

Crop, Soil and Environmental Sciences

Graduate Student Handbook

**Prepared by Crop, Soil and Environmental Sciences Graduate Committee,
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SAFETY

Safety, at all times is absolutely essential and everyone’s responsible. You are responsible for your safety and probably, legally liable for the safety of anyone you supervise. The following is not an all inclusive list, but points out some major safety issues.

1. See page 17 on state vehicle operations.
2. Do not operate any machinery or equipment until you have read and understand the safety issues associated with it (this includes lawnmowers, tractors, grinders, harvesters, etc).
3. Do not operate any machinery or equipment if you are under the influence of mind altering drugs (legal or illegal).
4. **Pesticides:** Do not handle, mix, transport or apply any pesticide unless you have a permit from the State of Alabama that covers the class or classes of pesticides in question, i.e., restricted or non-restricted use.
5. Do not get close to pesticides unless you have been through a safety training session.
6. In order to operate any piece of motorized machinery you must sign the departmental safety form indicating you have received instructions on safety and correct operations. The person giving the instructions must sign as well.
7. If you have not had training in lab chemical safety, either through chemistry course, specific safety course, do not mix or handle laboratory chemicals unless you have been instructed by or are being supervised by someone who has been well educated in chemical safety.
8. Items 1 - 7 applies to anyone you supervise and you are responsible for making sure they are well trained in safety operations.
9. Report any safety problems that you know of to your immediate supervisor.

RESPONSIBILITIES OF STUDENTS

The graduate student is expected to read and follow the guidelines described in this handbook. Being a graduate student cannot be considered as only a job. Rather, it is a means of accomplishing professional goals. The student is a representative of Auburn University and the Department of Crop, Soil and Environmental Sciences.

Both thesis and non-thesis students have the following responsibilities:

1. to make the commitment to his/her graduate program which is required for the successful completion of his/her degree. This often requires more time than generally expected when initiating a graduate program.
2. to read and be familiar with the information presented in the AU Graduate Studies Bulletin, and to know and observe all regulations and procedures relating to the program he/she is pursuing. In no case will a regulation be waived or an exception granted because a student pleads ignorance of, or contends that he/she was not informed of, the regulations or procedures. Rules, regulations and requirements listed in Auburn University Bulletin take precedence over the departmental document if a difference occurs. A student planning to graduate should be familiar with the dates relating to application for graduation and other pertinent deadlines (Form 1).
3. to satisfy the requirements of the bulletin in force at the time the student is admitted to, and begins course work in, a degree program; or the student may, with the consent of his/her advisor, graduate under a subsequent bulletin provided the student complies with all requirements of the later bulletin.
4. to follow all policies and meet all requirements and deadlines.
5. to perform project related work, regardless of funding status, as defined by the faculty advisor.
6. to ensure security and energy conservation of the project and department equipment and facilities.
7. to maintain and care for all project and department materials.
8. to set a demanding schedule to maintain his/her progress.
9. to call meetings of the graduate committee, reserve the room, and provide committee members with the time, location, and purpose of the meeting.
10. to conduct committee meetings.

11. to inform his/her graduate committee of the status of their program and research at regular intervals.

12. to pursue employment upon graduation.

The thesis/dissertation student also has the responsibility:

13. to ensure that his/her research is original, which requires a detailed literature review.

14. to properly summarize and interpret his/her research.

15. to perform his/her own research-related work.

ADVISOR'S ROLE

1. to provide competent advice on course work, research, and employment opportunities when requested.

2. to describe the limits of supplies, equipment, and labor, to the graduate student before the initiation of his/her work.

3. to define the amount of time a student must devote to non-thesis related project work.

4. to provide the graduate student the opportunity to be imaginative and innovative in the pursuit of his/her degree program.

5. to provide an atmosphere that will encourage successful completion of the graduate program.

6. to provide supplies, equipment and labor within the limits of available funding.

7. to stay abreast of the graduate student's research and its progress.

8. to provide assistance in the form of critical review of the initial project proposal, seminars, manuscripts, presentation, and the thesis/dissertation.

9. to accept final responsibility for research conducted under his/her project.

GRA DUTIES

Graduate assistantships are awarded to help students support themselves while earning graduate degrees and to help the university fulfill its responsibilities in teaching and research.

Once an assistantship is awarded, the student must make satisfactory progress toward completing degree requirements and must satisfactorily perform his/her assigned duties in order to be reappointed. The department head will often make assignments for students to assist in laboratory or classroom teaching. Though not a departmental requirement (unless assigned), it is strongly recommended that every graduate student spend at least one semester teaching or assisting in the teaching of a lab.

Graduate assistants are not considered permanent or full-time employees of the University, and therefore, do not earn annual or sick leave. However, since assistantships are awarded for the purpose of accomplishing teaching or research, it is desirable to establish some understanding regarding the amount of time students may be away from the campus during periods they are being paid. **Graduate assistants are expected to be on duty during the breaks between semesters.** With the exceptions of university holidays, the student should request permission to be on 'leave' from his/her major professor and it is the major professor's responsibility, along with the student's, to see that this 'leave' policy is not abused.

The major professor and other faculty need to know the whereabouts of graduate students and how to get in touch with them when needed. At the beginning of each semester, the graduate students should provide their major professors with their schedules. It is also important that the student provide a phone number and/or email address where they can be reached when away from the department.

Exercise your professional status by enrolling in a society membership. It is highly recommended to join the American Society of Agronomy (ASA), Crop Science Society of America (CSSA), Soil Science Society of America (SSSA), or the Weed Science Society of America (WSSA). Student members are entitled to reduced fees for journals and registration as well as career placement services.

Following is the website to the AU Graduate Assistant Handbook:

http://www.grad.auburn.edu/cs/grad_assist_guide.html

CROP, SOIL AND ENVIRONMENTAL SCIENCES PERSONNEL

FACULTY:

John P. Beasley, Professor and Head, B.S., Auburn University; M.S., Oklahoma State University; Ph.D., Louisiana State University,

David I. Bransby, Professor; B.S., Univ. of Natal, South Africa; M.S., Univ. of Missouri; Ph.D., Univ. of Natal, South Africa. Forages, Energy Crops.

Eve Brantley, Extension Specialist and Associate Professor, B.S., Berry College; M.S., Clemson University; Ph.D., Auburn University. Water Resource

Charles Y. Chen, Associate Professor, B.S., China Agricultural University; M.S., The Graduate School of Chinese Academy of Agricultural Sciences; Ph.D., University of Illinois at Urbana-Champaign. Peanut Breeding, Genetics, and Genomics

Joyce Tredaway Ducar, Assistant Professor, B.S., Auburn University; M.S., Auburn University, Ph.D., The University of Tennessee. Weed Science.

Yucheng Feng, Associate Professor, B.S., Beijing Agricultural Univ.; M.S., Ph.D., Penn State. Soil Microbiology.

Elizabeth Guertal, Professor; B.S., M.S., The Ohio State Univ.; Ph.D., Oklahoma State Univ. Turf and Soil Fertility.

David Han, Extension Specialist and Associate Professor; B.A., Cornell University; M.S., Cornell University; Ph.D., The Ohio State University. Turfgrass Management.

Julie Howe, Assistant Professor, B.S., M.S., Texas A&M University, Ph.D., University of Wisconsin. Soil Science.

Gobena Huluka, Associate Professor, B.S., Addis Ababa University; M.S., Ph.D., Auburn University Ph.D., Soil Science.

Jennifer M. Johnson, Extension Specialist and Assistant Professor, B.A., Western Kentucky University; M.S., Western Kentucky University; Ph.D., University of Kentucky. Forages.

Thorsten Knappenberger, Assistant Professor, B.S., M.S., Ph.D, University of Hohenheim, Germany. Agricultural Engineering.

Gary Lemme, Extension Director, B.S., M.S., South Dakota State University; Ph.D., University of Nebraska-Lincoln.

Paul Mask, Assistant Director, Agriculture, Forestry & Natural Resources; B.S., Georgia State University; M.S., University of Georgia; Ph.D., Ohio State University

J. Scott McElroy, Professor, B.S., M.S., Auburn University, Ph.D. North Carolina State University. Weed Science/Turfgrass.

Charles C. Mitchell, Jr., Extension Agronomist and Professor; B.S., Birmingham Southern College; M.S., Auburn Univ.; Ph.D., Univ. of Florida. Soil Fertility.

C. Dale Monks, Extension Agronomist and Professor; B.S. Middle Tennessee State; M.S. University of Arkansas; Ph.D. University of Georgia. Cotton Production.

Brenda Ortiz, Extension Specialist and Associate Professor; B.S., Univ. Nacional de Colombia-Univ. del Valle, Cali; Ph.D., Univ. of Georgia, Athens, Precision Agriculture

Dennis Shannon, Professor; B.A., Goshen College; B.Sc. (Agr), McGill Univ. (Canada); M.S., Ph.D., Cornell Univ. Medicinal Crops, Agroforestry, International Agronomy.

Joey Shaw, Professor; B.S., James Madison Univ., M.S., Univ. of Maryland, Ph.D., University of Georgia. Pedology.

Edzard van Santen, Professor, Staatsexamen, Philipps Univisitas Morburg, Federal Republic of Germany; M.S., Ph.D., Univ. of Wisconsin-Madison. Forage Breeding.

David B. Weaver, Professor; B.S., M.S., Univ. of Georgia; Ph.D., Purdue Univ. Cotton Breeding.

Glenn Wehtje, Professor; B.S., Washington State Univ.; M.S., North Dakota State Univ.; Ph.D., Univ. of Nebraska. Weed Science.

NON-TENURED FACULTY

Dennis P. Delaney, Extension Specialist; B.S., Michigan State Univ.; M.S., Clemson Univ., Ph.D., Auburn University. Soybean and Conservation Cropping.

AFFILIATE AND ADJUNCT FACULTY

Adjunct faculty:

William Birdsong, Agronomist, Wiregrass Extension & Research Center

Michael Davis, Agronomist, Blackbelt Extension & Research Center

Affiliate faculty:

Kip Balkcom, Assistant Professor, USDA-ARS, National Soils Dynamics Lab, Auburn, AL

Jim Bostick, Assistant Professor, Crop Improvement Association, Headland, AL

Stanley Boul, Affiliate Professor, North Carolina State, Ag Idea

Kevin Brunson, Affiliate Professor, Texas Tech, Ag Idea

Phat Dang, Affiliate Associate Professor, USDA-ARS, National Soils Dynamics Lab, Auburn, AL

Alexandria Graves, Affiliate Associate Professor, North Carolina State, Ag Idea

Mussie Habteselassie, Affiliate Associate Professor, Georgia

Karen Harris-Shultz, Affiliate Associate Professor, USDA-ARS, Tifton, GA

John Havlin, Professor, North Carolina State

Greg Holt, Affiliate Professor, USDA-ARS

Nirmal Joshee, Affiliate Associate Professor, Fort Valley State College, Fort Valley, GA.

J. Moore-Kucera, Affiliate Associate Professor

Andrew Price, Assistant Professor, USDA-ARS, National Soils Dynamics Lab, Auburn, AL.

Steve Prior, Professor, USDA-ARS, National Soils Dynamics Lab, Auburn, AL

David Ratcliffe, Affiliate Professor, Georgia, AG Idea

Bret Runion, Assistant Professor, USDA-ARS, National Soils Dynamics Lab, Auburn, AL

Allen Torbert, Associate Professor, USDA-ARS, National Soils Dynamics Lab, Auburn, AL

Michael Vepraskas, Affiliate Professor, North Carolina State, AG Idea

Dexter Watts, Agronomist, USDA-ARS, National Soils Dynamics Lab, Auburn, AL.

ALABAMA CROP IMPROVEMENT ASSOCIATION:

James P. Bostick, Executive Secretary-Alabama Crop Improvement Assoc., Inc. and Adjunct Professor; B.S., M.S., Auburn Univ.; Ph.D., Mississippi State Univ.

Hamilton Bryant, Associate Director, Agric. Research/Extension Center.

EMERITUS:

Donald M. Ball, Extension Agronomist and Professor Emeritus; B.S., Western Kentucky Univ.; M.S., Ph.D., Auburn Univ. Pasture and Forages.

Jacob H. Dane, Professor Emeritus; B.S., Agric. Univ. of the Netherlands; M.S., New Mexico State Univ.; Ph.D., Colorado State Univ. Soil Physics.

Ray Dickens, Professor Emeritus; B.S., Univ. of Arkansas; M.S., Ph.D., Auburn Univ. Turfgrass Management.

Charles Elkins

Clyde E. Evans, Professor Emeritus; B.S., Abilene Christian Univ.; M.S., Auburn Univ.; Ph.D., North Carolina State Univ. Soil Fertility.

John W. Everest, Extension Weed Scientist and Professor Emeritus; B.S., Univ. of Alabama; M.S., Ph.D., Auburn Univ. Weed Science.

Richard Guthrie, Professor Emeritus; B.S., M.S., Auburn University; Ph.D., Cornell University. Soils.

James E. Hairston, Extension Agronomist and Professor Emeritus; B.A., Berry College; Ph.D., Univ. of Georgia. Water Quality.

Benjamin F. Hajek, Professor Emeritus; B.S., Texas A&M Univ.; M.S., Ph.D., Auburn Univ. Clay Mineralogy.

Dallas L. Hartzog, Extension Agronomist and Professor; B.S., M.S., Auburn Univ. Peanut Production.

John B. Henderson, Extension Agronomist and Professor Emeritus; B.S., M.S., Auburn Univ.; Ph.D., North Carolina State Univ. Soybean and Oil Crops.

Arthur E. Hiltbold, Professor Emeritus; B.S., Cornell Univ.; M.S., Iowa State Univ.; Ph.D., Cornell Univ. Soil Microbiology.

Charles C. King, Jr.; Professor Emeritus; B.S., M.S. Auburn Univ.; Ph.D. North Carolina State Univ. Crop Production.

Jorge A. Mosjidis, Professor Emeritus; B.S., Univ. of Chile, Santiago; Ph.D., Univ. of California Riverside. Forage Legumes Breeding.

David H. Teem, Professor Emeritus; B.S., M.S. and Ph.D., Auburn Univ. Weed Science.

Joseph T. Touchton, Professor and Head Emeritus; B.S., M.S., University of Georgia; Ph.D., University of Illinois. Nutrient Management

Charles W. Wood, Professor Emeritus, B.S., M.S., Mississippi State University. Soil Science

PROFESSIONAL STAFF:

Laurent Bahaminyakamwe, Research Fellow III, Soil Physics
Kris Balkcom, Research Associate IV, Wiregrass Station
Jon Brasher, Coord I, Field 7 Media Research
Hamp Bryant, Assoc. Dir., Agric. Research/Extension Center
Bill Bryce, Research Assistant IV, Turf Management
Kathy Glass, Advisor III, National Resources Program, Variety Testing
Jim Harris, Assoc Dir, Agric. Research/Extension Center, Turfgrass Research Unit
Cynthia Hunter, Technician IV, Laboratory, Soils
Kathryne Jernigan, Research Associate I
Jessica Kelton, Research Associate IV
Rachel Sharpe, Research Associate IV, Plant Breeding
Susan Sladden, Research Assistant IV, Forage Quality

SOIL TESTING STAFF:

Gobena Huluka, Associate Director, Agriculture Research/Extension Center
Lee Ashley, Tech II, Lab
Hirut Gifawosen, Tech IV, Lab
Edward Hiltbold, Asst III, Lab
Shelia Holt, Administrative Support Assistant II - Academic
Brenda Norris, Tech III, Lab
Bill Wills, Technician IV, Lab

OFFICE STAFF:

Tesa Brown, Accountant II
Deborah Buchanan, Administrative Support Assistant II – Academic
Kay Holloway, Lead Admin Assistant
Letha Stenson-Hauptert, Administrative Support Assistant II - Academic

OFFICE PROCEDURES, SERVICES AND SUPPLIES

Listed on the following pages are some of the items covered in this book that will require help from the main office. Please keep these in mind as you make requests for assistance.

Administrative Assistant: Submits ALL purchase requests, receipts, vehicle mileage summaries, etc.

Secretaries: Submits travel reimbursements and/or requests for travel; tuition certificates; requests for keys; plans of study; conference room and department car reservations; typing needs such as mailing labels.

Secretaries may assist graduate students with projects that relate to their major professor's research and/or teaching functions within the department and on the same priority as faculty. Under **NO** circumstances is typing of graduate student's theses, term papers, etc., considered part of their job responsibilities.

Purchase Orders: The department will follow the University's policy of not issuing individual purchase orders for purchases under \$2,500 unless required by the vendor. All faculty and staff have been issued a Visa purchasing card to make purchases for items under \$2,500. See your project leader for details. For all single purchases that total **more than** \$2,500, and other questions regarding making purchases, please see Tesa Brown.

Supplies: The department's main office has some common items that you may need to keep your desk operational. However, if you need items that can not be borrowed or are not available in the department, please give your order and account number to the secretary in 201 Funchess. She will order supplies at a competitive rate. In case of an emergency, you may purchase supplies at the University Bookstore in Haley Center. All charges (including purchases for laboratory supplies) to the department must have FOP (account number). See your project leader for details. All receipts must be turned in to the administrative assistant/bookkeeper with your project's name and number.

Keys: Keys to your office and the computer room are checked out from the main office staff. You will be signing a key release form for the duration of your stay. All university keys are to be returned after you have finished at Auburn. Your major professor may also have a few keys that you will need. Lost keys are the responsibility of the student.

Telephone: Graduate students and staff should obtain their supervisor's permission to place long distance calls. To make a long distance call, dial *76 + access code (obtain from your supervisor) + 9 + 1 + area code + number. The call will be billed to the project's account. This access code is also needed for long distance FAX transmissions. For on-campus calls dial 4 + the last four numbers. For local off campus calls dial 9 + seven-digit number.

Department Flower Fund: The department maintains a "flower fund" for such things as births, funerals, and social events. Graduate students are asked to contribute \$10 when this fund is depleted; usually just once a year.

Copiers: There are two photocopy machines in the department; rooms 201 and 231. Crop, Soil and Environmental Sciences students can use a copy machine for research purposes, but may not photocopy books or journal articles or any large volume copying, such as dissertations and theses. Copy cards can be purchased from Ralph Brown Draughon Library for use in the library.

FAX Machine: Students can use the departmental FAX machine (334-844-3945) in the mail room when it pertains to research and with your supervisor's permission. Long distance telephone call regulations also apply for long distance FAX transmissions.

Mail, UPS packages, Deliveries: Individual folders for incoming mail are provided in room 230. The folders are assigned by the department secretary. Outgoing campus and departmental mail is placed in mailbox at bottom of stairs near the entrance, second floor Funchess. Personal mail is not accepted even if stamped.

UPS packages must have a packaging slip with a street address attached to the package. Ground UPS packages are picked up at the mailroom by UPS. You are responsible for getting packages over 25 lbs to the mailroom. UPS and Federal Express provide overnight delivery. Street address, phone number AND account number must be made available for overnight mailings. Overnight airbills are processed by the department secretary.

All packages are delivered to the main office. Students will be informed by the secretary if they have received a delivery. NO CASH ON DELIVERY PACKAGES WILL BE ACCEPTED.

Petty Cash Reimbursements: Do **NOT** assume under any circumstance that you will be reimbursed for expenses from the petty cash fund. See the department's bookkeeper for details prior to purchasing.

TRAVEL AND DEPARTMENT VEHICLES

In-State Travel:

When traveling in project leader's vehicle, gas can be charged to the department using the state credit card located in the vehicle's glove compartment. You will be asked for a Driver ID Number when using the card. See your Project Leader, Tesa or Lee for this number. Receipts need to be turned in to main office – include vehicle tag number on the receipt. For department car, your name and the begin/end mileage must be recorded in the log book located in the vehicle. There are varying reimbursement rates depending on the duration of the trip. **All International students who travel MUST turn in itemized receipts for in-state and out-of-state travel, amounts limited to the following.**

Travel Reimbursements Rates:

In-State

less than 6 hours	\$0
6-12 hours	\$11.25
<u>more</u> than 12 hours	\$30.00
Overnight.....	\$75.00/day

Out-of-State

Meals:

up to \$34.00/day.....	No receipts needed
\$60.00/day.....	Itemized receipts required
Lodging.....	Receipts required
Personal Mileage.....	57.5 cents/mile
Atlanta airport.....	\$115.00 round trip/57.50 one way
Montgomery airport.....	\$71.00 round trip/35.50 one way
Columbus airport.....	\$47.00 round trip/23.50 one way
Birmingham airport.....	\$132 round trip/66.00 one way

When filing for reimbursements be sure to obtain the project name and FOP from your project leader and include it on your request.

Out-of-State Travel:

When traveling out-of-state, please sign out in the main office. Upon your return, submit a completed travel expense form to the department secretary. In addition to lodging receipts, we need rental vehicle, taxi and gas – if you are unsure about a receipt it’s probably best to get one. **Original receipts are required**, along with the FOP from your professor. Also, for meetings, conferences, etc. a copy of a meeting brochure, announcement or program (with dates) must be submitted.

Graduate Travel Awards:

Graduate students must file an **Application for Graduate Travel Awards** form with the Graduate School to request out-of-state travel funds. This is a general fund created to assist students in their travels. All departments have limited funds for travel. Applying for travel awards will help you and the Crop, Soil and Environmental Sciences. Guidelines and applications are available from the Graduate School home page. Be sure to check the guidelines for deadlines!

International Travel:

An authorization to travel form – RAIT – must be approved at least 1 month prior to travel. Please check the following web site for necessary information:
www.ag.auburn.edu/adm/international/travel/index.html

Department Vehicles:

The University requires every person driving state vehicles to have a valid driver's license, wear a seat belt, and be certified by Auburn University. A defensive driving course is offered and must be attended before driving a university vehicle. When you do the initial paperwork as a new student, you will be assigned a class date for taking the course. **Anyone that will be driving a 15 passenger van or larger must take an additional class.** State vehicles can be parked at the Funchess Hall loading deck, **but only when loading and unloading** material. Time in these zones is 15 minutes or less. Check with front office about current parking regulations for state vehicles.

Department Car and Project Vehicles:

The department car can be used anytime for official University business other than field work. The sign-out sheet and the keys for the car are in the main office (201 Funchess). To be assured that the car is available, reserve in advance.

Before you begin your trip, check the tires, body, interior, and dashboard lights of the car. Problems must be reported to Linda Bankston immediately. Some problems you can correct yourself such as low oil, low or flat tire, etc. Put your name and the car's mileage in the log and be sure the insurance card is there. When you return, put the ending mileage and report any problems. **ALWAYS, WEAR YOUR SEATBELT**, do not exceed the speed limit, **clean out your trash** and fill up the gas tank upon your return. Traffic tickets are the responsibility of the driver.

Most professors are fortunate enough to have a project vehicle. The project vehicle is considered state property and should be treated as such. Check with your major professor concerning usage procedures for their vehicles.

When driving a project vehicle, whether it is yours or someone else's, follow the departmental car procedure. If you borrowed a vehicle from someone and you encountered problems, please tell the person you borrowed it from, no matter how trivial it may seem.

NEVER RETURN A VEHICLE WITH LESS THAN ½ TANK OF FUEL!

Unfortunate Circumstances Involving Vehicles:

The following are circumstances that, hopefully, you will never encounter. But if you do, here are some guidelines to follow:

If you receive a speeding ticket:

The University does not pay speeding tickets. It is your responsibility to pay your fines. It would also be a good idea to inform the departmental bookkeeper in case any questions arise. Driving within posted speed limits will eliminate the majority of problems.

If you are involved in an accident:

Do exactly what you would do with your own car. The police should be called and a report prepared. Inside the glove compartment should be an insurance card that will be needed. If someone is hurt, call an ambulance. Notify the department secretary on your return to the University and file an accident report for the University insurance company.

If your vehicle has a mechanical failure:

Find the nearest telephone and call the main office and let them know. They will find someone to pick you up and help make arrangements to either get it fixed or hauled back.

If you lock the keys inside the vehicle:

If you are out of town, the police usually can help you retrieve them. There are times though, that even the police can't get inside the vehicle. A locksmith should be called and the bill from the locksmith will have to be paid by you.

Of course, if you are in town and you lock your keys inside the vehicle, call the main office (334-844-4100) or your major professor. They both should have an extra set.

CROP, SOIL AND ENVIRONMENTAL SCIENCES FACILITIES

Greenhouses:

Greenhouses are available to research scientists of the Alabama Agricultural Experiment Station. The current Plant Science Research Facility (PSRF) provides 10,800 square feet of modern greenhouse space and a header house containing laboratory and work space. The greenhouse is divided into ten 30 x 36 feet zones, each equipped with individual temperature, air circulation, and shade controls. Three of the zones are equipped with high intensity auxiliary lighting. Each of six zones is equipped with two, 3 x 24 feet and three, 5 x 30 feet benches for a total of 594 square feet of bench space.

There is no permanent assignment of space. Specific areas and type of greenhouse and laboratory space will be assigned to project leaders for the duration of an experiment. At the end of an experiment, space will be vacated and all containers, plant material, supplies, and equipment must be removed from both the greenhouse and the laboratory. An extension of time

may be obtained by submission of a written request one month prior to the original termination date. A key for greenhouse and header house areas will be checked out by the project leader at the initiation of an experiment and must be checked in at the completion of the experiment.

Space assignments will be made on the basis of an approved experimental outline. The outline, signed by the project leader and department head should be submitted to the superintendent of the PSRF. Project Leaders are encouraged to confer with the PSRF Superintendent prior to preparation of an outline. Space request for teaching and extension should follow the same procedures as for research. The Outline should follow the format of those now used for research on Alabama Agricultural Experiment Station substations according to guidelines given in the AAES Handbook for Project Leaders.

Special growing media must be provided by project leaders, however PSRF personnel will work with researchers in mixing and preparing special media. Limited quantities of special growing media and soils can be stored at the PSRF for the duration of an experiment. Routine watering with tap water or a standard nutrient solution will be performed by PSRF as stated in the Research Outline. The standard nutrient solution is made up from a 15-16-17 soluble fertilizer with trace and minor elements. PSRF will continuously monitor all greenhouses for insects and diseases and will apply preventive and curative pesticide treatments as needed and that are compatible with plants and research objectives. Researchers (graduate students and technicians, etc.) are urged to monitor for diseases and insects and to notify the PSRF superintendent if any are detected.

PSRF has a conference room equipped with a slide projector, a screen, a table, and chairs that will comfortably seat 14. Priority for use of the conference room will be given to planning sessions, seminars, and group meetings directly related to work at the PSRF. However, the room is available for other group meetings. Room reservations are required in advance.

Agronomy Farms:

Agronomy Farms and available research areas are controlled by AAES and not the department.

Computer Facilities:

The Crop, Soil and Environmental Sciences Department has a computer lab in room 205 Funchess Hall. Many software packages have been loaded onto the computer hard-drives. All computers are access protected. Users are encouraged to recycle their draft copies and reserve clean paper for final drafts.

Seed Storage:

The seed storage room is a refrigerated room (278 Funchess) to be used for seed storage only. The seeds must be labeled with the professor's name and placed in the assigned drawer. DO NOT stack seeds on the floor. See Kathy Glass (275 Funchess) before using.

Forage Drying:

There are six large forage dryers in 220 Funchess. Heat is provided through a steam boiler from the basement of Funchess. Temperatures are not easily adjusted. See Brenda Wood if the temperatures do not meet your needs. As soon as your plants are dry you must remove them from the driers. They will be removed for you if they are dry and space is needed. Do not use the room for long term storage of plant material; longer than 2 weeks.

Grinders:

Plant Preparation: Two Wiley mills, three cyclone mills, and a hammer mill are available in Funchess 221. Do not grind whole grain samples through these mills. Oven dried, pre-ground grain (such as that which has been through a blender) can be put through the cyclone mills.

As you can imagine this room can become quite dusty and pose a potential health hazard. For those particularly dusty jobs it is highly recommended that air purifying helmets be worn. A face shield also protects the eyes from dust and flying debris. Paper filter masks, ear plugs, and safety goggles are also available. See your major professor for these supplies. Susan Sladden is in charge of this room.

Soil Preparation: Soil grinders in 225 Funchess are for your use in preparing samples. Samples must be dry.

Soil Drying:

Soils can be dried in 225 Funchess. Just remember to have them clearly labeled and remove them once they are dry. Unclaimed, unlabeled, and old samples will be removed without warning.

Soil Testing Laboratory:

Auburn University's Soil Testing Lab is located in the ALFA Building at 961 South Donahue Drive. It has operated since 1953 as a cooperative effort of the Alabama Agricultural Experiment Station and the Alabama Cooperative Extension Service. The Experiment Station conducts research and operates the laboratory. This lab serves the public throughout Alabama and also provides support to extension and research projects. With proper planning and advanced communication with soil testing, research projects can utilize many of the services provided. Analyses include soil, plant, forage and feed, and water. Soil sampling boxes can also be obtained from this lab. If you have any questions or want more details about soil testing, contact Dr. Gobena Huluka (844-3958).

DEPARTMENTAL EQUIPMENT

The following is a list of equipment that is used in many graduate programs. Much of the equipment listed below requires training and/or supervision, so please talk to the contact person before using the equipment. Failure to do so can seriously hinder your process in getting your degree.

<u>CONTACT PERSON</u>	<u>EQUIPMENT</u>
	Leco total carbon, nitrogen analyzer, Kjeldahl N analysis, Retsch soil grinder, Millipore water filtration, incubators, HPLC, toxic bioassay analysis
Kathy Glass	Planters, seed counters, bushel weight scales, large scales, cotton gin, crop moisture meter
Dr. Joey Shaw	X-ray diffraction, thermo-gravimetric analysis, particle size analysis, mineral classification
	Dual energy gamma system, soil water retention analysis, spatial variability analysis, bulk density analysis, saturated hydraulic conductivity
Dr. John Odom	Atomic adsorption spectrophotometer, safety officer, inductively coupled plasma, spectrophotometer, plant and soil grinders, water purification, freeze drier, fluorometer
Dr. Julie Howe	Ion chromatography, HPLC, pH and electrical conductivity
Susan Sladden	Kjeldahl N analysis, forage fiber analysis, in vitro dry matter digestion analysis, near infra-red spectrophotometer, spectrophotometer, distillation units, constant temperature bath, root count materials
	Ethylene glycol bath, sterile hoods, leaf area meters
Dr. Scott McElroy	OSFL-1 chlorophyll florescence detection system, chlorophyll florescence imaging system, LI-6000 infrared gas analyzer
Dr. Glenn Wehtje	Scintillation detector
Dr. Beth Guertal	Spectrophotometer, microplate reader

CAMPUS SERVICE FACILITIES

Scientific Supply Store:

Chemical supplies and some equipment for research may be obtained from the Scientific Supply Store (844-4307) located on the 2nd floor in the new Science Center. It often helps to bring a Fisher, Aldrich, Sigma, etc., catalog with you when ordering materials since the Scientific Supply Store orders directly from these suppliers. Campus discounts apply for most all supplies obtained through Scientific Supply.

AAES Land and Facilities Management:

The purpose of the AAES Land & Facilities Management Department is to provide construction, earth preparation, irrigation systems, and other support of experiment station projects. They are located at 925 Camp Auburn RD (844-3596). With approval of your major professor, work orders can be submitted on-line.

Auburn University Library:

The Ralph Brown Draughon Library is named in honor of Ralph Brown Draughon, President of Auburn University from 1947 to 1965, and a moving force behind the construction of the original portion of the Library. With the completion of a 207,000 square foot addition in 1991, the Library has a seating capacity of 2,500 designed to serve the study, teaching, and research needs of Auburn University.

Computer workstations for accessing the World Wide Web and the Libraries' collections are located on every floor of the library. There is also an OIT computer lab on the 3rd floor and an Internet Café located on the ground floor. In addition, there are wireless computers available which can be checked out from the Circulation Desk on the 1st floor with a valid student, faculty or staff ID. Individual study carrels are located throughout the building.

Photocopying services are offered by the Copy Cat Center. The library Copy Cat office is located on the 2nd floor. Library photocopiers are located on each of the five floors, accepting activated TigerCards or photocopy debit cards (Campus Cash cards). Group study rooms accommodating four to six persons are located on third and fourth floors of the Library and are available on a first-come, first-served basis. Services for users with disabilities are available on an as-needed basis. Contact the 2nd floor Main Reference Desk at 844-1737 for more information. For more information about the library: <http://www.lib.auburn.edu>

INTERNATIONAL STUDENT INFORMATION

International Students:

Upon arrival at Auburn University, you must report to the Office of International Programs, located in Foy Hall within 5 days. Afterwards, please present your passport, I-94 and I-20 documents to Kay Holloway in Funchess 201. Copies of these documents will be made and stored in departmental files. Additional departmental forms are required and will be given to each student for processing.

For more information, please see the international student website at:

<http://www.auburn.edu/academic/international/oie/iss/>

GRADUATE DEGREE REQUIREMENTS

Admission:

Admission and general regulations for graduate programs at Auburn University are outlined in the Graduate School Bulletin. The Graduate School bulletin can be obtained from the Graduate School located in Hargis Hall or at the following web address:

http://www.auburn.edu/student_info/bulletin/

Tuition Waiver:

Tuition waiver for a M.S. student is 40 hours (minimum 30 hours required + 10) and a Ph.D. is 80 hours (minimum 60 hours required + 20). Students are charged a processing fee each semester in which their fellowship is used; \$248 in 2007-08. However, fees are subject to change. Other charges include International Education fees, and **ALL** students are required to have health insurance. An assistantship is qualified for the Graduate Tuition Fellowship regardless of the type (teaching, research, other) under the following conditions:

1. the Fellowship has a minimum appointment of 0.33 FTE (at least 13 hours work per week);
2. the Fellow is in the assistantship for the full semester (no later than the 8th class day [5th class day in summer semester], through the last day of the semester);
3. the Fellow receives an assistantship stipend greater than or equal to the minimum set by the Provost (\$612/month for academic year 2007-08);
4. the Fellow is a degree seeking student (although provisionally accepted students are eligible for their first semester);
5. the Fellow is in good academic standing (GPA at least 3.0);

6. the Fellow is registered for at least 1 hour, but not more than 15 hours of course work.

Requirements for Acceptance into Graduate Studies:

1. B.S. in Agronomic Sciences or related field.
2. 3.0 GPA for last 90 semester hours for B.S degree.
3. Minimum of 900 GRE (verbal + quantitative).
4. If items “2” and “3” **are not met** but student is accepted for graduate studies by The Graduate School, then a student may be accepted by Crop Soil and Environmental Sciences as a **provisional for two semesters** under the following conditions:
 1. Major Professor indicates in writing to Department Head that she/he is willing to accept the student.
 2. For two semesters, student must earn a 3.0 or better for each graded course (minimum of 12 semester hours). Major Professor must receive approval of courses from Graduate Studies Committee. Undergraduate leveling courses must meet the same criteria.
 3. At the end of the two semesters, the Major Professor will provide the Graduate Studies Committee and Department Head a written report indicating reasons for or against the student’s continued graduate studies in the Crop, Soil and Environmental Sciences Department. The recommendation will then be made known to the student by either the Department Head and/or Major Professor.

Funding:

There are several types of funding available to graduate students. Graduate research assistantships (GRA) are the most common in the department. Assistantship information can be obtained from the main office in 201 Funchess Hall. Information concerning loans and other options can be obtained from the Office of Financial Aid, located in Mary Martin Hall.

Stipends:

Stipends for Graduate Research Assistant, Crop, Soil and Environmental Sciences Department, effective 10/01/14:

<u>Level</u>	<u>M.S.</u>	<u>Ph.D</u>
I	\$18,277	\$20,682
II	\$20,682	\$23,087

M.S. Program:

- Level I: All M.S. students start at Level I
- Level II: Advance to Level II after 12 months provided all required undergraduate level courses have been completed. If student has not completed the M.S. program after 2 years at Level II, the assistantship is automatically terminated. Total time for an assistantship Level I and II, however, is 3 years.

Ph.D. Program:

- Level I: All Ph.D. students start at Level I. Students with deficiencies in undergraduate coursework have 12 months to complete their courses. If required undergraduate level courses are not completed in 12 months, student will go off assistantship until they are completed.
- Level II: Students will be promoted to this level after they have satisfactorily completed their preliminary exams and have no more than 6 hours of classes (excluding Research and Dissertation) remaining on their program of study. If the advisory committee recommends additional courses because of deficiencies identified during the preliminary exams, these courses will be included in the 6 hour limitation. Upon reaching this level, students can remain on an assistantship for no more than 24 months.

The move from one level to the next is not automatic. The student must request the move through the major professor. The request must be made prior to the beginning of a semester. Changes will not be made during the semester and back pay the following semester is not an option if someone forgets to make the request on time.

There are several items that can cause a student to temporarily or permanently lose an assistantship. These items are documented in the departmental "Policies for Graduate Students". Please read these policies carefully.

Exceptions and Appeals:

Exceptions to the above rules can be appealed by the student. The student must initiate the appeal in writing. It should be addressed to the Graduate Program Committee, but routed through the student's major professor for her/his comments. The Graduate Program Committee will send their recommendation to the Department Head, who will support the committee's decision, unless the recommendation is passed or denied by one vote margin. When a narrow margin vote occurs, the Department Head will consult with the committee before making a final decision.

It is always up to the student to have his/her major professor notify the Department Head when it is time for him/her to be promoted to another level. They must provide documentation via their major professor to support the promotion.

Student Standing, In-State vs. Out-of-State:

All Graduate Research Assistants pay **in-state tuition**. When the assistantship is terminated, students who are not legal residents of Alabama will have to pay **out-of-state tuition**. This situation can be a problem for students who leave prior to graduation and still have to take AGRN 7990 or AGRN 8990 the following semester. In this situation you will have to pay **out-of-state tuition** if you are **not a legal resident of Alabama**. Also, if you have not turned in your thesis, you must register for at least one (1) hour of AGRN 7990/8990 the semester you turn in your thesis. Note: graduate M.S. students must register for a minimum of 4 hours and Ph.D. students 10 hours of AGRN 7990/8990. However, Crop, Soil and Environmental Sciences requires a minimum of 1 hour/semester which may exceed The Graduate School requirements. There is no limit on maximum hours for AGRN 7990/8990.

CROP, SOIL AND ENVIRONMENTAL SCIENCES GRADUATE COURSES

- 6000 Soils and Environmental Quality/Fall
- 6020 Nutrient Management/Spring
- 6060 Soil Microbiology/Spring
- 6080 Soil Resources and Conservation/Fall
- 6086 Soil Resources and Conservation (distance education)
- 6100 Plant Genetics and Crop Improvement/Fall/Spring
- 6150 Soil Morphology/Spring
- 6160 Advanced Turfgrass Management/Spring
- 6300 Soil Chemistry/Fall
- 6400 Bioenergy and the Environment/Spring
- 6970 Agronomy Problems
- 7080 Experimental Methods/Summer
- 7120 Cytology and Cytogenetics
- 7140 Chemistry and Use of Herbicides in Crop Production/Fall
- 7150 Seminar in Genetics/Spring
- 7160 Genetic Data Analysis/Fall (even years)
- 7170 Advanced Plant Breeding/Spring
- 7180 Crop Ecology/Spring (even years)
- 7190 Advanced Forage Crop Management and Research Methods/Spring
- 7250 Crop Physiology/Fall (odd years)
- 7540 Principles of Plant Nutrition/Summer (odd years)
- 7550 Soil and Plant Analysis/Spring
- 7560 Clay Mineralogy/Fall (even years)

- 7590 Soil Physics/Fall
- 7950 Seminar/Fall and Spring
- 7970 Agronomy Problems
- 7990 Research and Thesis
- 8570 Physical Soil Chemistry/Summer (even years)
- 8580 Advanced Soil Physics/Spring (even years)
- 8990 Research and Dissertation

MINIMUM COURSE REQUIREMENTS

The following courses are recommended of candidates for advanced degrees in Crop, Soil, and Environmental Sciences. Courses selected for a plan of study are at the discretion of the student's graduate committee. Plans of study are reviewed and approved by the GPO and/or department head for consistency with general departmental standards.

Soil Science: Requirements for non-thesis Master of Agriculture (M.Ag.) degree

The Master of Agriculture (M.Ag.) and Master of Science (M.S.) have the same course requirements, except the M.Ag. degree requires at least two additional graded courses. Students on the M.S. degree track that change to the M.Ag. program will not receive credit for thesis research hours. Both degrees require a final oral examination. M.Ag. students register for GRAD 7000 during the semester the exam is taken. M.Ag. students must write a professional paper as part of a special problems course (AGRN 6970) and present an exit seminar (AGRN 7950) on this paper.

Soil Science: Recommended Background Courses for the M.S. degree

Calculus I	MATH 1610 or 1680 or 1710
Physics	PHYS 1000 or 1510
Organic Chemistry	CHEM 2030 or 2070 & 2071
Fundamental Chemistry II	CHEM 1040 & 1041
Analytical Chemistry	CHEM 3050 & 3051
Plant Biology (Plant Physiology)	BIOL 3100 or HORT 3000
Statistics	STAT 7000

Recommendation of minimum of 12 semester hours from the following list

Soils & Environmental Quality	AGRN 6000
Nutrient Management	AGRN 6020
Soil Microbiology	AGRN 6060
Soil Resources & Conservation	AGRN 6080/6086
Soil Morphology	AGRN 6150
Soil Chemistry	AGRN 6300
Soil Physics	AGRN 7590

Number of Hours Required for Degree, M.S.

A minimum of 30 semester hours (6000-level or above) of which:

1. At least 21 semester hours must be in a major area of concentration.
2. Two hours of AGRN 7950 (Seminar).
3. One hour of AGRN 7990 (Research and Thesis) must be registered for each semester including summer semesters. Up to 6 hours of AGRN 7990, may be counted toward degree.
4. Courses selected for the plan of study are at the discretion of the graduate committee based on the student's interest and direction of thesis project. Plans of study are reviewed and approved by the GPO and/or department head to maintain consistency and rigor among graduate students

Soil Science: Recommended Background Courses for the Ph.D. degree

Recommended background courses for the M.S. degree in Soil Science plus:

Calculus II	MATH 1620 or 1690 or 1720
Physical Chemistry I or II*	CHEM 4070 or 4080*
Statistics II	STAT 7010

*Choice of CHEM 4070 or 4080 must be approved by major advisor. BCHE 6180 or BCHE 7200 can be substituted for CHEM 4070 or 4080, with approval.

Number of Hours Required for Degree, Ph.D.

A minimum of 60 semester hours (6000 level or above) beyond B.S. degree of which:

1. At least 30 hours graded coursework. Of these, at least 6 hours must be 7000-level or above in major area of study.
2. At least 18 hours must be completed at Auburn University.
3. 30 hours of course work and may include: 1) ungraded; 10 hours 8990, 2 hours 7950, 4 hours Research and thesis from M.S. degree; 2) minimum 14 hours graded; courses from Auburn; appropriate graduate-level courses from M.S. degree.
4. One hour of AGRN 8990 (Research and Dissertation) must be registered for each semester, summers included. Up to 10 hours of AGRN 8990, may be counted toward the degree.
5. In addition to the courses listed above, a student's major professor may have core courses which they expect you to take for your area of specialization. Advisory committee members may require you to take courses in addition to your advisor's and the departmental requirements.
6. Courses selected for the plan of study are at the discretion of the graduate committee based on the student's interest and direction of thesis project. Plans of study and reviewed and

approved by the GPO and/or department head to maintain consistency and rigor among graduate students

Requirements for non-thesis Master of Agriculture (M.Ag.) degree

The Master of Agriculture (M.Ag.) and Master of Science (M.S.) have the same course requirements, except the M.Ag. degree requires at least two additional graded courses. Students on the M.S. track that change to the M.Ag. program will not receive credit for thesis research hours. Both degrees require a final oral examination. M.Ag. degree registers for GRAD 7000 during the semester the exam is taken. M.Ag. students must write a professional paper and present as part of a special problems course (AGRN 6970) and present an exit seminar (AGRN 7950) on this paper.

Requirements for Degree, M.Ag.

A minimum of 30 semester hours (6000-level or above) of which:

1. At least 21 semester hours must be in a major area of concentration.
2. Two hours of AGRN 7950 (Seminar).
3. One hour of AGRN 7990 (Research and Thesis) must be registered for each semester, summers included. Up to 6 hours of AGRN 7990, may be counted toward degree.
4. Courses selected for the plan of study are at the discretion of the graduate committee based on the student's interest and direction of thesis project. Plans of study and reviewed and approved by the GPO and/or department head to maintain consistency and rigor among graduate students.
5. Completion of a special project approved by graduate committee. Special project must be presented to major advisor.

Plant and Weed Science: Recommended Background Courses for the M.S. degree

Calculus I	MATH 1610 or 1680 or 1710
Organic Chemistry	CHEM 2030 or 2070 & 2071
Fundamental Chemistry II	CHEM 1040 & 1041
Analytical Chemistry	CHEM 3050 & 3051
Plant Biology (Plant Physiology)	BIOL 3100 or HORT 3000
Statistics	STAT 7000
Plant Pathology	PLPA 3000
Economic Entomology	ENTM 4020
Systematic Botany	BIOL 5120/6120
Genetics	BIOL 3000*

*AGRN 5100 can be substituted for BIOL 3000 if student is not majoring in plant breeding.

Common Graduate Level Courses Taken:

Plant Genetics & Crop Improvement	AGRN 6100
Advanced Turfgrass Management	AGRN 6160
Bioenergy and The Environment	AGRN 6400
Chemistry & Use of Herbicides	AGRN 7140
Crop Ecology	AGRN 7180
Advanced Forage Mgt. & Research Methods	AGRN 7190
Crop Physiology	AGRN 7250
Soils and Environmental Quality	AGRN 6000
Soil Microbiology	AGRN 6060
Insect Toxicology	ENTM 7100
Insecticides & Environment	ENTM 6030
Plant Nematology	PLPA 7500
Field Survey Plant Pathology	PLPA 6080
Introductory Molecular Genetics	CMBL/BIOL 6220

*Course substitutions have to be approved.

Number of Hours Required for Degree, M.S.

A minimum of 30 semester hours (6000-level or above) of which:

1. At least 21 semester hours must be in a major area of concentration.
2. Two hours of AGRN 7950 (Seminar).
3. One hour of AGRN 7990 (Research and Thesis) must be registered for each semester, summers included. Up to 6 hours of AGRN 7990, may be counted toward degree.
4. Courses selected for the plan of study are at the discretion of the graduate committee based on the student's interest and direction of thesis project. Plans of study and reviewed and approved by the GPO and/or department head to maintain consistency and rigor among graduate students.

Plant and Weed Science: Recommended Background Courses for the Ph.D. degree

All the course requirements for the M.S. degree in Plant Science and Weed Science plus:

Calculus II	MATH 1620 or 1690*
Organic Chemistry II	CHEM 2080/2081
Biochemistry I	BCHE/CHEM 6180/6181
Biochemistry II	BCHE/CHEM 6190/6191**
Experimental Statistics II	STAT 7010

*One additional statistics course beyond STAT 7010 (must be > STAT 7010, no substitutions) may be substituted for Calculus II requirement.

**Students with written advisory committee approval may petition The Graduate Committee to substitute appropriate plant physiology or other plant chemistry courses for Biochemistry II.

Number of Hours Required for Degree, Ph.D.

A minimum of 60 semester hours beyond B.S. degree of which:

1. At least 30 hours graded coursework must be 6000-level or above. Of this, 6 hours must be at 7000-level or above in major area of study.
2. At least 18 hours must be completed at Auburn University.
3. 30 hours of additional course work and may include: 1) **ungraded**; 10 hrs 8990, 2 hours 7950, 4 hours Research and Thesis from M.S. degree; 2) minimum 14 hours **graded**; courses from Auburn; appropriate graduate-level courses from M.S. degree.
4. One hour of AGRN 8990 (Research and Dissertation) **must** be registered for each semester, summers included. Up to 10 hours of AGRN 8990, may be counted towards the degree.
5. In addition to the courses listed above, a student's major professor may have core courses which they expect you to take for your area of specialization. Advisory committee members may require you to take courses in addition to your advisor's and the departmental requirements.
6. Courses selected for the plan of study are at the discretion of the graduate committee based on the student's interest and direction of thesis project. Plans of study and reviewed and approved by the GPO and/or department head to maintain consistency and rigor among graduate students.

There are no foreign language requirements for graduate degrees in Crop, Soil and Environmental Sciences.

ADVISORY COMMITTEE AND PROGRAM OF STUDY

During the first semester of study, you and your major professor must set up an advisory committee and program of study. The department requires four or more committee members for M.S. and Ph.D. programs. All forms (1-6) mentioned in the next section can be found at the end of this book.

Policies for Graduate Students:

1. **AGRN GRA Form 1**, which is primarily a planning form for meeting specific deadlines, must be completed **before** the departmental bookkeeper will process a Personnel Action Form (PAF). Without a PAF you cannot receive a paycheck. The student and major professor will retain a copy of this form. The original will be kept in the departmental office, and updated each time a deadline is met.
2. Deficiency courses (departmental minimum course requirements) must be identified prior to registration for the first semester the student is on campus. A list of the required courses already taken (or proposed substitution for these courses) and courses that have not been satisfied, must be submitted to and signed off by the major professor before the student is allowed to register. **Use AGRN GRA Form 2.**

All undergraduate level deficiency courses must be completed before the end of the 3rd semester or the student's assistantship will be terminated.

3. A brief research project outline and a tentative plan-of-study must be presented to the Departmental Graduate Program Committee before the end of the first semester. No names or signatures of advising committee members should be included in the tentative plan-of-study.

This outline will include:

1. Proposed thesis title
2. Research objectives
3. Outline of research methods
4. Advisory committee members

After the Departmental Graduate Program Committee approves the tentative plan-of-study and the research outline, the official plan-of-study (signed by all members of the advisory committee) will be submitted to the Chairman of the Graduate Program Committee along with **AGRN GRA Form 3**.

If the student does not receive a signed copy of the plan-of-study from **The Graduate School** within 6 weeks after submitting, he/she must request a tracer.

4. By the end of the 4th semester, the student must present an oral progress report to the thesis advisory committee. This report will include:
 1. Experiment outline.
 2. Explanation for deviations from item 3.
 3. Problems encountered with the research and possible solutions.
 4. Accomplishments to date and future work.
 5. Estimated completion date.

All advisory committee members must sign **AGRN GRA Form 4** or provide reason(s) for not signing.

A signed copy of form 4 must be submitted to the departmental office before the beginning of the 5th semester. If not submitted, the assistantship will be terminated.

5. Ph.D. Students must repeat item 4 by the end of the 7th semester. If not submitted by the beginning of the 8th semester, the assistantship will be terminated. Use **AGRN GRA Form 5** for item 5.
6. **AGRN GRA Form 6** is to verify that the **Plan of Study** approved the Crop, Soil and Environmental Sciences Department has been completed. This form must be completed just prior to final exams for M.S. and preliminaries for Ph.D. students.
7. The burden of meeting all deadlines is the responsibility of the graduate student and no one else. Situations beyond the control of the student must be presented to the Department Head prior to the deadline.
8. Deadlines apply to all students. However, some appointments and/or some research programs may require different deadlines. In these situations it will be the responsibility of the major professor to amend the deadlines for approval by the Department Head. Request for extensions to any deadline should be filed as early as possible, but no later than 1 semester prior to the deadline. The request must contain brief reasons for changes, new deadline dates (no one will be allowed to have an open ended program), and signatures of the student and major professor.
9. If a student's grade point average for all graded courses falls below 3.0, the student will have one semester to bring it back to 3.0. If not, the student's assistantship will be terminated. If the grade point average falls below 3.0 for a second time, the assistantship will be terminated and there will be no possibility of renewal.
10. If a student receives an **incomplete** in a course, it must be removed before the end of the next semester or the student's assistantship will be terminated.
11. The maximum number of semesters for an assistantship is 9 (3 years) for M.S. students and 12 (4 years) for Ph.D. students.
12. Policies also apply to non-traditional graduate students, such as research associates, and to international students even if they are not on assistantships.
13. It is obvious that time limits will be different for some of these students, but specific dates must be established during the first semester of residency. If students not on an assistantship (i.e., international students on AID programs, etc.) do not follow the guidelines they will not be allowed to obtain an assistantship if their source of funds are terminated, which frequently occurs.

14. It is the responsibility of international students to keep their visa current. In other words, each student must maintain a legal status with the INS. If your visa expires and you are on an assistantship, your assistantship automatically terminates. When your visa is brought back into current status with the INS, the assistantship can be reinstated but there will be no back pay for the time that your visa was out of status.

In addition, any international student who is out of status with INS will not be allowed to use any facilities in Funchess Hall including office, telephone, computer, etc., without special permission by the department head. Special permission will only be considered for situations beyond the student's control.

RESIDENCY REQUIREMENT

Once the program of study has been filed, another form must be completed that outlines the proposed residency requirement.

A M.S. degree student, thesis option, must spend one semester, or a 10-week term, on campus as a full-time student. This requirement concerns academic residency only; it has nothing to do with residency for fee purposes. There is no residency requirement for M.Ag. degree students, non-thesis option.

A Ph.D. degree student must be enrolled for two consecutive semesters as a full-time student to meet his/her residence requirement. A proposed schedule for the accumulation of residency must be submitted to The Graduate School prior to the initiation of the residency year. **All Ph.D. students should consult The Graduate School Bulletin for all the details:**
www.auburn.edu/student_info/bulletin/

COMPLETION OF THESIS OR DISSERTATION

A final draft of the thesis or dissertation must be submitted to the advisory committee at least 3 weeks before the final examination. The draft is one which is approved by the major professor as being complete and editorially correct. The style of the thesis or dissertation should be based upon professional journals in the field of study. Completed theses and dissertations from Auburn Crop, Soil and Environmental Sciences graduates can be checked out for reference by checking with the main office.

Remember at least 4 copies of the corrected thesis or dissertation must be delivered to the Thesis and Dissertation Office for binding — two to be retained by the library, one by the student's department and one by the student's major professor. Also, the student is responsible for the expenses of copying and binding.

The Guide to the Preparation and Submission of Theses and Dissertations is available on the web at http://www.grad.auburn.edu/cs/thesis_guide.html

LEAVING AUBURN

An exit form (last page of this book) must be completed before your departure. The day after you graduate, resign, or leave the department, your office is no longer your personal storage area and anything personal in the office the day after you graduate, resign or leave will be thrown away.

ORAL AND WRITTEN EXAMINATIONS

Master of Science:

The advisory committee will administer the oral examination upon successful completion of course work and thesis research. Oral examination results must be submitted to the Graduate School within three days. It is the responsibility of the student to get the necessary forms from The Graduate School before the examination.

Doctor of Philosophy:

Preliminary Examinations: The advisory committee will administer both written and oral preliminary examinations once the student has completed the course work on the program of study. The written portion of the examination does not require approval in advance by The Graduate School. The oral portion, however, does require such approval. Arrangements must be made by application to

The Graduate School Office at least one week in advance. This application may be obtained on-line: <http://www.grad.auburn.edu/forms.htm>.

If the preliminary examination reveals deficiencies in a particular area, the advisory committee may recommend remedial work, re-examination, or discontinuation of doctoral study. The oral examination should be conducted immediately after the successful completion of the written examination and well before the final examination. At least one complete semester (preferably

more than one) must intervene between the oral and final examinations. Successful completion of the oral examination requires unanimous support of the student's advisory committee.

The student becomes a candidate for the degree upon successful completion of the preliminary examination, and has four calendar years thereafter to complete all additional requirements. However, remember that assistantships are only good for four years with a possible six-month extension.

Final Examination: After the first draft of the dissertation has been completed and has been approved by the student's advisory committee, it is submitted to The Graduate School. An outside reader will be appointed to review the dissertation. However, the student's major

professor may request appointment of the outside reader at any time rather than waiting until after the dissertation is drafted. When The Graduate School has approved the dissertation, the student may apply for the final examination by filing another form obtained from The Graduate School. The application must be filed with The Graduate School at least one week in advance.

The final examination is administered by the advisory committee. The representative of The Graduate School (outside reader) also attends and participates. Final examinations (M.S. and Ph.D.) will emphasize the defense of the thesis or dissertation but will not be limited to that. Questions may be raised in any appropriate area and particularly in areas where the student performed poorly on preliminary examinations. The final examination is usually oral but may be both oral and written.

Successful completion requires unanimous support of all members of the committee. Any member of the Graduate Faculty may attend. If a student fails the final examination, a re-examination may be given upon recommendation of the advisory committee and approval by the Dean of The Graduate School. In addition to successful completion of all examinations, final copies of the dissertation must be submitted to The Graduate School before the degree is conferred.

Graduation Clearance Check:

The Graduate School requires each student to request a graduation check prior to the semester **proceeding** the semester of anticipated graduation. The end of the semester is defined as graduation day. The Graduation Check form is available on-line at www.grad.auburn.edu. This on-line form enables the student to submit a graduation check electronically instead of completing a hard copy form. This check is not to be confused with a residency plan or a plan of study which are due earlier in a student's program. This procedure provides sufficient time for a student to address any problems or needs to meet graduation deadlines. This procedure also facilitates the final graduation clearance.

Seminar Requirements:

All M.S. and Ph.D. Agronomy graduate students will present at least two seminars. Each M.S. and Ph.D. graduate student will be required to take two hours of AGRN 7950 for credit (1 credit hour for each seminar). Agronomy M.Ag. students are required to take one hour of AGRN 7950 the semester they present a seminar on their professional paper. Attendance is required at all departmental seminars unless excused for valid reasons such as class conflicts.

Seminars are scheduled for Fall and Spring semesters. Literature review seminars should be presented no later than the 4th semester. A detailed literature review (rough draft will be adequate), approved by the major professor, should be presented to the advisory committee prior to the literature review seminar presentation. The first seminar should focus on research objectives but some results may be presented.

If the literature review seminar is not completed by the established deadline, the assistantship will be suspended until it has been completed.

A second seminar, in which the student reports on research accomplishments, will be presented near the end of the student's program. The second seminar consists of the presentation of research results to a faculty/student audience. A third seminar may also be presented if you and your major professor feel it is necessary to split the results into two seminars. Seminars should be prepared to last approximately 20 minutes with an additional 10 minutes given for discussion and questions. Two to 7 days before your seminar, e-mail an abstract of your seminar presentation to 'ay-all'. If faculty on your advisory committee are outside of the department, invite them and send a copy of the abstract.

The format for abstracts should be adhered to:

TITLE:

YOUR NAME:

MAJOR PROFESSOR'S NAME:

DATE:

TIME:

LOCATION:

ABSTRACT:

Consult p. 21-24 of the ASA, CSSA, SSSA Publications Handbook and Style Manual for further information on abstracts.

Two to five of "the most important" references should be included at the end of the abstract. The abstract should be no longer than 1 page. All seminars are presented utilizing a LCD projector.

GRADUATE FORMS

AGRN GRA Form 1

AGRN GRA Form 2, Soil Science

AGRN GRA Form 2, Plant and Weed Science

AGRN GRA Form 3

AGRN GRA Form 4

AGRN GRA Form 5

AGRN GRA Form 6

Employee Exit Check List

AGRN GRA FORM 2 FOR SOIL SCIENCE STUDENTS

Minimum course requirements or equivalents for M.Ag. and M.S. degrees. Any deficiency course must be taken for a grade. No graduate credit for courses below 6000 level. All courses count against 40 hours (M.S.) of tuition waver.

Course Numbers	Equivalent substitute from another institution. Graduate Studies Committee may require verification by Institution.
MATH 1610 or 1710 or 1680	
PHYS 1000 or 1510	
CHEM 1040 & 1041	
CHEM 2030 or 2070 & 2071	
CHEM 3050 & 3051	
BIOL 3100 or HORT 3000	
STAT 7000	
12 semester hours from following list:	
AGRN 6000	AGRN 6150
AGRN 6020	AGRN 6300
AGRN 6060	AGRN 7590
AGRN 6080	
Additional requirements for all soil science Ph.D. students include all courses listed for the M.S. degree in soil science plus:	
MATH 1620 or 1690 or 1720	
CHEM 4070 or 4080 or BCH 6180 or 7200	
STAT 7010	
6 semester hours graded coursework 7000-level or above in major area of study; list course titles and numbers in spaces below:	

AGRN GRA FORM 2 FOR PLANT AND WEED SCIENCE STUDENTS	
Minimum course requirements or equivalents for M.Ag. and M.S. degrees. Any deficiency course must be taken for a grade. No graduate credit for courses below 6000 level. All courses count against 40 hours (M.S.) of tuition waver.	
Course Numbers	Equivalent substitute from another institution. Graduate Studies Committee may require verification by Institution.
MATH 1610 or 1680	
CHEM 1040 & 1041	
CHEM 2030 or 2070 & 2071	
CHEM 3050 & 3051	
BIOL 3100 or HORT 3000	
STAT 7000	
PLPA 3000	
ENTM 4020	
BIOL 5130/5131 or 6130/6131	
BIOL 5120/6120	
BIOL 3000 (sub. AGRN 5100 for non plant breeding majors)	
12 semester hours for M.S. from List A on page 29, Graduate Student Handbook	
Additional requirements for all Plant and Weed Science Ph.D. students include all courses listed for the M.S. degree in Plant and Weed Science plus:	
MATH 1620 or 1690 (substitution)	
CHEM 2080/2081	
STAT 7010	
BCHE/CHEM 6180/6181	
BCHE/CHEM 6190/6191 (substitution)	
6 semester hours 7000-level or above in major area of study for Ph.D; list courses and numbers	

AGRN GRA Form 3
Approval of Research Project Outline

This form must be completed prior to the end of the first semester

Student: _____

Major Professor: _____

I agree with the tentative thesis title, objectives, and materials & methods presented by the student.

Thesis Committee:

<u>Name (printed or typed)</u>	<u>Signature</u>	<u>Date</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

AGRN GRA Form 4

Fourth Semester (including summers) Progress Report to Thesis Committee

Student: _____

Major Professor: _____

Estimated Completion Date: _____

I agree that the student is making satisfactory progress towards completion of his/her program (Research & Course Work). Changes and deviations from the original plan-of- study and research outline are well documented and are acceptable or the student and major professor have agreed to make acceptable modifications. (Acceptable modifications must be written; oral agreements are not acceptable). A brief list of modifications must be attached to this form and signed by the committee member(s) requesting modifications.

If you believe that there are problems with the program that cannot be reasonably corrected, do not sign this form; and please provide the major professor and the head of the Crop, Soil and Environmental Sciences Department a written and signed summary of the problems.

Thesis Committee Signatures:

Name (Print or type)	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

AGRN GRA Form 5

Seventh Semester Progress Report to Thesis Committee
Ph.D. Students Only

Student: _____

Major Professor: _____

Estimated Completion Date: _____

I agree that the student is making satisfactory progress towards completion of his/her program (Research & Course Work). Changes and deviations from the original plan-of- study and fifth quarter progress report are well documented and are acceptable or the student and major professor have agreed to make acceptable modifications. (Acceptable modifications must be written; oral agreements are not acceptable). A brief list of modifications must be attached to this form and signed by the committee member(s) requesting modifications.

If you believe that there are problems with the program that cannot be reasonably corrected, do not sign this form; and please provide the major professor and the head of the Crop, Soil and Environmental Sciences Department a written and signed summary of the problems.

Thesis Committee Signatures:

Name (Print or type)	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**AGRN GRA Form 6
PLAN OF STUDY VERIFICATION**

This form is to verify that the **Plan of Study** approved by the Crop, Soil and Environmental Sciences Department has been completed as approved. The form must be completed and signed by all members of each student's Graduate Committee just prior to final exams for M.S. students and prelims for Ph.D. students. Also, a non-committee faculty member will be assigned by the Department Head to serve in the verification process.

The undersigned affirm that the **Plan of Study** for _____
(student's name) was completed as approved.

Major Professor

Committee Member

Committee Member

Committee Member

Committee Member

Non-Committee Member

Any changes in the approved **Plan of Study** must be shown below:

Approved Course	Substituted Course

Auburn University

Employee Exit Check List

Employee Name _____ Banner ID# _____

Department Name _____ Title _____

This checklist must be completed by all terminating employees except hourly student employees and forwarded by their respective departments to the College of Agriculture Dean/Director office along with the terminating PAF. Employees who leave University employment have an obligation to return all University property issued to them and settle all outstanding accounts.

Check (✓) or indicate N/A	Authorized Signature	Responsibilities
*****	*****	Returned/paid/made arrangements....
		for all items obtained from RB Draughon Library and its branches
		for AU Identification Card
		for all traffic fines/fees and hang tag
		Purchasing card, AUHDCC Aid, American Express, Diners Club, telephone cards, all departmental books, apparatus, keys, or any other material
		for all uniforms, property equipment, and supplies
		terminated access to computer systems (ID and passwords)
		for all federal property
		made all satisfactory arrangements with Department Head (must have supervisor signature)

Supervisor signature

Date

Employee signature

Date