FISHERIES AND MARICULTURE

MASTER'S STUDENT HANDBOOK

(REVISED AUGUST 2020)

COLLEGE OF SCIENCE AND ENGINEERING

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FAMA Websites:
http://fama.tamucc.edu
http://gradschool.tamucc.edu/degrees/science/fisheries_and_mariculture.html

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This handbook is intended to be read in conjunction with the Graduate Catalog and the College of Graduate Studies Master's Student Handbook.

SECTION I. FISHERIES AND MARICULTURE PROGRAM

Introduction

This handbook provides guidance to students applying for and enrolled in the Fisheries and Mariculture (FAMA) master's (M.S.) degree program at Texas A&M University-Corpus Christi (TAMU-CC). It contains information about the requirements for successfully completing the degree, the course of study, selecting an advisor and graduate committee, choosing whether to pursue the thesis or professional (non-thesis) course of study, and the final oral examination. This handbook should be used in conjunction with the Graduate Catalog (be sure to select correct catalog and year in menu). The FAMA Handbook lists requirements specific to the FAMA program that are above and beyond what is described in the catalog. Additional graduate school requirements and specific rules and procedures can be found in the College of Graduate Studies (CGS) Master's Student Handbook and the TAMU-CC University Handbook. There is also a Style Guide that contains detailed instructions for preparing the thesis prospectus, thesis proposal, thesis or professional paper, and master's defense seminar. Be sure to consult the ProQuest system for final format of a thesis.

The M.S. in Fisheries and Mariculture

The Fisheries and Mariculture Program offers an M.S. degree with a choice of emphasis in either fisheries or mariculture. Our students enjoy a low student-faculty ratio and opportunities to study ecologically and commercially important Gulf of Mexico species. Faculty members supervise student research on topics such as fisheries ecology, habitat restoration, phytoplankton ecology, aquatic animal culture, genetics, disease, and nutrition. In addition to university facilities, students also conduct research at nearby partner institutions including the Texas A&M AgriLife Mariculture Research Facility, Texas Parks and Wildlife Department Marine Development Center, and the Texas State Aquarium. Our students acquire cutting-edge science and technological skills necessary for positions in both public and private sectors of the fisheries and mariculture industries, as well as undertaking research allowing them to pursue further studies at the PhD level.

The **goal** of the Fisheries and Mariculture M.S. program is to:

- Prepare graduate students for a career in either the private or public sector in fisheries, mariculture, or aquaculture.
- To foster creative independence and critical thinking in graduates so they are competent to practice in and contribute to their profession and field of scholarship.

The **expectations** of our graduates are to:

- Exhibit knowledge (breadth and depth) in the fields of fisheries or mariculture.
- Demonstrate the ability to conduct a thorough and complete survey of the relevant scientific literature pertaining to their approved topic of study.
- Demonstrate the ability to collect, organize and interpret data and produce a thesis or professional paper from an experiment, study, or project.
- Develop technical writing and communication skills that will benefit them in their professional careers.

The FAMA Student

Prospective students who wish to pursue a FAMA M.S. degree should have a strong life sciences background. Students accepted into the degree program will generally have undergraduate degrees in an area of the biological sciences (e.g., Biology, Ecology, Wildlife and Fisheries Sciences) with coursework that includes chemistry (e.g., general chemistry, organic chemistry, biochemistry) and math (e.g., trigonometry, calculus, statistics). The FAMA faculty welcome students from diverse academic paths as well as those who have some research experience.

Graduate study provides advanced, specialized training that strengthens academic and professional competence by broadening scientific horizons as well as development of specific expertise. Graduate students must assume greater responsibility and exercise more individual initiative than was necessary as an undergraduate. The graduate faculty emphasize productive research, employ seminar methods more frequently, and anticipate higher levels of class participation. To be successful in the master's program, students must display commitment to independent study, must become familiar with past and current research, and must relate ongoing research to the investigations of other scholars.

Fisheries & Mariculture Administrative Staff

Department Chair: Cherie McCollough, Ph.D.
FAMA Program Coordinator: John Scarpa, Ph.D.
Administrative Staff: Ms. Ronnie Emanuel (Academic Advisor), Mr. Ken Brown, Ms. Sue Burgess, and Ms. Sarah Wood

Get Connected, Interactions with Other Graduate Students and Professionals

Most official college and program information for students is distributed on listservs. A full list of all university listservs may be found at https://sci.tamucc.edu/school/encslabs/listservs.html. It is highly recommended that you subscribe to the graduate science and engineering student listserv (SciTech-GradStudents, scitech-gradstudents@listserv.tamucc.edu Historical fact: It is called SciTech as the college used to be Science and Technology.) Other listservs that may be of interest include: MSGSO - Marine Science Graduate Student Organization (marigrad-list@sci.tamucc.edu) and Opportunities (scholarship/internship, opportunities-list@listserv.tamucc.edu).

Graduate education is not a solitary endeavor. Students must make opportunities to discuss their projects with other graduate students and offer to assist others in the field or laboratory. Beyond generating camaraderie, this will give students a more comprehensive understanding of the many specific issues and problems in coastal and marine systems, expose them to a broad array of lab/field techniques, provide ideas for research, and provide opportunities to reciprocate in supporting each other. Attending seminars and student presentations of proposals or research will allow you to see what is expected and should be viewed as another learning experience.

Your professional development goes beyond your immediate classes and research. You should become a member of one or more professional societies in your field so that you may be eligible for scholarships and awards from that society, as well as attending the conferences to develop your professional skills and networking. Some societies also have certification programs that may set you apart from other applicants during your career. The American Fisheries Society has such a certification program. AFS also has Chapters, such as the Texas Chapter, that you may want to join in addition to the national society. Other professional societies to consider joining are the World Aquaculture Society and National Shellfisheries Association. Talk to your supervisor and others about what societies you should consider joining.

SECTION II. ADMISSION INFORMATION

FAMA Program Admissions Criteria

Students seeking admission to a graduate degree program with Texas A&M University-Corpus Christi must submit an admission application form, application fee, official transcripts, and program-specific supporting documents. All documents **must** be received by the College of Graduate Studies by the designated deadlines (see below).

College of Graduate Studies
6300 Ocean Dr.
Faculty Center (Unit 5843)
Corpus Christi, TX 78412

gradweb@tamucc.edu
Phone: 361.825.2174
Fax: 361.825.2775

Application Submission

Specific information on University criteria, application procedures, fees, and additional requirements for international applications is found in the TAMU-CC Graduate Catalog and at the College of Graduate Studies Website. To apply, complete the online Graduate Studies Application Form.

Program Requirements & Information

Below is a summary of the supporting documents required by the FAMA program:

- Completed university graduate application form.
- An essay of approximately 400 words describing educational and career goals, interests as they relate to the faculty in the FAMA programs, and a list of faculty members contacted.
- Three letters of evaluation from people familiar with your scholarly potential.
- Transcripts of all previous undergraduate and graduate work (including transcript evaluations of all work done at foreign institutions)*.
- Graduate Record Examination (GRE) scores that are not more than five (5) years old.
- Any relevant supplemental materials such as publications or resumes that include information about relevant experiences.
- International students have additional requirements as outlined at the College of Graduate Studies website. The FAMA programs require TOEFL or IELTS scores (click here for more information) for students from countries where English is not the native language. These scores must not be more than two (2) years old from the date the application was received AND must meet university criteria.

[*To be considered official, all required postsecondary academic records must be submitted directly from the registrar's office and bear the seal and signature of the registrar of the institution. In some foreign countries, the controller of examinations or principal may certify academic records. Official English translations, not interpretations, are required from most countries. Applicants must submit external transcript evaluations along with copies of the official transcripts. An applicant's file will not be considered complete without the submission of external transcript evaluations.]

It is the student's responsibility to make sure that the application is complete and received by the deadline to assure full consideration. Acceptance into the FAMA M.S. program is competitive and based on consideration of all application materials. Students accepted into the program will typically have demonstrated an ability to succeed in an academically rigorous environment through high GPA and GRE scores. Relevant life experiences may also provide a substantial basis for consideration.

Students whose GPA for the last 60 hours of undergraduate coursework is less than 3.0 (on a 4.0 scale), whose GRE scores are below the 50th percentile, or both are typically not competitive. Even if accepted, students in this situation are not eligible for support (i.e., cannot be supported through teaching or research assistantships), including out-of-state tuition waiver. Students whose GPA for the last 60 hours of undergraduate coursework is 2.5 or less (on a 4.0 scale) will not be considered for admission.

A campus visit with personal interviews involving prospective faculty mentors is highly recommended. To schedule a visit, please contact one of the following:

Dr. John Scarpa
FAMA Program Coordinator
John.Scarpa@tamucc.edu
361.825.2369

Mr. Ken Brown
Sr. Administrative Assistant
Kenneth.Brown@tamucc.edu
361.825.3907

Ms. Maggie Cano
Graduate Recruitment
Maggie.Cano@tamucc.edu
361.825.3496

Program Deadlines

The FAMA program has two deadlines: 1) priority date deadlines and 2) late or last decision date deadlines. All students should strive to meet the priority deadline because it is used to make decisions regarding assignment of assistantships. All applications received after the priority date deadline are considered "late" applications. Deadlines are typically earlier for international students because of the time required to process visa applications for international students. For the most up-to-date application deadlines visit http://gradcollege.tamucc.edu/degrees/science/fisheries_and_mariculture.html.

M.S. FAMA PROGRAM APPLICATION DEADLINES			
	Admission Semester		
Domestic Students	**Fall**	**Spring**	**Summer I**
Priority deadline to receive complete applications.	February 1	August 1	February 1
Decision date for **Priority** deadline	March 15	September 15	March 15
Last date for receipt of complete applications.	May 15	October 15	March 1
Decision date for **late** applications.	June 15	November 15	April 1
International Students	**Fall**	**Spring**	**Summer I**
Priority deadline to receive complete applications.	February 1	June 1	February 1
Decision date for **Priority** deadline	March 15	July 15	March 15
Last date for receipt of complete applications.	April 15	September 15	February 1
Decision date for **late** applications.	May 15	October 15	March 15

The acceptance process has two steps: 1) review and vote for acceptance by the FAMA program faculty and 2) final and official acceptance by the College of Graduate Studies. The applicant will be notified of acceptance by the FAMA Program Coordinator by email at the same time the College of Graduate Studies is notified. **The student will receive official acceptance or rejection only by the College of Graduate Studies.**

Assistantships

Students seeking full consideration for fellowships or assistantships (teaching or research) should have a completed application file submitted by the Priority Deadline (e.g., February 1 for Fall admission). However, applicants must apply separately for scholarships, assistantships, and fellowships at the College of Science & Engineering (https://sci.tamucc.edu/student-information/graduate-funding.html) or College of Graduate Studies (see Funding tab). Remuneration for M.S. assistantships, which is currently $1200/month for a 9-month half-time (50%, 20 hours/week) appointment, is consistent regardless of whether a student is a teaching or research assistant. **Students are only eligible to work half-time.**

After the priority deadline, if funding is available, awards will be made on a first come, first served basis. Students who have received offers for fellowships or assistantships **must notify** their respective coordinator (FAMA - John Scarpa) and the College of Science and Engineering TA Coordinator (Named in offer letter) of their acceptance by April 15 for Fall admission and November 15 for Spring admission (if assistantships are available). Otherwise, the University will assume that the offer has been rejected and will make offers to other deserving students.

Admission to the program is decided independently of financial awards. *Students must first be accepted into the program before financial awards can be considered*. For details regarding graduate assistantships and scholarships, refer to the CGS website at http://gradschool.tamucc.edu/funding/assistantships.html and http://gradschool.tamucc.edu/funding/index.html, respectively.

Teaching Assistantships: The State of Texas requires international graduate students whose native language is not English to obtain English proficiency certification before serving as graduate teaching assistants. See CGS website for details at http://gradschool.tamucc.edu/funding/assistantships.html.

Research Assistantships: A limited number of research assistantships are available through research institutes or centers and individual faculty members. Consult with institute or center directors and individual faculty members to identify these opportunities.

Timelines: Sometimes students need to make decisions on financial assistance before all information is in. For example, a student may need to accept or reject a financial aid package (loans) before he or she knows whether he or she is approved for an out-of-state tuition waiver. If you have a financial aid situation, you should discuss the situation with your faculty advisor and the Office of Student Financial Assistance before making a decision. If your studies start being extended far beyond "normal" time for completion, a situation of "excessive" hours may occur that can lead to financial aid issues. This situation rarely occurs, but if it does, see a representative at the Office of Student Financial Assistance to check what is the process for continuing.

Out-Of-State Tuition Waivers: Out-of-state tuition waivers are available to any graduate student receiving a half-time assistantship or fellowship. Students receiving a University scholarship of $1,000 or more per academic year are eligible to apply for out-of-state tuition waivers. To be eligible for an out-of-state tuition waiver, students must maintain a course load of 9 graduate hours during long semesters or 3 graduate hours during the combined summer session. The CGS Master's Handbook provides information on how to request an out-of-state tuition waiver.

Graduate Orientation

The College of Graduate Studies hosts a general Graduate Student Orientation (Orientation Schedule) every Fall and Spring semester. The FAMA program may schedule a Program Requirements Orientation

separately, usually during the first week of classes, to ensure that all new graduate students in the program are able to attend. Graduate students with teaching assistantships must attend training **prior to** the start of the fall and spring semester.

SECTION III. ACADEMIC PROGRESSION

Enrollment Status

All FAMA students with teaching or research assistantships **MUST** be enrolled full-time, which is 9 hours during the fall and spring semesters and 3 hours during the combined summer session. If a student is unsupported and chooses not to enroll for any reason, they can only remain unenrolled for two semesters after which they will be dropped from the program and will have to reapply to complete their degree. The maximum time allowed to complete the M.S. degree is seven (7) years. After this time coursework will begin to expire. Students typically, and should plan to, complete their degree within 2-3 years. All FAMA students must follow University rules governing graduate studies including, but not limited to: residency, recency of credit, leave, transfer credit, degree plans, grade point average, scholastic probation, enforced withdrawal, out-of-State tuition waivers, and the Texas 99-hour rule. All rules are described in the TAMU-CC Graduate Catalog.

Choosing a Degree Track

The FAMA program gives students a choice between thesis track and professional (i.e., non-thesis) track and the *option* of fisheries or mariculture. The **thesis track** can be thought of as a *research-intensive degree* whereas the **professional track** is *internship-intensive*, which may have a research component. Students should have discussed the track and option they will pursue with their potential graduate advisor before being accepted into the program.

Fulfilling FAMA Program Degree Requirements

All FAMA master's students must, regardless of track (thesis or professional):

- form a committee appropriate to program and track
- have an approved degree plan
- develop a prospectus outlining the goals and objectives of their research project or internship
- pass a final oral examination.

In addition, thesis-track students must:

- develop a research proposal
- conduct research
- write thesis
- give a public seminar
- defend thesis

Important – It is the student's responsibility to ensure all University and College forms, paperwork, and other degree requirements are completed in a timely manner. Continuing stipend support is contingent upon completing these milestones.

The Graduate Advisory Committee (GAC)

After being accepted into the FAMA program and enrolling, the most important first step for thesis-track students is forming the graduate advisory committee (GAC). [*n.b.*: All first semester FAMA students will be assigned a College of Science and Engineering advisor for guidance with class registration and other program issues. This advisor is not to be confused with your GAC faculty supervisor.] Ideally, students should select a GAC, with the aid of their primary supervisor(s), by the end of their first semester. The committee should be formed by the end of your first semester, but no later than the end of your second semester in the program (Table 1, next section). The GAC will help the student develop their overall degree program, including determining a research topic, formulating a research plan, selecting coursework, approving the degree plan, reviewing and approving the final research product (thesis or professional paper), and administering any examinations. Beyond these functions, the chair and advisory committee members should serve as valuable mentors.

Composition and size of the GAC should reflect the scope of the intended graduate program and should be developed with substantial input from the student's primary supervisor(s). After the committee is formed, your primary supervisor will normally become your committee chair. Individual faculty members are under no obligation to serve on your committee or to be your committee chair. The decision not to serve is usually based on some definable criteria, such as work overload or incompatible research interests.

The graduate advisory committee (GAC) consists of at least three (3) members. Two members must be of the FAMA faculty, including the committee chair. Additional members from outside the FAMA faculty or the university may be approved by Department of Life Sciences and the College of Graduate Studies (CGS). In exceptional cases, individuals holding graduate faculty rank at TAMU-CC or another accredited institution may serve as co-chair. In all cases involving the appointment of a non-FAMA faculty member, a graduate faculty status request (Form 2 from CGS) accompanied by a curriculum vitae and a rationale for the appointment must be provided to the Program Coordinator and filed with the Department of Life Sciences and CGS.

Students **MUST** meet with their committee ***by the end of the first long semester but no later than the end of the second long semester***. The goal of the first committee meeting is to allow students to introduce themselves and their academic and research interests to the committee and to finalize a degree plan. Students should remain in close contact with their GAC during all phases of graduate study to keep them informed of progress and setbacks. Students must meet at least annually with their GAC to update the committee regardless of progress. **Students are responsible** for calling required annual meetings of the committee and any other meetings deemed necessary by either the student or a committee member. If a student is having problems with their GAC they should speak to the Program Coordinator. If an advisor or committee chair decides to not serve on a student's GAC it is the responsibility of the student to find a replacement for that member or new chair person, otherwise the student may be dropped entirely from the university.

On occasions, it may be necessary to replace a committee member or a committee chair. If such a situation arises, the student should consult with their committee chair or the Program Coordinator immediately. The Program Coordinator and other members of the committee will determine if a change is necessary. The removal or replacement of a committee member requires a majority agreement of the remaining committee members and the Program Coordinator. Should a dispute arise between a student and any committee member, the student should consult with their committee chair, Program Coordinator, or the Department Chair.

Degree Plan

Each student, with input from the GAC or faculty supervisor, formulates a degree plan, which details the coursework that the student will undertake for his/her degree program. The minimum number of hours that are taken by all M.S. students is 36 credit-hours at the 5000- or 6000-level; however, many students will take more than the minimum, either because they wish to expand their knowledge or because their committee requires additional coursework to address deficiencies. To address deficiencies, the GAC may require a student to take coursework at the 4000-level or less; these courses are regarded as foundation work and will not be counted toward the total. Up to nine (9) credit-hours of graduate-level coursework may be approved for transfer from another university or program.

A degree plan must be filed with the Academic Advisor for Life Sciences (Ms. Ronnie Emanuel) no later than the end of the second long-semester after the student begins his/her program. The requirements for tracks and options are described in the following section.

Table 1. Important milestones for FAMA M.S. students.

Milestone	Due by
Selection of advisor	Before entering program
Committee formed	End of 1st semester, no later than 2nd semester
Degree plan filed (may be accompanied by full committee meeting)	End of 1st semester, no later than 2nd semester
Proposal submitted (usually accompanied by full committee meeting)	End of 2nd semester, no later than 3rd semester

Important *– It is the student's responsibility to ensure that all forms, paperwork, and other degree requirements are completed in a timely manner. Support via programmatic Research or Teaching Assistantships or student awards is contingent upon completing the milestones listed in Table 1. In addition, if a particular milestone is not accomplished by the end of the semester indicated, the student will be given a warning and must meet with the program coordinator to discuss progress towards completing the milestone. If a particular milestone is not accomplished by the end of the next semester, the student will be blocked from registering for courses until the milestone has been completed.*

Thesis and Professional Paper Research Prospectus and Proposal

See the on-line FAMA Style Guide regarding research prospectus and proposal. When you are ready to sign up for thesis proposal (FAMA 5392) [as well as thesis research (FAMA 5393), thesis submission (FAMA 5394), project research (FAMA 5940), internship for professional track students (FAMA 5940), or graduate defense seminar (FAMA 5102)] you must first email the administrative assistant (Mr. Ken Brown) of the Department of Life Sciences and request the course be "opened" for you. In your request, be sure to include your A# and your graduate committee supervisor. The assistant will then email you the specific course number (and CERN) for you to register.

There is often a misunderstanding of the requirements for the courses of thesis proposal, thesis research, and thesis submission as their names do not adequately describe the requirements. For FAMA 5329 (Thesis Proposal) a **completed proposal** must be submitted and accepted by your GAC for you to receive credit. For FAMA 5393 (Thesis Research) the production of a **full draft of your thesis** must be submitted to your GAC for you to receive credit; this course is not for doing the research, which is FAMA 5940 (Project Research). For FAMA 5394 (Thesis Submission) the final draft of your thesis, accepted by your graduate committee, and submitted to the CGS is necessary for you to receive credit.

For any of the above courses (or any course) an **Incomplete** is only given if there were extenuating circumstances that prevented the completion. Therefore, plan accordingly with your faculty advisor for when you will sign-up for these courses. If you do not receive an incomplete, a grade of **In Progress** will be given and you will have to sign up and pay for the course again.

NOTE: For research projects or teaching with vertebrate animals (e.g., fish), an Institutional Animal Care and Use Committee (IACUC) protocol (Animal Use) must be submitted to the Research Compliance Office. The protocol must be approved by IACUC **before** any data is collected that will be used in your thesis. For projects involving human subjects (even surveys), an Institutional Review Board (IRB) protocol must be submitted to the Research Compliance Office. The protocol must be approved by IRB **before** any data is collected that will be used in your thesis. Students should prepare protocol and other compliance forms along with their graduate advisor(s). It is in the best interests of the student to **ensure the proposal is approved by their committee AND the compliance office prior to the start of the research.** The student should report regularly on research progress to the advisor and committee to prevent last minute surprises or misunderstandings and to gain approval for any redirection.

FAMA M.S. Thesis Track Requirements

The FAMA thesis track requires students to propose an original research project, conduct the proposed research, and then prepare a thesis manuscript based on that research. The on-line FAMA Style Guide has more information about the preparation of the documents required to fulfill Thesis Track requirements. The proposed research must be approved by the GAC and conducted while the student is enrolled at TAMU-CC. The thesis must include a review of the relevant literature, description and statistical analysis of research results, and discussion of the results that contextualizes the research within the larger body of research in the discipline. A minimum of 36 hours is required, which may include up to 6 hours of FAMA 5940 (Project Research) with GAC approval (see required courses in tables on next page). In addition to the required credit hours associated with the research project, there are other required and elective courses that must be taken.

FISHERIES Thesis Track:

Course Number	Course Title	Credit Hours	Total Credit Hours
FAMA 5328	Fisheries Ecology and Management*	3	3
FAMA 5329	Fisheries Techniques	3	3
MATH 6315	Statistical Methods in Research	3	3
MATH 6316 **or** CMSS 6323	Statistical Methods in Research II Experimental Design	3	3
FAMA 5392	Thesis Proposal (proposal must be approved by GAC to receive credit)	3	3
FAMA 5393	Thesis Research (first draft of the thesis must be produced to receive credit)	3	3
FAMA 5394	Thesis Submission (final thesis manuscript must be approved by the GAC and submitted to receive credit)	3	3
FAMA 5102	Graduate Defense Seminar (taken in the last semester)	1	1
	Elective, specialized, topical coursework approved by the GAC		14
		Total	**36**

*Students with demonstrated competence in this course (i.e., have taken this or a similar course as an undergraduate) **and** approved by your GAC, may substitute another course (form required).

MARICULTURE Thesis Track:

Course Number	Course Title	Credit Hours	Total Credit Hours
FAMA 5370	Mariculture*	3	3
FAMA 5312	Mariculture Techniques	3	3
MATH 6315	Statistical Methods in Research	3	3
MATH 6316 **or** CMSS 6323	Statistical Methods in Research II Experimental Design	3	3
FAMA 5392	Thesis Proposal (proposal must be approved by GAC to receive credit)	3	3
FAMA 5393	Thesis Research (first draft of the thesis must be produced to receive credit)	3	3
FAMA 5394	Thesis Submission (final thesis manuscript must be approved by the GAC and submitted to receive credit)	3	3
FAMA 5102	Graduate Defense Seminar (taken in the last semester)	1	1
	Elective, specialized, topical coursework approved by the GAC		14
		Total	**36**

*Students with demonstrated competence in this course (i.e., have taken this or a similar course as an undergraduate) **and** approved by your GAC, may substitute another course (form required).

FAMA M.S. Professional (non-thesis) Track Requirements

The FAMA professional track is designed to provide a broad understanding of fisheries or mariculture and is focused upon practical, hands-on experience in fisheries or mariculture techniques. The ultimate goal of this option is to provide students with the skills and techniques needed to improve their opportunity for employment within industry. Students are required to undertake an extensive internship

program with an approved agency, institution, or commercial operation. This program consists of required coursework, elective coursework, and internship hours. A minimum of 36 credit hours is required for graduation. A two-person rather than a three-person GAC is required as the focus of this program is on practical, real-world experience and on-the-job training rather than research. However, a student may still have three or more members on their committee for mentoring. Requirements that indicate a student's research experience are omitted in favor of providing opportunities for the student to participate as a professional in the field. Differences in the requirements for students in the FAMA professional track are:

1. Students are co-supervised by a FAMA faculty member and a qualified member of the organization providing the internship.
2. Students enter into an internship agreement with the sponsor to maintain a jointly-determined training schedule with specific objectives. These objectives will be in-line with hiring guidelines for the sponsoring entity.
3. Upon completion of the internship, students write a professional paper regarding a particular aspect of their training or experience. This document should be designed for publication in a trade journal, agency bulletin, etc. The topic and format of the document will be approved by the faculty advisor and agent of the sponsor.
4. Students are not required to present at a graduate defense seminar, but may be asked to make a presentation for instructional and training purposes. In lieu of a defense seminar, a student must complete an oral examination in a format jointly agreed upon by the faculty advisor and agent of the internship sponsor (e.g., professional interview).

Successful completion of the FAMA Professional Track is jointly assessed by the faculty supervisor and internship supervisor. Factors considered include the timely completion of the internship, quality of the intern's work, quality of the professional paper (see on-line FAMA Style Guide for more information about the preparation of the documents required to fulfill Professional Track Requirements), professional conduct of the candidate, and overall knowledge displayed in the final oral examination.

Students must complete **36 semester credit hours** with a significant portion taken as internship hours. This degree plan may or may not include elective coursework, which is agreed upon between the student and faculty supervisor. *Following are the required courses for the fisheries track and mariculture tracks*.

FISHERIES Professional Track:

Course Number	Course Title	Credit Hours	Total Credit Hours
FAMA 5328	Fisheries Ecology and Management*	3	3
FAMA 5329	Fisheries Techniques	3	3
MATH 6315	Statistical Methods in Research	3	3
FAMA 5397	Professional Paper Submission (taken in the last semester)	3	3
FAMA 5998	Internship	variable	Min 9, Max 18
	Elective, specialized, topical coursework approved by the faculty supervisor	variable	Min 6, Max 15
		Total	**36**

*Students with demonstrated competence in this course (i.e., have taken this or a similar course as an undergraduate) **and** approved by your GAC, may substitute another course (form required).

MARICULTURE Professional Track:

Course Number	Course Title	Credit Hours	Total Credit Hours
FAMA 5370	Mariculture*	3	3
FAMA 5312	Mariculture Techniques	3	3
FAMA 5421	Chemistry of Natural Waters*	4	4
FAMA 5315	Diseases and Parasites of Aquatic Organisms*	3	3
MATH 6315	Statistical Methods in Research	3	3
FAMA 5397	Professional Paper Submission (taken in the last semester)	3	3
FAMA 5998	Internship	variable	Min 9, Max 17
	Elective, specialized, topical coursework approved by the faculty supervisor	variable	Min 0, Max 8
		Total	**36**

*Students with demonstrated competence in these courses (i.e., have taken these or similar courses as an undergraduate) **and** approved by your GAC, may substitute other courses (form required).

FAMA Courses and Example Course Sequences

Courses and Semester/Year offered

Course Number and Name	Offered
FAMA 5312 – Mariculture Techniques	Fall, Odd years only
FAMA 5314 – Aquatic Animal Nutrition	Spring, Odd years only
FAMA 5315 – Diseases and Parasites of Aquatic Organisms	Spring, Even years only
FAMA 5322 – Aquaculture Business Planning	Spring, Even years only
FAMA 5324 – Quantitative Fisheries Methods	Upon sufficient demand
FAMA 5327 – Marine Restoration Ecology	Fall, Odd years only
FAMA 5328 – Fisheries Ecology and Management	Fall, Odd years only
FAMA 5329 – Fisheries Techniques	Fall, Even years only
FAMA 5332 – Aquatic System Design	Fall, Even years only
FAMA 5336 – Dynamics and Quantitative Models of Aquatic Resources	Upon sufficient demand
FAMA 5338 – Applied Fisheries Statistics	Spring, Odd years only
FAMA 5355 – Public Aquarium and Animal Care Operations	Summer I, every year
FAMA 5370 – Mariculture	Fall, Even years only
FAMA 5421 – Chemistry of Natural Waters	Spring, Even years only

When you are ready to sign up for thesis proposal (FAMA 5392), thesis research (FAMA 5393), thesis submission (FAMA 5394), project research (FAMA 5940), internship for professional track students (FAMA 5940), or graduate defense seminar (FAMA 5102)] you must first e-mail the administrative assistant in Department of Life Sciences and request the course be "opened" for you. In your request, be sure to include your A# and your graduate committee supervisor. The assistant will then e-mail you the specific course number (and CERN) for you to register.

Example Course Sequences for Thesis and Professional Tracks

Example Course Sequence for FAMA **Mariculture** Thesis and Professional Tracks			
Thesis Track		**Professional Track**	
FALL (9 cr)	FAMA 5370 mariculture* (3)	**FALL (9 cr)**	FAMA 5370 mariculture* (3)
	MATH 6315 stats 1* (3)		MATH 6315 stats 1* (3)
	elective (3)		elective (3)
SPRING (9 cr)	MATH 6316 or CMSS 6323 * (3)	**SPRING (9 cr)**	FAMA 5998 Internship* (2)
	FAMA 5392 thesis proposal* (3)		FAMA 5421 chemistry natural waters* (4)
	elective (3)		FAMA 5313 diseases & parasites of aquatic animals* (3)
SUMMER (0-3 cr)	FAMA 5940 project research (3)	**SUMMER (0-6 cr)**	FAMA 5998 Internship* (up to 6 if wanted)
	or elective (if needed)		
FALL (9 cr)	FAMA 5312 maricult tech* (3)	**FALL (9 cr)**	FAMA 5312 maricult tech* (3)
	FAMA 5393 thesis research* (3)		FAMA 5998 Internship* (6)
	elective (3)		
SPRING (6-9 cr)	FAMA 5394 thesis submission* (3)	**SPRING (3-9 cr)**	FAMA 5998 Internship* (3+)
	FAMA 5102 thesis def. seminar* (1)		FAMA 5397 professional paper* (3)
	elective (if needed)		elective (if needed)
	* = required		* = required

Example Course Sequence for FAMA **Fisheries** Thesis and Professional Tracks			
Thesis Track		**Professional Track**	
FALL (9 cr)	FAMA 5328 fisheries* (3)	**FALL (9 cr)**	FAMA 5328 fisheries* (3)
	MATH 6315 stats 1* (3)		MATH 6315 stats 1* (3)
	elective (3)		elective (3)
SPRING (9 cr)	MATH 6316 or CMSS 6323 * (3)	**SPRING (9 cr)**	FAMA 5998 Internship* (3)
	FAMA 5392 thesis proposal* (3)		elective (3)
	elective (3)		elective (3)
SUMMER (0-3 cr	FAMA 5940 project research (3)	**SUMMER (0-6 cr)**	FAMA 5998 Internship* (up to 6 if wanted)
	or elective (if needed)		
FALL (9 cr)	FAMA 5329 fisheries techn* (3)	**FALL (9 cr)**	FAMA 5329 fisheries techniques* (3)
	FAMA 5393 thesis research* (3)		FAMA 5998 Internship* (6)
	elective (3)		
SPRING (6-9 cr)	FAMA 5394 thesis submission* (3)	**SPRING (3-9 cr)**	FAMA 5998 Internship* (3+)
	FAMA 5102 thesis def. seminar* (1)		FAMA 5397 professional paper* (3)
	elective (if needed)		elective (if needed)
	* = required		* = required

Deadlines

Thesis/Professional Paper and Oral Examination Deadlines

Students must be able to formally present and defend the results of their research (thesis track) or projects (professional track) and complete the oral examination administered by their GAC by deadlines that are established by the College of Graduate Studies in order to graduate at the end of a semester. These deadlines are ***generally two weeks before graduation*** but should be verified with your **academic** advisor (not GAC supervisor) at the beginning of the semester the student determines in which they will be defending.

Thesis manuscripts must be approved by the GAC and submitted on-line along with forms and fees according to the College of Graduate Studies schedule in any given semester.

Professional papers must be approved and signed by the GAC or faculty and internship supervisors and turned in to the Academic Advisor **on or before the last day of classes** in any given semester.

Graduation Deadlines

You must submit a completed application for graduation through SAIL by the posted deadline. It is highly recommended that you make an appointment with your academic advisor to review your records and be sure you have met all requirements for graduation.

Graduation deadlines are posted by the Office of the Registrar at http://registrar.tamucc.edu/Degrees_and_graduation/Apply_for_grad.html.

Commencement
For dates, times and location of the commencement ceremonies please visit http://commencement.tamucc.edu/.