

California Cooperative Fish Research Unit
Humboldt State University
U.S. Geological Survey, Biological Resources Division
CA Department of Fish and Game

**GRADUATE STUDENT AND UNIT EMPLOYEE
INFORMATION AND REFERENCES**

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REFERENCES

1. Guidelines for Use of Fishes in Field Research
2. Guide for Care and Use of Laboratory Animals
3. Acceptable Field Methods in Mammalogy
4. Report of the American Ornithologists' Union on the Use of Wild Birds in Research
5. Alpha Technical Bulletin 5/2001 on MS222 (Tricaine Methane Sulphonate)
6. Developing Metadata
7. Quality Control/Quality Assurance
8. Good Laboratory Practices
9. Material Safety Data Sheets Notebook

INTRODUCTION

Welcome to the California Cooperative Fish Research Unit. The unit is a cooperative effort of the US Geological Survey, the California Department of Fish and Game, and Humboldt State University. The Humboldt State University Foundation is a separate entity that facilitates grants and contracts for the university. Policy and regulations of each agency govern the practices of the coop unit and our employees.

The Unit Leader (UL) and Assistant Unit Leader (AUL) are federal employees of the US Geological Survey and are adjunct professors in the Department of Fisheries Biology. The Administrative Support Coordinator (ASC) is employed by Humboldt State University.

Students and employees are an integral part of the California Cooperative Fish Research Unit's mission to:

- 1) conduct scientific research that benefits fish, wildlife, their habitats, and ecosystems upon which they depend;
- 2) train graduate fisheries and wildlife management students, through mentoring and teaching graduate level courses, to become competent fisheries and wildlife scientists; and
- 3) provide technical assistance to the fisheries and wildlife profession by sponsoring training workshops, reviewing and writing manuscripts for publication, and coordinating research activities.

Accepting a position with the coop unit is a commitment to assist with our mission and to be a responsible member of the unit. The information presented below is intended to provide basic guidelines and points of references; it is not to be construed as fully comprehensive.

ADMINISTRATIVE PROCEDURES AND GENERAL INFORMATION

ADMINISTRATIVE SUPPORT

The Administrative Support Coordinator (ASC) manages the cooperative unit office and is responsible for the various administrative aspects of the research grants and contracts. The ASC is available for support in the following areas: personnel, payroll, purchasing of supplies and equipment, package and mail distribution, travel, vehicle maintenance, property accountability, computer systems and the unit web pages. The ASC also serves as an information resource and communication liaison between the unit staff, students, and employees.

TECHNICAL SUPPORT

Requests for technical support (construction, repairs, welding, and maintenance) should be requested via your faculty advisor. The departmental stockroom manager/equipment technician (168C WFB) maintains an inventory of research equipment that is available for check-out, and may be able to assist with some construction tasks. Other possibilities for assistance, particularly for plexiglass construction, include the CNRS equipment technicians in 175 Science B.

AUDIO/VISUAL EQUIPMENT

The university maintains an inventory of audio/visual equipment, including overhead projectors, slide projectors, and computer projectors that are available for use on campus. These must be reserved by your major advisor or other faculty member.

COPY SERVICES

The copier in the Unit Office is for small needs only (1 or 2 copies of an original). Larger copy needs should be processed on university machines and billed to project accounts (see the administrative assistant for authorization) or use Copy Service in the university library. The copier should not be used for class work or for personal copies.

COMPUTERS

Personal computers and printers are provided in limited quantity for the benefit of all graduate students. Please be considerate of others, clean up the work area and don't clutter hard drives with personal files.

Guidelines for Use of Computers:

1. PC's are for the use of unit graduate students and staff only.
2. Priority of uses for PC's is (1) research, (2) graduate student class work, (3) professional business for graduate students, (4) undergraduate class work. They should not be used for personal matters.
3. Illegal copying of copyrighted software is prohibited.
4. Laser Printer - use the laser printer for final copy and not for statistical outputs that may be many pages. The printer is not available for printing class work or for personal printing. The cost of paper, toner cartridges and servicing for these printers adds up quickly.
5. The color printer is to be used by permission only.

CAMPUS SECURITY

To help insure your safety, you may call the campus Police Department, at any time, for a safety escort. This service is useful for persons walking across campus at night. Persons working unusual or late hours are advised to inform the Police Department of this fact. To request a safety escort, call 707/826-3456.

KEYS AND BUILDING SECURITY

It is the responsibility of all students and employees to maintain building security. The university takes this very seriously. Valuable items are present in the Wildlife and Fisheries Bldg., unit offices, laboratories, and storage buildings (including the boat storage facility on 17th and Bayview Streets, and the facility at the U.S. Coast Guard property in Samoa). Gates, doors and windows must be locked when spaces are unoccupied. The exterior doors must not be blocked ajar unattended.

Each graduate student will be issued basic keys (determined by major advisor/supervisor) upon arrival. Key holders may be held financially accountable and should not loan their keys to others. Technicians and assistants employed through the unit will be issued keys as necessary. Upon separation from the unit program all keys must be returned to Plant Operations. A copy of the receipt must be provided to the unit office.

The fisheries biology department requires that each student/employee carry a building pass if they use the building during evenings or weekends. Requests for building passes must be signed by the major advisor.

LIBRARY

The unit maintains a library for staff and student use. The library contains professional journals, reprints, various publications and books that may be borrowed for a limited time. The reprints and miscellaneous publications are cataloged in a Pro-Cite data base - ask the ASC for assistance retrieving these documents.

BOOKS and THESES: Record your name, phone, and date on the card located in the back of the book.

REPRINTS, PUBLICATIONS and JOURNALS: List item(s) on a 3x5 card along with name, phone, and date.

The books located in the Leader and Assistant Leader's offices are from their personal libraries. They may consider a loan but this must be discussed with them directly. Do not remove books without permission. A sign-out sheet is located in each office for documenting these loans.

MAIL DELIVERY

Students and technicians are each assigned a mail box in the unit office. Please check your box on a regular basis. Personal mail should not be received at the unit address. The unit address may be used for professional mail such as position information and professional society correspondence but you must then be responsible for changing the address when you leave the program. Notify the office of any address changes and provide forwarding address information if you leave the area.

OFFICE SUPPLIES

Graduate students needing letterhead to write an official letter must obtain it from one of the unit staff. Basic office supplies (pens, pencils, paper, envelopes, file folders, etc.) are available or may be purchased for project use only.

TELEPHONES - FAX

The telephone in WF 212C (826-3223) is assigned to Coop Unit students and has a shared voicemail set-up. Voicemail Instructions are posted next to the phone. Approved long-distance calls (project related) must be recorded on the log sheets in the unit office for reconciliation with the monthly billing. Personal long-distance calls must be charged on a personal credit card.

The FAX machine in WF 212C is available for sending and receiving project related correspondence. The number is 707-826-3269.

CELLULAR PHONES

Five cellular telephones are available and should be used whenever you go in the field. The phones are intended to provide an added measure of safety in the field and to facilitate communication. Though service is limited in remote areas the phone may still bring you closer to help in an emergency. Read the instruction manuals, paying particular attention to the battery care. To check-out a cell phone record the phone number by your destination on the sign-out board. The phones have ample free minutes for use in the service area, long-distance calls are billed. The phones are not intended for personal use, though local calls will be allowed within reason.

PROPERTY LOSS OR DAMAGE

The unit does not assume responsibility for loss of personal effects such as cameras, books, clothing, that are housed in an office on the campus. Personal property should be kept to a minimum. It is recommended that expensive items be covered by personal property insurance.

PURCHASING

Permission from the UL or AUL is required to purchase supplies and materials on research project funds. All approved research item purchases must be obtained through approved sources. The ASC will process approved purchase requests and reimbursements. A cash fund is available for purchase of small items.

Plan purchase needs well in advance to allow sufficient time for processing (2-4 days) and delivery (days or weeks depending on the item).

To place a purchase request first research the best source of supply for the item you seek, then provide the following information:

1. Vendor name, address, phone or catalog with page marked
2. Item description
3. Unit of measure (EA, PK, CS, etc.)
4. Quantity needed
5. Price per unit
6. Shipping/delivery information - for large items obtain an estimate

To request reimbursement for items purchased personally:

1. Write name and project on receipt.
2. Identify item and use if not itemized on the receipt.
3. Circle total amount to be reimbursed.
4. Tape receipt(s) to sheet of paper, preferably on the bottom half of the sheet.

Using a personal credit card for project purchases is discouraged. For any purchases on a personal credit card you must also provide a copy of the monthly credit card statement before reimbursement will be processed.

RECYCLE - REDUCE WASTE

Recycling and waste reduction is important and everyone is expected to contribute to the effort. Containers are widely available on campus, some are handled by the custodial staff, and some are not. Below is a brief synopsis:

1. Office Pack (mixed paper) - blue bin in Rm. 212 (custodian).
2. White paper - blue bin in Rm 212C (custodian).
3. Cardboard - flatten boxes and take to large bin located at east side parking lot.
4. Newspaper and catalogs are collected in a box in 212C (take to bin located at east side parking lot).
5. Beverage containers are collected in a basket in 212C (take to bins outside front of building).

For hazardous wastes, including batteries refer to Laboratory Safety section and/or HSU Environmental Health and Safety (<http://www.humboldt.edu/~ehos/disposal.htm>).

Conserve paper and toner by printing and copying carefully. Always check existing supply resources before purchasing new items. Reuse materials whenever possible.

TRAINING TECHNICIANS

If you have technicians working for you, it is your responsibility to make sure that they are familiar with all unit policies (such as phone, computer, and copier use, vehicle use, building security, etc.)

EMPLOYMENT WITH THE COOP UNIT

CATEGORIES OF EMPLOYMENT

Employees of the unit are appointed through the HSU Foundation. Pay and benefits are determined by the type of appointment, of which there are many, the most common are described below.

Graduate Research Assistant - Master of Science candidate selected by a department within the College of Natural Resources and Sciences and assigned to a research project funded through the unit. Appointed to a regular time base and paid a monthly salary.

Graduate Student Assistant - Graduate student appointed to assist with research projects on an hourly basis.

Student Assistant - Undergraduate student appointed to assist with research projects on an hourly basis.

Research Technician - Non-student appointed to assist with research projects. Technicians may be paid on either a salaried or hourly basis.

GRADUATE RESEARCH ASSISTANT FINANCIAL SUPPORT

At Humboldt State University most of the financial support for graduate students is provided by a paid position as a Graduate Research Assistant, as opposed to a stipend or assistantship. A monthly salary is paid in return for research services rendered. The unit strives to provide 2.0 - 2.5 years of support for each graduate student working on unit research. The duration of support is at the discretion of the major professor based on research needs and project funding. Support may be terminated before two years if the student is making insufficient progress. Student performance will be evaluated by the major professor within the regulations of the university.



Graduate Research Assistants are appointed at $\frac{1}{2}$ time base during the academic session (September - May) and at $\frac{3}{4}$ time base during the summer (June - August). Graduate Research Assistants are typically expected to work on research an average of 20 hours per week during the academic year and 30 hours per week during the summer. This may include time spent on their thesis research and/or other aspects of unit project research. Supported students may be called upon to assist in ancillary work in the field or in data analysis.

Support provided by the Cooperative Unit to graduate students is intended to provide financial help during their research and scholarly activities. Graduate students are occasionally offered outside employment from other organizations. Unit policy encourages students to complete their degrees in a timely fashion. Therefore, we discourage outside employment. Graduate students accepting outside employment must notify the Unit and suspend Unit support during the period of other employment.

PAYROLL

Salaried employees report time worked on a Level of Effort Certification. The inclusive dates are the 1st through the 15th of the month and the 16th through the end of the month. The amount of time worked is reported as a percentage based on the assigned time base (50%, 75%, or 100%). LE Forms must be submitted to the ASC by 11 am on the posted due date. A PDF version form is available in the unit share file.

Hourly employees report actual daily hours worked on a timesheet. Hourly employees are limited to 8 hours per day and 40 hours per week. Student work schedules should not interfere with their educational program. Typically, this would not be more than 20 hours per week when classes are in session. Timesheets must be submitted to the ASC by 11 am on the posted due date.

BENEFITS

Student employees do not earn vacation, sick leave, holidays, retirement, or insurance. A non-student employee may qualify for these benefits depending on specific eligibility requirements.

Each HSU Foundation employee is covered by SDI, a State program which provides payments to a person unable to continue working because of an off-the-job injury or illness. Eligibility is determined by the CA Employment Development Department.

All employees are covered for work related injury. If you are injured or contract an occupational disease on the job, you must report it as soon as possible. Report the circumstance of the injury or disease to your immediate supervisor and the Humboldt State University Foundation Manager's Office, no later than three business days following the occurrence. Failure to report your claim within established time frames may be cause for denial of your claim.

SIGN-IN AND OUT

Coop Unit employees will record their status daily on the sign-out board in the unit office. The board is used both to monitor attendance and to locate employees in case of an emergency.

ATTENDANCE

As in all employment settings, absence from assigned duties must be reported to and approved in advance by the supervisor (UL or AUL). Graduate Research Assistants may be approved for a maximum of **three** weeks of paid absence per academic year. Graduate students should be aware that research schedules are not patterned after academic schedules. Paid absences should be scheduled so that they do not jeopardize research projects or progress of the individual's research program.

SEPARATION

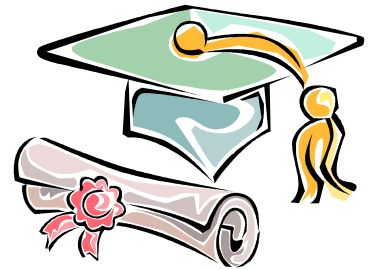
Upon termination from the Cooperative Unit program employees must:

1. Return keys to Plant Operations and submit a copy of the receipt to the Unit.
2. Remove personal belongings from assigned office space.
3. Make appropriate arrangements for samples and data.
4. Return unit equipment, boots, waders, books and supplies.
5. Clear all library and financial matters with the University.

MASTER OF SCIENCE ACADEMIC PROGRAM

GENERAL

Humboldt State University offers a Masters degree with a Fisheries option under the Natural Resources Graduate Program. The program of study for a Master of Science candidate includes approved coursework and a research project resulting in a thesis. Specific requirements of the Fisheries M.S. degree option are outlined below. These requirements are in addition to more general requirements established by the College of Natural Resources (CNRS, detailed in the Natural Resources Graduate Program) and the Graduate School (Handbook for Master's Students, online at <http://www.humboldt.edu/~gradst/gradinfo.shtml>). Major advisors and graduate committees may establish additional requirements. Students should be aware of their personal responsibility to meet requirements of the HSU Graduate Studies Program, the NR Graduate Program, the Fisheries option, and their individual major advisor and graduate committee. An orientation session which details program requirements for new students is offered by the Department Chair, CNRS Graduate Coordinator, and/or other faculty members at the start of each fall semester.



MAJOR ADVISOR

When an individual faculty member accepts a particular student for graduate study, with the concurrence of the Fisheries Biology Department Chair, that faculty member agrees to serve as the student's *major advisor* and Chair of the student's graduate committee. The major advisor is responsible for guiding the student from research proposal through thesis preparation processes. The major advisor should generate ideas for research, introduce the student to the scientific and technical literature, provide contacts with relevant professionals and scientists, and guide the student on scientific problem solving. The major advisor is expected to work most closely with the student on the form and substance of a proposal and thesis, provide detailed constructive criticism on logical thinking and presentation of ideas and on writing style. The graduate student is responsible for monitoring his/her progress toward degree completion and making sure that all paperwork is filed and a thesis is completed within existing deadlines.

GRADUATE COMMITTEE

A graduate committee is constituted to help the student. The role of the graduate committee is two-fold: (1) to assist the student in formulating a program of study that will achieve minimal competence as a fishery biologist and provide sufficient background to successfully complete the research project, and (2) to guide/assist the student in the formulation, design, and completion of the thesis research project. The graduate committee should consist of at least two individuals that are chosen by the graduate student in consultation with his/her major advisor, and be established by the end of the first semester of residence. The department requires that the chair of the committee (major advisor) be a probationary, tenured, emeritus, or adjunct faculty member (the latter includes the UL and AUL) in the Department of Fisheries Biology. At least one committee member should be a tenure track faculty member in the

Department of Fisheries Biology. The third member must be a tenure track or adjunct faculty member and must possess a PhD. Additional faculty members (i.e., 4th or more) may also be added to a student's committee. These additional committee members are not required to possess the PhD degree, but they should have a record of professional accomplishments that clearly suggests that they would make an important contribution to the student's graduate program. Graduate Committee composition is approved by the Department Chair and the Graduate Coordinator for the NR Graduate Program on a committee appointment form obtainable from the Graduate Coordinator.

The Graduate Committee should be formed early during the first semester of residence and graduate students should expect active faculty participation on their Graduate Committee. Graduate committee members are expected to read and offer constructive comments on briefing materials, plans of research, and drafts of theses or dissertations; attend and participate in a constructive manner in committee meetings; and offer guidance outside committee meetings. Committee members, including the major advisor, are responsible for critical assessment of the thesis proposal for professional, scientific, and ethical soundness, and appropriateness for the degree pursued. The graduate committee is not responsible for detailed editing of a student's writing. All committee members are, however, responsible for review of thesis drafts within a "reasonable period of time". Unless there are extenuating circumstances, a reasonable period of time means 3 weeks (note that 9-month faculty are not required to review thesis drafts over the summer). Should the student and his/her major advisor agree that a committee member is not fulfilling expectations, e.g. by not returning thesis drafts within the accepted 3 week window, they may request that a committee member remove himself/herself from the committee. If a committee member is unwilling to remove himself/herself from a graduate committee, then the Fisheries Biology Department Chair and/or the NR Graduate Coordinator should be consulted for guidance. Because committee members are under no obligation to honor a request to remove themselves from a graduate committee, this option should be explored only when a major advisor and student feel very strongly that a committee member has not been fulfilling his/her responsibilities.

COURSE REQUIREMENTS

- Approved upper division courses totaling 30-60 units, at least 15 of which must be graduate level (500-600 level). No more than 9 transfer and extension units can be counted toward the degree. A grade point average of 3.0 must be maintained in all courses taken to satisfy degree requirements.
- Required courses: FISH 685 (seminar, 1 unit); 690 (thesis), 695 (research problems in fisheries). In-state students are expected to enroll in 3 units each of FISH 690 and FISH 695 for a minimum of four consecutive semesters. Out-of-state students may enroll in fewer numbers of units of FISH 690 and FISH 695 during their first year in residence only, with the agreement of their graduate committee, if and only if a financial hardship would otherwise result. Generally, out-of-state students who have substantial graduate stipends are expected to adhere to the 3 unit rule during the first year of their program. Note, however, that no more than 6 units of Fish 690 and 695 combined count toward meeting the requirement for 15 units of graduate level coursework.

- Additional required courses, or their equivalents, include: Fish 310 (Ichthyology), FISH 460 (fisheries management) and FISH 450 (Introductory fish population dynamics. Equivalency of courses taken elsewhere will be evaluated by the student's graduate committee.

TENTATIVE PROGRAM OF STUDY

A tentative graduate degree program should be submitted to the Natural Resources Graduate Office preferably before the end of the first semester in residence. Form is obtainable from the NR Graduate Office (NR 101) or the NR Graduate Coordinator. This form describes undergraduate deficiencies and approved upper division and graduate courses to be taken, based on consultation with the graduate committee. The form must be approved by the graduate committee, department chair, and the NR graduate coordinator.

COMMITTEE MEETINGS

Each student's graduate committee is expected to meet with the student before the end of the first semester (to discuss the program of study and tentative research plans), during the second semester (to discuss and approve the student's research proposal), and at least yearly thereafter. While these meetings should focus on the research project and coursework, an additional function will be evaluating the student's performance and making recommendations for improvement. It is the obligation of the student to arrange these meetings in consultation with the student's major advisor. The library in the Wildlife and Fisheries Building (WFB) may be reserved for meetings, through the departmental secretaries (220 WFB).

THESIS PROPOSAL

A thesis proposal is required for Advancement to candidacy (see below). It should generally be completed before the end of the second semester in residence. The proposal must be the original work of the student, but may draw upon a grant proposal that may provide funding for the graduate student. The purpose of the proposal is to help the student design a project that is explicit, well justified, has clear objectives, can be performed with resources and time available, and has methods that should achieve the intended results. Preparation of a proposal has other benefits: e.g., it teaches the student how to approach problem-solving based on rational scientific methods; stimulates communication among the student and graduate committee members; and demonstrates that collaboration and peer review are essential parts of professional endeavors.

The major advisor and graduate committee have the authority to dictate the format and specifications of the thesis proposal to meet the needs of the student and project. A typical format includes:

- Title page
- Introduction and Justification
- Methods
- Literature Cited
- Time Schedule

The signed proposal represents a good-faith agreement by the student to complete the planned work as part of the degree program. The proposal can, however, be changed if accomplishing the intended project proves untenable. Minor changes are expected in any project and need not be approved formally. Major changes, such as adding or dropping objectives, adopting entirely different methodologies, must be approved explicitly by the graduate committee. If changes are made subsequent to achieving advancement to candidacy, a program waiver must be obtained and approved by the HSU Office of Research and Graduate Studies. Waiver forms may be obtained from <http://www.humboldt.edu/~gradst/gradinfo.shtml>.

APPROVED PROGRAM OF STUDY AND ADVANCEMENT TO CANDIDACY

The program of study (course list) and the thesis proposal must be approved by the major advisor and graduate committee members, as well as by the NR graduate coordinator before a student may advance to candidacy. A student must apply for advancement to candidacy after completing at least one semester of graduate work, and before the completion of the final 9 units of work, excluding Fish 690 and 695. The forms for Advancement to Candidacy are available online at: www.humboldt.edu/~gradst, through the department and from the Office for Research and Graduate Studies (SH 212), and include a thesis abstract form and an approved graduate course list. The student should complete the forms in consultation with the major professor, by reviewing departmental requirements, and by downloading a copy of their transcripts. Check to see that all major requirements are met, all prerequisites for the courses will be, or have been met, that courses will be offered when they are scheduled to be taken, and that course titles are the same as those listed on the transcript. Advancement to candidacy forms must be signed by the major advisor, graduate committee members, and the NR graduate coordinator. A copy of the thesis abstract or the full proposal is submitted along with the candidacy application. It is recommended that students pursuing master's degrees apply for graduation at the time they advance to candidacy. Hand delivery of the forms to each of the signatories is recommended.

GRADUATION REQUIREMENTS

Thesis

The thesis is a scientific report and should be written in a concise, precise, and technical style that facilitates publication in scientific journals. Its format must meet university and college requirements, which are detailed in the Handbook for Master's Students (from the Office of Research and Graduate Studies) and in the Natural Resources Graduate Program document entitled 'Guidelines for preparing a thesis or project'. Most students opt to prepare their thesis in the traditional "long-form" thesis format, but students may alternatively elect to prepare their thesis in a journal manuscript form that may be more suitable for eventual publication in a professional journal. Students contemplating preparation of a thesis in manuscript format should consult with the Graduate Coordinator *prior to* writing their thesis.

Costs of thesis preparation are the sole responsibility of the student regardless of project financial support. The major advisor will determine if project funds may be used for other expenses related to thesis preparation. Students are obligated, at their own expense, to provide required copies to the HSU Graduate Studies Program, the Unit and the major professor. Additional copies for the funding agency and softbound copies may be covered by project funds.

Thesis Defense

An oral thesis defense is required by the Department of Fisheries Biology of students who entered the degree program subsequent to December 2001. The oral defense will consist of a public presentation on results of the student's research, followed by a meeting of the committee and student to "defend" the thesis project methods and results.

The student must apply for graduation and complete all graduate school requirements before a degree can be awarded.

PUBLICATION OF THESIS RESULTS

Students are encouraged to publish research results as soon as practicable after completing the thesis. Policy of the Coop Unit is that publications are ordinarily co-authored by the student and major advisor. Committee members may also act as co-authors, but they must in all cases approve of work that is destined for publication *prior to* such publication, regardless of whether or not they are listed as authors on a publication. Students will be listed as senior authors if the publication is submitted within a year of thesis completion. After one year, the major advisor may take senior authorship, particularly if extensive revision is required. Page charges for journal publications will ordinarily be covered by project or unit funds.

TIME FRAME FOR GRADUATE STUDIES

Minimum time to complete the M.S. program is typically 2 - 2 ½ years, with a maximum allowable limit of 7 years. This requires attention to scheduling academic requirements, as required courses may be offered only in alternating years.

A checklist of tasks required during the M.S. degree program, and the general time frame in which these are expected to be completed is provided in the table below:

| Task | Time Frame for Completion |
|--|--|
| Attend departmental and college graduate student orientation sessions | First semester |
| Form graduate committee with input from major advisor. Have committee members sign committee appointment form and submit for approval to department chair and NR graduate coordinator | First Semester |
| Schedule a graduate committee meeting to develop a study program and to discuss research objectives. Submit tentative graduate course form for approval, with signatures by the graduate committee, department chair, and NR graduate coordinator. | First Semester |
| Develop graduate research proposal with guidance from major advisor and committee members | First, second semesters |
| Schedule graduate committee meeting to obtain approval of research proposal and assess academic performance. | Before end of second semester, and ideally prior to research data collection |

| | |
|--|---|
| Submit animal care and use request and obtain any required collection permits if relevant | Immediately after graduate committee approves proposal. |
| Complete thesis abstract form | Second to third semester, submitted with advancement to candidacy. |
| Complete Approved Graduate Course list | Second to third semester, submitted with advancement to candidacy. |
| Apply for advancement to candidacy | Second to third semester, must be before final 9 units (excluding FISH 690 & 695) of academic work have been completed. If have <9 units left need to apply for a program waiver. |
| Schedule other committee meetings as appropriate to keep members apprised of research progress | At least once yearly after proposal has been approved |
| Apply for graduation & degree check (one form) | After approval of advancement to candidacy from Office of Research and Graduate Studies and before deadline posted in the Calendar of Activities & Deadlines found in the current class schedule, on the HSU website, and in the Academic Information and Referral Center). |
| Submit draft thesis to advisor | Early in fourth semester is ideal. |
| Address advisor's suggested revisions | Producing an acceptable draft is an iterative process and time required will vary with the quality of the drafts. The advisor typically wishes to comment on more than one draft before a complete draft is circulated for full graduate committee review. |
| Submit draft thesis to graduate committee | After approval of draft by advisor |
| Address graduate committees suggested revisions | Typically 30 days following delivery to the committee. |
| Schedule and complete oral thesis defense | Last semester |
| Submit revised thesis to college graduate director | Last semester (Allow graduate coordinator 3 weeks to review, and allow time for revisions). |
| Obtain required signatures for thesis | Last semester |
| Reproduce and bind copies of thesis | Last semester (CNRS students are required to bind 4 copies: 2 for the library, 1 for the department and 1 for the major advisor. Cooperative Research Unit students are required to provide an additional copy for the Unit library.) Contact Office for Research & Graduate Studies for deadlines |

CONTINUOUS ENROLLMENT POLICY

Effective for all students admitted for the fall 2002 semester and subsequent semesters, students are required to enroll for a minimum of one unit per term for at least two terms per academic year (fall, spring, summer) until degree requirements are completed. Graduate students are strongly encouraged to complete all graduation requirements before seeking employment and while still in residency at the university.

STUDENT RESPONSIBILITIES

The student is responsible for learning and following program requirements, for completing coursework with an acceptable level of achievement and for steady and conscientious progress toward degree completion. This includes contacting graduate committee members, and assuring their adherence to time guidelines. The student is responsible for the content of the research proposal and thesis, and for producing understandable and grammatically correct documents, including text, tables, and figures, for review by the graduate committee.

Graduate students are strongly encouraged to become members of and active participants in the appropriate scientific societies as part of their professional development. Organizations such as the American Fisheries Society, Ecological Society of America and North American Benthological Society all have special membership categories and activities specifically for students. See the UL or AUL for application materials or information about scientific societies.

ACADEMIC HONESTY

All unit students are expected to behave honestly in their academic endeavors. Failure to adhere to HSU policies on academic honesty (see p. 13, Handbook for Masters Students) may jeopardize the student's standing within HSU. Dishonest behavior may also result in termination of unit support.

TUITION AND SCHOLARSHIPS

If allowed by the research project budget, funds may be available to reimburse a portion of the graduate student fees (tuition), typically \$500 per semester. This reimbursement is negotiated individually; it is optional and will be for a maximum of four semesters per student.

Tuition for students who are not residents of California is substantially higher than tuition for residents. Graduate students from outside the State of California may apply for residency one year after establishing residence in the state. Residency status, for tuition purposes, is decided by the university on an individual basis.

A limited number of fellowships and scholarships are available through the Fisheries Department. These are awards granted to graduate students to aid in furthering academic study and they usually require no service to the university. Announcements regarding these opportunities will be distributed as they occur.

THE CONDUCT OF SCIENTIFIC RESEARCH

The research conducted by the California Cooperative Fish Research Unit is in response to the needs of various state and federal agencies and occasionally private organizations. The work is contracted by these entities and each project generally has a detailed proposal along with very specific budgetary and reporting requirements. Students may be required to collect data and contribute to reports in addition to the scope of their thesis topic. Graduate students should seek clarification with their major professor on project-specific expectations.

CARE AND USE OF RESEARCH ANIMALS

Each of us selected our profession because of our interest and concern for fish, wildlife and natural resources. We have a responsibility to insure that the animals we work with are treated correctly. Approved procedures pertaining to the best possible practices for animal care and welfare, both in the lab and in the field, have been developed and are available for your information. Please review the following resources, available in the Unit Office, for detailed topical information:

- Guidelines for Use of Fishes in Field Research (Ref. 1)
- Guide for the Care and Use of Laboratory Animals (Ref. 2)
- Acceptable Field Methods in Mammalogy (Ref. 3)
- Report of the American Ornithologists' Union on the Use of Wild Birds in Research (Ref. 4)
- ALPHARMA Technical Bulletin 5/2001 on MS222 (tricaine methane sulphonate) (Ref. 5)



In California, collecting organisms from the wild requires a permit. The permit program is administered by the Department of Fish and Game.

Everyone, including graduate students, must obtain a scientific collecting permit. Permit applications can be obtained from the California Department of Fish and Game, License and Revenue Branch, 3211 S Street, Sacramento, CA 95816, Phone: 916-227-2245.

The fee is currently \$15.75 for a student collecting permit. You must carry a copy of the permit with you when collecting and adhere to any conditions of the permit which includes notifying CDFG (Larry Preston, Eureka office: 707-441-5736) at least 24 hours prior to collections that are not continuous in nature.

Under no circumstances will the Unit condone collecting of animals not required for research projects or for approved reference collections of the University or the Unit.

Additional collecting permits are required for collecting on federal lands (National Parks, National Wildlife Refuges, Bureau of Land Management) and for collecting species listed as Threatened or Endangered. The Unit will obtain permits from the appropriate agency (CA Dept. of Fish & Game, National Park Service, National Marine Fisheries Service, U. S. Fish & Wildlife Service) for each project.

Humboldt State University Institutional Animal Care and Use Committee (IACUC) have established a Protocol to document the procedures to be used for the humane care and use of live vertebrate animals. All graduate student research is subject to this

review, before data collection is started. A copy of the protocol application can be obtained online at www.humboldt.edu/~iacuc. **A Master of Science thesis will not be approved by the university without the appropriate IACUC approvals.**

Because of the potential for conflict of interest, hunting or fishing by a student on his or her study site is discouraged.

DATA MANAGEMENT AND PUBLIC OWNERSHIP

Ownership

All research conducted through the unit is supported by grants or contracts. Although we commonly refer to data as being “mine” or “ours”, data ownership rests with the contracting agency. Federal agencies are mandated to make this data available to the public. It is our responsibility to collect, properly document, analyze, and publish their data.

Metadata

Metadata consist of descriptions of the data collected. They include date, time, and location, description of the data and any limitations of the data. Metadata are intended to both help others identify data that may have use in applications in addition to those the originators defined and to prevent the misuse of data. Unit students are responsible for developing metadata for all data they collect. Guidance in developing metadata is provided in Reference 6.

Quality Control and Quality Assurance

Quality Control and Quality Assurance (QA/QC) refers to procedures one adopts to document and track the processes involved in gathering data. QA/QC involves procedures such as the use of field and/or laboratory notebooks, testing the efficiency of our methods, tracking samples, and recording, analyzing and interpreting data. QA/QC is a part of good science and unit students will adhere to policies outlined in Reference 7.

Archiving Data

All research data collected become property of the funding agency and must be permanently filed with the unit. Copies of field note books, laboratory data, metadata, or other data must be filed in a timely manner (e.g. each semester) during the course of the research. Each project has filing locations established for this purpose. Copies of digital files should be placed in the network share folder under the project name. Paper copies should be filed in the data file cabinet in Room 212C. At the completion of the research, copies of raw and analyzed data (either on paper or electronic media) must also be retained at the unit.

Archiving Materials

Prior to leaving the unit and its facilities, graduate students and faculty should adhere to the following policy.

Perishable research materials such as stomachs, hides, chemicals, carcasses, roe, etc., must be removed from the facilities and destroyed following Good Laboratory Practices (GLP) Guidelines (Reference 8).

Documentation such as voucher specimens, genetic materials, data, etc. must be retained for:

1. 5 years when publication is sought;
2. 3 years if no publication is sought;
3. Indefinitely if data are likely to be sought by EPA, FDA, or other regulatory GLP agencies;

Usable field samples should be given to the appropriate faculty member, and data should be stored with the faculty advisor.

If research material is archived it must be in a sealed box, clearly labeled with the graduate student's name, date of completion, contents, and discard date. This policy will be enforced by the unit and will be checked at the time the student's thesis is submitted.

LABORATORY SAFETY

Chemicals

It is the responsibility of each student using chemicals in his or her research project to be knowledgeable about their proper use, storage, disposal, and any hazard their use may pose. This information may be obtained from the Material Safety Data Sheet (see MSDS Section below) provided with each chemical purchased. Students are also responsible for determining the appropriate amount of chemicals needed so as to not purchase in excess. Any remaining unused chemicals should be made available to other projects. Failure to comply with unit chemical safety regulations will be grounds for reprimand or disciplinary action.

Hazardous Material Management and MSDS

The unit leader is the chemical safety representative. Any questions you may have regarding handling or disposal of hazardous materials should be directed to him. Most chemicals routinely used in university laboratories are classified as hazardous materials. Many other products that you may not think of as hazardous are also classified as hazardous materials. For example, gasoline, oils, and sharp objects such as syringes or broken glass are considered hazardous materials.

All chemicals acquired by the unit must be processed and recorded by the CNRS stockroom personnel. Chemicals and samples must be properly labeled and stored.

Humboldt State University follows all federal and state regulations concerning the management of hazardous materials and disposal of hazardous wastes. It is your responsibility to know and follow these regulations.

All materials (chemicals) that pose any potential problem to human health are required to be sold with a Material Safety Data Sheet (MSDS). These sheets contain information such as physical data, fire hazard, toxicity, health effects and first aid. MSDS sheets are filed in our MSDS reference book located in WFB Room 200 (Reference 9). Refer to this reference before using chemicals to familiarize yourself with these substances and know how to find this information in the event of an emergency. If your project purchases chemicals, verify that the MSDS information has been filed.

Training

A laboratory/hazardous materials safety training course is presented each semester - annual attendance is required by the university.

FIELD SAFETY

Safety is a vital concern to us. Please ensure that any vehicles you use for field work contain a first aid kit, and that you are carrying a cell phone with you. Look for all opportunities to increase your knowledge and skills regarding safe field practices. Training in First Aid and CPR are available at no cost through the university office of environmental health and safety. Remember that no data are worth risking a dangerous situation.

FACILITIES, LABS, AND EQUIPMENT

USE AND OPERATION OF MOTOR VEHICLES

The unit maintains a fleet (5) of vehicles that are available for project use:

2000 Jeep Cherokee, 4x4

1996 Jeep Cherokee, 4x4

1993 Chevrolet S10 Blazer, 4x4

1989 Chevrolet S10 pick-up, 2x4

1985 Chevrolet van, 2x4

Drivers must be pre-authorized to use the unit vehicles, they **must**:

1. Have a valid state driver's license.
2. Read and sign the Unit Policy Information Regarding Use of Federal Vehicles.
3. Complete and sign a U.S. Geological Survey volunteer form. Becoming a federal volunteer provides some protection from Tort Claims that may be filed by other parties in the event of an accident.
4. Attend the Defensive Driver Training provided by the university.

All drivers of unit vehicles are required to obtain a vehicle insurance policy that covers them while driving a "non-owned" vehicle. Most carriers either provide this option as part of basic insurance or make it available for a minimum annual fee.

Vehicles must be operated according to all state laws, including speed limits. Use of seat belts is mandatory by all occupants when a vehicle is in operation. Infraction of laws will lead to disciplinary action if the student is judged to be negligent. Vehicles are identifiable as being in state or federal ownership. Drivers should be extra courteous and recognize that driving federal vehicles is a privilege not a right. **Always drive defensively.**

Drivers take on certain additional responsibilities for the care and maintenance of the vehicles.

- Vehicles should be scheduled in advance to assure availability or are available on a "first come-first served" basis. A monthly record sheet is provided to schedule and sign-out vehicles. Priority may need to be reassigned when a 4-wheel drive is required or number of passengers is an issue.

- Perform a basic safety check (tires, lights, mirrors...) before each trip.
- Each vehicle has a packet containing a logbook, keys, and credit cards.
 - Record odometer reading, miles driven, project name, and driver in the vehicle logbook on a daily basis. Mileage is accounted to the individual project funding.
 - Record all gasoline/oil purchases and services performed and any maintenance needs.
 - Use of the Renner card is preferred, the Union 76 credit card 2nd. Due to funding limitations the federal credit card should be used in an emergency only. To validate the federal card purchase you enter two zeros then the vehicle number located on the front of the card.
- Monitor the logbook mileage and advise the ASC before routine maintenance is due so that a service appointment can be arranged.
- Notify the office immediately if there are specific problems with the vehicle - a notation in the logbook is not sufficient.
- Wash and vacuum the vehicles regularly. You may obtain cash from the unit for this purpose or submit a receipt to the ASC for reimbursement.
- Vehicles should be parked in the designated areas and locked. Vehicles should not be taken to private homes unless specifically approved by the major advisor.
- Vehicles should only be used for authorized activities - they are not to be used for shopping trips or other personal advantage, or by members of the employee's family (unless that person is also an authorized driver). Specific authorization is required for non-employees to ride in unit vehicles - request approval from the unit leader or assistant.



Driver Responsibilities in case of accident:

1. Stop immediately.
2. Take steps to prevent another accident at the scene.
3. Call an ambulance if necessary.
4. Notify police. *Note: If you are injured, have the police notify your supervisor who will assume your responsibilities for gathering information for reporting the accident.*
5. DO NOT sign any paper or make any statement as to who was at fault (except to your supervisor or to a Federal Government investigator).
6. Get name and address of each witness (if form(s) are available, ask him/her to complete SF-94, Statement of Witness).
7. State your name, address, place of employment, name of your supervisor and upon request, show your operator's permit (federal government vehicles do not have registration cards).
8. Notify your supervisor immediately and provide all reports and information collected (see 9 below).



9. The following information will be needed for the Unit to report the accident and complete the required forms:
 - a. Registration information for the other vehicle(s) involved including owner's name, tag number & state, serial number, and vehicle description.
 - b. Information on other driver(s) including name, address, operator's permit number and expiration date.
 - c. Name and address of each person involved and extent of injury, if any.
 - d. Name and address of insurance company of other vehicle(s).
 - e. General information such as location, time, weather, damage, measurements, etc.

If you are involved in an incident (an event which could have resulted in harm to people or damage to property) or if you become aware of an unsafe condition, immediately report the pertinent information to the unit leader.

BOATS

All students/employees must complete a U.S. Department of the Interior Safe Boating Course before operating unit boats. Safety concerns covered in that course worth reiterating here include:

1. All personnel will wear life jackets when in a boat.
2. Boats will not be loaded beyond capacity.
3. Boats will not be operated at night without running lights.
4. All personnel using the boom shocker will wear rubber waders or hip boots, rubber gloves, and a life jacket.
5. No trailer or vehicle will be operated without legal complement of running lights in operable condition.
6. All gear in boats being towed on the highway will be securely fastened within the boat.
7. All students will be familiar with the State of California's boating regulations. These regulations must be observed in addition to those listed above. Failure to comply with safe boating regulations (USGS or state) may result in termination.



MANAGEMENT OF LABS AND FIELD EQUIPMENT

The unit provides access to an extensive list of equipment for use on research projects. Some items are very expensive and some items were purchased for specific projects and/or tasks. State and federal property regulations require strict accountability for equipment with a mandatory check-out procedure. Each piece of equipment has a file card to be completed with name and check out dates. A calendar is also available for "reserving" and planning purposes however all equipment use will ultimately be prioritized and coordinated by the UL and AUL.

Equipment must be maintained on a regular basis. Service requests need to be processed well in advance of anticipated field use. Sensitive electronic equipment must be kept in the dry containers provided. Batteries must be charged according to manufacturers recommendations. Instruction manuals should be read in advance and followed in the field. Negligence in the care of unit equipment will not be tolerated.

Equipment should be returned to assigned storage locations. It must be clean and in proper working condition. If loss or damage occurs, it must be reported to the unit immediately.

DESK ASSIGNMENT

The unit will attempt to provide all supported students with a desk space. Available space within the unit office is limited - most of our graduate student space must be



negotiated through the fisheries department. The Fisheries Department assigns labs to functions (e.g. age and growth, genetics, pathology). In each lab, a particular faculty member oversees lab use and operation. Discuss your needs for lab space with your major advisor, who will negotiate for needed space and equipment.

Space is available only for the period of enrollment in classes. Students are responsible for keeping office and, especially, laboratory facilities in clean and neat order or they risk losing privileges. University laboratory policies prohibit food, beverages and tobacco products in laboratory areas.

TRAVEL

PROFESSIONAL MEETINGS

The philosophy of the unit is to support professional travel by graduate students to extent possible and to distribute that support as evenly as possible to all students. Travel necessary for research or attendance at a meeting must be approved in advance. Requirements for travel approval vary among sources of funding (HSU Foundation, federal or state). Thus, requests for travel support must be submitted to the unit office a minimum of two weeks prior to the date of travel. The university procedure requests travel commitments at the beginning of each semester.



In most instances per diem (room and meal expenses) will not be paid unless the student is presenting a paper or poster. However, even the presentation of a paper does not insure that such expenses can or will be paid. Reimbursement for travel requires a precise record of expenses and receipts. When feasible, graduate students will be provided transportation to and from scientific meetings. Transportation is often some form of mass ground transportation and is dependent on the unit person or faculty member who is attending the meeting.

PROJECT FIELD WORK

Travel expenses that are related to work at distant project locations are negotiated individually and are dependent on approval of the funding source. Graduate Research Assistants need to be cognizant of available travel resources before planning overnight field work involving student assistants and technicians.