GRADUATE PROGRAMS
IN
THE DEPARTMENT OF FISHERIES
AND ALLIED AQUACULTURES

Auburn University
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Graduate Program Policies

The policies and procedures for all graduate programs fall under those of the Graduate School (http://www.grad.auburn.edu/general/policies.html) and those specific for the department. A checklist for MS and PhD students, respectively, can be found at: http://www.grad.auburn.edu/masters_checklist.html and
http://graduate.auburn.edu/gradannex/doccklst/.

Exceptions to Graduate School Policies: Exceptions may be made to policies of the Graduate School under special circumstances. A person wishing to request an exception should write a letter to the dean of the Graduate School stating the nature of the request and the reasons for it. If a student is making the request, the letter should be submitted first to the major professor, who will write a letter of recommendation. Both letters go to the department head. If a member of the faculty is making the request, the letter goes to the department head, who will write a letter of recommendation. In all cases, requests for exceptions must have the approval of three members of the department's Graduate Faculty as well as the department head. All letters go to the academic dean for approval. Letters and comments then are forwarded to the dean of the Graduate School. A request for an extension of time to meet degree requirements must be justified. It must be accompanied by a proposed schedule for completion and assurance that the student is current in subjects included in the plan of study.

Graduate Degrees

The FAA graduate program prepares students for productive careers in academia, the private and public sectors in aquaculture, aquatic ecology, and fisheries biology and management. The Department offers graduate programs leading to the Master of Science (MS), Master of Aquaculture (MAq), and Doctor of Philosophy (PhD) degrees. All graduate students are expected to be engaged in service to the department’s research and education programs as deemed appropriate by the academic adviser and department head.

Master of Science Degree (M.S.). This degree prepares the student for teaching, research and extension or other fisheries or aquaculture related careers. The M.S. also prepares students for further studies toward a Ph.D.

Requirements:

- Submit an approved Plan of Study to the Graduate School no later than the end of second semester in Graduate School for full-time or part-time students.
- Complete in good academic standing a minimum of 30 semester hours of 6000-level and above courses beyond the bachelor's degree, of which 21 hours must be from graded courses. A student must earn at least 24 semester hours at Auburn University.
  - A minimum of 21 semester hours (which includes FISH 7990) of 6000-level and above courses must be taken within the major area of
concentration and at least an additional 9 hours taken in a separate but closely related area of concentration.

- No more than 9 credits of Special Problems.
- A minimum of 4 semester hours of FISH 7990 (Research and Thesis) are required, but no more than 6 semester hours may be counted toward the degree.

- Submit an approved research proposal to the Graduate Advisory Committee by the end of the first year of Graduate School.
- Submit the residency requirement form to the Graduate School.
- Present a seminar of completed research in the department for which credit will be given as FISH 7950. The seminar typically should be presented some time prior to the comprehensive examination by the Graduate Advisory Committee, but not necessarily on the same day. The seminar will be evaluated using a standard form by at least three (3) members of the graduate faculty and used for internal purposes and provided to the student's Graduate Advisory Committee.
- Pass a comprehensive examination on research and course work (i.e., the “defense”).
- Submit to the Graduate School a thesis approved by the student's Graduate Advisory Committee.
- All graduate work towards a master’s degree must be completed within a period of five (5) calendar years.

**Master of Aquaculture (M.Aq.)**. This non-thesis degree prepares a student for a career in aquaculture management or extension.

**Requirements:**

- Submit an approved Plan of Study to the Graduate School no later than the end of second semester in Graduate School for full-time or part-time students.
- Complete in good academic standing a minimum of 40 semester hours beyond the bachelors' degree. A student must earn at least 24 semester hours at Auburn University.
  - Included in the 40 hours are six core departmental courses (FISH 6210, 6220, 6240, 6250, 6410, & 7640; 20 hours) and several business-related courses (6 - 12 hours).
- No more than 9 credits of Special Problems.
- Submit the residency requirement form to the Graduate School.
- Successfully complete a 3 to 5-month internship mutually agreed upon between student and Graduate Advisory Committee and submission of final report approved by major professor.
- Present a seminar of completed internship in the department for which credit will be given as FISH 7950 (for students entering the graduate program Fall 2010 or after). The seminar typically should be presented some time prior to the comprehensive examination by the Graduate Advisory Committee, but not necessarily on the same day. The seminar will be evaluated using a standard
form by at least three (3) members of the graduate faculty and used for internal purposes and provided to the student's Graduate Advisory Committee.

- Pass a comprehensive oral examination after completion of all course work and internship.
- All graduate work towards a master’s degree must be completed within a period of five (5) calendar years.

**Doctor of Philosophy Degree (Ph.D.).** The Doctor of Philosophy Degree prepares the student for a professional career in teaching, research, and/or extension.

**Requirements:**

- Submit an approved Plan of Study to the Graduate School before the end of the first year of study.
- Complete in good academic standing a minimum of 60 semester hours beyond the bachelor's degree of which a minimum of 30 semester hours must be taken in graded courses at 6000-level and above and at least 21 semester hours of these graded graduate-level courses must be completed at Auburn University.
  - The remaining 30 credits may be earned from additional course work (including 6000-level courses, 7990 and 8990).
  - No more than 9 credits of Special Problems taken during PhD program.
  - A maximum of 4 semester hours of FISH 7990 from a completed master's program may be counted toward the minimum credits for the Ph.D.
  - The minimum and maximum number of hours of FISH 8990 is 10.
- Submit the residency requirement form to the Graduate School;
- Submit an approved research proposal to the Graduate Advisory Committee by the end of the second year of Graduate School.
- Pass a general examination, often called the "preliminary examination," typically after all graded course work is completed, to become a PhD candidate. The exam includes a written exam followed by an oral exam. The student becomes a candidate for the degree on successful completion of the general examination.
- Upon admission to candidacy, the student has four calendar years to complete all remaining requirements for the doctoral degree.
- Present a seminar of completed research in the department for which credit will be given as FISH 8950 (for students entering the graduate program Fall 2010 or after). The seminar typically should be presented some time prior to the comprehensive examination by the Graduate Advisory Committee, but not necessarily on the same day. The seminar will be evaluated using a standard form by at least three (3) members of the graduate faculty and used for internal purposes and provided to the student's Graduate Advisory Committee.
- Pass the Final Examination and successfully defend after research is completed and a draft of the dissertation is complete (i.e., the “defense”).
- Submit to the Graduate School a dissertation approved by the student's graduate advisory committee.
Financial Support

Graduate Assistantships

Financial assistance in the form of Graduate Research (GRAs), Teaching (GTAs) and Extension (GEAs) Assistantships are available on a competitive basis from extramural or intramural grant sources through individual faculty. A student will normally be accepted to the Fisheries program only if a major professor is willing to provide an assistantship or that the student comes with a scholarship that provides a level of funding equivalent to an assistantship. Assistantship stipends are not paid solely for conducting thesis or dissertation research. The number of assistantships available depends in great part on the success of departmental faculty in obtaining competitive grants. Students holding assistantships are currently charged in-state resident tuition.

Graduate assistantship appointments are temporary. Because assistantships are normally funded through grants and contracts, the length of funding is dependent upon the funding source and the student remaining in good academic and professional standing. These may be extended by the Major Professor, depending upon the availability of funds and the demonstration of satisfactory progress toward the degree. Each graduate assistant must be registered for at least one course (during each academic term of the assistantship), must satisfy the minimum course load specifications of the department and must be making satisfactory progress toward the degree.

Students on assistantships are assigned duties by their Major Professor or the Department Head and, generally, have obligations to the program, contract or grant from which the assistantship is derived. Students on assistantships receive the same benefits as other university students. Students should understand that there are various categories of assistantships with differing requirements, duties, and obligations. Hence, comparisons among graduate students with regard to duties and time commitment for an assistantship may not be meaningful.

Graduate School Guidelines for Graduate Assistantships
http://www.grad.auburn.edu/ps/guidelines_ga.html

1. To be on assistantship, a graduate student must be in a degree-seeking program. The student must be registered in the BANNER classification of MST, EDS, PHD, EDD, or GPR.

2. To be on assistantship, a graduate student must be registered for at least one course (anything carrying an Auburn University course number) during each academic term of the assistantship.

3. To be on assistantship, a graduate student must satisfy the minimum course load specifications of the individual departments and be making satisfactory progress toward the degree.
4. **International graduate students on F1 visas cannot hold a greater than 50 percent work appointment.** Rules for summer terms are different. Please check with the Office of International Education.

5. Graduate students may hold multiple assistantships and the assistantships may come from different units on campus, but together they cannot add up to more than a 100 percent appointment. Multiple assistantships for international graduate students cannot add up to more than a 50 percent work appointment.

6. To receive the out-of-state tuition waiver for non-resident students, a graduate student must be on no less than a 25 percent graduate assistantship and must be paid at least the minimum amount set by the Graduate School. This dollar figure is adjusted yearly during the budget process. Waivers are available only to graduate assistantships assigned for an entire semester, defined as beginning no later than the eighth class day each semester and ending no earlier than the last day of classes each semester.

7. Non-Alabama resident graduate assistants who have been on assistantship for at least two consecutive semesters will automatically have their out-of-state tuition waived for the next semester whether or not they are on assistantship that semester. The "next" semester is defined as the next calendar semester. For example, a graduate student on 25 percent or higher assistantship for consecutive fall and spring semesters will still have the out-of-state tuition waived if registered summer semester whether the student is on assistantship or not that summer semester. If the student were not to enroll the summer semester in this example, but were to enroll the following fall semester, this benefit would not apply because fall would not be the next calendar semester.

8. After June 30, 2000, all graduate assistants registered for at least one hour are exempt from FICA and Medicare (Section 218 of the Social Security Act).

9. Graduate assistants who meet the requirements for GRAD7900 Thesis Completion or GRAD8900 Dissertation Completion and register concurrently for at least one hour of Research and Thesis/Research and Dissertation are considered full-time students and are exempt from FICA and Medicare on graduate assistant stipends.

**Graduate Tuition Fellowships (GTFs)**

The Graduate School currently provides **GRADUATE TUITION FELLOWSHIPS** (GTFs), which will waive in-state tuition. Current Graduate School policy is: “Students with a qualifying assistantship* will automatically receive a Graduate Tuition Fellowship that pays resident and non-resident tuition, course fees, and student activity fees (no more than 15 attempted hours per semester) for all attempted hours** each semester during which the qualifying assistantship is held until a maximum level of support has been received. This maximum is directly linked to the minimum number of hours required by the curriculum in which the student is enrolled. For master’s and specialist students on assistantship, the maximum tuition fellowship support available is the minimum program*** plus 10 hours and for doctoral degrees, the maximum amount of support from
the tuition fellowship is the *minimum program*** plus 20 hours. Students are charged a processing fee each semester in which their fellowship is used****." See [http://www.grad.auburn.edu/ps/presgradfellows.html](http://www.grad.auburn.edu/ps/presgradfellows.html) for current information.

**Travel Support**

The Department encourages graduate students to attend professional meetings at the regional and national level. When possible, transportation and financial assistance may be provided for such attendance (typically through the advisor’s contracts and grants), but such funds are not guaranteed. Financial support to attend professional meetings is also available on a competitive basis from the Graduate School ([http://www.grad.auburn.edu/forms/begin_travel_award.html](http://www.grad.auburn.edu/forms/begin_travel_award.html)).

**Graduate Student Health Insurance Program**

Beginning Fall 2007, all graduate assistants with assignments of 10 hours (0.25 FTE) or greater for the full semester in the Fall and/or Spring semesters, who meet the minimum monthly stipend established by the Office of the Provost, and are in good academic standing are **required** to have health insurance coverage.

For students with qualifying assistantships as described above, there is a $500 ($250 per semester) subsidy that will be automatically applied along with the charges for insurance. These students will be automatically enrolled in the Auburn University Graduate Student Group Health Plan (GSGHP).

If one has equivalent/greater prior coverage and can so demonstrate, that person may choose to opt out of the University plan. Those who wish to opt out must complete the required form by the end of the 9th class day of a given semester or they must continue to be enrolled in the GSGHP for the remainder of that semester.

International graduate students and dependents in F or J immigration status will continue to be covered and billed similarly under the Mandatory International Student and Scholar Health Plan - check with the Office of International Education (insurance@auburn.edu) for details.

Those graduate students who do not qualify for the automatic enrollment may opt-in to the program. They must complete a request form and submit it to the Graduate School. See [https://fp.auburn.edu/gradschl/gsgi/Login.aspx](https://fp.auburn.edu/gradschl/gsgi/Login.aspx) for further information on optional enrollment.

**Course Registration Requirements**

Each graduate assistant must be registered for at least one course (during each academic term of the assistantship), satisfy the minimum course load specifications of the
department and be making satisfactory progress toward the degree. During fall and spring semesters, international students must carry a full load (9 h), unless all coursework has been completed or a Gold form is submitted to the Office of International Education (OIE).

**Continuous Enrollment Policy**

All full- and part-time degree-seeking graduate students must be continuously enrolled. Continuous enrollment is defined as registration in at least two semesters in a given academic year (fall, spring, summer) until the degree is awarded or status as a degree-seeking student is terminated through an official university withdrawal. Students must register for the term in which they take their examinations, defend their dissertations, and complete degree requirements (including summer term). Although the Graduate School and individual graduate programs will monitor the enrollment status of graduate students, it is ultimately the responsibility of graduate students to ensure that they are meeting the enrollment provisions of this policy.

**Inactive Status**

Students who fail to register for at least two semesters in a given academic year will be declared inactive. To be re-activated, students must apply for re-activation to the program in which they were enrolled and the Graduate School. Students must also pay the re-activation fee. Re-activation is not guaranteed. In order to fulfill the continuous registration requirement, students who are re-activated must register retroactively and pay fees for all semesters that have elapsed since they were last enrolled.

**Leave of Absence**

Students planning to discontinue enrollment for a semester or more must request approval for a leave of absence. Students may petition the Graduate School for a leave of absence for a maximum of two semesters during the entire program. A petition for a leave of absence, signed by the Graduate Program Officer or head of the academic unit, must be approved by the Dean of the Graduate School. The request must be filed and approved before the anticipated absence. An approved leave of absence will enable students to re-enter their program without applying for re-activation or owing retroactive fees.

A student may be granted a leave of absence for medical reasons, family necessity or dependent care, military service, or personal reasons. A student who has completed at least one full term as a student in good standing may be granted a one semester personal leave of absence for any reason. A leave for personal reasons may be taken only once during the period of study.

A student on leave is not required to pay fees, but in turn may not use Auburn University facilities, resources, or services intended only for enrolled students; receive a graduate assistantship, fellowship or financial aid from the University or take any Auburn courses related to the plan of study.
Graduation and Registration Requirements

Thesis and dissertation students needing thesis or dissertation final approval and submission and the final examination, or non-thesis graduate students needing to complete projects, would register for 7990 Research and Thesis or 8990 Research and Dissertation, as applicable. Non-thesis graduate students requiring only a final examination would register for GRAD 7000. Students may not register for GRAD 7000 for more than one semester. Students who have in a previous term completed all requirements for the degree, upon receipt of a “certificate of completion” form from the Graduate School, will not be required to register in a future term if their graduation is delayed or postponed.

To maintain continuous enrollment, students not enrolled in GRAD 7000, GRAD 7980, GRAD 7990 or GRAD 8990 should register for GRAD 7890, Continuous Registration for Master’s Students or GRAD 8890, Continuous Registration for Doctoral Students, and pay the requisite enrollment fees. Students must satisfy the minimum requirements for GRAD 7990 and GRAD 8990 before enrolling in GRAD 7890 or GRAD 8890.

No student will be permitted to graduate who fails to submit a graduation check request to the Graduate School prior to the semester of expected graduation. Graduation day is the official last day of each semester and, therefore, is the deadline for approved plans of study and graduation checks for graduation the following semester. It is the responsibility of graduate students to check records for compliance with graduation requirements. Students who have completed a graduation check for a previous term must notify the Graduate School of pending graduation before the 15th class day of each subsequent semester. Graduate degrees are awarded at the end of each semester. Candidates wishing to graduate in absentia must inform the Registrar’s Office.

A graduate student may carry a maximum course load of 16 hours per semester (14 in the summer term). This includes undergraduate courses, but does not include 7990 (Research and Thesis) and 8990 (Research and Dissertation) when required of all graduate students in a department each semester. Graduate student must carry nine hours per semester or enroll in GRAD 7AA0/8AA0 with concurrent enrollment for a minimum of one hour of 7990/8990 to be classified as full-time students. Enrollment in GRAD 7AA0/8AA0 requires the completion of a certification available at the Graduate School or on the Web at [www.grad.auburn.edu](http://www.grad.auburn.edu).

Major Professor

Specific philosophies and expectations for graduate students vary among major professors; therefore clarification might be needed, for example, about hours of work, computer access, availability of supplies, etc. Faculty who serve as Major Professor to Masters' students must have "Graduate Faculty Status: Level 1" conferred by the Graduate School; doctoral students must be advised or formally co-advised by faculty with "Graduate Faculty Status: Level 2." (See faculty list)
Graduate Advisory Committee

The Graduate Advisory Committee functions to guide the student through his/her graduate program, especially in assessing suitability and progress of the thesis or dissertation research. The Graduate Advisory Committee should be selected by the student and major professor. The formal appointment of the advisory committee occurs when the Plan of Study is approved by the Graduate School.

The committee has the responsibility for helping the student develop a Plan of Study and Research Proposal and providing guidance toward completion of all degree requirements, including conduction of the doctoral general and final examinations. The committee must sign the final version of the thesis or dissertation prior to submission to the Graduate School at the end of the student’s program. It is the student's responsibility, however, to see that all required forms are completed, approved when necessary by the Graduate Advisory Committee or Department Head, and submitted to the Graduate School by the designated deadlines.

M.Aq. or M.S. degrees: The committee should consist of the major professor as committee chair and at least two other faculty members. Two must be members of the graduate faculty. This committee will approve the student's program of study, conduct required examinations and direct the required field project or thesis.

Ph.D. degree: The committee shall consist of the major professor and at least three members of the Graduate Faculty. At least two, including the major professor, must be members of the Graduate Faculty at Level Two.

Students should meet with their Graduate Advisory Committee at least once per calendar year to assess progress toward their degree. It is the responsibility of the graduate student to organize and schedule these evaluation meetings. The student should discuss the format and agenda for the committee meeting in advance with his/her major professor.

Plan of Study

The Plan of Study is an approved list of courses that must be taken in order to satisfy the curriculum requirements for graduation and awarding of the degree. The Plan of Study should be prepared by the student and the advisory committee and filed with the Graduate School by the end of the second semester for MS and MAq students and by the end of the first year for PhD students. The choice of courses must include the minimum number of course credit hours required by the Department. In selecting courses, the committee should take into account the student's background and previous course work, career goals, and specific courses that will help prepare the student for the thesis or dissertation research to be conducted. The student is responsible for carrying out the planned program and for asking the major professor to make necessary changes. The Graduate School recognizes that changes may be warranted, and a form is available for amendments as required by student needs, research interests and course availability. For M.S. or MAq students, one to
three changes may be made by using the simplified "Change in Existing Plan of Study Form" available at the Graduate School or on the web. Four or more changes require a new Plan of Study. It is the student's responsibility to submit the Plan of Study or any subsequent changes approved by the committee online via the Graduate School GPOST website (http://graduate.auburn.edu/gspoststudent/) and the responsibility of the advisory committee and department head to then approve them. Notification and approval of all changes must be provided to the Graduate School before the beginning of the student’s final semester.

Transfer of Credit from Other Institutions

Graduate credit taken in residence at another approved graduate school may be transferred to Auburn University. No prior commitment is made concerning whether transfer credit will be accepted. A student must earn at least 24 semester hours, or half of the total hours required for a master's degree, whichever is greater, at Auburn University. A program that requires 30 hours of credit will be limited to 6 semester hours of transfer credit. No such limitation is applied to doctoral degrees except 21 semester hours must be earned as a graduate student at Auburn University in graded course work at the 6000-level or above. The credit must be acceptable to the student's advisory committee and be pertinent to the student's Plan of Study. No transfer credit will be approved without an official transcript. No course on which a grade lower than B was earned may be transferred. Additionally, credit will not be allowed if the combined GPA on graduate work taken at other schools is less than 3.0 on a 4.0 scale, nor may transfer credit be used to improve the GPA on courses taken at Auburn University. All transferred credit to be counted toward a master's or specialist degree must have been earned within five years of the date the Auburn degree is awarded. There is no such time limit on credit for doctoral degrees.

Academic Progress & Dismissal

Each graduate student's progress toward a degree is monitored by the student's advisory committee, and issues of professional development may be considered. While failure to maintain academic standards merits automatic dismissal, a student also may be dropped from the Graduate School if progress is unsatisfactory in other areas. In such cases, the advisory committee will prepare a statement of deficiencies and/or grievances and discuss it in a meeting with the student. The statement must have the unanimous support of all members of the committee. The student will be warned that corrective measures must be taken within a specified time to avoid action that might result in dismissal. The committee determines the period allowed for correction. Copies of the statement of grievance and summary of the meeting will be provided the student, the department head, the academic dean, and the graduate dean. If the deficiency is not corrected within the time allowed by the committee, a statement reiterating the grievance and recommending dismissal should be sent to the graduate dean with copies to the student, the department head, and the academic dean. The graduate dean will give the student an opportunity to respond and will make a final determination. The student and the advisory committee will be notified. The
action taken will not appear on the student's official transcript, and release of information is restricted under the University's policy on the confidentiality of student records.

Research Proposal

All M.S. and Ph.D. students must submit an approved research proposal to the Graduate Advisory Committee by the end of the first year of Graduate School for MS or second year for PhD. The proposal, prepared in consultation with the Major Professor, should include research objectives, a review of relevant literature and the methods by which the research will be conducted. The Graduate Advisory Committee should approve the research proposal before the research begins.

Residency

Resident, on-campus study is the foundation for research-based graduate degree programs at Auburn University. Any graduate student enrolled in a degree program culminating in a thesis or dissertation must directly engage in research with the major professor, must have access to the research tools needed for the research activity, must be immersed in the culture of graduate education, must engage in the professional activities of the discipline, and must complete the research activity in a reasonable period of time. Graduation requires the major professor to certify compliance with these requirements and submit the proper form (http://www.grad.auburn.edu/forms/residency.pdf).

Thesis and Dissertation

The thesis for the M.S. and the dissertation for the Ph.D. must be the work of the student. Submission of a thesis or dissertation is defined as the time at which the first complete draft of such is submitted to the major professor for review. There is no limit on the time between the defense and the submission of the dissertation, as long as that period does not violate the four-year time limit between the general exam and the submission of the dissertation. The Graduate School Calendar lists the deadline for acceptance of theses and dissertations by the Graduate School each semester. Each semester the Graduate School conducts a thesis/dissertation workshop. Students should attend this workshop before writing their thesis - usually during the school term preceding their expected date of graduation. The Graduate School will check students' theses/dissertations for format prior to the deadline for each semester. Students are strongly advised to use this service. See http://www.grad.auburn.edu/cs/gscalendar.html for important dates.

Comprehensive Examination (Master’s)

All MS candidates under the thesis option and MAq students under the non-thesis option must pass a comprehensive examination covering the major and minor field, as well as the
research and thesis. This usually is a two-hour oral examination, but the student’s advisory committee also may require a written examination. Members of the Graduate Faculty not on the advisory committee may attend any oral examination as visitors. The major professor will schedule the oral examination not later than the deadline indicated in the Graduate School Calendar and should announce it through FAA-Fac (faa-fac@acesag.auburn.edu) or other appropriate mechanism. Successful completion requires the unanimous support of all members of the advisory committee. If a student fails the examination, one re-examination may be given on recommendation of the advisory committee and approval by the dean of the Graduate School. Further examinations will be allowed only under exceptional circumstances and with the approval of the Graduate Council.

Non-thesis students requiring only a final examination must register for GRAD7000 in the semester when the exam is taken.

**General Doctoral Examination**

A general examination, often called the "preliminary examination," is required of all applicants for the degrees of Doctor of Philosophy. It consists of written and oral testing by the student's advisory committee in the student's major and minor fields of studies. 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 for the oral examination must be made by application to the Graduate School at least one week in advance of the examination. The primary purpose of the general examination is to assess the student's understanding of the broad body of knowledge in a field of study. The examination also affords the advisory committee an opportunity to review the student's proposed research and understanding of research methods and literature in the chosen field. If the general examination reveals deficiencies in any of these areas, the advisory committee may recommend remedial work, re-examination, or discontinuation of doctoral study.

The general oral examination should be conducted immediately after the successful completion of the written examination and at least one complete semester (preferably more than one) must intervene between the general oral and final examinations. The two examinations thus cannot be taken either in the same semester or in consecutive semesters. Some departments have specific requirements for conducting these examinations, and the student should become familiar with these. Successful completion of the oral examination requires unanimous support of the student's advisory committee. If the general oral examination is failed, a re-examination may be given on recommendation of the committee and approval by the dean of the Graduate School. Further examinations require exceptional circumstances and approval by the Graduate Council.

The student becomes a candidate for the degree on successful completion of the general examination and has four calendar years thereafter to complete all additional requirements. If unable because of reasons beyond the candidate's control to complete the requirements
on time, the student may petition the Dean of the Graduate School for an extension. Otherwise, the student will revert to the status of an applicant and must petition the Dean of the Graduate School to retake the general oral examination.

**Graduation Requirements**

No student will be permitted to graduate who does not have an approved Plan of Study on file in the Graduate School or who fails to submit a graduation check request online to the Graduate School via GAAAP (http://graduate.auburn.edu/GAAAP/) prior to the semester of expected graduation. Graduation day is the official last day of each semester and, therefore, is the deadline for approved plans of study and graduation checks for graduation the following semester. It is the responsibility of graduate students to check records for compliance with graduation requirements. Students who have completed a Plan of Study and graduation check for a previous term must notify the Graduate School of pending graduation before the 15th class day of subsequent semesters. Graduate degrees are awarded at the end of each semester. Candidates wishing to graduate in absentia must inform the Office of Records and Admissions.

Students who have in a previous term completed all requirements for the degree, upon receipt of a "certificate of completion" form from the Graduate School, will not be required to register in a future term if their graduation is delayed or postponed.

**General University Policies**

**Research Involving Humans:** Auburn University established the Institutional Review Board for the Use of Human Subjects in Research (IRB) to evaluate research for compliance with the guidelines and policies of the U.S. Department of Health and Human Services, the Public Health Service, the Food and Drug Administration and other federal, state and local regulations. All research in which human subjects are used, whether by faculty, staff or students, must be approved in advance by the IRB, regardless of the source of funding, lack of funding or any other consideration. Research involving human subjects not approved in advance may be disallowed and may incur severe penalties for non-compliance with institutional policy. Information and review forms may be obtained from the Administrator for Special Programs, 307D Samford Hall, (334) 844-5966.

**Activities Involving Animals:** Auburn University's Animal Resources Program requires compliance with the Animal Welfare Assurance negotiated with the Office of Protection from Research Risks/National Institutes of Health (OPRR/NIH). A major part of that Assurance involves the Institutional Animal Care and Use Committee (IACUC) that ensures compliance with the Assurance, the policies of the U.S. Department of Health and Human Services, the U.S. Department of Agriculture and all other federal, state and local regulations concerning care, treatment and use of animals. All activities, whether teaching, research, production or display of animals, and whether or not the activity is funded, must be approved in advance by the committee. The use of animals for any purpose that is not
approved in advance by the IACUC may involve severe penalties for non-compliance with institutional policy and could jeopardize the University's Animal Welfare Assurance filed with the OPRR and the NIH. Information may be obtained from the Director of Animal Resources, (334) 844-5667. See http://www.auburn.edu/research/vpr/animals/iacuc.htm for IACUC information and http://www.auburn.edu/research/vpr/animals/training.htm for training.

General Departmental Operating Procedures

Parking permits. Graduate students are issued a “C” zone hang-tag. Special request may be made for a “B” zone through the department head.

Mailbox assignments. Assigned by the Main Office Staff in Swingle 203. Mailboxes in Rm 204 are for business use only. Personal mail should not be sent to departmental mailboxes.

Desk assignments. Limited desk space is available. Major Professors can request space through the Graduate Program Officer, Dr. Bill Daniels.

Issuance of Keys. Card access to Swingle Hall and keys to student offices, certain labs in Swingle Hall and other facilities are coordinated through Mrs. Karen Booker (Swingle 203) after approval of the Major Professor and are issued by Access Control.

Driving Departmental Vehicles. Students must comply with Auburn University Fleet Safety Policy (http://www.auburn.edu/administration/rms/pdf/fleet-safety.pdf) to operate an Auburn University owned, leased, and/or rented vehicle. This includes completion of the defensive driving course (http://www.auburn.edu/administration/rms/pdf/r_defensive-driving.pdf) within 15 days of hire. Once an employee or student has completed the course, they will receive an email which lets them know they have passed the course. They need to print this email or forward it to Mrs. Karen Booker (Swingle Rm 203; bookeks@auburn.edu) to put in their file for auditing purposes and proof of insurability with Risk Management. They must also complete and sign an Auburn University Fleet Safety Policy Acknowledgment of Receipt form with Karen.

Departmental Purchases. Purchases can be made with the Major Professor’s permission after talking with Mrs. Carolyn Jones (CJ) (Swingle Rm 203-D; jonesca@auburn.edu) to learn proper procedures.

Departmental Travel. All departmental travel must be arranged through the major professor and follow all Auburn University and departmental policies and procedures (http://www.auburn.edu/administration/iss/business_office/policy_manual/travel.html). See Mrs. Susan Smith (Swingle Hall, Room 203; SLS0014@auburn.edu) for departmental procedures.
**E.W. Shell Fisheries Center Use.** A 2-hour orientation is mandatory and will be provided at the beginning of each semester. Coordinate training through Mr. Bill Trimble (844-2872) or Mr. Randell Goodman (844-4667).

**Fishing.** Fishing is a benefit that may be revoked at any time. Fishing opportunities for graduate students and their immediate families is permitted in certain ponds. Permits are required and must be visible while fishing. Directions and permits can be obtained in Swingle Hall, Rm 203. Note that fishing by friends of fisheries students is **not** permitted at any time.

**Hunting.** ABSOLUTELY NO hunting is allowed on Fisheries property.

All safety issues or concerns should be reported immediately to the departmental safety officer, Dr. Allen Davis (844-9312; ddavis@acesag.auburn.edu) and/or the department head, Dr. David Rouse (844-4786). ALL students are required to have a safety orientation. See Dr. Davis for scheduling.

**Facility problems:** For problems in Swingle Hall, they should be reported to Mrs. Karen Booker (844-9206) or Mrs. Susan Smith (844-4786). Problems at the Fisheries Annex should be reported to June Burns or Dr. Rouse.
FACULTY

Graduate Faculty Level II

Arias, Covadonga R.  (Ph.D.) Associate Professor, microbial genomics.  ariascr@auburn.edu

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### FALL

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### SPRING

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### Fisheries and Allied Aquacultures (FISH) Course Descriptions

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**SUMMER**

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E = even years; O = odd years

---

**Fisheries and Allied Aquacultures (FISH) Course Descriptions**

6210 **PRINCIPLES OF AQUACULTURE** (3). LEC. 3. Pr., BIOL 1030 or 1037. **FALL.** Principles underlying aquatic productivity and levels of management as demonstrated by present practices of aquaculture around the world.
6215  **MARINE AQUACULTURE** (2) LEC. 1, LAB 2. Pr. BIOL 1030. **SUMMER.** Introduction to culture of marine species with emphasis in nutrition and feeding, reproductive biology, production techniques, processing, marketing and economics. Dauphin Island Sea Lab.

6220  **WATER SCIENCE** (3). LEC. 3. Pr., CHEM **FALL.** Properties of water, the water cycle, basic water chemistry and water quality with emphasis on water in managed ecosystems.

6240  **HATCHERY MANAGEMENT** (4). LEC. 2, LAB. 8. Pr., FISH 6210. **SPRING.** Study of warmwater hatchery techniques and application of those techniques in the field.

6250  **AQUACULTURE PRODUCTION** (4). LEC. 3, LAB 4. Pr., BIOL 1030 or BIOL 1037. **SUMMER.** Factors affecting growth and yield of aquacultural species, with implications toward farming commonly cultured species. Production techniques for commercially important finfish are discussed.

6320  **LIMNOLOGY** (4). LEC. 3, LAB 4. Pr., CH 1040, BIOL 3060 and FISH 5220, **SPRING.** Limnology is the study of the chemical, physical, geological, biological and ecological processes that influence the structure and function of freshwater communities. Focus on interactions among these variables. Credit will not be given for both FISH 5320 and FISH 6320.

6380  **GENERAL ICHTHYOLOGY** (4). LEC. 3, LAB. 6. Pr., BIOL 1030 or BIOL 1037. **FALL.** Survey of the biodiversity of world and local fishes, with an overview of ecology, behavior, biology and conservation of fishes.

6410  **INTRODUCTION TO FISH HEALTH** (3). LEC. 3. Pr., BIOL 1030. **FALL.** Introduction to parasitic, bacterial, and viral pathogens of wild and cultured finfish and shellfish.

6425  **MARINE FISH DISEASES** (4) LEC. 7.5, LAB 6. Pr. BIOL 1030 or BIOL 1037 and BIOL 3200. **SUMMER, FIRST TERM.** Introduction to diseases of marine finfish and shellfish and practical techniques used to isolate and identify diseases. Dauphin Island Sea Lab.

6440  **FISH ANATOMY AND PHYSIOLOGY** (4). LEC. 3, LAB. 4. Pr., FISH 5380 or FISH 6380. **SPRING.** Advanced studies of fish anatomy and physiology. Emphasis on teleosts and topics of importance in fishery biology, aquaculture, and fish health.

6510  **FISHERIES BIOLOGY AND MANAGEMENT** (4). LEC. 3, LAB 4. Pr., BIOL 1030 or BIOL 1037. **FALL.** This course provides a general overview and introduction to fisheries management with emphasis on
freshwater examples. The laboratory will provide hands-on field experience. Credit will not be given for both FISH 5510 and FISH 6510.

6520 SMALL IMPOUNDMENT MANAGEMENT (3). LEC. 5, LAB 10. Pr., BIOL 1030 or BIOL 1037. **SUMMER, 1ST MINI SEMESTER.** Major aspects of primarily recreational fishing pond management, including construction, stocking, water quality management, harvest strategy, diagnosis of problems and communication of analyses.

6630 FACILITIES FOR AQUACULTURE (3). LEC. 2, LAB. 4. **SPRING, ODD YEARS.** Principles and practice of site selection, design and construction of aquacultural facilities, with emphasis on impoundments and ponds.

6650 FISH AND SEAFOOD PROCESSING TECHNOLOGY (3). LEC. 3. Pr., CHEM 2030 or BIOL 3200. **SUMMER.** Emphasis on important species, market forms, preservation techniques, and rules and regulations of the seafood industry.

6670 FISHERIES AND AQUACULTURE EXTENSION METHODS (2). LEC. 2 **SUMMER, 2ND MINI SEMESTER.** Concepts and practices pertaining to aquacultural extension organization, administration, program development and implementation.

6725 MARINE Ichthyology (6). LEC. 6. Pr., BIOL 3060 and FISH 6380. **SUMMER.** General background in the biology of marine fishes and their taxonomy. Offered only at the Gulf Coast Research Laboratory (GCRL), Ocean Springs, MS; Admission to GCRL.

6745 MARINE FISHERIES MANAGEMENT (4). LEC. 4. Pr., Admission to GCRL. **SUMMER.** Overview of practical marine fishery management problems. Offered only at the Gulf Coast Research Laboratory, Ocean Springs, MS.

6970 SPECIAL TOPICS IN FISHERIES AND ALLIED AQUACULTURES (1-4). LEC. Pr., Instruction and discussion in a selected current topic in Fisheries, Aquaculture or Aquatic Sciences.


7240 RESOURCE USE AND ENVIRONMENTAL ISSUES IN AQUACULTURE (2) LEC. 3. **FALL.** Resource use, environmental
effects, and sustainability of aquaculture with emphasis on approaches to improving efficiency and reducing negative environmental effects.

**7270 CRUSTACEAN AND MOLLUSCAN AQUACULTURE** (4). LEC. 3, LAB 3. Pr., FISH 5210 or FISH 6210. SPRING. General biology and culture techniques of the major shrimp, crawfish and shellfish species cultured throughout the world.

**7330 RESERVOIR LIMNOLOGY** (3). LEC. 2, LAB 5. Pr., FISH 5320 or FISH 6320. SUMMER, EVEN YEARS. Consideration of the ecological characteristics of reservoirs as they relate to modern concepts of ecosystem management.

**7340 FISH ECOLOGY** (3). Lec. 2, Lab. 3. Pr., BIOL 3060. FALL, EVEN YEARS. Study of interactions among fish and their environment. Laboratory will emphasize critical literature reading and experimental approaches.

**7360 MANAGEMENT OF AQUATIC FLORA IN FISHERIES AND AQUACULTURE** (4). Lec. 3, Lab. 6. Pr., BIOL 6120. SUMMER, ODD YEARS. Role of aquatic vegetation in fish production, its utilization and control.

**7380 ECOLOGY AND MANAGEMENT OF RIVERINE SYSTEMS** (4). Lec. 3, Lab. 3. Pr., BIOL 7370. SPRING, EVEN YEARS. River systems within a landscape ecology and ecosystem management context. Laboratory sessions stress techniques for assessment and management.

**7410 MOLECULAR DIAGNOSIS: PRINCIPLES AND APPLICATIONS** (3) Lec. 3. SPRING. Introduction to molecular biology techniques currently used in disease diagnosis.

**7420 FISH DISEASES** (4). LEC. 3, LAB. 4. Pr., BIOL 3200, and FISH 6410. FALL. Diagnostic techniques for viral, bacterial, fungal and parasitic diseases of fishes, including etiologic agents, geographical range, species susceptibility, clinical signs, clinical pathology, epidemiology, and management.

**7450 FISH PATHOLOGY** (3). LEC. 2, LAB 3. Pr., FISH 5410 or FISH 6410 or FISH 7420. FALL, EVEN YEARS. Morphological and physiological changes in fish with infectious or noninfectious diseases.

**7460 CLINICAL FISH DISEASE DIAGNOSIS** (1-3). Lec. Pr., FISH 6410 and FISH 7420. Practical experience in necropsy of diseased fish. Identification of causative agents and prescription of appropriate disease control. Course may be repeated for a maximum of 3 credit hours.
FISH POPULATION DYNAMICS (3). LEC. 2, LAB. 4. Pr., FISH 5510 or FISH 6510 and STAT 7040. SPRING, EVEN YEARS. Derivation of fish population estimates, growth, recruitment and mortality; use of modeling techniques to assess exploited fish populations.

QUANTITATIVE TECHNIQUES IN FISHERY ASSESSMENT (3). LEC. 2, LAB 4., Pr., FISH 5510 or 6510 and STAT 7000 or 7040. SPRING, ODD YEARS. Quantitative techniques to assess and manage fish populations in freshwater. The laboratory will analyze actual fisheries data using SAS on personal computers.

FISH NUTRITION (3). LEC. 3. SUMMER. Fundamental and applied aspects of fish nutrition, including nutrient requirements, physiology of food assimilation, feed preparation, and practical feeding.

FISH NUTRITION LABORATORY (2). LAB. 6. Coreq. FISH 7640. SUMMER. Laboratory exercises in analysis of fish feeds and formulation and preparation of fish feeds.


CHEMICAL OCEANOGRAPHY (3). LEC. 3. SPRING. In-depth examination of the chemistry of seawater and its relationship with biological, geological and physical processes in the oceans. Taught at Dauphin Island Sea Lab.

DIRECTED STUDIES IN FISHERIES (1-4) IND. SU. Individualized in-depth study on a particular subject under the guidance of a professor. May include directed readings and research. Course may be repeated for a maximum of 4 credit hours.

INTERNERNSHIP IN FISHERIES AND AQUACULTURE (1-10) INT. SU. Field experience in aquaculture, fisheries or aquatic resource management on farm or with research, extension or aquatic management agency. Course may be repeated for a maximum of 10 credit hours.

GRADUATE SEMINAR SERIES (1). LEC. SU. Acquaint students with current research and related activities.

GRADUATE RESEARCH SEMINAR (1). SEM. 1 SU. Oral presentation and discussion of research in the field of specialization. Course may be repeated for a maximum of 2 credit hours.

SPECIAL PROBLEMS IN FISHERIES AND ALLIED AQUACULTURES (1-5). (CREDIT TO BE ARRANGED). Individual or group project or research in consultation with faculty member on problem in fisheries and allied aquacultures. Course may be repeated for a maximum of 5 credit hours.

RESEARCH AND THESIS (1-10). MST. Credit to be arranged. Course may be repeated with change in topic.

DIRECTED STUDIES IN FISHERIES (1-4) IND. SU. Individualized in-depth study on a particular subject under the guidance of a professor. May include directed readings and research. Course may be repeated for a maximum of 4 credit hours.

GRADUATE SEMINAR SERIES (1). LEC. SU. Acquaint students with current research and related activities.

GRADUATE RESEARCH SEMINAR (1). SEM. 1 SU. Oral presentation and discussion of research in the field of specialization. Course may be repeated for a maximum of 2 credit hours.

SPECIAL PROBLEMS IN FISHERIES AND ALLIED AQUACULTURES (1-5). Individual or group project or research in consultation with faculty member on problem in fisheries and allied aquacultures. Course may be repeated for a maximum of 5 credit hours.

DOCTORAL RESEARCH AND DISSERTATION (CREDIT TO BE ARRANGED).
## GRADUATE SCHOOL POINTS OF CONTACT

### Getting In

<table>
<thead>
<tr>
<th>Category</th>
<th>Contact Person</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>Admissions (Domestic)</td>
<td>Ms. Jennifer Lovelace</td>
<td>(844-2134)</td>
</tr>
<tr>
<td>Admissions (International)</td>
<td>Ms. Theresa Morgan</td>
<td>(844-2133)</td>
</tr>
<tr>
<td>Recruiting and Communications</td>
<td>Ms. Jessica Nelson</td>
<td>(844-2160)</td>
</tr>
<tr>
<td>International Admissions Processing</td>
<td>Ms. Alisa Little</td>
<td>(844-7105)</td>
</tr>
<tr>
<td>Admissions Processing</td>
<td>Ms. Myra Garrett</td>
<td>(844-4700)</td>
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<td>Ms. Donna Childers</td>
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<td>Academic Standing (last names M-Z)</td>
<td>Ms. Sherry Ray</td>
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<td>Dropping and Adding Courses</td>
<td>Ms. Linda Hatchett</td>
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<td>Fellowship Opportunities</td>
<td>Dr. George Flowers</td>
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<td>Financial Aid</td>
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<tr>
<td>Grades, Changing or reporting</td>
<td>Ms. Sherry Ray</td>
<td>(844-2131)</td>
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<tr>
<td>Insurance, Graduate Student Program</td>
<td>Ms. Sarah Beckum</td>
<td>(844-4506)</td>
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<tr>
<td>Plans of Study (last names A-L)</td>
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<td>Dissertation Preparation</td>
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<td>Final Examinations, Request for</td>
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<td>General Examinations, Request for</td>
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<td>Graduation Check/Certification (last names A-L)</td>
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<td>Thesis Preparation</td>
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<tr>
<td>Dean</td>
<td>Dr. George Flowers</td>
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<tr>
<td>Associate Dean</td>
<td>Dr. George Crandall</td>
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<tr>
<td>Director of Advising and Diversity</td>
<td>Ms. Rosa Jackson</td>
<td>(844-2132)</td>
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<tr>
<td>Director of Admissions</td>
<td>Ms. Theresa Morgan</td>
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<tr>
<td>Information Technology</td>
<td>Richard Alverson</td>
<td>(844-2130)</td>
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<tr>
<td>International Student Services</td>
<td>Leonard Vining</td>
<td>(844-2125)</td>
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<tr>
<td>Receptionist</td>
<td>Minnie Bryant</td>
<td>(844-4700)</td>
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</tbody>
</table>

**IMPORTANT CONTACT NUMBERS**

**EMERGENCY NUMBERS**

*Emergency* fire, police, ambulance, etc. – 911 (On and Off Campus)

**Auburn University Medical Clinic** - 844-4416 or 844-4422

**Auburn University Police Department** - 844-4158
[www.auburn.edu/police](http://www.auburn.edu/police)

**Auburn University Numbers and Web Addresses**

**Animal Resources (Office of the Vice President for Research)**
[http://www.auburn.edu/research/vpr/animals/training.htm](http://www.auburn.edu/research/vpr/animals/training.htm)

**Auburn University Bookstore** - 844-4241
[www.auburn.edu/bookstore](http://www.auburn.edu/bookstore)

**Auburn University Library** - 844-4500 or 844-1738
[www.lib.auburn.edu](http://www.lib.auburn.edu)

**Student Financial Services Business Office (Mary Martin Hall)** – 844-4634
[www.auburn.edu/administration/business_office/sfs](http://www.auburn.edu/administration/business_office/sfs)
College of Agriculture - 334/844-2345
http://www.ag.auburn.edu/

New Student Union – information - 844-4244. Obtain numbers for clubs, academic and religious organizations
http://www.auburn.edu/student_info/student_affairs/stdunion/

Graduate School – 844-4700
www.grad.auburn.edu

I.D. Card Office – 844-4507
http://www.auburn.edu/administration/tigercard/

Information Technology – Help Desk - 844-4944
www.auburn.edu/oit

Office of International Education – 844-5001
Dr. Andrew Gillespie, Assistant Provost, International Programs-
http://www.auburn.edu/academic/international/oie/

International Student Organization - 844-2724
http://www.auburn.edu/student_info/iso/

Office of International Education - 844-5001
http://web6.duc.auburn.edu/academic/other/international_education/office/ (Immigration documents)

Recreation Services – 844-4716
www.auburn.edu/recservices

Registrar – 844-4770
www.auburn.edu/registrar

Risk Management and Safety – 844-4870
http://www.auburn.edu/administration/rms/

Student Affairs – 844-5810
http://www.auburn.edu/student_info/student_affairs/

Student Government Association - 844-4240
www.auburn.edu/sga

Tiger Transit – 844-4757 or 844-4760
www.auburn.edu/transit