more constitutes a Leave of Absence and requires the prior approval of the ADE. The specific period(s) of vacation are to be arranged by mutual consent with the research advisor and the instructor of the course for which the student is assigned as a TA, if applicable, and approved by him/her. The two weeks vacation time includes absences during winter break and summer vacation, but excludes University holidays. Additional absences for vacation purposes may not be granted with pay.

When traveling outside of the U.S., it is important to verify that all travel documents are obtained to ease passage in and out of the country. For non-US students, please be aware of regulations regarding visa.

4.5 Outside Work

The students who are appointed as an RA are expected to devote their time to their academic studies and to their RA responsibilities. No outside work for pay is allowed without permission from their advisor and the ADE. This also applies to TA/RAs during the semester as a TA. The TA/RA is expected to learn about the laboratory and explore research options during that time.

Although TAs are appointed directly by their respective academic departments, NSCL offers the students an office, a computer, and other resources to begin their research at the lab. The students should take advantage of this opportunity rather than working at a different job. If you feel it is necessary to work at a separate job, please inform the ADE.

4.6 Tutoring

Tutoring can benefit you intellectually as well as financially. It can help solidify your ideas about physics or chemistry and make you a better teacher. You should discuss the decision to tutor with your advisor. Tutoring should not interfere with your research duties and thesis completion. As such, tutoring should be kept to a minimum, not to exceed an average of 5 hrs per week.

If you are a TA, you are not allowed to act as a paid tutor for a student in the course you are assigned to. Such behavior would constitute a conflict of interest because you are being paid by the Department to provide office hours and direct contact support (recitation, lab, etc.) to students for that course. You may act as a paid tutor for any course to which you are not assigned as a TA in any given semester.

4.7 Tours

Tours are an integral part of the outreach done at NSCL. Graduate student help is necessary in giving tours to larger groups, such as high school students. Being a tour guide can benefit the graduate student in giving him/her a greater knowledge of the laboratory, teaching him/her how to communicate science to the general public, and help overcome fears of public speaking. Since giving a tour is an added work load, compensation is provided for giving tours. However, please note that some students have visa restrictions that prevent them from receiving compensation for giving tour. Laboratory Human Resources will verify your eligibility.

You are eligible to be a tour guide after your first year at the lab. During your second year, you may choose to be a tour guide by talking to the outreach coordinator. You should discuss this decision with your advisor. Giving tours of NSCL should not interfere with your research or thesis completion. The number of tours you give should be kept at a reasonable level, about two per month or 25 per year. If you are interested in becoming a tour guide, contact the NSCL outreach coordinator.

5 Conflict Resolution and Counseling

The transition from college to graduate school offers many exciting new opportunities, but also challenges. During your graduate studies, you gain new experiences and learn new skills in preparation for your future career. In order to facilitate this transition and guide you through graduate school, NSCL would like to ensure that you get any help you might need and answer any questions you might have.

5.1 Conflict Resolution

As student's progress through a graduate program, disagreements or conflicts may arise between students and other students, faculty/staff, or research advisors. The University guidelines for resolving a conflict is outlined in the Graduate Student Rights and Responsibilities document (GSRR, <http://grad.msu.edu/gsr/docs/GSRR.pdf>). A

useful resource for conflict resolution can be found at <http://grad.msu.edu/conflictresolution/>. There are no repercussions for following appropriate conflict resolution channels.

It is best to make sure that issues get resolved at an early stage and you are highly encouraged to talk to your advisor, the ADE or other faculty at NSCL or in your department when you have a question or concern. NSCL also has an Employee Concerns Program (<https://intra.nscl.msu.edu/ceapps/ecp/>) which allows you to submit concerns online and anonymously if desired.

5.2 Counseling

Graduate school can be a difficult time in one's life. The University Counseling Center is a good resource for students who are struggling in graduate school (<http://counseling.msu.edu>). Graduate students are eligible for eight free counseling sessions and the counseling center can subsidize more sessions if deemed necessary.

You should also feel welcome to initiate a conversation with your advisor, the ADE or other faculty at NSCL and in your department. Remember that all are very interested in helping you be successful. Even if they cannot always provide direct support, they can point you to the right person or resource, or they can be there to just listen.

6 Safety and Training

It is important to maintain a safe and healthy work environment at NSCL. All safety issues are handled by the Environmental, Safety, and Health (ES&H) office.

When you first arrive at NSCL, you are required to take a standard set of safety training sessions. Most of them are online. Any additional training that is required for your work has to be requested by your advisor.

It is very important to be proactive for anything related to safety. You should talk to ES&H staff, your advisor, lab management if you feel that a certain practice or procedure is unsafe. There is also an online safety suggestion box (<https://intra.nscl.msu.edu/troublereports/editReport.php>), which is part of the NSCL trouble report system. In addition, anyone at the laboratory can halt ongoing work by any employees by issuing a "stop work order" (training for this practice is part of your initial training). There are no excuses for performing work in an unsafe manner.

7 Conferences and meetings

A fundamental part of research is the presentation of your results. This is done at conferences and workshops. This serves not only to inform the community of new science, but also to develop important skills such as public speaking, networking, establishing collaborations, etc. Once you have obtained results, you are encouraged to present them at one of these meeting. You should keep track of the conference calendar (see below) and talk to your advisor if there is a meeting you want to go to. The advisor may also suggest meetings for you to attend.

7.1 Selecting a meeting

There is a broad spectrum of meetings available to attend throughout the year. For nuclear science, the largest meetings are sponsored by the American Physical Society (APS), the American Chemical Society (ACS) and the Division of Nuclear Physics (DNP), and are advertised widely and long in advance. Another good opportunity is the annual exotic beam summer school: http://fribusers.org/4_GATHERINGS/2_SCHOOLS/schools.html. It is important to be proactive in searching out meetings and checking with your advisor about attending.

Check the bulletin boards for announcements or posters advertising upcoming events. A list of conferences can be found at http://groups.nscl.msu.edu/nscl_library/confer/confer.htm and at www.jinaweb.org.

It is important to have a well written abstract prepared when applying to present your research. The submission deadline is at least several months prior to the meeting. You must distribute your abstract to your collaborators for proof-reading and approval.

Although professional travel is supported by the NSCL you are encouraged to find extra funding. There are opportunities within the university (see the NSCL Graduate Student Wiki under 'Resources') and quite often the conferences offer support and discounts for students.

7.2 Travel Logistics

Before you make your travel arrangement, you must fill out a travel authorization (IntraEnterprise, under 'Time and Attendance'). Once it is approved (you will receive a signed copy), then you can make your arrangements. Coordinate your travel with other NSCL participants in order to save on travel expenses. The form for reimbursement of travel expenses can also be found with the travel authorization. The NSCL travel coordinator will help you with conference registration and travel arrangements. These forms should be filled out in a timely fashion, and the travel authorization should be submitted as early as reasonably possible. It is possible that you will have to

take action on the approval of the reimbursement. In such a case, you will receive an email with a link to the necessary document.

7.3 Travel to Foreign Countries

Effective July 1, 2014, HTH Worldwide serves as the University's provider of international emergency evacuations resulting from medical conditions, political unrest or natural disasters, in addition to repatriation of remains, coordination of medical care and personal assistance services. Because of this change, departments will no longer be required to complete an enrollment roster or provide an account number to put HTH health insurance in force as the coverage will be centrally funded. The only required steps for departments to take in order to put coverage in effect for international travelers will be to (1) complete a pre-trip travel authorization (which you have to do anyway for every business-related travel) for international traveler and (2) register the trip in the International Travelers Abroad Database (http://www.isp.msu.edu/travel/travelers_database.htm), which the NSCL Travel Team will do for you.

The HTH Worldwide insurance product for non-study abroad international travelers is called "GeoBlue Traveler". Since many travelers feel more comfortable with an ID card in their hands that is easily accomplished by going to www.geo-blue.com and clicking on "Register" (the MSU Group Access Code is: QHG9999MSUBT). This step will enable travelers to print their ID card in advance, review HTH's large network of global medical providers, look at claim procedures and become familiar with the online and mobile tools available to them. If travelers would like to purchase separate travel coverage at their own expense for an accompanying spouse or dependents, they can get a quote through HTH Worldwide at www.hthtravelinsurance.com or by calling 1-888-243-2358.

8 Graduating

Once you are about to finalize your result, you should begin to apply for your next job. You should discuss the publication plans for your research results with your advisor. Before you begin to write your Ph.D. thesis, make sure that you follow the latest guidelines and formatting rules, which are available from the graduate school website: <http://grad.msu.edu/thesisdissertation/>.

There is a thesis template available through the graduate student website (<http://www.mth.msu.edu/~weil/>), but you are cautioned to find out if the current template implements all of the current document guidelines. The current formatting guidelines can be found at: <http://grad.msu.edu/etd/docs/formattingguide.pdf>.

8.1 Job applications and interviews

Discuss your plans with your advisor who might know about job opportunities. He/she will be able to give you advice on your CV and other application-related issues. When you are invited to an interview, remember to fill out a travel authorization. See section 7.2.

8.2 Scheduling your thesis defense

When you are planning for your defense, you should remember the following deadlines and constraints:

- You must be enrolled when you defend your thesis.
- The last possible day to defend your thesis is the last day of the semester (or, since this is not listed in the official calendar, the last day before the first day of the new semester).
- In order for your research assistantship to cover your tuition, you must be appointed at least 53 days. That means you have to be present at MSU and work for you RA for at least this time after the new semester has started and cannot hand in your thesis to the graduate school until then.
- The date of degree on your diploma is not determined by the thesis defense, but by the date when the graduate school accepts your thesis.

8.3 Preparing for the defense

Once you give your thesis to your guidance committee, you should spend the time until the defense preparing your presentation and any potential questions. You are expected to discuss in detail the content of your thesis.

9 Outreach and other activities

There are many opportunities for NSCL graduate students to become involved with activities not directly related to their research. In general, participation in these activities is encouraged, but completely voluntary. The

level at which a student becomes involved should be discussed with the advisor and should take the students current research-related schedule into account (i.e. giving tours during the setup or running of an experiment is not advisable).

9.1 Tours and open houses

Giving NSCL tours to the general public allows the student to gain experience in communicating scientific methods and principles to the general public, a useful skill for essentially all careers with a Ph.D. degree in nuclear science. Please see section 4.8 for more details about giving tours.

About every other year, NSCL organizes an Open House. The lab opens up to the general public to communicate its scientific goals and achievements. All NSCL staff and students are encouraged to participate in this event. It typically includes tours, demonstrations and other activities.

9.2 Women and Minorities in Physical Sciences (WaMPS)

This is a graduate student organization designed to “support and to promote women and minorities in the physical sciences”. See <https://www.msu.edu/~wamps> for a list of upcoming events. All students are encouraged to get involved.

9.3 Younger Chemists’ Committee (YCC)

YCC is a graduate student organization that provides science outreach to the community. These outreach events have included classroom demonstrations, scout merit badge days, and chemistry competitions. YCC provides leadership opportunities that can be valuable in developing young careers. See <http://msuycc.wordpress.com/> for contact information.

9.4 Graduate Women in Science (GWIS)

GWIS is a graduate student organization that aims to “promote the participation and advancement of women in science by providing a support network locally and nationally and by actively fostering the development of aspiring scientists.” GWIS provides outreach, social events, and career resources. Anyone who holds a bachelors degree in a scientific discipline can join. For more information, visit http://gwis-msu.wikispot.org/Home_Page?action=show&redirect=Front+Page.

9.5 University-wide Professional and Personal Enrichment Workshops

MSU sponsors many events that are offered to graduate student and are designed to help with professional development (career workshops, thesis writing support groups, etc). Usually, students are notified by email from the Department of Physics & Astronomy or the Chemistry Department. These events are usually free to attend.

9.6 Professional societies

It is useful to become a member of the American Physical Society (APS, www.aps.org) and/or the American Chemical Society (ACS, www.acs.org).

A student membership in the APS provides a yearly subscription to Physics Today for free. In addition, student members receive registration fee discounts for events sponsored by the APS. A membership in the ACS provides full online access to Chemical & Engineering News and offers discounts on registration fees for all ACS sponsored meetings.

10 Graduate student participation in lab administration

Graduate students organize their participation in lab administration themselves. They are in charge of assigning graduate students office space and select a NSCL graduate student president. The students also vote for their representatives on the many committees where they are represented. Elections are held at the end of every academic year.

10.1 Graduate student meetings

The graduate students have weekly meetings which are organized by the NSCL graduate student president. In addition to a research presentation by a student, the committee representatives update the students on the recent activities. The ADE is invited to the second meeting of the month to report from the monthly faculty meetings and to be available for any questions. At the beginning of each academic year the representatives to the NSCL committees are elected in these meetings. Currently, they take place Mondays at 4:10pm in the NSCL lecture hall. A list of upcoming talks and available dates is located on the grad wiki.

10.2 Representation on NSCL committees

The committees with graduate student participation are:

- Diversity committee: Committed to encouraging diversity in the workplace. Conflicts related to diversity that cannot be handled by your advisor can be brought to your diversity committee representative.
- Electronics and Data-U: Manages the electronics pool. If you need a module not owned by the lab, contact your representative.
- Outreach committee: Coordinates outreach efforts. Works with the NSCL outreach coordinator Zach Constan on some outreach events.
- Social committee: Decides the price of ice cream and donuts. Also organizes the holiday party and lab-wide barbecues.
- Recruiting committee: Meets prospective students and organizes their visit. If you would like to meet prospective students, contact your representative.
- Seminar committee: Schedules speakers for the Nuclear Science Seminars at NSCL. Also schedules lunches to meet the weekly speaker.
- Space committee: Handles issues relating to office space. If you would like to change offices or have issues related to your office, contact your space committee representative.
- Webmaster: Maintains the graduate student wiki.
- Women & Minority Lecture Series: Organizes lunches with the graduate students whenever there is a women and minorities speaker, which happens only a few times per semester/year.

11 A guide to IntraEnterprise and Portal

IntraEnterprise and Portal are two very useful resources for graduate students. These websites contain a wide range of internal information about NSCL/FRIB. This section gives an introduction to the two websites.

11.1 Brief guide to IntraEnterprise

NSCL has a number of online tools and resources available. They hold links to policies, procedures, documentation and apps. IntraEnterprise (<https://enterprise.nsl.msu.edu/>) is your first stop to a large variety of practical information. When you first arrive it is helpful to browse around. On occasion, links refer to applications or information made available on the old Intra system (which requires additional login) or Portal. The contents of some of the tabs of the Navigation Bar most frequently used by graduate students are described below.

Time and Attendance

- Absence list of all lab employees. This is useful for knowing when certain professors/staff are traveling. (Note: one can also check employee calendars in Outlook. If the person's calendar is up-to-date, this is very useful for scheduling meetings/knowing when people will be unavailable)
- Link to MSU Academic Calendar
- Teaching Calendar – shows when all professors at the cyclotron teach/what class they are teaching
- Request for Travel Authorization – a travel authorization must be filled out whenever traveling to a conference, to another lab for an experiment, etc.

Employee Information

- Link to the graduate student wiki (has many useful resources)
- Place to update contact information
- Photographs of lab employees (may be useful, especially for new students)
- Extensions (phone number extensions) for employees in the lab
- Office map
- Tour schedule

Training

- Shows online training modules that have been completed and which ones are available (which should be completed). Also shows when the various training modules were last taken (refreshers must be taken after a certain amount of time).

CCF Operations

- Coupled Cyclotron Facility – provides important information about performing experiments at NSCL, such as the responsibilities of the spokesperson for an experiment
- Upcoming Experiments – List of approved experiments

- Cyclotron Experiment Schedule – shows when upcoming experiments have been scheduled

Seminars and Events

- has lists of seminars, meetings, and conferences that are scheduled at the NSCL (and other for the Physics Department)

Nuclear Science Resources

- E-Pool – page for checking out/in modules from E-Pool. All modules borrowed from E-Pool must be checked out
- Library – NSCL Library Home page has some useful links, such as a long list of upcoming nuclear science conferences/workshops, nuclear physics scientific journals, theses from former NSCL graduate students, list of books that are available from the NSCL Library, and links to instruction manuals for electronic modules used at NSCL (which can be checked out from E-Pool)
- Electronic Journals – links to nuclear physics scientific journals
- Useful Software – several programs that may be useful for nuclear physics

11.2 Portal and Alfresco

NSCL uses two different document servers. Alfresco

(<https://docmgmt.nsl.msu.edu/share/page/site/NSCL/dashboard>) is heavily used by various operation departments, and you might need to access it, e.g. if you have to approve design drawings. Portal (<https://portal.frib.msu.edu/>) is used for a wide variety of purposes, and for example holds the depository of procedures and policies at <https://portal.frib.msu.edu/appsandtools/forms/default.aspx>, under “business”.

Portal is a document server where one can upload and download files. While a wide range of documents are available, only a few sections of Portal that may be the most relevant for graduate students will be highlighted here. Portal can be navigated using the tabs (Portal, Getting Started, Business, etc.) in the upper left-hand corner of the page.

- ‘Getting Started’ tab –, has some nice templates for making powerpoint presentations and letterheads
- ‘NSCL Operations Division’ tab – under ‘Division’ may have slides from labwide meetings/various presentations and talks
- ‘NSCL Project’ tab - has some safety information about hazard assessment and job safety analysis

12 Additional information about the laboratory

The atrium is the site of many social activities, including Tuesday Coffee and Bagels (Tuesdays at 9:30 am) and the ice cream social (Thursdays at 2:30 pm, \$1.00 per person). It is a popular place to eat lunch and study.

Office supplies are available in room 1148. Take what you need to do your work, but be considerate of others and do not take everything. If you need a new log notebook or whiteboard markers, these can be obtained from the front desk in the main lobby..

The E-pool (room 1350) contains electronics supplies. You can check out electronics modules (VME, CAMAC), find cables, connectors, etc. It is located off the Data-U6 area. Be sure to return supplies when not in use.

The electronics room holds resistors, capacitors, connectors, and other small pieces associated with circuits. A work room next door is available for activities such as cable-making, soldering, and bread-boarding.

The Detector Lab is located in the basement. Talk with the head of the detector lab for more information.

Elevators are located by the atrium/theory hall stairwell and in both of the North wings along Shaw lane.