

## INFORMATION FOR GRADUATE STUDENTS

### Graduate Study

### *Tropical Plant and Soil Sciences (TPSS)*

October 4, 2013

In order to solve the complex problems facing agricultural plant production systems, many disciplines must be integrated successfully. Candidates may specialize in breeding and genetics of agricultural crops (e.g., fruits, ornamentals, veggies, forest trees, corn, etc.); physiology, culture, and management of tropical fruits, vegetables, or ornamentals; morphogenesis; crop and stress physiology, postharvest physiology, growth regulation, plant genetics, plant cytogenetics, weed science, computer modeling, turf and landscape management, cropping systems, plant-soil relationships, soil chemistry, soil physics, soil management, soil and water conservation, soil fertility, and soil microbiology.

Courses offered in Botany, Biochemistry, Entomology, Plant Pathology, Food Science, Genetics, Microbiology, Architecture, City and Regional Planning, Sociology, Psychology, Tourism Management, Information and Computer Science, Geology, Civil Engineering(ry) and Zoology in combination with courses offered in TPSS will provide considerable flexibility in the development of a program suited to the student's career objectives.

The TPSS department offers graduate study leading to a Master of Science (MS): Plan A, Plan B, or Plan C and Doctor of Philosophy (PhD) degree. The degrees mentioned emphasize the development of problem-solving skills that utilize molecular, biochemical, physiological, chemical, genetic, human dimensions in horticulture, social-psychological, design, installation and management of built and natural landscapes as well as ecological approaches to collaborative research in plant and soil sciences.

The TPSS degree aims to provide the student with a thorough hands-on understanding of the principles and techniques in the adaptation and application of biotechnology to tropical crop plant production, and the role of soils in supporting the whole system of crop production systems. Students will gain theoretical foundations and appropriate practical techniques to successfully create and maintain sustainable landscapes. The various options will require an understanding of fundamental biological processes, molecular and organism biology, genetics, plant physiology, chemistry, physics, people-plant relationships, socio-cultural and microbiology. Graduates of the program will also gain the knowledge and skills in order to conceptualize and produce environmentally and economically sustainable ornamental landscapes for tropical and subtropical regions. Soil is studied both for intrinsic properties, as well as its role in supporting crop growth and as an environmental resource.

The horticulture options explore the many facets of tropical food and ornamental crop production, landscape design, installation, and management which requires an understanding of agricultural systems, plant production, soil fertility, people-plant relationships, landscape systems, protection of the environment, as well as supporting disciplines such as crop ecology, plant physiology, public and private landscapes, design and planning and molecular biology.

The MS and PhD in TPSS are recognized by the Western Interstate Commission for Higher Education (WICHE) regional graduate programs. Residents of Alaska, Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington, and Wyoming are eligible, upon admission, to enroll at Hawai'i-resident tuition rates.

## **Contact**

Graduate Program

Tropical Plant and Soil Sciences

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## **1. Entrance Requirements**

For admission to the TPSS graduate programs, applicants must present a bachelors degree with a GPA of at least 3.0 (4.0 equals A scale) or the equivalent in the last four semesters or approximately 60 semester credits of the applicant's undergraduate record. The GRE is required for all applicants. A minimum CBT TOEFL score of 173 is required of all foreign students. All applicants must submit two letters of recommendation at the time of application.

General Graduate Degree information, criteria and procedures are available at <http://www.hawaii.edu/graduatestudies/degree/html/degree.htm>

## **2. Transfer of Credits**

The transfer of credits to meet the requirements of the MS or PhD is not automatic. The student must petition the graduate program chair, certifying that the transfers make programmatic sense and that the courses to be transferred are equivalent in rigor and scholastic content to graduate-level (600 level) courses offered at UH Manoa. The graduate program chair may consult with the graduate faculty as to the certification. The maximum number of credits that can be transferred is 12.

Only those credits that have not been applied towards the fulfillment of a previous degree may be transferred. An exception may be made if the subject matter area could not be met by course offering at UH Manoa, provided the courses transferred meet the rigor and programmatic appropriateness criteria described above.

## **3. Biosafety Training**

In the 1<sup>st</sup> semester of study, all graduate students who intended to work in a research laboratory classified as Biosafety Level one or higher are required to have adequate lab training. Students may be required to attend Lab Safety, Radiation Safety, Fire Safety, Occupational Health and Safety, Environmental Compliance, and/or Hazardous Materials Management training courses. Additional information can be found at <http://www.hawaii.edu/ehso/>

## **4. Advising**

Initial advising of all graduate students is performed by the Chair of TPSS Graduate Faculty. Prior to this, it is the student's responsibility to contact an advisor of interest and discuss with the particular advisor if they wish to serve as the chair of their committee. Upon

agreement of the advisor to serve as chair of the student's committee, the advisor will be required to sign all appropriate forms.

Please note that the selection and appointment of an advisor/committee chair should be done prior to or during the first semester of the program. However, it is highly recommended that the selection of an advisor/committee chair be completed by the start of the first semester. Early selection of an advisor has resulted in the successful planning of a graduate degree. Additionally, becoming acquainted with the TPSS faculty and other students will help students select an advisor/committee chair that is best suited for them.

Graduate Faculty members from the following list may be selected as an advisor. Associate and Affiliate Graduate Faculty can serve as members of a Graduate Committee, but cannot serve as advisor/committee chair or as the university representative of a PhD committee.

### ***Graduate Faculty***

- R. S. Yost, PhD (TPSS Chair) - Soil-plant relations, Soil management, Geospatial analysis
- A.M. Wieczorek, PhD (Graduate Chair) - molecular ecology, population genetics, biotechnology
- T.D. Amore, PhD-floriculture breeding
- H. C. Bittenbender, PhD - coffee, kava and cacao physiology and management
- J. L. Brewbaker, PhD - plant breeding, biochemical genetics
- K. T. Cheah, PhD - tissue culture, ornamental horticulture, business management
- J. Deenik, PhD - soil fertility, soil management
- J. DeFrank, PhD - weed science
- M. Habte, PhD - soil microbiology-biochemistry
- N. V. Hue, PhD - soil chemistry
- A. Kaufman MLA PhD – landscape systems, design and management, environmental psychology
- H J Kim, PhD – floriculture, ornamental production
- K. D. Kobayashi, PhD - floriculture and fruit physiology, computer modeling
- K. L. Leonhardt, PhD – floriculture
- R. M. Manshardt, PhD - tropical fruit breeding and genetics
- S. C. Miyasaka, PhD - alternative crops, plant nutrition
- M. Nickum, PhD – sustainable fruit and nut production
- R. Ogoshi, PhD- biofuels
- R. E. Paull, PhD - plant growth & development, postharvest handling
- T. Radovich PhD - vegetables, sustainable farming
- A. A Saulo, PhD- food technology extension, food safety and quality
- B. Turano, PhD- biofuels

### ***Cooperating Graduate Faculty***

- D. Borthakur, PhD- Plant-Microbe Interactions, Plant Biotechnology
- C. I. Evensen, PhD - water quality extension, environmental education
- A. El-Kadi, PhD- hydrology
- J. Leary, PhD- Invasive Weed Management
- W. S. Sakai, PhD - ultrastructure, physiological plant anatomy

M. J. Tanabe, PhD - in vitro propagation, turf management, plant propagation

***Affiliate Graduate Faculty***

M. Austin, PhD - crop breeding, hybrid seed production

M. M. M. Fitch, PhD - tissue culture, genetic engineering

M. C. Jackson, PhD - biochemistry, economics

T. Matsumoto, PhD - horticulture

J. J. McHugh, PhD - vegetable management, integrated pest management

P. Moore, PhD - plant development, sugar metabolism

C. N. Nagai, PhD - sugar cane genetics and tissue culture

D. Ragone, PhD - ethnobotany, conservation

C. Stiles, PhD- soil science

F. Zee, PhD - plant breeding, genetics

**5. Graduate Committee**

Upon entering the graduate program, students will meet with the Graduate Chair and their advisor for a preliminary conference early in the first semester of residency. If the student has not identified an advisor, the student will meet with the Graduate Chair only. During the preliminary conference, the student will be prepared to discuss their undergraduate study and associated academic transcript(s) (See Appendix I - Preliminary Conference Form), intended program of study, potential committee chair and/or committee members, strengths and weaknesses that may impact their study, and career goals. The decisions that are agreed upon during the preliminary conference will be taken into effect the next semester.

If a faculty advisor has not been selected, the Graduate Chair or a selected representative will perform the role of the student's advisor/committee chair. The advisor/committee chair and the Graduate Chair will guide the student on graduate course selections, successful progression of the program and if necessary, serve as an advisor until the permanent graduate program committee is established.

***Choice of committee members***

The members of the graduate student's committee will be determined by the student and advisor/committee chair. It is the student's responsibility to obtain consent of faculty members to serve on their committee. Additionally, the student will be responsible for arranging schedules for advising, proposals, and thesis defense. Generally, faculty members are chosen to serve on a student's committee based upon specific research interests and expertise that can contribute to their chosen research area. It is highly recommended to prepare a short document outlining the planned research (background, hypothesis, objectives, approach, and expected results) to share with prospective committee members before the meeting.

***Eligibility***

Committee members must be members of the Graduate Faculty of the University of Hawaii, Emeritus Graduate Faculty members, Cooperating Graduate Faculty or Affiliate Graduate Faculty members. A majority of the members of the committee must be from the Tropical Plant and Soil Sciences Department (Full, Cooperating or Affiliated). A committee

with only 50% Tropical Plant and Soil Sciences graduate faculty requires approval by the Graduate Division. Appointment of committee members who are not on the Graduate Faculty may be made upon approval of the Graduate Division. The Chair of the committee must be a member of the Tropical Plant and Soil Sciences Graduate Faculty. An Interim Graduate Faculty member can serve as a committee member, but not as a committee Chairman nor as the university representative of a PhD committee until he/she attains full Graduate Faculty status.

### ***Number of Members***

- a) MS committees shall have three or more members.
- b) PhD committees shall have five or more members. At least one member of the PhD committee must be from a field outside the Tropical Plant and Soil Sciences Department. The outside member (university representative) must be designated at the time the committee is formed and must sign all forms as the university representative, even though there may be more than one committee member from other departments.

### ***Meetings with Advisory Committee Chair and Committee.***

As of Spring 2012 all students shall meet with their permanent Graduate Program Committee **at least once each semester**. This meeting is to allow the committee to evaluate academic and research progress and to establish mutual goals for the next semester. It is the student's responsibility to schedule this meeting and to file the Academic Progress Report with the Graduate Chairman. (See attached form Appendix II.)

## **6. Master of Science Degree, Plan A (thesis) and B (without thesis)**

The intended study of the MS Plan A program is to further a student's graduate studies leading to the PhD degree or successful entry to careers as researchers and technicians. Graduates of the MS Plan B program typically enter careers in education, agribusiness, extension service, and other agricultural related occupations. The Plan B MS is regarded as a terminal degree in this graduate program.

### ***Requirements***

The advisor, with the approval of the Graduate Chair shall guide the student on course selection matters, insure progression in the program and advise the student until the permanent graduate program committee is established. At the initial meeting with the student, the advisor will go over with approval of the graduate program chair, additional courses for the students program.

Master of Science Plan A students must complete a minimum of 24 credits hours of course work and 6 credit hours of thesis preparation. A final oral examination is also required.

MS plan B students must complete a minimum of 30 credits as follows: at least 6 credits in TPSS 600+; 6 credits in TPSS/CTAHR/Botany 600+ (see list of allowed courses), 6 credits in other 600+; 6 credits of 699; 6 credits in other 400/600 level classes

List of allowed courses to meet 6 credits in TPSS/CTAHR/Botany 600+ requirement

Any TPSS 600+;

PEPS 662 Systematics and Phylogenetics;

PEPS 675 Biological Control of Pests;  
PEPS 686 Insect Transmission of Plant Pathogens;  
MBBE 602 Recent Advances in Molecular Biotechnology;  
MBBE 650 DNA and Genetic Analysis;  
NREM 611 Resource/Environmental Policy;  
NREM 680 Ecosystem ecology;  
BOT 652 Population Biology;  
BOT 661 Hawaiian Vascular Plants;  
BOT 669 Molecular Phylogenetics & Evolution;  
BOT 690 Conservation Biology;  
BOT 644 Ethnoecological Methods;  
BOT 651 Invasion Biology

### ***Proposal defense***

Master of Science Plan A students are required to give a thesis proposal seminar, preferably in the second semester

### ***Seminar***

All students must take TPSS654 (Communications in Science) during their graduate study and register for TPSS667 (Graduate Seminar) once every academic year in which they are registered as full-time student or equivalent. An exception can be made during the final semester, in which the dissertation defense or Plan B project report is given in place of TPSS667.

### ***Lecture Requirement***

All MS students who entered TPSS program in Fall 2011 or later are required to give one lecture in a TPSS course during their program. The student will be evaluated by the faculty teaching the course, and this evaluation will be added to the student's file.

### ***Master of Science- Thesis Plan A***

See section 9 below for details on thesis preparation. Upon development of a thesis proposal in conjunction with your advisor and the selection of graduate committee, the student will be advanced to candidacy. The thesis topic must be submitted and approved by your Graduate Committee prior to mid-term of the semester after you have been advanced to candidacy. You may register for TPSS 700 only after your thesis topic has been approved by your committee.

### ***Final Examination- Master of Science Plan A***

A final oral examination on course of study and project is required. The first part of the examination consists of a seminar presentation and defense of the research, which is open to the public and is one hour in length. Following the presentation, student will be examined in detail on the conduct and results of the thesis by the committee.

### ***Final Examination- Master of Science Plan B***

A final oral examination on the thesis is required. The first part of the examination

consists of a seminar presentation and defense of the research, which is open to the public and is one hour in length. The seminar will be presented on a topic agreed upon by the student and their advisor/committee chair. Topics presented included the research conducted under the advisor's direction in TPSS 699.

### ***Final examination- Master of Science Plan C***

The UHM Graduate Division and TPSS in CTAHR allow for a Plan C Masters degree. To be admitted into the TPSS Plan C program the candidate must be able collect and analyze a body of scientific literature that addresses a specific area of science relevant to the academic expertise of a faculty member in TPSS. The analysis and interpretation of the literature should be of sufficient scope and focus for publication as a review article in a peer reviewed journal. The review article must identify important data gaps and recommend a series of experiments that can close and or address them. The Plan C candidate will submit a properly formatted preadmission document containing the literature review, identification and discussion of data gaps, research to address the data gaps, a set of simulated raw data for each experiment described, and the statistical analysis for the simulated data with associated interpretation. All other admission requirements of the UHM Graduate Division must also be satisfied. The Plan C preadmission document will be reviewed by the graduate chair and a committee of three graduate faculty members familiar with the candidate's area of research selected by the Graduate Chair. The preadmission document will be the basis for acceptance into the TPSS Plan C program. Candidates not accepted into the Plan C program can still apply for graduate status into the Plan A and B programs.

*Total Credit Requirements-* No specific number of credits is required. The student shall demonstrate competence in the preadmission paper document and must meet the minimum residence requirements. Candidates must make at least 1 presentation at the CTAHR Student Research Symposium or similar venue during their program of study.

*Transferring from Plan A or B to Plan C-* A student on academic probation may not transfer from Plan A or B to Plan C. Transfer students must provide the same preadmission document as new Plan C candidates

*General Exam-* The preadmission document will represent the only written qualifying exam required for Plan C candidates. The submission will be assigned a pass/fail grade. Plan C candidates who fail the admission review process can still apply for plan A & B status. After the student passes the preadmission review, a program committee is identified by the Plan C candidate and approved by the Graduate Chair. Chaired by the student's program adviser, the committee will guide the student through the rest of the recommended program of study. The committee will be composed of no less than 3 and no more than 5 faculty certified to serve in this capacity.

*Program of Study-* The program committee will review the preadmission document and use it as a thesis research proposal. Based on the candidate's academic transcripts and preadmission document, course work and execution of required research activity will be specified. A report of required course work and research activity will be submitted by the program adviser to the graduate chair for review and approval as the candidate's requirements for awarding a master's degree. The graduate chair shall submit to the Graduate Records Office a copy of the recommended program of study

*Final Exam:* The final exam determines the student's level of comprehension and

achievement in the chosen discipline at the master level.

*Timing:* The entire exam must be given prior to the last day to submit master Plan B and C final exam results, as indicated in the Academic Calendar for the term during which the degree is to be conferred.

*Format Exam:* Format for Plan C in TPSS is as follows: The written exam will consist of either a literature review or research manuscript that has been submitted and accepted for publication to a peer reviewed journal that is approved by the program adviser. The Plan C candidate must be the sole author for review article and major author for research publication. The Journal's Editor manuscript acceptance letter must be presented to the Graduate Chair prior to scheduling the oral exam. The Plan C candidate cannot schedule the oral exam until the acceptance letter of the editorial board is forwarded to the graduate chair for review and approval to proceed. A candidate who cannot obtain a letter of acceptance for the manuscript cannot take the oral exam and cannot transfer to Plan A or B programs unless all required course work is taken. The oral examination is open to the public, during which the author of the manuscript described above demonstrates to his or her committee satisfactory command of all aspects of the work presented and other related subjects, if applicable. The defense must be one hour or more in length. It may be scheduled between 8:00 am to 4:30 pm on any workday, during both instructional and non-instructional periods. To pass the oral exam, a student must demonstrate a level of comprehension and achievement consonant with that required by Plans A and B on the final exam.

*Results:* Exam results shall be reported to the Graduate Records Office via a memo certified by the student's program adviser and endorsed by the graduate chair.

*Time limits to completion of Plan C program:* Plan C candidates must obtain a letter of acceptance for their manuscript within 2 years of the start of their program. If candidates cannot finish within that time frame, they can make a 1-time request for a 9-month extension.

## **7. Doctor of Philosophy Degree**

PhD graduates are expected to enter careers as researchers and/or educators in institutions of higher learning, both in public and private institutions. The PhD is awarded only for original scholarly achievement. The dissertation, which is a significant original contribution to basic knowledge in the candidate's field is required. Only students with above average academic records in pre-doctoral programs will be accepted in the program.

### ***Requirements***

The advisor, with the approval of the Graduate Chair shall guide the student on course selection matters, insure progression in the program and advise the student until the permanent graduate program committee is established. At the initial meeting with the student, the advisor will go over with approval of the graduate program chair, additional courses for the student's program.

Course requirements are established by the student's Graduate Committee. Following a preliminary conference with the advisor and/or committee and with the approval of the graduate program chairman, the student will be officially advanced to candidacy. After admission to candidacy and the completion of most courses in the candidate's program, the candidate must take oral comprehensive examinations covering all subjects considered

relevant to the concentration. A seminar on the proposed research topic may be also required by the student's permanent committee. A final oral examination, which includes a public defense of the dissertation, is required of all candidates.

For all PhD students, a minimum of 12 credit hours in courses numbered 400 or above is required for the major, not including seminar, directed research, thesis/dissertation research.

### ***Seminar***

Candidates must register for TPSS 667 (Graduate Seminar) once every academic year in which they are registered as full-time or equivalent. An exception is made in the final semester in which the dissertation defense can be substituted for seminar. All students must take TPSS 654 (Communications in the Sciences) or its equivalent during their first year as a substitute for one semester of TPSS 667.

### ***Lecture Requirement***

All PhD students who entered the TPSS program in Fall 2011 or later are required to give three lectures in TPSS courses during the course of their program. The student will be evaluated by the faculty member teaching the course, and this evaluation will be added to the student's file.

### ***Course Work***

Course requirements are established by the student's Graduate Committee. Upon development of a thesis proposal with your advisor/committee chair and committee members, you will be advanced to candidacy. The thesis topic must be submitted and approved by your Graduate Committee prior to mid-term of the semester after you have been advanced to candidacy. After admission to candidacy and the completion of most courses in the candidate's program, the candidate must take oral comprehensive examinations covering all subjects considered relevant to the concentration. A seminar on the proposed research topic may be also required by the student's permanent committee. A final oral examination, which includes a public defense of the dissertation is required of all candidates.

For all PhD students a minimum of 12 credit hours in courses numbered 400 and 600 level is required for the major, not including seminar, directed research, and thesis/dissertation research

### ***Comprehensive Examination***

An oral or oral and written comprehensive examination is conducted by your Graduate Committee for all PhD candidates. This examination may cover any subject thought pertinent by your committee members. The comprehensive examination may be repeated once at the option of your committee. If the student fails to pass the exam the second time, the student will be dropped from the program.

### ***Proposal defense***

PhD students are required to give a thesis proposal seminar within the first year of their program.

### ***Language requirement***

There is no language requirement for the PhD degree in TPSS.

### ***Dissertation***

The PhD is awarded only for original scholarly achievement. The dissertation, which is a significant original contribution to basic knowledge in the candidate's field is required. For further information see "section 8" below. The dissertation proposal must be submitted and approved by your Graduate Committee during the semester following completion of the qualifying examination. You may register for TPSS 800 (Dissertation Research) only after approval of your dissertation proposal.

The Graduate Division requires that: *"The student must be the sole author of the manuscript, co-authored dissertation is not permitted. In addition, the dissertation should exhibit originality in the sense that it does not duplicate someone else's work. The dissertation may not have been published previously in its entirety. With the approval of the graduate program and the committee chair, a student may include previously published material in the dissertation."*

<http://www.hawaii.edu/graduatestudies/degree/html/degree.htm#doctorate>, Accessed 2011 June 14.

### ***Final examination***

A final oral examination on student's dissertation is required. The first part of the examination consists of a seminar presentation and defense of your research, which is open to the public and is one hour in length. Following the open seminar presentation, there will be more thorough examination of the research and results of the dissertation by the members of your committee and any other members of the Graduate Faculty who wish to attend.

### **Courses Available**

TPSS 500 Master's Plan B/C Studies  
TPSS 601 Crop Modeling  
TPSS 603 Experimental Design  
TPSS 604 Advanced Soil Microbiology  
TPSS 610 Nutrition of Tropical Crops  
TPSS 614 Molecular Genetics of Crops  
TPSS 615 Quantitative Genetics  
TPSS 640 Advanced Soil Chemistry  
TPSS 650 Soil Plant Nutrient Relations  
TPSS 652 Information Research Skills  
TPSS 654 Communications in the Sciences  
TPSS 664 Orchidology  
TPSS 667 Graduate Seminar  
TPSS 670 Agrarian Systems Analysis  
TPSS 674 Plant Growth and Development  
TPSS 680 Geospatial Analysis of Natural Resource Data  
TPSS 695 Plan B Master's Project  
TPSS 699 Directed Research  
TPSS 700 Thesis Research

TPSS 711 Special Topics  
TPSS 800 Dissertation Research  
MBBE 620 Plant Biochemistry  
MBBE 680 Methods in Plant Molecular Biology

## **10. Thesis and Dissertation Requirements**

### ***Plans for publication and rights to data***

The Graduation Division requires that all graduate students doing a thesis or dissertation file a statement on “Plans for Publication and Rights to Data” at the time of acceptance of the thesis/dissertation topic. In addition, all doctoral students will be required to publish their dissertations with UMI ProQuest Services (<http://tls.il.proquest.com/hp/Support/DServices/>) or some other equivalent publishing firm suggested by the student and approved by the Graduate Division. Such publication is also an option for MS students.

### ***Thesis (MS Plan A)***

The master’s thesis problem is decided upon in consultation with your advisor. It will usually be closely related to research that your advisor is conducting. You are expected to demonstrate your ability to conduct research on the problem independently and to understand thoroughly all aspects and limitations of your study. The format of the thesis will be as specified in “Instructions for the Preparation of Theses and Dissertations” of the Graduate Division. Do not use previous theses as models.

### ***Dissertation (PhD)***

The Doctoral dissertation problem is also decided upon in consultation with your advisor but should be clearly distinguishable as your own research. As stated in the Graduate catalog: “The dissertation is expected to be a scholarly presentation of an original contribution to knowledge resulting from independent research and should be suitable for publication.” The format of the dissertation will be as specified in “eTD (Electronic Thesis and Dissertation) STYLE & POLICY GUIDE” of the Graduate Division at [http://manoa.hawaii.edu/grad/wp-content/uploads/manuals/tdstylepolicy\\_e.pdf](http://manoa.hawaii.edu/grad/wp-content/uploads/manuals/tdstylepolicy_e.pdf). The graduate student is responsible for seeing that formats are complied with in submitting theses/dissertations to the Graduate Division.

### ***Cost of thesis preparation and photocopying and number of copies required***

All costs of thesis preparation, photocopying, and binding of theses and dissertations will be assumed by the student.

- a) The Graduate Division requires at least one copy of the student’s dissertation (a binding fee is charged by the Graduate Division).
- b) The Department requires one unbound copy of the student’s dissertation (there is no binding fee by the Department).
- c) It is common practice for the student to present one bound copy of the student’s dissertation to the advisor. (Some committee members might also appreciate a copy - you might want to ask them.)
- d) Some advisors, especially when your project was funded by an outside grant, will require you to provide them with digital files of all your research results. The digital files will

normally contain your thesis, all data files and figures, and other files related to the work done on the grant.

e) **11. Steps in Degree Progress**

The chronological order of progress for advanced degrees is given below in tabular form.

<b>STEP</b>	<b>TIME FRAME</b>	<b>GRAD DIVISION FORM REQUIRED</b>
1. Preliminary conference & appointment of advisor.	1st Semester of residency	I
2. Completion Biomedical and Biological Responsible Conduct of Research, Basic Course	1st Semester of residency	
3. Hazardous Materials course	1st Semester of residency	
4. Appointment of committee	2nd Semester of residency	
5. Approval of thesis/ topic	2nd Semester of residency	
6. Proposal defense for PhD students	1 <sup>st</sup> year of residency	
7. Advancement to Candidacy <b>MS Plan A students</b> -upon presentation thesis proposal committee members and thesis proposal seminar <b>PhD Students</b> -upon successfully passing comprehensive exam and	2nd Semester of residency  to be decided by the student and committee	II
8. Submit final draft of thesis/dissertation to committee	Minimum of 2 weeks before scheduled defense	
9. Prepare thesis title page	After examination. No signature page required in thesis	
10. Final seminal and oral examination		III
11. Submit thesis/dissertation to Graduate Division	Meet Graduate Division deadline as published in catalog	IV

## **12. Use of Departmental Supplies and Facilities**

### ***Keys***

Keys to rooms and facilities are obtained from the departmental administrators in room 102. Keys to the buildings and facilities other than student's office/lab are obtained upon written request from the student's advisor describing need for access to the facility. Keys should not be loan to unauthorized persons. If keys are lost, please notify the departmental administrators. Security of building must be maintained for the safety of occupants of the building and to prevent theft of valuable equipment and personal belongings. All the keys must return when student's affiliation with the TPSS Department ends.

### ***Mailboxes***

You will be assigned a mailbox in St John Room #102. Check daily for mail and other notices. Room 102 is generally open from 8:00 A.M. to 12:00 Noon and from 1:00 to 4:30 P.M. Monday through Friday. You should use your home address for personal mailings.

### ***Office supplies***

Office supplies are not available for student use except by Graduate Assistants assisting in instructional activities as part of the performance of their official duties.

### ***Stationery and postage***

Official stationery and mailing facilities are not available for student except for Graduate Assistants for correspondence in relation to their official duties and only after approval by their advisors.

### ***Laboratory and field supplies***

Supplies and facilities for carrying out research programs will be supplied for all students by the department through the advisor. All ordering of supplies, reserving of space, etc., will be done by student's advisor.

### ***University vehicles***

Only University employees (Graduate Assistants, Student Assistants or Research Assistants) with a valid Hawaii driver's license are allowed to drive University vehicles.

### ***Telephone use***

Students are not permitted to make long distance calls on University telephones except for official business with approval of their advisors.

### ***Computers***

Nearly every laboratory is equipped with personal computers connected to the University Computer Center. There are also computers with a printer in St John Room 107, which may be used by students in accordance with policies that have been established and posted in that room. Graduate students should not attempt to modify programs on departmental computers in room 107. Do not attempt to use a computer with which you are not familiar without first being instructed by faculty or fellow graduate students familiar with its use. Incorrect use of

the computer may cause problems with someone else's programs or data. Dr. Kobayashi (Room 207) and Dr. DeFrank (Room 212) are faculty members with computer expertise who can help you with unusual problems that arise.

### ***Seminar and Meeting Room (St John #106 and #104)***

Students may use the Departmental Seminar (Room #106) and Meeting Room (#104) for official business. A sign-up sheet is available in St John Room #102.

### **13. Financial Assistance**

The department occasionally has openings for Teaching Assistants, Research Assistants, and Tuition Waivers, as well as for special awards that become available from time-to-time. In addition, faculty members often have openings for student assistants or casual hire on research projects for which graduate students may apply. All continuing and new students not receiving assistance will be automatically considered for Tuition Waiver openings and will be invited to apply for Assistantship openings.

Research and Teaching Assistant-ships are normally renewable dependent upon satisfactory performance. If students continue for a PhD. degree after the MS., they must reapply for the assistantship, as continuation is not automatic. Tuition Waivers are limited to a maximum of four semesters for master's students and eight semesters for doctoral students.

### **14. Graduate Student Association**

The graduate students of the Department have formed an association for social as well as professional purposes. Through this organization, students advise faculty on academic matters and other areas of concern to graduate students. They help fellow graduate students with housing and other personal matters and hold occasional social events. You are automatically a member and are encouraged to actively participate in this organization.

A faculty-graduate student social is held at the beginning of each semester to introduce new students and help them become acquainted with the faculty, staff and other students of the department.

### **15. Exit Requirements**

All students must complete the following prior to exiting the program.

Return all keys to the main office.

Clean up all spaces used (laboratory benches, greenhouse benches, desk).

Leave a personal forwarding address with the main office.

### **16. Appendices**

# Appendix I.

## TPSS Graduate Student Preliminary Conference Form

Student Name: \_\_\_\_\_ Meeting Date: \_\_\_\_\_

Degree Sought: \_\_\_\_\_ MS A or B \_\_\_\_\_ PhD

Career Goals \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### UG Program, Research Experience, Transcript Review:

Statistics                      YES                      NO                      Research Method                      YES                      NO

Research and Technical Skills. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Other: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Course Deficiencies: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### First Semester Goals:

Courses: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Research Proposal Development (Thesis/ Project)- Topic: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Potential Committee Members: \_\_\_\_\_  
\_\_\_\_\_

Completion Biomedical and Biological Responsible Conduct of Research, Basic Course

Go to : <https://www.citiprogram.org/default.asp>

### Signatures

\_\_\_\_\_  
Student

\_\_\_\_\_  
Graduate Chair

\_\_\_\_\_  
Thesis Committee Advisor

\_\_\_\_\_  
Other Faculty Present

\_\_\_\_\_  
Other Faculty Present

## Appendix II. TPSS Graduate Student Semester Progress Form

Student Name: \_\_\_\_\_ Meeting Date: \_\_\_\_\_

<b>Degree Sought:</b>	MS A or B	PhD
<b>Preliminary Conference</b>		<b>Admission to Candidacy</b>
<b>Permanent Committee</b>		<b>Proposal Seminar</b>
<b>Comprehensive</b>		<b>Final examination</b>
<b>Seminar Attendance</b>	Satisfactory	Unsatisfactory
<b>TPSS 654 Requirement Fulfilled</b>	Yes	No
<b>Lectures Requirement Fulfilled</b>	<b>MS (one lecture)</b>	<b>PhD (3 lectures)</b> Yes No
<b>Academic Progress:</b>	Year: _____	Fall Spring

Courses: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Research (Thesis): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Other: \_\_\_\_\_  
 \_\_\_\_\_

Evaluation Overall Progress:                      Satisfactory                      Unsatisfactory

**Next Semester Goals:**  
 Courses: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Research (Thesis): \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Other: \_\_\_\_\_  
 \_\_\_\_\_

**Signatures**

_____	_____
Student	Thesis Committee Chairman
_____	_____
Member	Member
_____	_____
Member	Member
_____	_____
Member	Graduate Chair