

# GRADUATE STUDENT HANDBOOK

## DEPARTMENT OF PHYSICS & ASTRONOMY

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Revised: 21 June 2016

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## I. INTRODUCTION

Welcome! We are happy that you have decided to pursue graduate studies at the University of Nebraska–Lincoln. Graduate students play an integral role in the department. We hope that this guide will help you negotiate the maze of paperwork and procedures that would seem essential to life in a university.

The faculty and staff are always available to help you with academic and non-academic concerns. Please feel free to call on us if you need advice or help. We look forward to helping you achieve your goal of a graduate degree in physics.

## II. CONTACT INFORMATION

Although there are many people who can assist you, these are the primary people with the most experience.

<b>Title</b>	<b>Responsible for</b>	
Graduate Secretary	Grad admissions, processing PAFs (personnel action forms - which are necessary to get paid), problems with pay and/or billing	Jenny Becic 208 Jorgensen Hall 472-9221
Receptionist	Various forms, general advice; course permission codes; office assignments	Cyndy Petersen 208 JH; 472-9220
Office Associate	Web Manager; general advice	Amanda Lager 208 JH; 472-9223
Graduate Chair	Faculty member in charge of general advising, course advice, graduate student progress, etc.	Kees Uiterwaal 077 Jorgensen Hall 472-9010
Lecture/Demonstration Manager	Makes TA assignments, schedules summer courses	Cliff Bettis 134A Jorgensen Hall 472-2789
Laboratory Manager	Manages introductory labs	Shawn Langan 139 Jorgensen Hall 472-2199
Vice Chair	Oversees TA assignments	Bradley Shadwick 310N Jorgensen Hall 472-3578
Department Chair	Our Supreme Leader	Dan Claes 258G Jorgensen Hall 472-2783
Business Manager	Supplies, keys, ordering lab and teaching equipment, travel reimbursements, report building problems	Patricia Fleek 208D Jorgensen Hall 472-6072
Purchasing Assistance	Ordering lab and teaching equipment, travel reimbursements	Kim Schaaf 208G Jorgensen Hall 472-0326
Electronics Shop Manager	Help with computer issues, electronics	Bob Kelty 356 Jorgensen Hall 472-2793
Supervisor of Student and Instrument Shop Manager	Machine shop training for students	Bob Rhynalds 177C Jorgensen Hall 472-2780

### III. DEPARTMENTAL & UNIVERSITY PROCEDURES

The first few weeks as a graduate student are often the most hectic. Your NUID and keys must be obtained, as well as your teaching or research assignments. Classes Start. This section summarizes some of the basic procedures you will need to learn during your time here.

#### A. Paychecks

Assistantships for the academic year are divided into ten equal payments, with the first check on the last business day of August. ***You must sign up for direct deposit of your pay to a bank;*** see Jenny Becic for forms. New students must be on campus to do paperwork no later than August 10<sup>th</sup> in order to receive an August paycheck. A teaching assistantship or research assistantship may be available for the two summer months.

#### B. Communications

##### *E-Mail*

E-mail accounts can be obtained by logging into ***MyRed***.

Please give the main office your e-mail address for inclusion in the departmental directory, and for the departmental distribution list. Remember to update the main office if there is a change in your contact information.

The department uses email as the primary mode of communication, so you should check your email ***at least once a day*** for important messages.

Free anti-virus software is available from Information Services at <http://antivirus.unl.edu/>. It is a good idea to install and keep this software updated. Please be prudent when opening files and/or forwarding messages from unknown sources. Report suspicious messages (for instance, phishing) to: [security@unl.edu](mailto:security@unl.edu).

##### *Regular Mail*

All graduate students have mailboxes located in 214 Jorgensen Hall. The office staff receives mail on even-numbered calendar days only and distributes it to the mailboxes. Large packages may be placed on the table in the mailroom and a note left in your mailbox. ***Please check your mailbox at least once per day for interdepartmental mail.***

Outgoing mail for both 'Campus' and 'U.S. Postal Service' should be placed in the trays in 214 Jorgensen Hall. Note that ***no personal mail can be sent from or delivered to the departmental office.*** All outgoing mail must have the department's address and the sender's name on the outside of the envelope.

Campus mail addresses must include the recipient's name, the room and building, and the on-campus zip code. Departments on City Campus (like us) are denoted by CC (xxxx), where the xxxx are the last four digits of the extended zip code. The Department of Physics and Astronomy's campus zip code is 0299. Departments on East Campus are denoted by EC (xxxx).

##### *Telephones*

All campus offices start with the 472 prefix. To phone a campus office from campus, dial 2-xxxx where the 'xxxx' is the last four digits of the telephone number. The departmental phone directory is posted on its website.

To get an off-campus number, you must dial '9' first.

## C. Photocopying

### 1. *Research or Teaching Related Photocopying*

Research- and teaching-related photocopying can be done in the department copy room (214 Jorgensen Hall). Codes have been assigned to all research grants and teaching-related areas. Ask your advisor or the professor for whom you are teaching, which code(s) you should use. The office staff can also assist you.

If the photocopier is out of order and you have an urgent photocopy need, see one of the staff in 208 Jorgensen Hall for instructions.

Appendix C is a copy of a recent memo summarizing photocopy policies.

### 2. *Personal Photocopying*

Personal photocopying for members of the department can also be done in 214 Jorgensen Hall. The copy code for personal copies is available from the office staff. Mark the number of copies you make next to your name on the clipboard near the copy machine. Copies are tallied once every month or so, and you will receive a bill in your mailbox that can be paid in room 208F Jorgensen Hall. The current price is 4.5 cents per copy.

## D. Use of Computers

Computers are available in some graduate student offices. The Association of Students of the University of Nebraska (ASUN) will provide you with a used computer for your office, as available. See Jenny Becic for details on how to get one of these computers.

## E. Obtaining Supplies

**Supplies** (paper, pens, chalk, etc.) for research- and teaching-related uses are located in room 208.2 Jorgensen Hall. Some materials are in an open cabinet; others must be requested from the business office staff. If you need something that is not stocked, it can be ordered through the Office Depot catalog (which is also available in the Physics Business Office, 208.2 Jorgensen Hall). The supplies in 208.2 Jorgensen Hall are for research and teaching related needs only.

**Equipment or supplies not in stock** must be requisitioned through the web forms available on the departmental website (<http://www.unl.edu/physics/forms>). Click on the "Requisitions" tab, then either the Excel or PDF file of the requisition form. Once completed, the requisition must be e-mailed to [papurchasing@unl.edu](mailto:papurchasing@unl.edu).

When you receive your order, verify that the shipment is correct, and then sign the invoice and the packing slip, and return it to room 208.2 Jorgensen Hall.

## F. Access to Facilities

### *Identification*

All students must have an NCard which is available at the ID office in the University Bookstore (Union). The ID office is on the first floor of the Student Union. You must already be registered for classes and bring a photo ID with you to the ID office when obtaining your card. The NCard will cost you \$20. This student ID also serves as your library card and will give you access to Jorgensen Hall before or after business hours (8 am to 5 pm) on weekdays and over the weekend.

**International students** must first check in at the International Student and Scholar Office (ISSO) at 201 Seaton Hall upon arrival on campus. After you have been on campus for 10 days, go to the Federal Building to apply for a Social Security card.

**A receipt showing the application for your Social Security card must be presented to the Jenny in the Department office.**

### *Keys; NCard Access*

You will need to get a key for your office on arrival. Keys are obtained from Patty in 208G Jorgensen Hall.

Keys are the property of the University. Security concerns dictate that keys may not be duplicated or lent to anyone else. Report any suspicious activity to the Main Office. Return the key to the Physics Department when you graduate or separate from UNL.

Jorgensen Hall's exterior doors will be locked at all times outside the building's normal business hours. You will need your NCard activated to enter the building after normal hours. You will also need your NCard activated to enter the Mail Room (214 JH) which is locked at all times. NCard access is obtained from Beth Farleigh in 208A Jorgensen Hall.

### *Safety*

Keep your offices and labs locked when they are empty. If you enter through a locked door, make sure that the door shuts and latches afterward. **Do not prop open doors.**

Keep purses and valuables (such as laptop computers) out of view. In the past, on rare occasions, items have been taken from offices and labs. The problem is usually at its worst during the last few weeks of classes each semester. Report any suspicious people to the main office, or to the campus police at 402-472-2222.

## **G. Love Library**

Many research journals are available over the web. To access them from any computer in the department, go to the UNL library web site (<http://libraries.unl.edu/>), Hover over "ERESOURCES & COLLECTIONS" to open a red menu, then select "Databases and Journals" from this menu, then scroll down.

Also available on the web are a number of databases for searching the scientific literature. Links to these databases are located on the library's E-Resources webpage, and can be found listed alphabetically by clicking on the appropriate letter in the "Databases by Title" section in the center column. One of the most powerful databases is the "Web of Science" database located under "W". The library periodically offers workshops on using these databases.

### *Books*

Most books can be checked out of the library using your student ID card. Some books are on reserve for courses, or are designated reference materials that can only be used in the library. Please be aware of "fair use" copyright laws and limit your copying to materials that fall within the "fair use" guidelines.

Do NOT remove any material from the library without checking it out.

### *Ordering Articles*

The delivery of any books that you request will be made to the Engineering library, so you can pick them up at the Circulation desk, W204 Nebraska Hall. Any journal articles you request will continue to be delivered as usual -- directly to your email address. If you need a book or an article, you can request an Interlibrary Loan (ILL) via the university library's website. To access Interlibrary Loan, go to <http://libraries.unl.edu/>, and select "Delivery/Interlibrary Loan" on the left of the page as you scroll down.

## H. Office Space

The department endeavors to provide all graduate students with office space. Office space is assigned by the Department, is considered to be temporary, and will expand or contract depending on current teaching and research requirements of the Department. New graduate students will receive office assignments from Cyndy in 208 Jorgensen Hall. ***Do not change your desk to another space without contacting her prior to the move.***

## I. Parking

Parking permits are available from UNL Parking and Transit Services, 625 Stadium Drive, Suite A (located in the ground level of the Parking Garage), or online (<http://parking.unl.edu>).

## J. Reimbursements for Travel

If you are going on a work-related trip for which you will be reimbursed, you must fill out a travel authorization **prior** to leaving. On the department website (<http://www.unl.edu/physics/>), choose "Department Home," then "Downloadable Forms." During travel, be sure to get **itemized receipts** for all expenditures. Upon return, you must fill out a travel reimbursement form. Both are submitted electronically to [ppurchasing@unl.edu](mailto:ppurchasing@unl.edu). **Reimbursement must be requested within 60 days of the last day of travel.**

## IV. REQUIREMENTS FOR GRADUATE DEGREES

The Department of Physics and Astronomy of the University of Nebraska-Lincoln offers graduate education leading to the degrees of Master of Science and Doctor of Philosophy in Physics. The Department has a flexible program of graduate study that can easily accommodate students with a wide variety of goals and backgrounds. Every entering graduate student will be assigned an academic advisor who is a member of the Department's Graduate Committee. Entering students are required to take a Preliminary Exam during their first week on campus in August prior to registering for classes. This test, which is also required for Ph.D. candidacy, will be used to assess the level of their knowledge of undergraduate physics, and will aid the Graduate Committee in giving them advice about which courses to take during their first semester.

The time required for obtaining a degree should be kept to a minimum, giving due consideration to the student's background and particular subfield of specialization. During the first and second years of graduate study, an adequately prepared student will take most of the formal courses in the program. For well-prepared students, the times needed to obtain an M.S. degree and a Ph.D. degree should be about two years and five years respectively.

An outline of the steps that a student must complete to obtain a graduate degree in physics follows:

1. Obtain admission to the Graduate College.
2. Pass the Preliminary Exam on undergraduate-level physics.
3. Complete all required course work with an adequate GPA (see below).
4. M.S. degree students must
  - file a Memorandum of Courses *before finishing one half of the course work for the M.S. degree* (i.e., for most students this should be done during the second semester of their studies). A student may not file a Memorandum of Courses and graduate in the same semester or summer session.
  - apply for the degree; pass the "M.S. Comprehensive Examination" (comprising only course grades; see below);
  - complete a thesis (if the thesis option described in the *Graduate Bulletin* is chosen; see below).

#### 5. Ph.D. degree students must

- complete 91x courses (excluding 918) with a GPA of 3.00 or better, and have a cumulative GPA  $\geq 3.00$  in all required courses at the time of graduation;
- form a supervisory committee;
- file a Program of Studies approved by the supervisory committee **before finishing one half of the course work for the Ph.D. degree**;
- pass the Ph.D. Comprehensive Examination at least 7 months (but not longer than 3 years) prior to the final oral examination on the dissertation;
- complete a dissertation, including an oral defense of the dissertation.

Knowledge of foreign languages can be valuable both personally and professionally. Although the Physics and Astronomy Department has no general foreign language requirement, individual supervisory committees may include a language (or research tool requirement) in the student's program if they feel it is appropriate.

Each student is responsible for knowing the requirements of his or her degree program as specified in the *Graduate Bulletin*. THESE REQUIREMENTS ARE NOT DISCUSSED IN THIS HANDBOOK. Copies of the *Bulletin* may be downloaded from the Graduate Studies web site at: <http://www.unl.edu/gradstudies/bulletin>. In addition to the requirements of the Graduate College, the faculty of the Department of Physics and Astronomy has approved the following requirements:

### Preliminary Exam

A preliminary exam on undergraduate-level physics must be passed. All students will take this exam as a placement exam prior to the first semester of study. Depending on the outcome, the graduate committee may recommend or require the student to take selected 800-level courses before the corresponding 91x courses. The exam will be offered twice a year: after the end of the spring semester, and before the beginning of the fall semester. Students may take the exam up to three times and must pass it before the beginning of their second academic year.

### A. M.S. Degree Program

#### i. Course Work

In addition to the requirements given in the [Graduate Studies Bulletin](#), a candidate for an M.S. degree must pass (grade  $\geq C$ ) the following courses:

- PHYS 811: Methods in Theoretical Physics I
- PHYS 911: Classical Mechanics
- PHYS 913: Electromagnetic Theory I
- PHYS 916: Quantum Mechanics I
- PHYS 998: Special Topics in Current Research

plus one of the following courses:

- PHYS 912: Statistical Physics
- PHYS 914: Electromagnetic Theory II

## ii. M.S. Comprehensive Examination

To pass the M.S. “Comprehensive Examination”, students must record a GPA of at least 2.5 in Physics 911, 912 (or 914), 913, and 916. Students with an average GPA of 3.00 or above in these courses will be awarded an M.S. degree en route to a Ph.D. without having to write a Master’s Thesis (“Option III” as specified in the Graduate Bulletin). Students with a cumulative GPA below 3.00 but at least 2.50 will be able to obtain the M.S. degree by defending an M.S. thesis and passing an oral exam (“Option I”). Students with a cumulative GPA in all courses below 2.50 for two consecutive semesters will be dismissed from the program. The Committee has the option of giving an oral exam, a written exam, or both.

## B. Ph.D. Degree Program

### i. Course Work

The required courses for every student seeking a Ph.D. degree are:

PHYS 811:	Methods in Theoretical Physics I
PHYS 911:	Classical Mechanics
PHYS 912:	Statistical Physics
PHYS 913:	Electromagnetic Theory I
PHYS 914:	Electromagnetic Theory II
PHYS 916:	Quantum Mechanics I
PHYS 917:	Quantum Mechanics II
PHYS 918:	Quantum Mechanics III
PHYS 998:	Special Topics in Current Research

**plus** three of the following four introductory “survey” courses:

PHYS 925:	Introduction to Atomic and Molecular Physics
PHYS 926:	Introduction to Elementary Particle and Nuclear Physics
PHYS 927:	Introduction to Solid State Physics
PHYS 928:	Introduction to Plasma Physics

**plus** at least one additional mathematics course, chosen in consultation with an advisor, from the following list:

MATH 814:	Applied Linear Algebra (Matrix Theory)
MATH 822:	Advanced Calculus
MATH 823:	Introduction to Complex Variable Theory
MATH 824:	Introduction to Partial Differential Equations
MATH 935 or 936:	Advanced Methods of Applied Mathematics I or II
PHYS 812 or 813:	Methods in Theoretical Physics II or III
STAT 880:	Statistics and Applications

Students with little or no laboratory experience as undergraduates are urged to take Physics 231: Electrical and Electronic Circuits I, and/or one of the Advanced Laboratory Courses, Physics 841-843.

The recommended order in which a fully prepared student should take these courses is:

**FIRST YEAR**

<u>First Semester</u>	<u>Second Semester</u>
Physics 911 - Classical Mechanics	Physics 914 - Electromagnetic Theory II
Physics 913 - Electromagnetic Theory I	Physics 916 - Quantum Mechanics I
Physics 998 - Special Topics in Current Research	Math Elective
Physics 811 - Methods in Theoretical Physics I	

**SECOND YEAR**

<u>First Semester</u>	<u>Second Semester</u>
Physics 912 - Statistical Physics	Physics 918 - Quantum Mechanics III
Physics 917 - Quantum Mechanics II	Physics 92X
Physics 92X	Physics 92X (will generally be taken in the third year)

Note that in the table above, courses are listed in the semester in which they are usually given. It may be necessary to wait until the third year to finish the Introductory Course (925, 926, 927, and 928) sequence.

Normally 911, 912, 913, 914, 916, and 917 will be offered once each year, and Quantum Mechanics III (918), Methods in Theoretical Physics II and III (812 and 813), and the survey courses (925, 926, 927, and 928) will be offered at least once every two years. Physics 811 is normally offered every fall. Students participating in research may register for one of the following: Physics 899 (Masters Thesis), Physics 996 (Research other than Thesis), and Physics 999 (Doctoral Dissertation). Note that all beginning graduate students, both M.S. and Ph.D. students, must take Physics 998 (Special Topics in Current Research). This is a 1-credit-hour course introducing students to the research activities in the Department.

Students wanting to sign up for PHYS 996 **MUST find a research adviser who will be supervising their research**. Only after the professor AGREES to supervise the student is he/she allowed to enroll in PHYS 996. The student should obtain the required permission code from Cyndy in the Department Office, 208 JH, and **must submit proof of the professor's consent to Cyndy** so she knows the student is allowed to take this course. The supervising professor gives the grade (Pass/No Pass).

**ii. Qualifying Procedure and Formation of the Supervisory Committee**

A minimum GPA of 3.00 in the 91X courses (excluding 918 Quantum III) is required for Ph.D. candidacy. Ultimately, the student must have a cumulative GPA of 3.0 in all required courses to get the Ph.D. **Students may take required courses no more than**

**twice.**

Students may not drop courses without permission of the Graduate Committee (see also Sec. V.G below). As soon as a student has completed the required Ph.D. course work satisfactorily, he/she should form a supervisory committee guiding his/her dissertation research. The committee should consist of at least four members including the student's research advisor and an outside representative from another department in the University.

### **iii. Program of Studies**

A complete Program of Studies approved by the supervisory committee must be filed with the Office of Graduate Studies. See the graduate secretary in the main office for assistance with this.

### **iv. Ph.D. Comprehensive Examination**

A written comprehensive examination of each Ph.D. applicant is required by the Graduate College. The examination may also include an oral presentation and examination. This examination is administered by the student's supervisory committee and will normally have the form of a written report based on approximately one week of intensive research on a subject approved by the Supervisory Committee. It is expected that this topic will be in the general area of the student's Ph.D. thesis (e.g., AMOP, HEP, etc.), but will not be a simple extension of their Ph.D. research topic.

### **v. Ph.D. Dissertation**

The dissertation must be completed between 7 months and 3 years following the passing of the Ph.D. Comprehensive Exam. In addition to the written dissertation, an oral defense of the research is required. The *Application for Final Oral Exam* should be filed with the Office of Graduate Studies no less than 2 weeks prior to the scheduled defense.

## **V. DEPARTMENTAL EXPECTATIONS CONCERNING GRADUATE STUDENTS**

### **A. Advisors**

A member of the Department's Graduate Committee will advise every graduate student until a Ph.D. supervisory committee is formed. At that time, the thesis or dissertation supervisor becomes the student's advisor. Students are, of course, encouraged to seek advice from any member of the faculty at any time.

### **B. Evaluation of Student Progress**

Students are expected to make timely progress towards their degree objective. Each student will be informed periodically by letters from the Graduate Committee and by their advisors of the faculty's evaluation of their progress. Some issues that are considered by the faculty when evaluating a student's progress are:

- Is the student taking a full load of substantive courses relevant to his/her degree?
- Is the student's grade point average (over all required graduate courses) B or better?
- Does the student show interest in current research through attendance at colloquia and seminars and discussions with faculty members?
- Has the student started his or her research training at the appropriate time?

## C. Grades and the Honor System

Students seeking a Ph.D. are required to have a "B" average (i.e., a GPA of at least 3.00) in the courses taken to satisfy the degree requirement. No special seminar or research course grades will be included in the calculation of this grade average. In some graduate courses a grade of "P" will be given to indicate passing work. It is important to understand that in all 900-level courses, a grade less than a C is considered to be failing; in 800-level courses, a passing grade is B or better unless there is no 300- or 400-level equivalent in which case the passing grade is C. Students receiving grades of D or worse, or those who have failed more than one course in a given semester will be put on academic probation. A student put on academic probation for these reasons who fails to significantly improve his or her grades during the next semester will likely be dismissed from the program. Students with a cumulative GPA less than 2.50 will be put on academic probation. If they fail to raise their cumulative GPA above 2.50 in the next semester, they will be dismissed from the Ph.D. program.

If a student fails a required course, he or she must retake it to remain in the program, but no course may be taken more than twice. Cumulative grade point averages will be based on the highest grade a student receives in a given course. Required courses may not be taken on a Pass/No Pass basis.

In general, students should select a research group to join by the middle of the Spring Semester of their first year; and, if possible, be an RA during the summer in that group after the first academic year. It is important for the student to realize that, until they have finished their required course work, **their first priority is, in fact, coursework**, not research.

Students are expected to abide by the *honor system* for examinations and, as specified, for other assignments. If, for example, an instructor gives a take-home or other examination and a student obtains assistance on the examination from written or verbal sources not explicitly approved by the instructor, the student is in violation of the University's Code of Conduct. (For details see the [Student Code of Conduct](#) in the UNL [Graduate Studies Bulletin](#); see also Section H below, and Appendix A of this document.)

## D. Attending Colloquia and Seminars

**All graduate students are strongly encouraged to attend Colloquium.** Departmental Colloquia are an important part of graduate student education and help to provide students with knowledge of a broad range of topics in physics and astronomy. Colloquium speakers are specifically told that graduate students are a primary audience in Colloquium. As your research interests develop, you are encouraged to attend Seminars, which are more technical talks in specific subfields.

Departmental Colloquia take place on most Thursdays during the fall and spring semesters, and are generally scheduled at 4:00 p.m. in room 136 Jorgensen Hall. Free refreshments will be available in the vending machine area from 3:30 p.m. to 4:00 p.m.

## E. Commencing Research

Physics 998, a one-credit course required of all graduate students during their first fall semester in residence, is designed to introduce students to research in the Department. It comprises 10 or more lectures by our faculty on their research programs. This course must be taken during the first semester of a student's residency unless permission to take it in the second year is granted by the Graduate Committee.

Students are also encouraged to register for non-thesis research. A brief summary of the research interests of the faculty is presented on the Physics and Astronomy website, in the Department's listing in The American Institute of Physics' (AIP) annual book entitled *Graduate Programs in Physics, Astronomy, and Related Fields*, and in the insert from

GradSchoolShopper, containing the information from the AIP book. The latter two are available in the Department office.

## F. Registration

**Graduate students are expected to register during early registration.** If there is some reason why registration cannot be accomplished at that time, the Department office should be notified.

## G. Policy for Withdrawals

Students may not withdraw from courses required for the graduate degree they are pursuing without explicit, written permission from the graduate committee.

We follow the Academic Calendar (<http://registrar.unl.edu/academic-calendar>) to define the deadlines for the “early” and “late” withdrawals. The early withdrawal deadline is found in the Academic Calendar as “Last day to file a drop to remove course from student’s record”. The late withdrawal deadline is found as “Last day to withdraw from one or more courses for the term”.

The consequences of a withdrawal are:

- On or before the early withdrawal deadline:  
*Effect of early withdrawal:* The course has not been taken, and no grade will be recorded.
- On or before the late withdrawal deadline:  
*Effect of late withdrawal:* The course has been taken, and a grade of “W” will be recorded. This “W” will be disregarded in GPA calculations. Required courses may only be taken twice; late withdrawal counts as one of the two attempts.
- *After the late withdrawal deadline:* No withdrawal is allowed.

## H. Distribution of M.S. and Ph.D. Theses and Thesis Abstracts

Two unbound copies of each thesis should be given to Love Library. Graduate students and/or their advisors are also asked to distribute to faculty and other graduate students a copy of the M.S. or Ph.D. Thesis Abstract to better inform the faculty of student progress and to acquaint graduate students with the research being carried out in the Department.

## I. Academic Dishonesty

Graduate students in the Department of Physics and Astronomy historically have displayed a high level of integrity when carrying out classroom assignments and when working on examinations or thesis research. The purpose of the discussion here is to make sure that students are fully informed of faculty expectations in this regard. A fairly complete discussion of what may constitute academic dishonesty and the possible penalties for such dishonesty may be found in the [Graduate Bulletin](#) issued by the Graduate College of the University of Nebraska-Lincoln. This section of the *Graduate Student Handbook* summarizes for graduate students in the Department of Physics and Astronomy some of the main points made in the [Graduate Bulletin](#) regarding academic dishonesty and clarifies some issues regarding penalties for engaging in academic dishonesty.

Any student found guilty of academic dishonesty shall be subject to both academic and disciplinary sanctions. Academic dishonesty includes, but is not limited to, the following:

1. **Cheating.** Copying or attempting to copy from an academic test, examination, or assigned work of another student; using or attempting to use unauthorized materials, information, notes, study aids or other devices for any academic test or assignment.
2. **Fabrication and Falsification.** Falsifying or fabricating any information or citation in any academic exercise, assignment, or examination. Falsification is the alteration of information, while fabrication is the invention or counterfeiting of information.
3. **Plagiarism.** Presenting the work of another as one's own (i.e., without proper acknowledgement of the source) and submitting examinations, theses, reports, or other academic work in whole or in part as one's own when such work has been prepared by another person or copied from another person.
4. **Abuse of Academic Materials.** Destroying, defacing, stealing, or making inaccessible library or other academic resource material.
5. **Complicity in Academic Dishonesty.** Helping or attempting to help another student to commit an act of academic dishonesty.
6. **Falsifying Grade Reports.** Changing or destroying grades, scores or markings on an examination or in an instructor's records.
7. **Misrepresentation to Avoid Academic Work.** Fabricating an excuse such as illness, injury, accident, etc., in order to avoid or delay timely submission of academic work or to avoid or delay the taking of an examination.

For a more complete description of what may constitute academic dishonesty, the student is referred to the current [Graduate Bulletin](#). Penalties for academic dishonesty are discussed in Appendix A.

## VI. TEACHING AND RESEARCH ASSISTANTSHIPS: RULES & BENEFITS

### A. Minimum Registration Requirement

The Department requires that all graduate students holding either a teaching or a research assistantship (TA or RA) be registered for at least 9 credit hours during each semester of the academic year.

### B. English Requirement for ALL Foreign Graduate Teaching Assistants

The statement of the University policy is attached as Appendix B. The University requires all foreign Teaching Assistants to successfully complete an International Teaching Assistant Institute. This three-week-long institute is offered during the latter part of each summer.

### C. Getting Paid

Your salary for your graduate assistantship for the academic year (Aug. - May) is paid out in ten equal monthly payments on the last business day of each month beginning in August and ending in May of the following year. If your appointment is for one semester only, your stipend will be paid out in five equal monthly payments. Summer TAs result in an unusual pay schedule. At the end of June, you get paid for the first half of the first 5-week session. The July paycheck includes the second half of the first 5-week session and the first half of the second 5-week summer session. In August, you get paid for the second half of the second 5-week session. In addition, if you are a TA or RA for the next fall, your salary for that appointment will be included in the August paycheck. See the graduate secretary for questions about paychecks.

## **D. Limitations on Graduate Teaching Assistantship Support**

In order to improve research productivity, decrease the average length of graduate study, and mitigate potential problems arising from the minimum class size policy, the Department limits the extent of TA support as follows:

1. All students are restricted to 12 semesters of full-time TA support after enrolling with a B.S. degree (or UNL equivalent), and eight semesters of full TA support after enrolling with an M.S. degree (or UNL equivalent). Support during the summer is not restricted.
2. If funding is available, students making satisfactory progress will be guaranteed 10 semesters of full-time TA support toward the Ph.D. degree (6 semesters if entering with an M.S. degree) or 5 semesters toward the M.S. degree. Beyond these limits, support will be granted only at the convenience of the Department.

## **E. Tuition Credit**

### **i. During the Academic Year**

To be eligible for tuition waiver, graduate students must have an assistantship or a combination of assistantships that have a combined FTE of at least .33 (13 hours per week) and remain in the assistantship for at least 120 days each semester. Tuition is waived for up to 12 credit hours each semester.

### **ii. During the Summer Sessions**

Students having a graduate assistantship during the academic year may receive tuition credit during the following summer sessions. The amount of tuition credit depends on the level of the academic year graduate assistantship stipend. Details are available from the Main Office, the Graduate Committee Chair, or the Graduate College. Graduate assistants not on appointment for both semesters are not eligible for the summer session tuition credit.

## **F. Social Security Taxes**

Some graduate students unnecessarily pay social security (F.I.C.A.) taxes every summer on their summer income. The Payroll Office (ext. 2-2010) describes the regulations as follows:

1. Foreign Students here on an F-1 or J-1 visa generally do not pay Social Security taxes for the first five years they are attending UNL. Those on F-2, H-1, H-2, or J-2 generally do pay social security taxes. For further information, consult the Payroll Office.
2. Domestic students who have a graduate teaching or research assistantship do not pay Social Security taxes provided they have half-time status. This means that they must be registered for a total of four credits over the course of the summer. Be sure to register for all 4 credits hours no later than June 1<sup>st</sup> to avoid paying Social Security taxes in June. See Jenny Becic for details.

## **G. Full-Time Status**

(See the [Graduate Bulletin](#))

During the summer, students are not required to register for credit hours to maintain graduate student status; however, if they do not register for at least a total of 4 credit hours over the summer sessions as noted above, Social Security and Medicare taxes will be withheld. During the fall and spring semesters, full-time status is 9 credit hours.

## VII. TEACHING ASSISTANTSHIPS: DUTIES AND ADVICE

### A. Duties

Teaching assistants make essential contributions to the Department's teaching program. They are among the few instructors from whom a student obtains guidance in the study of physics and astronomy. These duties are described in detail in the memo entitled, "Teaching Assistant Duties," which is issued by the Vice Chair each August. A recent copy of this memo is appended to this handbook.

A full **TEACHING LOAD** for a teaching assistant includes

1. **Teaching** of three laboratory sections, or six recitations, or some other equivalent assignment. Depending on the Department's schedule of courses, the assignment may be split in a number of ways. Every effort will be made to schedule a teaching assistant in only one course, but this is not always possible. Attendance at laboratory briefings scheduled by the Laboratory Manager is required of students with lab sections.
2. **Tutoring** of undergraduate students taking introductory physics courses (such as Physics 115, 141, 142, 151, 211, 212, 213, 260 and 261) for one hour per week. Teaching assistants are to be present in the Physics Learning Center during the entire assigned hour and are to be prepared to assist the undergraduates with the questions they are likely to ask. They should feel free to seek help from others if needed.
3. **Proctoring** of examinations. Proctoring assignments are made at the beginning of the year. It is your responsibility to contact the professor or instructor for whom you will be proctoring to receiving information about the assignment.
4. **Grading** of examinations. Course lecturers are to distribute the grading work load equitably among the faculty and teaching assistants assigned to them, taking into account the number of recitation sections taught by each instructor.

According to the Bylaws of the Board of Regents it is the responsibility of every faculty member "to fulfill the assigned time schedule of all classes, including quizzes, laboratories, tests, and other meetings unless absence is caused by an emergency or approved University business." Teaching assistants have the same responsibilities. For teaching assistants, the "**assigned time schedule**" includes assigned grading, proctoring, and tutoring duties as well as scheduled recitation and laboratory teaching.

All incoming graduate students are required to take part in TA Training which is held the week before the beginning of fall classes. All teaching assistants are expected to be present in the Department during **General Registration**, which occurs on the Thursday and Friday immediately before the first day of classes for both fall and spring semesters. Assistants will be notified of their duties through their Department mailboxes and/or by email. Mailboxes and email should be checked frequently, especially at the beginning of the semester.

If a student will be away on University business or unavoidably absent for other reasons, **he/she has the responsibility to arrange for a replacement for his/her teaching responsibilities**, as detailed in the Teaching Assistant Responsibilities Policy, which is appended to this handbook or is available in the Department office. These arrangements must be satisfactory to the lecturer for the course (in the case of recitation teaching and/or grading and proctoring assignments) and/or to the laboratory manager (in the case of laboratory teaching).

In the case of an absence caused by an **emergency**, the teaching assistant should notify the course instructor **and** the Department office as soon as possible. If a teaching assistant knows beforehand of an unavoidable absence, he/she is expected to proceed as described in the previous paragraph.

The duties of a teaching assistant are not complete until the grades for the course he/she has been teaching have been filed or posted. The Academic Senate has proclaimed that all grades must be completed and filed within 5 working days of the final examination. The teaching assistant is expected to have the grades ready at the time specified by the course lecturer and to be available for consultations with the lecturer until the course grades have been filed.

Yearly **renewal** of a teaching assistantship is based on:

1. Satisfactorily meeting the obligations of a teaching assistant.
2. Satisfactory progress toward a degree.
3. Availability of funds.

## **B. Recommended Procedures**

### **i. Preparing for Class**

When preparing for a class, an assistant should read and understand the assigned material, work the assigned problems, and be thoroughly prepared. Nevertheless, situations may arise in which the assistant is unable to respond correctly to some reasonable question. In such situations it is usually best to admit one's difficulty and have the needed information available at the next class meeting.

### **ii. Holding Office Hours**

Each full-time teaching assistant is required to have three office hours per week.

### **iii. Proctoring of Examinations**

Due to scheduling of classes, you may proctor exams for courses other than the ones for which you are teaching. The following procedures should be followed:

1. Proctors should contact the course instructor to whom they are assigned at least 2 days before the exam in order to find out when and where their services are required. They will be expected to be available 10 to 20 minutes before the examination begins.
2. Proctors should see that students' seats are uncluttered and that all books, papers and other material are deposited at the front of the room.
3. Students' seating should be arranged so that communication between them is minimized.
4. A count of the number of students taking the examination should be taken at least twice. Attendance should be taken when seats have been assigned.
5. At the beginning of the examination, the number of problems and the number of pages on the exam should be announced so that each student can tell whether his or her exam is complete.
6. Proctors should remain alert to what is happening in the examination room.
7. Proctors should be ready to clarify questions the students may have about the examination, without actually solving the problems.
8. When the examination is over, but before leaving the room, the proctor should count the number of papers turned in. If it differs from the number of students, check the room for fallen or misplaced exams, compare the tests turned in with the attendance roster, etc.

9. Any suspected cases of improper student conduct during an examination should be reported to the instructor in charge with all of the evidence collected. Do not make any accusations during the examination period.

#### **iv. Grading of Examinations**

1. When grading, it is important to establish a grading pattern by first looking at several papers, so that consistent and fair results can be obtained.
2. Whenever justifiable, give partial credit for incomplete or incorrect solutions to a problem. Do not penalize the student for continuing initial errors. For example, if a student uses the diameter for the radius in a problem, deduct for this error only once and not again, even if this mistake is repeated elsewhere in the same problem.
3. Papers should be marked in such a fashion that the instructor can detect modifications made by the students after the papers have been returned to them.

### **C. Graduate Student Teaching Award**

The department has established the *distinguished teaching assistant* award to recognize the important role that graduate TAs play in the department's mission. The award is given each spring at the department's Recognition Luncheon.

## **VIII. PHYSICAL FACILITIES**

The Department of Physics and Astronomy occupies Jorgensen Hall, Behlen Laboratory (the Diocles Laser), and Behlen Observatory at Mead, Nebraska. The various Departmental facilities and their locations are as follows:

### **A. Departmental Offices**

The Department Chair and his/her administrative assistant have offices in 208B and 208A Jorgensen Hall adjoining the main Department office in 208 Jorgensen Hall. The Department's business office is in 208.2. The photocopy machine and the mailboxes are in the "mailroom" which is Jorgensen Hall 214.

### **B. Physics Learning Center**

Graduate students are assigned to serve as tutors during various hours of the week in the Learning Center (253 Jorgensen Hall).

### **C. Lecture Halls**

The two lecture rooms used for large-enrollment introductory physics courses are Jorgensen 110 (reserved through UNL Registration and Records) and 136 (reserved in the Physics Department Office). Both rooms seat 150.

### **D. Introductory Laboratories**

Laboratories for all of the lower-level physics courses are held in the various rooms on the north half, first floor of Jorgensen Hall. The office of the Laboratory Manager is 139 Jorgensen Hall.

### **E. Advanced Undergraduate Laboratories**

Jorgensen 241 and 233 house the advanced undergraduate laboratories.

## **F. Conference/Seminar Rooms**

Jorgensen 207, 309, 338 and 071 are available for seminars and can also be used as conference rooms. Reservations for their use should be made with the secretaries in the Department Main Office.

## **G. Meeting Room**

Faculty, staff, graduate students, and undergraduate physics majors may use the meeting room, Jorgensen 207, for informal meetings.

## **H. External Research Laboratories**

Professors doing experimental work maintain laboratories in the two buildings housing the Department on campus (Jorgensen Hall & Behlen Lab). Off-campus research is carried out at:

- Fermi National Accelerator Laboratory (near Chicago)
- The Large Hadron Collider at CERN (in Switzerland)
- The Advanced Light Source at Lawrence Berkeley Laboratory, Berkeley, CA
- The Center for Advanced Microstructures (in Louisiana)
- The Behlen Observatory (near Mead, NE)
- Thomas Jefferson National Laboratory, Newport News, VA

## **I. Lecture Demonstration Apparatus**

The office of the lecture demonstrations manager is in Jorgensen 134A. Demonstration apparatus is stored and assembled in that room.

## **J. Electronics Shop**

The Electronics Shop is located in 356 Jorgensen Hall.

## **K. Instrument and Student Shops**

The Department maintains a fully-equipped instrument shop in Jorgensen 177 as well as a student shop in Jorgensen 175. The machines in the main shop are to be operated only by the shop staff, but those in the student shop may be used for Departmental work by students authorized by a member of the faculty. For safety reasons, students may use the machines only after being trained by the student shop machinist and passing a safety test. Students must always have a second person in the shop at all times ("buddy" system) when they are working.

## Appendix A:

### **PENALTIES FOR ACADEMIC DISHONESTY**

The academic and disciplinary sanctions which may be imposed on an individual who has engaged in academic dishonesty vary with the kind and extent of the dishonesty. In what follows, some possible sanctions are presented in specific instances. It should be noted that the Bylaws of the Department of Physics and Astronomy require a discussion and vote by the faculty of the Department if a student is to be expelled from the graduate program.

An individual who engages in academic dishonesty in a particular course will face penalties at the discretion of the faculty member teaching the course. These penalties may range from failing the assignment or examination to failing the course. Regardless of the degree of the penalties he/she has assessed, the faculty member will report the nature of the infraction to the Graduate Committee of the Department of Physics and Astronomy. The Graduate Committee may, after investigation, impose further penalties or sanctions, up to and including expulsion from the graduate program (with faculty consent and approval).

An individual who engages in academic dishonesty during the Preliminary Exam will normally be expelled from the graduate program. The extent and degree of academic dishonesty will be investigated as fully as possible, and the Graduate Committee will recommend penalties to the faculty of the Department for their discussion and decision.

An individual who engages in academic dishonesty while carrying out the research for an M.S. thesis, or in presenting the results of such research, will normally be expelled from the graduate program. The student's advisor will report the nature of the academic dishonesty to the Graduate Committee. The Graduate Committee will then investigate the extent and degree of academic dishonesty as fully as possible and make a recommendation regarding expulsion from the graduate program to the faculty of the Department.

An individual who engages in academic dishonesty while carrying out research for a Ph.D. dissertation, or in presenting the results of such research, or when taking the Comprehensive Examination, will normally be expelled from the graduate program. The student's Supervisory Committee will investigate, as fully as possible, the extent and degree of the academic dishonesty and report its findings to the Graduate Committee. After completing its own investigation and deliberations, the Graduate Committee will make a recommendation regarding expulsion from the graduate program to the faculty of the Department.

## **Appendix B:**

### **POLICY FOR AWARDING TEACHING ASSISTANTSHIPS TO FOREIGN GRADUATE STUDENTS**

#### **Introduction**

Concerns over the verbal communication skills of some of our foreign graduate teaching assistants arise on occasion. This long-standing issue has received considerable attention at UNL. The following policy is not designed to eliminate all speaking accents, but to ensure that all of our foreign graduate teaching assistants possess effective verbal communication skills.

#### **Policy Statement**

A foreign student may be awarded a Graduate Teaching Assistantship (GTA) involving classroom or laboratory contact with students only if the foreign student:

1. has been admitted to a degree program in the Graduate College, and
2. has successfully completed the International Teaching Assistant Institute offered at UNL.

Note that all foreign students, whether or not they wish to be TAs, must take the UNL English Placement Examination (EPE) on arrival on campus and must take any subsequently required English coursework. If a student is a native of a country in which English is the only national language, and English is the student's original language, both the EPE and requirement (2) above for TAs may be waived. Other criteria that must be considered by the Department Chair when appointing and reappointing Graduate Teaching Assistants include, of course, knowledge of the material, good teaching skills, etc.

## Appendix C: USING THE COPIER

- **Who Can Use the Copier?** Anyone who works in the department can charge copies to a grant number for research or teaching uses. People who work in the Physics and Astronomy Department can make copies for personal use. These copies are tallied approximately once a month and a bill delivered to your departmental mailbox.
- **Research- and Teaching-Related Copies.** The copy machine uses code numbers for all teaching and research accounts. These numbers are available from the office staff. If you don't know the grant number to use, contact your advisor or supervisor, someone in the Business Office or someone in the Department Office for assistance.
- **Personal Copies:** A clipboard with a list of names and "Personal Xeroxing" across the top is located on the table next to the copy machine. This is the place to record the personal copies you make. Please note the number of copies very clearly next to your name. We have had problems in the past with people writing copies under other people's names. The list of names is in alphabetical order based on the last name. If you do not see your name on the list, write your name and the number of copies you made at the bottom of the last page on the clipboard.

If you have a question as to whether your copies should be recorded as departmental or personal, consult the person you work for or see someone in the Department Office.

**Copiers do not last forever.** A few suggestions on how to extend the life of our copier:

- Make sure the lid is closed completely before you copy.
- Do not copy papers that may leave marks on the glass, such as papers with white-out that is still wet.
- Do not put ink-jet printouts in the automatic feeder.
- Be careful not to put anything on the photocopy surface that could scratch the glass. The scratch will be reproduced on everything copied on the machine!
- Do not use any transparencies in the photocopier that aren't specifically marked for use in photocopiers. The photocopier uses a great deal of heat to set toner, and thin transparencies will melt in the copier, causing a gooey mess and necessitating a service call.
- If you aren't sure how to use the machine, ask one of the department staff for assistance.
- If the copier needs toner, paper, etc., notify the office staff and they will handle the maintenance.
- Unless your research is in the area of copier repair, don't try to fix the copier if it breaks. Report all problems to the department office.

## Appendix D: BRIEF HISTORY OF THE DEPARTMENT

The founder of this Department over a century ago was DeWitt Bristol Brace, who came to Nebraska in 1887, after receiving his doctoral degree in Germany under Hermann Helmholtz. The following year the Department was established with Brace as chairman. Under his leadership it grew rapidly both in facilities and in reputation for scholarly research.

Brace was able to do forefront research that was recognized by contemporaries around the world, despite being handicapped by a lack of funds. One of his projects was to measure the effect of motion on the double refraction of light, a subject of intense interest at the time because of its bearing on the question of the luminiferous ether, alleged to pervade space. This work was one of four experiments that disproved the ether theory and as such may have influenced Einstein in his development of the theory of relativity. In 1901, Brace was elected Vice President of the American Physical Society (APS). His untimely death in 1905 brought a very promising career to an end (and prevented him from serving as President of the APS). At the time of his death, tributes came to the University from many prominent scientists, including Nobel Laureate Ernest Rutherford.

Although a Ph.D. in physics was awarded in 1896 (which was the first Ph.D. in the U.S. west of the Mississippi), the present Ph.D. program in physics was initiated after World War II and the first degrees were awarded in 1953.

The Department's circumstances improved dramatically in the 1960's when two major grants stimulated substantial growth in the size of the Department as well as in the scope of its research and teaching activities. A sum of \$1.25 million comprised of a National Science Foundation grant, a gift from the Behlen family of Columbus, Nebraska, and University funds, permitted the construction of Behlen Laboratory of Physics, which was dedicated in 1965. Then in September 1969 the Department received an \$811,000 grant from the National Science Foundation's Science Development Program to increase the size of its permanent staff from 19 to 29. At the same time, new equipment was purchased and additional personnel were added to the shops. Further expansion occurred in 1971 when the Department took over part of Ferguson Hall.

The study of astronomy at Nebraska began in 1894 when Professor Goodwin D. Swezey came here from Doane College. The modern program, however, began in the early 1970's when four astronomy faculty members were hired and the Behlen Observatory was built. The Observatory, completed in 1972 at the Mead Field Laboratory, was made possible by a \$300,000 grant from the Behlen family. The Observatory facilities are continually updated and now include full computer control and modern digital imaging technology.

The Department has approximately 30 faculty members. The largest research groups are in Atomic, Molecular, Optical, and Plasma Physics, Condensed Matter Physics, and High Energy Physics. An overview of the Department's research programs, grant and contract funding, and research facilities is provided in the annual A.I.P. listing for the Department as well as in the Department's *Graduate Studies and Research* booklet, both of which are available from the Department Main Office 208 Jorgensen Hall.

In May 2010, the Physics & Astronomy Department moved into its new building, Theodore Jorgensen Hall, named for Ted Jorgensen, who was a University of Nebraska physics graduate and professor.

Professor Jorgensen was born in Connecticut but grew up on the sparsely populated region of northwestern South Dakota. His parents were the only source of his education before he enrolled at the University of Nebraska in 1923. He and a friend had ridden their motorcycles to Lincoln. By 1935 he had earned two degrees at Nebraska and a Ph.D. in physics from Harvard University. While he was at Harvard he mastered the techniques of Chinese cooking, something he was well known for.

He was on the faculty at Nebraska from 1938 to 1975 except for a three-year interval in the 1940s when he was invited to Chicago and later to Los Alamos, NM to join the group of scientists assembled to develop an atomic bomb.

Jorgensen's research on the Manhattan Project gave him ideas for areas of research in atomic collision that required the use of an ion accelerator which he built with the help of two graduate students and the department machinist. Jorgensen obtained support from the Atomic Energy Commission and many students and faculty members utilized the accelerator. The work started by Jorgensen brought Nebraska to the forefront of atomic collision research.

Professor Jorgensen was well liked as a teacher and was the first in the department to receive a Distinguished Teaching Award. He was department chairman for three years. In 1994 he published a book on the physics of golf that was so popular that it was translated into other languages. He was 100 when he died in 2006.

A *Teaching Assistantship* (TA) is intended to contribute to the department's teaching responsibilities and to your professional development. Your compensation and your continuation in the program depend in part upon your performance as a TA. As University employees, you are expected to adhere to all applicable policies and procedures, including those described in this document and at <http://www.unl.edu/gradstudies/current/funding>.

- **TA Categories:** TAs fall into one of three categories as follows:
  - GTA = Graduate student Teaching Assistant
  - UTA = Undergraduate student Teaching Assistant
  - OTA = Other Teaching Assistant
  
- **TA Supervisors**
  - Cliff Bettis - TA Manager (JH 134A, 2-2789, [cbettis@unlserve.unl.edu](mailto:cbettis@unlserve.unl.edu))
  - Shawn Langan - Laboratory Manager (JH 139, 2-2199, [palab@unlnotes.unl.edu](mailto:palab@unlnotes.unl.edu))
  
- **Department Administrators**
  - Dan Claes - Department Chair (JH 258G or 208, 2-2783, [dclaes@unlhhep.unl.edu](mailto:dclaes@unlhhep.unl.edu))
  - Bradley Shadwick - Vice Chair (instruction, JH 310N, 2-3578, [shadwick@unl.edu](mailto:shadwick@unl.edu))
  - Kees Uiterwaal - Graduate Chair (graduate advising, JH077, 2-9010, [cuiterwaal2@unl.edu](mailto:cuiterwaal2@unl.edu))
  - Ken Bloom - Undergraduate Chair (undergrad advising, 258E, 2-6093, [kenbloom@unl.edu](mailto:kenbloom@unl.edu))
  
- **Department Office** (JH 208, 472-2770, [paoffice@unl.edu](mailto:paoffice@unl.edu))
  - Cyndy Petersen - Department Secretary (general questions, registration, scheduling, tutoring room)
  - Jenny Becic - Graduate Secretary (graduate programs, graduate student payroll)
  - Amanda Lager - Office Associate (maintains department website, assist with [Spectrum](#) newsletter, provide office support to various department committees)
  
- **Teaching Assignments**

You will be assigned to teach laboratories, teach recitations, set up labs, do course grading, or some combination of these. A *Full TA* (6 units) is expected to work *19.6 hours/week on average*. If you find that you are spending more time than this, discuss it with your supervisor or the Vice Chair. Your work assignment begins the week before classes and ends only after you have completed all of your assignments, usually by the end of finals. You may not arrange to leave for break or vacation until after finals are over. Due to likely visa problems, we strongly recommend that International Students *not* travel abroad during the winter break.

### Typical Assignments (supervisor):

- One **laboratory** section = 2 units (Laboratory Manager)
- One **recitation** section = 1+ units (Course Instructor)
- One **laboratory setup** = 1 unit (Laboratory Manager)
- Course **grading** = varies as assigned (Course Instructor)

### • Other Duties (supervisor):

Office Hours (TA Manager): Most TAs are required to hold office hours *each week* in the Physics Learning Center (JH 253). The number of hours depends on your specific assignment—up to 1 hour per week for 1/3 and 1/2 TAs, and up to 2 hours per week for 2/3 and full TAs. You must attend all office hours, or arrange a substitute. The purpose of office hours is to provide help any student who comes in - though you should give priority to your own students. The office hour schedule will be distributed during the first week of classes. You must sign in at the main office (JH 208) at the beginning of *each* assigned office hour.

Exam Proctoring (TA Manager): You will be scheduled to assist with administering exams several times per semester. This will not necessarily be for the same course as your teaching assignment.

Grading (Course Instructor): You are expected to complete weekly grading for assigned labs. and/or recitations.

Lab Training (Laboratory Manager): You are expected to participate in weekly lab-training meetings for your course (141, 142, 221, 222, 223).

### • Guidelines and Procedures:

General: Find out what your duties are. Check in with your supervisor(s) frequently. *Be prepared, be on time, be engaged* in class, office hours, etc. Complete out-of-class duties (e.g., grading) promptly & thoroughly.

Learning Center: (JH 253)

Sign in for each session in the main office. Help students; do not work problems for them.

The *students* are responsible for bringing a copy of the assignment and the text.

Help students from your recitations or labs first, then any others that come by.

Proctoring: You are responsible for contacting the Course Instructor at least *one week in advance* of a scheduled exam. They will instruct you when and where to meet. The exam may not be in the same location as the class, so be sure you know the room, building and time. Consult a campus map if the exam is held in a building unfamiliar to you.

Paid Tutoring: The Department does not arrange or coordinate paid tutoring. You may, however, engage in tutoring for pay, subject to the following conditions.

1. You *may not* accept payment for tutoring from students in classes that you are assigned to teach or for which you are assigned grading.
2. Due to immigration regulations, you *may not* be employed by non-UNL entities (including private tutoring) if you are an international student.
3. You *may not* tutor for pay in the Learning Center (JH 253) or in your office.
4. You *may* apply to have your name included on the Departmental list of qualified tutors.
5. You *must* obtain written permission from your research supervisor before you begin paid tutoring.
6. You *must* inform the Vice Chair before you begin paid tutoring.

- **Attendance Policy:**

You are required to complete all of your assigned teaching duties as scheduled. These duties may include any or all of the following: laboratory or recitation classes; training; office hours; grading; meeting with your supervisor; or exam proctoring. Your appointment begins *one week* before classes start and ends the last day of finals. You are expected to be available and ready for work any and all weekdays except for specified University Holidays (<http://hr.unl.edu/general/holidayschedule.shtml>). If you are not a US citizen or permanent resident - do not travel outside the country between semesters because delays in handling your visa are very likely, causing you to return late, in which event you may lose your TA for the Spring Semester.

Under very limited circumstances, you may request to be excused from teaching to fulfill a professional obligation, such as to attend a research conference. There are three very important limitations to these excused absences.

- i) It is *your responsibility* to arrange for a suitable substitute.
- ii) This option is limited to one absence, for a maximum of one week, each semester.
- iii) You may not be excused during the first or last week of classes. ***Under no circumstances are you to cancel, dismiss, or reschedule class.***

You must inform the supervisor(s) (lab, recitation, and grading) of the activities that will be affected by your planned absence and obtain their approval at least two weeks in advance. Your teaching responsibilities take precedence over other activities; do not assume that an absence will be automatically approved.

If some *unforeseen and unavoidable* circumstance, such as illness or accident, prevents you from teaching your assigned classes or other TA duties, you must inform Shawn Langan ([slangan@unl.edu](mailto:slangan@unl.edu) or 2-2199) as soon as you are able. If you are unable to reach him, contact the Department Office (472-2770, [cpetersen3@unl.edu](mailto:cpetersen3@unl.edu) or [jbecic2@unl.edu](mailto:jbecic2@unl.edu) ). ***Do not cancel or dismiss the class.***

- **Mailboxes/E-mail:**

Check your mailbox and e-mail regularly - at least once a day. The graduate student mailboxes are in JH 214, grouped alphabetically in the center section of the west wall. Notify the Main Office (JH 208, 472-2770, paoffice@unl.edu) immediately if your contact information changes. **Much of our communications with you regarding teaching assignments and the like will be by email. It is essential that we have your correct email address on file.**

- **Talk to us:**

We want your teaching experience to be as enjoyable and rewarding as possible. We welcome questions or discussion about any aspect of your teaching duties and studies. Consult the Vice Chair (Brad Shadwick) for clarification about the duties, policies, and procedures described in this document.