

UCSC PHYSICS GRADUATE STUDENT HANDBOOK

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ADMINISTRATORS, COMMITTEES and ADVISORS

Judy Hobor is currently the Graduate Program Advisor for Physics. She is located in ISB 211, 459-4122, jahobor@ucsc.edu

The Graduate Advisor is the primary contact in the Physics Department Office for Graduate Students and Graduate Program issues. When you first join the program, she can help you get started. Please feel free, at any time, to ask her for help to find your way around, do the things you need to do, get enrolled/registered, handle financial aid issues, understand policies and procedures, degree and program requirements and other issues. She is here to support you and your studies. Her goal is to help you get through the program as smoothly, quickly, and easily as possible. If she doesn't know the answer to your question, she can refer you to someone who can help you.

Staying in touch and keeping Judy informed helps her to help you through the program. Please contact Judy as soon as possible when things change such as your advisor, employment and research plans and assignments, home or physics department address, phone and email information. It's also a good idea to contact her when you are considering, approaching and/or passing milestones in your studies such as completing degree course requirements, taking qualifying exams, oral exams and preparing to present your MS thesis or defend your PhD dissertation. Check with her regarding requirements. She can often help you avoid unpleasant surprises and disappointments.

If you want the Graduate Committee to discuss an issue, just let the Graduate Advisor know and she will see that it gets on their agenda; you can, of course, also contact Graduate Committee Members directly.

Physics Graduate Faculty Committee (2003-2004)

Dave Belanger, ISB 245, 459-2871, dave@dave.ucsc.edu

Michael Dine, ISB 329, 459-3033, dine@scipp.ucsc.edu

Peter Young, ISB 221, 459-4151, peter@bartok.ucsc.edu

Dave Williams, NS II 318, 459-3032, daw@scipp.ucsc.edu
Sue Carter, NS II 349, 459-3657, sacarter@ucsc.edu

The Graduate Committee is responsible for overseeing the Graduate Program. Please contact them if you have questions or concerns about the program. They genuinely care about the success of each and every graduate student and about the improvement of our graduate program. They can be a wonderful resource. Contact them early if you're having any difficulties; don't wait for things to become critical. The Graduate Committee members really are on "your side". They are here to help.

Graduate Student Committee (2003-2004)

Brandon Allgood, ISB 103, 459-4739, allgood@physics.ucsc.edu
Christian Flacco, NSII 387, 459-3242, cflacco@scipp.ucsc.edu
Michael Wilson, NSII 387, 459-3242, mwilson@scipp.ucsc.edu
Lisa Downward, NSII 308, 459-4588, lmd@physics.ucsc.edu
(Lisa is also the Physics Representative for the Graduate Student Association on campus. For more information on that group, contact her or visit the UCSC Graduate Student Association web site.

Graduate students are an important part of the department and they contribute a great deal to the department. The Graduate Student Committee facilitates interaction between graduate students and faculty and represents graduate students in the decision making processes of the department. The Graduate Student Committee serves to keep graduate students informed about departmental and graduate student issues, to represent the graduate students to the faculty and the graduate committee, and to provide a forum for graduate students to discuss issues and concerns relating to their graduate education. New members are always welcome. Contact any member of the Graduate Student Committee with comments, questions, or concerns.

Physics Department Chair

David Belanger, ISB 245, 459-2871, dave@dave.ucsc.edu

SCIPP Director(Santa Cruz Institute for Particle Physics) Abe Seiden, Natural Sciences II 333, 459-2923, abs@scipp.ucsc.edu

Physics Department Program Assistants

Judy Hobor, ISB 211, 459-4122, jahobor@ucsc.edu , Graduate Advisor
Julie Reiner, ISB 211, 459-3744, julier@ucsc.edu, Department Assistant
Hua Vang, ISB 211, 459-2329, hvang@ucsc.edu, Undergraduate Advisor

Along with their many other duties, such as keeping the Physics Department Office running well and advising undergraduates, Hua Vang and Julie Reiner support physics

courses in just about every way you can imagine, from initial course preparations such as ordering textbooks to coordinating grading and evaluations. If you are a TA you will be working very closely with them on the course that you TA. Julie handles textbook ordering and can help you find current texts and instructor desk copies that you may need for your TA work. Good communication (don't be afraid to ask a million questions) will pave the way to a smooth TA experience for you, your students, and the Program Assistants.

Physics Department Office Manager

Lin Weyers, ISB 219, 459-4121, lin@ucsc.edu††

Lin Weyers, the Physics Department Office Manager, oversees the work of the Department Office, supports the Physics Department in many different ways, and deals with the "big issues" such as accounting, personnel/payroll, office space, and facilities issues.

Santa Cruz Institute for Particle Physics Staff

SCIPP Office: 337 Natural Sciences II Building
Georgia Hamel, NSII 335, 459-2635, georgia@scipp.ucsc.edu

Georgia is a great resource for students working with SCIPP (the Santa Cruz Institute for Particle Physics). She can help you find your way around SCIPP and SCIPP research projects, policies and procedures as well as support you and your SCIPP research in many, many ways.

Your Physics Department Advisor

Every graduate student is assigned an initial faculty advisor when they enter the program. Students may request a change in their advisor at any time. Once a student begins research, the research advisor is usually becomes the official advisor. If a student's research advisor is in another department, the student will still have a departmental advisor on the Physics Department faculty. To change your advisor, contact the Graduate Program Assistant, who will, with the approval of your past and proposed advisors, make the change in your records.

It is important that you meet with your advisor every quarter to discuss your goals, coursework and expectations. Your advisor can provide a wealth of information, from his/her years of experience, about the "real world" aspects of the program.. Your advisor is your personal consultant on academic matters and serves as a liaison between you and the Physics Department in procedural matters. Advisors can discuss the program with you and provide guidance regarding coursework, They can consult with you about degree and other program requirements, provide a sounding board about your research, consult with you about financial aid and other financial support, help you create a long term

strategy for accomplishing your goals, help you stay on track and advise you about your career options.

Advisors can also assist and advise you if you run into problems, and they can help you to identify potential problems, whether that is with your courses, research, funding, employment, registration/billing, personal needs, or other matters. top of page

NOTES ON POLICIES AND PROCEDURES

New Graduate Student Orientations

The Physics Department conducts an orientation for new graduate students every fall prior to the start of instruction. This orientation includes information about the department, research groups, events, financial support. Resources, pressing needs and practical items as well as a question and answer period. T/A and R/A hiring is also discussed at the orientation meeting. Key payroll personnel will be available to sign you up for employment and answer your questions.

The UCSC Division of Graduate Studies also conducts an orientation for new graduate students every fall just prior to the start of instruction. This orientation will acquaint you with campus information and services beyond the department. In addition the Chancellor's Office has a University-wide reception for all graduate students on campus, a good time to meet other students.

Recently the Center for Teaching Excellence has added a workshop for new TAs to help them with issues and questions regarding teaching on campus. Also this group offers monthly brown bag lunches for new and continuing TAs to keep addressing concerns as they arrive. Degree and Program Requirements

Study the Graduate Student Handbook (Campus-wide requirements) and the Policies and procedures for Graduate Students in Physics (Department requirements) closely. Confirm, using these official documents, any program and degree requirement information given to you by others (your advisor, other faculty and students). Check with the Graduate Program Assistant to confirm information. The Graduate Program Assistant is very aware of the policies and happy to do all she can to help you avoid unpleasant surprises.

Preparing for the Quals

Many students have asked: "What is covered on the qualifying exam?" The exam has five sections: Classical Mechanics (at an advanced undergraduate level), Electricity & Magnetism, Quantum Mechanics, Statistical Mechanics and Mathematical Physics. It is a closed-book exam, with one sheet of information (formulae, equations, etc.) provided. It is necessary to pass each section with a score of 50% or better, usually calculated by a certain number of points per problem. It is not necessary for a student to retake any section which they complete successfully. Students are required to take all unpassed sections of the exam each time the exam is offered or forfeit that attempt. Students are expected to pass the exam prior to their second year but are allowed an additional (last

chance) attempt prior to their third year. For more information see the Policies and Procedures section regarding the Qualifying Exam.

We provide students who will be taking the exam with copies of several past exams. Sections of the exam may vary year to year in subject matter and difficulty. Such variation is inevitable. It is impossible to give a reliable, complete list of topics which the exam may cover, but any student who has truly mastered the following material will almost certainly pass the exam: (see our scanned copies of past exams at <http://physics.ucsc.edu/exam>, password is phd)

I. Mechanics: Marion and Thornton, Classical Dynamics, (all chapters). This is an undergraduate level text, used in many universities in the junior year.

II. Electricity and Magnetism: Jackson, Classical Electrodynamics, esp. chapters 1-9, 11-14 (in principle, anything in the text may be covered in the exam).

III. Quantum Mechanics: Shankar, Quantum Mechanics, entire text. One might want to supplement this with some text with a more extensive treatment of topics such as scattering theory and perturbation theory, with more physical examples. Possible texts include those of Sakurai and Baym.

IV. Mathematical Methods of Physics: This is covered at an advanced undergraduate level. Suitable texts include those of Boas and of Arfken, in their entirety. This section tends to be somewhat unpredictable, but it is good to have a mastery of elementary differential equations, complex variables (particularly contour integration, and topics such as convergence of series, etc.). Topics like Laplace transforms, Fourier analysis, and the like appear with some regularity. You won't be expected to remember long formulas about special functions, but you might be given information (e.g. recursion relations, integral representations) and be expected to manipulate it to derive results.

V. Statistical Mechanics: Wannier, Statistical Mechanics, and Plischke and Bergersen, "Equilibrium Statistical Physics". This section is covered at the graduate level although many problems can be solved with an undergraduate level of understanding.

Some advice on preparation:

1. Allow plenty of time. The summer prior to the exam, you should try to minimize other commitments (research, travel, etc.). Plenty means a great deal -- the equivalent of many weeks, full time.

2. Don't expect that you will master material by reading. It is important to work problems, from small exercises, to textbook problems and past exams. All studying should be done with pen and paper in hand. Invent exercises: derive formulas in texts, apply them to familiar day to day problems, etc. It is a good idea to spend some of your time studying with your friends. This will give you feedback on problems, and is also fun and good for your morale.

3. Try to take a positive view of this experience. This is the last time you will be encouraged to take a broad view of physics. It is an opportunity to fill in gaps in your knowledge, explore material you didn't learn well in the past, read books that you have always wanted to (e.g. some students study the Feynman lectures while preparing).

4. Other Graduate Students have undergraduate texts which they like, have access to exams from other institutions, and pointed out that some of the material above (e.g. particular chapters of texts) has not been covered in past exams. I urge you to consult with your fellow students about strategies for preparing for the exam.

Important note: Remember that none of the material above comes with absolute guarantees. You will probably study material which will not be tested, and you will probably wish you had studied some material which you don't have time to study.

Your First Year: Courses & TA/RA

Your primary focus during the first year of the program will be attending courses and fulfilling your TA or RA employment responsibilities. A typical load is three graduate level physics courses per quarter plus Physics 292. Physics 292 is our weekly Colloquium and a 0-unit course; problems relating to topics from the weekly Colloquium may appear on the Qualifying Exam. Physics 297/298/299 RA courses (if you have been assigned as a TA or RA for the quarter) may satisfy one of the courses required. In addition, all first year graduate students are required to take Physics 205 in the winter quarter; in this 2-unit course, UCSC faculty give lectures on their current areas of physics research. The first year courses are as follows: FALL ††††††††††††††

Physics 210 - Classical Mechanics

Physics 212 - Electromagnetism I

Physics 292 - Colloquium

WINTER ††††††††

Physics 205 - Introduction to Research in Physics

Physics 214 - Electromagnetism II or PHYS213 E&M and Plasma Physics

Physics 215 - Introduction to Non-Relativistic Quantum Mechanics

Physics 292 - Colloquium

SPRING

Physics 216 - Advanced Topics in Non-Relativistic Quantum Mechanics

Physics 219 - Statistical Physics

Physics 292 - Colloquium

All first year courses, unless you are specifically exempted by petitioning the Graduate Committee, are required for the PhD degree. All PhD graduate students are expected to take all of these courses in your first year of study. Passing the related section of the qualifying exam prior to your first year of study does not mean that you should not take that graduate level course. These courses cover a great deal of material not covered in the qualifying exam. Please discuss your course schedule with your advisor once and also

feel free to contact the Graduate Program Assistant about the courses offered or your course schedule.

If you are a Masterís student, you are required to take eight physics courses, not necessarily all the courses listed above for the PhD students. However, if you intend on trying to pass the qualifying exams, the Graduate Committee strongly recommends that you take the courses required for the PhD students. Your course selection is still subject to review by your advisor and approval by the Graduate Committee.

Course Descriptions for all Physics Undergrad and Graduate Level Courses can be found in the UCSC Catalog. Normal Steps to Completing Degrees: Years 2-5

The normal steps to completing a Ph.D. are Coursework (1st year) , Written Ph.D. Qualifying Exam, Advanced Coursework, Research, Oral Ph.D. Qualifying Exam (approximately one year. after Written PhD Qualifying Exam is passed), Advancement to Candidacy, Thesis Research, Dissertation Preparation, Defense (usually within 5 years of starting the program), PhD.

In general, the second year of the PhD program will include more advanced coursework and beginning your research. It is hoped that a student will pass the Written Ph.D. Qualifying Exam by the start of the second year at which time a student should begin looking for a research advisor. The Oral Qualifying Exam is generally passed one year after the Written Ph.D. Qualifying Exam. In general, students conduct their thesis research in years 3-5. Students generally finish their PhD in 5 years.

The normal steps to completing a Masterís Degree are Coursework, Thesis Research, Thesis Preparation and Thesis Presentation (usually within 2 years of starting the program); successful completion of four out of five sections of the Written Ph.D. Qualifying Exam will waive the Thesis requirement. Masters students generally complete MS course requirements in the first 4 quarters and complete their thesis research by the end of the second year. PhD students generally complete their Masterís degree on their way to the PhD, by passing the qualifying exam and fulfilling the course requirements in their second year.

Physics Department Informal Complaint Resolution Process

There are many avenues available to students who have concerns about the Graduate Program and/or their experience as a graduate student. Students are actively encouraged to make suggestions and give feedback about the program. Different students will feel comfortable addressing their concerns in different ways. We seek to provide a variety of options to resolve issues. One option is to discuss one's concerns with one's advisor. In addition, the Graduate Committee gives prompt attention to all graduate student concerns. Students can discuss issues with individual Graduate Committee members and/or address the Graduate Committee at one of their meetings. Graduate students can request to be added to the Graduate Committee Agenda by contacting the Graduate Program Assistant. The Graduate Committee also hosts informal graduate student gatherings to listen to the concerns and suggestions of graduate students. The Graduate Student Committee is available to facilitate interaction between graduate students and

faculty and to represent graduate students in the decision making processes of the department, as well as to provide a forum for graduate students to discuss issues and concerns. Another option is to discuss concerns with the Department Chair or SCIPP Director. Anonymous feedback about the program can be sent via campus mail to the Graduate Program Assistant. Sensitive issues are treated confidentially and every effort is made to resolve issues promptly and fairly. Students wishing assistance from outside of the department are encouraged to contact the Ombudsman's Office or the Graduate Division.

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REGISTRATION & ENROLLMENT

Registrar's Office

190 Hahn Student Service Building, 459-4412, registrar@ucsc.edu

You can contact the registrar's office for assistance enrolling, and to resolve registration and enrollment issues. You can enroll using the new AIS On-line system. See more information on this below. On the first day of each quarter, as soon as you are fully enrolled and registered (paid), you may pick up your ID sticker for the quarter from the Graduate Program Assistant.

Call numbers needed to enroll can be found in the Schedule of Classes on the Registrar's web page. RA courses 297 and 299 are not included in the Schedule of Classes. You can get those enrollment codes(thesis research, etc.) from the Graduate Advisor.

If you are an RA you may to enroll in a PHYS297 if you are not Advanced to Candidacy, or PHYS299 if you are Advanced to Candidacy, with the Professor for whom you are working. Contact the Graduate Program Assistant and tell her the professor name and the number of units you need (to reach 10 for the quarter); she will give you the call number.

The Graduate Program Assistant will be glad to help you figure out correct courses and will often review your enrollment early in the quarter and remind you of any enrollment requirements and deadlines to help insure that you don't miss anything, but students must complete all enrollment transactions themselves. Proper enrollment and registration each quarter is, of course, the responsibility of the student.

You may request a letter grade or Satisfactory/Unsatisfactory (pass/fail). No credit can ever be awarded for courses for which you do not officially enroll. Graduate courses cannot be awarded credit by petition. An irreversible Unsatisfactory/Failing grade will be given for courses that you do not attend unless you drop them during the add/drop period.

It is best if you enroll during the open enrollment period. This insures your place in the course and may prevent a course from being cancelled due to lack of interest. It also allows review of your schedule when making TA assignments to avoid schedule

conflicts, etc. You must attend the first class meeting of all courses to preserve your place in the class.

After the open enrollment period is over, there is an Add/Drop period during which you may add, drop or exchange a class starting the day after the first class meeting. After the add/drop deadline there is a permission code period. During this time you must contact the Graduate Program Assistant in order to get a permission code to add a course. After the permission code period ends, there is an add by petition period during which you must see the Registrar to complete special forms and pay extra fees to add a course by petition. Your Graduate Program Assistant will need to contact the Graduate Division to get approval for any add/drops after the official dates have passed. After the permission code period, you must contact the Registrar's Office and complete special forms and pay extra fees to drop a course. After the drop with fee period is over, it is no longer possible to drop a course; if you don't satisfactorily complete the requirements you will receive a U.

Check the academic calendar for all of the deadlines listed above.

Course Information

The General Catalog includes general program information, course descriptions, course pre-reqs, etc. The Quarterly Schedule of Classes includes the important information for the current quarter: dates, deadlines, list of current offerings, call numbers (needed to enroll), course descriptions, dates, times, locations and instructor information as well as many other useful pieces of information. These items are available on the web and at the Bay Tree Bookstore. The Department Office has copies you can use while at the Department Office counter.

Enrolling for classes

Our new AIS Registration System requires that you enter the student portal and enroll on line. To get on the system if you are a new or continuing student go to <http://my.ucsc.edu>. This is the on-line enrollment and narrative evaluation system. Use requires your student ID and PIN number (which is initially set to the month and day of birth). Detailed enrollment instructions are in the Schedule of Classes located on the Registrar's web page.

Enrollment Help Line 459-3939

Call this number to speak with someone in the Registrar's Office if you are having difficulty enrolling.

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FINANCIAL SUPPORT

The Graduate Division web site has a great section on Financial Support. Please review this when you get time. There are many unfamiliar and unusual fellowship opportunities.

Division of Graduate Studies, 4th Floor Kerr Hall
Financial/Support: Bob Hastings, 459-2335, bobhast@cats.ucsc.edu

The Division of Graduate Studies oversees all UCSC Graduate Studies Programs. They can help you with UCSC campus-wide Graduate policies, procedures, and requirements. They also administer your official UCSC Graduate Student files, and handle tracking and administering many aspects of Graduate Student financial support. They provide programs and assistance regarding Graduate Student life at UCSC and publish the Graduate Student Handbook and the Dissertation Instructions. (Your success could depend upon being familiar with this information).

Payroll Deductions for Payment of Fees: If you will be a TA and your tuition and fees are not fully paid by a fellowship, grant or TA fee reductions, you may arrange for a scheduled Payroll Deduction for Payment of Fees at the Division of Graduate Studies Office.

The Division of Graduate Studies office may also be able to help you with a Short Term Emergency Loan if you find yourself in a bit of an emergency "money crunch".

Financial Aid

201 Hahn Student Services Building, Advisors 459-2963

Contact the Financial Aid office to confirm the status of your financial aid file and aid package (grants, fellowships, loans, etc). Be sure they receive all of the documents that they request. If they haven't received all of the requested documents it is likely that your financial aid check will be delayed. You can also contact the Financial Aid office if you are interested in getting a student loan. Contact Accounts Receivable, not financial aid, regarding the check once your package has been completed. Make sure to file a FAFSA, the statement of your financial need at the beginning of each new academic year.

Student Business Services Office/Accounts Receivable

203 Hahn Student Services Building, 459-2107

Fall financial aid checks (grants, fellowships, loans, etc.) will be mailed to the address on the Student Portal Checks are mailed from this office on the first day of each quarter. Outstanding UCSC charges are deducted prior to payment. Be sure that the Registrar's Office has your current address on the Academic Information System (AIS) so that your check is sent your correct address. Contact Accounts receivable if you do not receive your check (unless you have unfinished business with the financial aid office). Allow at least one week for mail delivery. It's possible that A/R may refer you to financial aid or the Division of Graduate Studies to resolve funding issues. You can arrange for Electronic Funds Transfer (direct deposit) of fellowships, financial aid and loans through the office of Accounts Receivable. Electronic Funds Transfer will also occur on the first day of the quarter, but funds will go directly into your bank account instead of the mail.

You will receive your money more quickly. A/R can set up Deferred Payment Plans for students who are not TAs and whose fees are not paid by other sources.

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TEACHING ASSISTANTS, RESEARCH ASSISTANTS, PERSONNEL/PAYROLL

Physics Personnel/Payroll Issues

Lin Weyers, Physics Office Manager, lin@ucsc.edu, 459-4121 or
Judy Hobor, Graduate Advisor, jahobor@ucsc.edu, 459-4122

Hiring Documents & Payroll Actions

Robin Rodriguez, Natural Sciences Business Office
Baskin Engineering 301, rodrigo@ucsc.edu, 459-5788

If you are just joining the program or you were not employed by the department the prior quarter, and you would like to T/A or you have an R/Aship, you will need to complete hiring paperwork. T/Aships must be confirmed by the Graduate Program Assistant and R/Aships must be confirmed by the hiring faculty member. Early every fall quarter, new TA/RA hiring takes place at the Physics Department Orientation; bring your picture ID, Social Security Card and/or visa or contact the Natural Science Business Office (NSBO) to complete hiring paperwork.

Payroll Checks

Payroll Office: 113 University Business Park (off campus), 459-2488

When you process your hiring paperwork, you may elect to have your check mailed to your home address or have it mailed to the Physics Department Office. Contact the Payroll office to change the address on your paycheck, switch to/from direct deposit, or hunt down a lost paycheck. If you have your check mailed to the Department Office you will need to come to the Physics Department Office in person to pick it up and sign for it each month, but you won't need to keep changing your address with payroll. You can sign up for direct payroll deposit into your bank account.

TA/RA pay days for fall quarter are November 1, December 1, and January 1. TA/RA pay days for winter quarter are February 1, March 1, and April 1. TA/RA pay days for spring quarter are May 1, June 1, and July 1. T/As and R/As do not need to fill out time cards. TA/RA Fee Reductions

Bob Hastings, Division of Graduate Studies Office
4th Floor Kerr Hall, 459-2335, bobhast@ucsc.edu

Your Supervisor

The Professor for whom you are a TA or RA.

TA & RA Assignments and Graduate Student Support Tracking
Judy Hobor, Physics Grad Program Assistant

ISB 211, 459-4122, jahobor@ucsc.edu

Prior to the end of every quarter, the Graduate Program Assistant will need to know if you would like to be a T/A or R/A for the following quarter.

Research Assistants

If you will be an R/A, the Graduate Program Assistant will need, every quarter, confirmation of the appointment from the professor who is hiring you. Providing prompt confirmation of the R/A appointment will insure prompt payment of your salary and R/A fee remissions.

Teaching Assistants

If you would like to T/A, prompt confirmation of your availability will help to insure that you receive an appointment. Prior to making course assignments, the Graduate Program Assistant will usually poll the available T/As regarding their preferences. Prompt confirmation of your preferences will insure that your preferences can be considered when the assignments are made. Many factors such as scheduling conflicts, T/A preferences, T/A performance, skills, knowledge and abilities, training of less experienced T/As, the needs of the students, faculty and staff all need to be considered when the assignments are made. Our philosophy is generally, "A happy T/A is usually a better T/A", so every effort will be made to come as close to meeting your preferences as possible, but sometimes this is not possible. If you will be a T/A during your first quarter in the program, please contact the Graduate Program Assistant ASAP to request a T/A Assignment, to find out what that assignment is and how to get started.

T/As work closely with the professor who is teaching the course for which they are hired. Contact the professor for information about course content, instruction, teaching, grading, proctoring expectations etc. In addition to TA meetings called by the professor during the quarter, there are very important T/A logistical meetings the first few days of the quarter. The Graduate Assistant will let you know the date, time and location of any T/A meeting that you are required to attend. T/A appointments begin the first day of each quarter and the T/A meetings are generally held at that time. It is crucial that all T/As attend these meetings. New T/A also attend training sessions, coordinated by the Head T/A ó T/A Trainer. T/As should also become familiar with ERES (electronic reserves) web pages where course information is posted. Program Assistants who coordinate the coursework for your courses can give you the ERES URLs and passwords.

Teaching Assistants are represented by the ASE/UAW. The ASE/UAW contract establishes terms and conditions of T/A appointments. T/A names and department addresses are released to the ASE/UAW each term. The contract requires that T/As receive appointment letters and that they accept the appointment in writing. Prompt return of the appointment acceptance form will insure your appointment. Teaching Assistants with eligible academic appointments, totaling between 25% to 50%, which is considered fulltime, are eligible to receive Graduate Student Health Insurance Program(GSHIP) premium remission as well as the educational and registration fee remission in place at the time of the appointment. Students receiving need-based financial

aid are encouraged to contact the Financial Aid Office to discuss the impact of this employment on their aid package.

T/A responsibilities may include, but are not limited to: attending the course lectures, T.A meetings and education sessions, conducting discussion sections and/or labs, monitoring section/lab enrollment and attendance, holding regular office hours, reading and grading student examinations promptly, proctoring exams, record keeping for sections/labs, drafting narrative evaluations in a timely manner, grading lab book, etc. Specific information regarding the responsibilities for the course you assigned to will be provided by your Faculty Supervisor, the Head T/A, or your Graduate Advisor. Should your duties change significantly from those outlined above, you will be notified of the changes in writing in advance by your faculty advisor.

International students who will TA for the first time, please note that UCSC requires all new international students who are given teaching assistantships, to demonstrate oral proficiency in English. A passing score on the TEST of Spoken English (TSE) is 50 or higher. If you have a score of 45, you can demonstrate oral proficiency with an oral interview once you arrive on campus. If you have not taken the TSE in your country, you can take the Speaking Proficiency English Proficiency Assessment Kit (SPEAK) which will be administered at UCSC before the fall quarter begins. If you have a TSE score report form please bring a copy. Students who are native speakers of English are exempt from this requirement.

Physics Department T/A Trainer and Head T/A
Currently the head TA is Daniel Simon, NSII 308. 459-4588, nomis@physics.ucsc.edu
The Physics Department T/A Trainer and Head T/A conducts group and individual trainings for Teaching Assistants throughout the year. Contact him if you have questions about teaching or the roll of a T/A in the Physics Department.

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LAB MANAGERS

Lower Division Instructional Lab Manager
Charlie Crummer, Thimann Labs 111D, 459-4154, ccrummer@ucsc.edu
Most lab T/As work closely with Charlie Crummer who manages the 5/6/7 instructional labs.

Upper Division Instructional Lab Manager
Fred Kuttner, NSII 176, 459-2061, fkuttner@ucsc.edu

Acting Demo Lab Manager
Alex Helman, Thimann Lecture Hall II, 459-3684, aghelman@ucsc.edu

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GRADUATE STUDENT RESOURCES

To download PDF version of this handbook click [here](#).

FACILITIES

Your Office

Graduate students share offices in ISB and NSII. All Physics Department office assignments can be found on the Department Directory or through the Graduate Advisor.

Keys

PBSci Stockroom, Thimann Labs Building loading dock 10-12am and 1-3pm M-F, 459-2785 stockroom@ucsc.edu. When you are assigned an office, you will receive a key request form authorizing you to obtain a key to the building entrance and the office in which you are located. Fill in your home address and take the authorization form to the Natural Sciences Stockroom to get your keys.

Telephone

Dial 6 for an outside line. Dial 9 for UCSC extension (for example 459-4122 can be reached by dialing 94122). The Physics Department Directory includes faculty, staff, postdocs, and graduate students. The UCSC Campus Directory includes listings of all UCSC administrative offices and an alphabetical listing of all staff and faculty, as well as lots of other useful information about our phone system and other items. UCSC Directory Assistance can be reached by dialing "0", 459-0111 (from off campus) Monday ó Friday 8am ó 5pm. For phone repairs call 459-3111. We discourage long distance calls and most graduate student phones have no ability to dial out of the area.

Physics Department Graduate Computing and Email

Ramon Berger, NSII 309, 459-3866 (berger@scipp.ucsc.edu) is the graduate computing system administrator. There are many graduate student computers available for your use including two fast and powerful multi-CPU clusters and many dual and single processor stand-alone computers (Linux, Mac, Windows). All can be utilized over the net and there are many demons available for your use. There is a <http://maxwell.ucsc.edu/computing/> graduate computing support web page for more important information about computing resources. When you first join the Physics Graduate Program, contact Ramon to set up your Physics Department computer access and email account and give your new email address to the Graduate Program Assistant. Check your email account on @physics.ucsc.edu frequently, or have it forwarded to your active email account as this email account is where the department will send all of your important email.

Communications and Technology Services (CATS)

Most graduate student needs are served by the Physics Graduate Computing services, but CATS also operates 14 instructional computing labs (some include 24hr access, printers,

scanners, AIP drives, CD-ROM burning and digitizing equipment), central computing facilities and computer-equipped classrooms, customer support services, internet access, a distributed UNIX environment, and the UCSC computer network system. To access central computing services, registered students must apply for a CATS account.

Computer Jacks

John Coha, Electronics Shop, 459-2606, †coha@cse.ucsc.edu

Computer Security Cables

Dave Thayer, Machine Shop, 459-2308, dthayer@ucsc.edu

Media Services

Kerr Hall, <http://media.ucsc.edu>. Classroom Hotline for classroom A/V and Multi-media equipment, 459-2117. Equipment Check-out, 459-2117

Facilities (Building) Problems

Contact the PBSci Work Order desk at pbsci.facilities@natsciucsc.edu or 459-3498 to place orders with the Physical Plant staff. Malfunctions of electrical, plumbing, locks, lighting, water leaks, heat/ventilation, exhaust fans, fumehoods.

Custodial, Equipment Repairs, Phone Order Changes & Used Furnishings

PBsci Sci Work Order Desk, 459-3498, pbsci.facilities@natsciucsc.edu

Custodial services, used furniture, and repair refrigerators, non-Ultra-Low freezers, ice machines and misc. equipment repair and phone order changes.

Mail

All graduate students have a mailbox in the Physics Department mailroom at ISB 232. Check this mailbox frequently. This mailbox is where the department staff will put all of your important messages, US mail and mail that is sent to you from other campus units, etc. If your office is at SCIPP or you are doing research in the field out of the area, the Graduate Program Assistant will send your mail to you once a week.

In the mailroom, there is a mailbag (maroon) for outgoing on-campus mail and a mailbag (blue) for outgoing US mail. The UCSC Post Office requests that you do not use the US mail bag for personal mail. All outgoing Physics Department US mail needs to include the mail stop #34-140 in the return address so that postage can be charged to our account.

The UCSC Address is: Your Name, Physics Department, UCSC, Santa Cruz, CA 95064. Since other addresses may change, but this address will remain constant as long as you are in the program, it is recommended that you use the department address for your address for personnel/payroll, accounts payable and the registrar.

Post Office

Jack Baskin Engineering Loading Dock, 459-2765, mail_services@macmail.ucsc.edu
Post office and mail services, including package and express mail services. Zip Code Information.

Shipping

UC Receiving, H Barn, 459-2852

Home Address and Phone Changes, Office #, Phone Extensions

Please notify the Physics Graduate Program Assistant if your home address or phone number change or if you move to a different office or change your phone extension on campus. When you first start the program, please let the Physics Graduate Program Assistant know your local address, home phone number and physics department email address as soon as possible. The department needs to know how to contact you in emergencies or to assist you in completing the program. Also make sure you make these changes via the Student Portal in AIS. Many campus units depend on the address files maintained at the Office of the Registrar.

Office Supplies, Fax & Photocopies

Office Supplies are located in the Physics Department Kitchen/Supply Room. As an employee of the department, you are welcome to use these office supplies for completing your duties.

There is a photocopy machine in the Physics Department Mailroom, ISB 232. The copy card is located at the front desk. Insert the copy card into the security box on the table next to the copier. Return the copy card when done (or if you find it in the machine). Additional copy card photocopies are located around the building, in libraries and several other locations around campus.

There is a fax machine in the Department Office; fax number 459-3043. We will put any fax sent to your attention into your mailbox. There is also a fax at the SCIPP Office; fax number 459-5777.

Bay Tree Bookstore

The bookstore stocks textbooks, supplies, course catalogues, schedules and has extended hours at the start of the quarter.

Check Cashing

102 Hahn Student Services, 459-2278 Cash up to \$25.00, with picture ID.

Automated Teller Machines

Located at the base of the Bay Tree Bookstore

Student ID Number

Your Social Security Number will be converted to a new UCSC ID number. International students have a number assigned by the Division of Graduate Studies.

ID Card Services

Pam Ackerman (pam@bookstore.ucsc.edu), Bay Tree Building near Bookstore, 459-2990,

You can get your Student ID card Monday - Friday 8:30 am ó 4:30 pm. Take your picture ID. The student ID is your library card, bus pass, and is used to gain access to many services and facilities around campus.

International Student Programs and VISA Information

105 Classroom Unit Building, 459-2858, visa@ucsc.edu, web: <http://oie.ucsc.edu>
If you are an international student, International Student Programs Office can check to be sure your papers are in order. If you an international student and you may TA at any time, you must take an English speaking exam and call 459-2510 to schedule a 15 minute interview. In addition, there will be an International Student Seminar which will meet five times during fall and winter quarters. Contact the International Student Program Office for more information. The key people to contact in this office are Joni MacFarlane (jonimac@ucsc.edu), Babette Scott (ibscott@ucsc.edu), and Sheryl Lee (sheryll@ucsc.edu)

California Residency Information

Office of the Registrar, Laurie Salatich 459-2754

Transportation and Parking Services Information & Parking Sales

TAPS Office, Base of Campus Police Station, Bus Passes
Carpool & Vanpool 459-4543
Main Reception ñ 459-2190

Your student ID with current quarter sticker is a Santa Cruz Metro bus pass.

All campus parking is by permit only and citations are frequent. Permits are issued at the Parking and Police Building, near the base of campus. You can also make complete an application on-lin at <http://www2.ucsc.edu/taps>. Lines to buy permits are long at the start of the quarter and applying for a permit on line, in advance, may save you quite a bit of time. Check out the TAPS web site for more information.

TAPS runs shuttles, a BART Connector and a UC Berkeley Library bus. The Airporter (private service, see the Pacific Bell Yellow Pages) also serves campus.

Emergencies: Call 911

Lost and Found

There is a lost and found a box in the Physics Department.
UCSC Lost and Found is located at the University Policy Office at 459-2231.

McHenry Library

Located just to the east of Kerr Hall, 459-4000, † <http://www.ucsc.edu/library/>
The general library on campus. Your student ID with current quarter sticker is your library card. Early in fall quarter they give tours of the library and the library computer systems.

Science Library

General Information, 459-0050

Circulation & Renewals, 459-5300

Course Reserves, 459-2865

Reference, 459-2886

Located on Science Hill just north of Kerr Hall. Your student ID with current quarter sticker is your library card. Early in fall quarter they give tours of the library and the library computer systems.

Housing

On-Campus Graduate Student Housing

Incoming Graduate Students: 459-3171, Carol Delpo

Community Rentals Program/Off-Campus Housing Information

125 Hahn Center, 459-4435, comrent@housing.ucsc.edu

web site: <http://communityrentals.ucsc.edu>

Housing in the community is usually a challenge to obtain. Ask fellow graduate students. They are often the best resource for housing leads and they may be able to help fellow students with temporary housing needs. Check with the Graduate Program Assistant as well. Sometimes she has leads.

Family Student Housing

599 Koshland Way, 459-2549

If you are married or have children, Family Student Housing is convenient and a very good value. Because of this, there is usually a waiting list for apartments. Getting on the waiting list as soon as possible, even if you are not sure you want to move in, will allow you to have the option of moving into Family Student Housing when an apartment becomes available. Childcare

Infant Center (3-30mo) 459-4073

Granary Child Development Center 426-3831

Health Services

Health Services and Insurance Information Cowell Health Center 459-2211

Counseling and Psychological Services, Cowell Health Center 459-2628

Dental Clinic, Cowell Health Center 459-2500

Graduate Student Health Insurance 459-4050 insure@cats.ucsc.edu

Medical, psychological and dental services are provided by the Health Center. Full-time graduate students have a mandatory health coverage plan, the Graduate Health Insurance Plan (GSHIP). Fees not covered by the plan are posted to your University account the day of your visit. Premiums are billed, along with other fees, when you register each quarter. Waivers are available by providing proof of other coverage. Vaccines are available. Counseling and Psychological Services offers a variety of programs and services to help students cope with the stress of academic life; don't hesitate to see if they have something supportive for you.

More detail below on Health Services:

The Student Health Center at UCSC provides a range of medical, psychiatric and dental services. All registered students are eligible to use the Health Center. There is no out of pocket fee charged to students for office visits. Your registration fees pay for a portion of these expenses. Vaccines are available. Counseling and Psychological Services offers a variety of programs and services to help students cope with the stress of academic life; don't hesitate to see if they have something that may be helpful for you.

Graduate Student Health Insurance Plans (GSHIP) offer medical, dental and vision coverage. GSHIP premiums are automatically billed on your student account at the beginning of each quarter. The Health Center and its medical staff are the primary physicians for GSHIP. You must start your treatment at the Health Center. If you need to see a physician off-campus, a referral may be provided from a Health Center physician. After Health Center hours, in the event of an emergency or if you are out of town, you may seek medical treatment anywhere. CCN providers are the contracted off-campus providers with GSHIP and using a CCN provider will maximize your coverage. In these cases, you will need an authorized claim form provided by GSHIP to submit your claim.

Students who have private insurance coverage, may waive GSHIP, by submitting an insurance waiver form, if the coverage is comparable or better than what the UCSC plans offer. Insurance companies may be billed for office visits, but they will not be billed for charges which are billed to the student account, such as prescriptions, lab work, x-rays and annual physicals which are not covered under the office visit, unless you make other arrangements on the date of service. Itemized bills are sent to the student so that they may bill their insurance company for charges billed to their account. It is very important to contact your insurance carrier to verify that services are covered if you elect to maintain other insurance and waive GSHIP. A new waiver will need to be completed at the beginning of each fall quarter. Repetitive Stress Injury Prevention

As more and more work, education and recreation involves computers, everyone needs to be aware of the hazard of Repetitive Stress Injury (RSI) to the hands and arms resulting from the use of computer keyboards and mice. This can be a serious and very painful condition that is far easier to prevent than to cure once contracted, and can occur even in young physically fit individuals. You may have heard the term Carpal Tunnel Syndrome

in connection with these injuries, but in fact CTS is only a small percentage of typing injuries. Tendinitis, Bursitis, Tenosynovitis, Tendonosis, DeQuervain's Syndrome, Thoracic Outlet Syndrome, Trigger Finger/Thumb, Myofascial Pain Syndrome, and several other related conditions are also associated with RSI.

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GROUPS AND OTHER INFORMATION WHICH MAY INTEREST YOU

Graduate Student Association

Student Center Building, 459-3142, gsa@cats.ucsc.edu, web: <http://www.ucsc.edu/gsa/>

MARC: Minority Access to Research Careers

Leo Ortiz, Director, 377 Thimann Lab Building, 459-4770, ortiz@biology.ucsc.edu,
Closely connected to MBRS Minority Biomedical Research Support Program.

SACNAS: Society for Advancement of Chicanos and Native Americans in Science, 459-4272

SOAR: Student Organizations and Resources Student Center Building, 459-2934

Women's Center Cardiff House, 459-2072

Gay, Lesbian, Bisexual & Transgendered Resource Center, Crown/Merrill, 459-2468

Disability Resource Center

146 Hahn Student Services Building, 459-2089, disable@ucsc.edu

Provides accommodations for students with both temporary and permanent disabilities.
Call for orientation and appointment information during the first week of the quarter.

Welcoming Diversity Receptions:

African American 459-3561

American Indian 459-4446

Asian/Pacific Islander 459-4446

Chicano/Latino 459-5608

Gay/Lesbian/Bisexual/Transgendered 459-4385

Office of Physical Education, Recreation and Sports

East Field House 459-2531, West Field House 459-2063, Recreation/Trips/Clubs 459-2806

Performing Arts Performance Information 459-2974, Ticket Office 459-2159

University Events, 459-2876, <http://events.ucsc.edu/calendar>

Tours

Arboretum Tours, 427-2998
Campus Tours, 459-4008
Farm Tours, 459-4140
Long Marine Laboratory Tours, 459-2883

Art Galleries

Cowell Coffee Shop, Stevenson Fireside Lounge, Eloise Pickard Smith Gallery (Stevenson), Bridge Gallery (Porter), James B. Hall Gallery (Porter), Mary Porter Sesnon Art Gallery (Porter), Porter Faculty Gallery (Porter), Stevenson Coffeehouse, Women's Art Gallery (Cardiff House).

Eating On Campus

There is a microwave and refrigerator in the Physics Department Kitchen/Supply Room for your use. There are restaurants at Kresge College, Porter College, Merrill College, Oakes College, and by the Baytree Bookstore. See the Eating Facilities section of the Campus Directory for phone numbers and locations.†

The Physics Department Web Home Page URL is: <http://physics.ucsc.edu>

This Quick Reference Guide is organized on a somewhat loose topical basis. For an alphabetical listings of Administrative Offices, Faculty/Staff Phone Numbers and Campus Resources see the Campus Directory.

Information on this page is subject to change.

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