# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>The Ph.D. in Coastal and Marine System Science (CMSS)</td>
<td>3</td>
</tr>
<tr>
<td>The CMSS Student</td>
<td>4</td>
</tr>
<tr>
<td>Admission to the CMSS Ph.D. Program</td>
<td>4</td>
</tr>
<tr>
<td>English Proficiency Verification and Certification Processes for</td>
<td>5</td>
</tr>
<tr>
<td>International Graduate Students</td>
<td></td>
</tr>
<tr>
<td>Application Deadlines</td>
<td>5</td>
</tr>
<tr>
<td>Financial Support</td>
<td>6</td>
</tr>
<tr>
<td>Fellowships</td>
<td>6</td>
</tr>
<tr>
<td>Harte Research Fellowships</td>
<td>7</td>
</tr>
<tr>
<td>Teaching Assistantships</td>
<td>7</td>
</tr>
<tr>
<td>Research Assistantships</td>
<td>7</td>
</tr>
<tr>
<td>Loans and Scholarships</td>
<td>7</td>
</tr>
<tr>
<td>Out-Of-State Tuition Waivers</td>
<td>8</td>
</tr>
<tr>
<td>Fulfiling CMSS Ph.D. Program Degree Requirements</td>
<td>8</td>
</tr>
<tr>
<td>The Graduate Advisory Committee</td>
<td>8</td>
</tr>
<tr>
<td>Interactions with Other Graduate Students</td>
<td>10</td>
</tr>
<tr>
<td>Teaching Requirement</td>
<td>10</td>
</tr>
<tr>
<td>Degree Requirements</td>
<td>10</td>
</tr>
<tr>
<td>Coursework</td>
<td>11</td>
</tr>
<tr>
<td>Degree Plan</td>
<td>11</td>
</tr>
<tr>
<td>Transfer of Credit</td>
<td>12</td>
</tr>
<tr>
<td>Minimum Grade Point Average &amp; Academic Probation</td>
<td>12</td>
</tr>
<tr>
<td>Course Load Requirements &amp; Restrictions</td>
<td>12</td>
</tr>
<tr>
<td>Seminars</td>
<td>13</td>
</tr>
<tr>
<td>Qualifying Examination &amp; Admission to Degree Candidacy</td>
<td>14</td>
</tr>
<tr>
<td>Research Prospectus/Proposal</td>
<td>15</td>
</tr>
<tr>
<td>Research Prospectus</td>
<td>15</td>
</tr>
<tr>
<td>Research Proposal</td>
<td>15</td>
</tr>
<tr>
<td>Dissertation</td>
<td>18</td>
</tr>
<tr>
<td>Dissertation Seminar &amp; Final Defense/Oral Examination</td>
<td>21</td>
</tr>
<tr>
<td>Dissertation Seminar</td>
<td>21</td>
</tr>
<tr>
<td>Final Defense/Oral Examination</td>
<td>22</td>
</tr>
<tr>
<td>Time Limit to Complete Degree Requirements</td>
<td>22</td>
</tr>
<tr>
<td>Graduation</td>
<td>22</td>
</tr>
<tr>
<td>Important Contacts</td>
<td>23</td>
</tr>
<tr>
<td>Get Connected</td>
<td>23</td>
</tr>
<tr>
<td>Appendix 1: CMSS Program Coursework Requirements &amp; CMSS Core Curriculum Course Descriptions</td>
<td>24</td>
</tr>
<tr>
<td>Appendix 2: Guidelines for Preparation of the Research Proposal and Dissertation Manuscript</td>
<td>28</td>
</tr>
<tr>
<td>Appendix 5: Program Application Checklist, First-Year Checklist, Degree Requirements Checklist</td>
<td>42</td>
</tr>
</tbody>
</table>
INTRODUCTION

This handbook provides guidance to students applying for and enrolled in the Coastal and Marine System Science (CMSS) doctoral degree (Ph.D.) program at Texas A&M University-Corpus Christi. For prospective students, it contains a brief overview of the program and instructions for applying for admission. For admitted students, it contains information about the requirements for successfully completing the degree, the course of study, selecting an advisor and a graduate committee, choosing a dissertation research topic, admission to degree candidacy, the dissertation defense, and the final oral examination. This handbook also contains detailed instructions for preparing the dissertation proposal and dissertation manuscript. An updated version of this handbook will be published each academic year. Students have the option of complying with the rules of the handbook that are in effect at the time of graduation or the rules in effect when he or she entered the program.

THE PH.D. IN COASTAL AND MARINE SYSTEM SCIENCE (CMSS)

The CMSS Ph.D. Program at TAMU-CC integrates traditional scientific disciplines to create a holistic understanding of coastal and marine environments. This is an interdisciplinary program is housed in the Department of Physical and Environmental Sciences (PENS). Graduates are broadly educated in coastal/marine policy as well as the biological, chemical, geological, and physical sciences. The CMSS Ph.D. degree is awarded by the College of Science and Technology. However, students and faculty from a variety of scholarly disciplines participate in the program. All CMSS students share a core of five interdisciplinary courses that cover the foundations of mathematical modeling, environmental policy, and case studies in system science. Then, each student pursues a program of specialized topical coursework tailored to the student’s research interests.

The goals of the CMSS Ph.D. program are:

- To develop graduates who are fully prepared to face current and future cultural, political, economic and scientific environmental challenges;
- To foster an atmosphere that nurtures research and scholarly activity through interdisciplinary approaches; and,
- To foster an atmosphere that promotes education from the regional to international level.

The expectations of our graduates are:

- To perform original and hypothesis-driven quantitative analyses that will lead to comprehensive verifiable models of natural systems;
- To emphasize mathematical and/or analytical skills to generate new data and critically evaluate models that will aid in our understanding of dynamic natural systems;
- To become a resource capable of answering environmental "what if" questions by providing comprehensive interpretation; and
- To obtain employment in industry, government, academia, or commercial enterprises
Prospective students who wish to pursue the CMSS Ph.D. should come from physical or life science backgrounds with strong emphasis on mathematical and analytical skills. Students accepted into the degree program must have a general undergraduate multidisciplinary knowledge of the biological and physical sciences, as well as mathematics and statistics. A strong background would include a major in one science area and a minor in another science area or mathematics. Students with backgrounds in applied computer science or Geographic Information Systems (GIS) are also of great interest to the program. The CMSS faculty welcomes 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 a specific expertise. Graduate students must assume greater responsibility and exercise more individual initiative than was necessary as an undergraduate. The graduate faculty emphasizes productive research, employ seminar methods more frequently, and anticipate class participation. To be successful in the doctoral 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.

**ADMISSION TO THE CMSS PH.D. PROGRAM**

It is important to begin the application process early to make sure all necessary documents and information are submitted well in advance of application deadlines. Persons seeking admission to the CMSS Program must apply through the TAMU-CC Office of Graduate Studies (OGS). If possible, the application should be submitted using the Texas Common Application Service (Accessed via http://gradschool.tamucc.edu/) but can be mailed if necessary. The fee to apply is $30 for U.S. applicants and $50 for international applicants.

In addition to application fees and the documents required by OGS, applicants must submit (1) three letters of evaluation from persons knowledgeable about the applicant’s potential for success in graduate studies; (2) an essay of about 1,000 words describing their educational backgrounds, challenges, career interests, goals, and faculty members contacted; and (3) GRE general test scores. Foreign students must submit official TOEFL scores. Applicants may optionally submit other relevant materials, e.g. copies of published works, GRE Subject Test scores or reports of past scientific research. All materials submitted will be considered.

A completed application consists of:

- Completed university graduate application form with essay of about 1000 words describing educational and career goals, interests as they relate to the faculty in the CMSS Program, and list names of faculty members contacted;
- Three letters of evaluation from people familiar with your scholarly potential;
- Transcripts of all previous undergraduate/graduate work (including transcript evaluations of all work done at foreign institutions)*;
Graduate Record Examination (GRE) scores that are not more than 5 years old;
• Any relevant supplemental materials such as publications or resumes that include information about relevant experiences; and,
• TOEFL scores from ETS taken within the last two years for students from countries where English is not the native language**.

* To be considered official, all required postsecondary academic records must come 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.

**TOEFL must be taken within two years of the date the application was received, unless the applicant’s primary language of instruction was English.

It is the student’s responsibility to make sure that the application is complete by the deadline to assure full consideration. Acceptance into the CMSS Ph.D. 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. A campus visit with personal interviews involving prospective faculty mentors is highly recommended and should be arranged through the CMSS Program Coordinator 361-825-2040 or 361-825-2020). The applicant will be notified of his/her acceptance or rejection by mail.

Students may take up to 12 semester hours of graduate coursework before being formally admitted to the CMSS program. See page 11 for information on transferring credit into the CMSS program.

ENGLISH PROFICIENCY VERIFICATION AND CERTIFICATION PROCESSES FOR INTERNATIONAL GRADUATE STUDENTS

International graduate students whose native language is not English must provide proof of English proficiency. There are two levels: English proficiency verified or English proficiency certification. International students whose native language is not English receiving teaching assistantships must obtain English proficiency certification (see page 7 for more information).

“English proficiency verified” is achieved by recent TOEFL score of at least 213 (computer-based). Scores from TOEFL examinations administered more than two years prior to acceptance into the CMSS program are not eligible for verification. English proficiency verification can also be obtained with a GRE Verbal score of 400 or higher; GRE must have been administered within five years of admission into the program.

APPLICATION DEADLINES

Students are admitted into the CMSS Ph.D. program in Fall or Spring semesters only; most students will begin in the Fall, and there may be no funding availability for Spring admissions. Applications must be complete by the deadlines listed below to receive consideration.
Applications completed after deadlines will not be considered until the next semester when students will be admitted. Admission to the program is decided independently of financial awards (see “Financial Support”) and applicants must apply separately for scholarships, assistantships, and fellowships.

_Students seeking full consideration for fellowships or assistantships should have a completed application file by the Priority Deadline of February 1 (Fall admission only). After this date, any awards will be made on a first come, first served basis. Students who have received offers for fellowships or assistantships must notify the University of their acceptance by April 15, otherwise, the University will assume that the offer has been rejected and will make offers to other deserving students._

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<thead>
<tr>
<th>International Students</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application:</td>
<td>Priority deadline for receipt of application</td>
<td>February 1</td>
</tr>
<tr>
<td>Completion:</td>
<td>Priority deadline for applicant files to be completed</td>
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</tbody>
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| Decision Date | March 15 | October 1 |

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<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>Completed Applications:</td>
<td>Priority deadline for application files to be completed</td>
<td>February 1</td>
</tr>
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<td></td>
<td>(including GRE scores, transcripts &amp; letters of recommendation)</td>
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</tr>
</tbody>
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**FINANCIAL SUPPORT**

**Fellowships**

A limited number of fellowships are available to CMSS students. Fellowships are available for a half-time (20 hour/week) 9-month appointment. The application deadline for consideration (for Fall semester) is March 1. Fellowship applications are available online at [http://sci.tamucc.edu/students/gradfunding.html](http://sci.tamucc.edu/students/gradfunding.html).

Students who hold fellowships must be enrolled as a full-time student (at least 9 hours/fall and spring semester, and 3 hours/summer) in the CMSS program. Appointments are for two full semesters (fall and spring). Reappointment requires reapplication each year, and students should not assume that the appointment will continue automatically. Summer fellowships may be available but must be applied for separately. Check the OGS website for annual and summer application deadlines.
Harte Research Fellowships

A limited number of research fellowships are available through the Harte Research Institute for Gulf of Mexico Studies (HRI). These fellowships are for students working with the HRI Endowed Chairs in the Institute. Application is made directly with an HRI Endowed Chair.

Teaching Assistantships

Teaching assistantships are available each year through the College of Science and Technology. Consult the college for information about eligibility as well as application procedures and deadlines, appointment durations, and course-load requirements.

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. English proficiency certification can be achieved by scoring at least 80 on each of the six sections of the English language proficiency examination (ELPE), by obtaining grades of A or B in English Language Institute (ELI) courses at the 300 level or higher, or through alternative certification by OGS. Students who have received a bachelor’s degree from an accredited U.S. institution will also obtain English proficiency certification.

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 funding sources. Some graduate research assistantships are administered through the College of Science and Technology; see http://sci.tamucc.edu/index.html (select “Student Information”).

Fellowship and Assistantship Amounts

There is a consistent remuneration structure for all Fellowships and Assistantships. Doctoral students entering with a BS, but not yet passing the qualifying comprehensive exam receive $1500/month. Doctoral students entering with a M.S. (and students entering with a B.S. and having completed 36 hours in the doctoral program), but not yet passing qualifying comprehensive exam receive $2000/month. Doctoral students having passed the qualifying comprehensive exam receive $2100/month. All increases start the semester following change of status. Teaching awards require teaching either 4 labs/year or (2 labs + 1 course)/year.

Loans and Scholarships

Consult the Office of Financial Assistance for information regarding student loans. Most Graduate Scholarships for S&T students are administered through the College of Science and Technology; see http://sci.tamucc.edu/index.html (select “Student Information”). The College routinely distributes information about many scholarships awarded by private organizations through its listservs.
Out-Of-State Tuition Waivers

Out-of-state tuition waivers are available to any graduate student receiving a half-time assistantship or fellowship, or a University scholarship of $1,000 or more per year. To receive an out-of-state tuition waiver, students must maintain a course load of at least 9 hours during long semesters or 3 hours in a 5-week summer session or 6 hours in a 10-week summer session. To request an out-of-state tuition waiver, submit the completed form to OGS before registering for classes. Out-of-state tuition waivers will be rescinded if students register for too few hours or are not working in the qualifying position by the 12th class day of long semesters and the 4th class day of summer semesters.

Texas 99 Hour Rule

The Texas State Legislature has enacted a rule that provides that students at all state universities with over 99 doctoral hours may be subject to the payment of nonresident tuition. A student will generally be able to study at Texas A&M University - Corpus Christi full-time for five complete academic years, including summers, before being affected by the 99 hour rule. For students staying beyond five years, in a number of cases there is still the possibility of a programmatic or individual exemption from the rule. For more information, contact the CMSS Program Coordinator.

Fulfilling CMSS Ph.D. Program Degree Requirements

Completing a Ph.D. is a long and complex process consisting of the following milestones:

A. Pre-Qualification
   1. form a committee
   2. create a degree plan
   3. develop a prospectus
   4. develop a proposal
   5. pass comprehensive exams

B. Post-Qualification
   1. conduct research
   2. write dissertation
   3. defend dissertation

The Graduate Advisory Committee

After being accepted into the CMSS program and enrolling, the most important first step is forming the graduate advisory committee. All first semester CMSS Ph.D. students will be assigned a doctoral program supervisor for guidance with class registration and other program issues. Students should form a graduate advisory committee to guide them through their degree program by the end of their first semester in the CMSS program.
Together, the graduate advisory committee and the student prepare a degree plan detailing the coursework necessary for the student’s program of study, select a dissertation topic and formulate a research plan. The graduate advisory committee also approves the dissertation proposal and final manuscript, and administers your qualifying examination and final dissertation defense/oral examination. Signed copies of the degree plan must by sent to the College of Science and Technology Dean’s Office (Academic Advisor) and Office of Graduate Studies and Research.

Composition and size of the graduate advisory committee should reflect the scope of the intended graduate program and should be developed with substantial input from the student's primary advisor(s). After the committee is formed, your primary advisor 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 should be based on some definable criteria such as work overload or incompatible research interests.

The graduate advisory committee consists of at least three members of the CMSS Ph.D. faculty, including the committee chair. It is strongly recommended that the committee be composed of four members. Additional members from outside the CMSS Ph.D. faculty may be approved by the Office of Graduate Studies (OGS). In exceptional cases, individuals holding graduate faculty rank at TAMU-CC or another accredited institution may serve as co-chair with the unanimous approval of the CMSS Ph.D. faculty on the committee. In all cases involving the appointment of a non-CMSS Ph.D. faculty member a curriculum vitae must be filed with OGS and provided to the CMSS Program Coordinator.

Upon submitting a degree plan, OGS will appoint a Graduate Faculty Representative (GFR) to the committee. The role of this appointee is to serve as an impartial member of the committee to ensure the integrity of University standards as they apply to the Ph.D. process. This member attends and participates in the oral portions of the final defense/oral examination.

The advisory committee chair supervises the student’s dissertation research, including preparation of the dissertation manuscript. The committee as a whole approves the degree plan, research proposal, and dissertation manuscript and administers the qualifying examination and final dissertation defense/oral examination. Beyond these functions, the chair and advisory committee members should serve as valuable mentors.

If possible, students should 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 graduate advisory committee during all phases of graduate study and dissertation research to keep them informed of progress and setbacks. At least annually, students must meet with their advisory committee 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. The student is responsible for maintaining a written record of advisory committee meetings including
conclusions reached. The student also submits all necessary paperwork and reports from the graduate advisory committee to the CMSS Administrative Assistant. Copies of meeting notes will be placed in your program file by the CMSS Administrative Assistant.

On occasions it may be necessary to replace a committee member or a committee chair. If such a situation arises, the student should consult his/her committee chair or the CMSS Program Coordinator immediately. The Program Coordinator and the 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 his/her committee chair, CMSS Program Coordinator, assigned Graduate Faculty Representative or Department Chair.

**INTERACTIONS WITH OTHER GRADUATE STUDENTS**

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.

**TEACHING REQUIREMENT**

All students in the CMSS Ph.D. program must teach at least 3 semester credit hours during their tenure as a doctoral student, usually after being admitted to candidacy. The rationale behind this requirement is that many graduates will go on to careers in academia where teaching will be a major activity. However, even those who are employed outside of academia will likely be involved in education at some level and experience teaching will help to prepare them for those types of challenges. The course and timing of the teaching will be negotiated with the CMSS Program Coordinator, the chair of the student’s advisory committee and the appropriate department chair. International students must obtain English proficiency verification if English is not their native language prior to being assigned to teach (see Teaching Assistantships below).

**DEGREE REQUIREMENTS**

The CMSS Ph.D. degree program consists of five components: coursework, the qualifying examination (admission to candidacy), the research proposal, the dissertation, and the dissertation defense (research seminar and final defense/oral examination). Throughout this process, there are three major decision points for the faculty. The first is admission to the program. An affirmative vote of the admissions committee indicates that the faculty believes you have the potential for advanced study. The second decision point occurs after a student has completed most of the required coursework (and any additional leveling coursework), and the graduate advisory committee administers a qualifying examination. The purpose of this step is...
to determine if the student has followed through by demonstrating potential for advanced study. After successful completion of this examination, a CMSS student becomes a Ph.D. Candidate. The third and final decision point comes when the student completes his/her dissertation. Successful defense of this work leads to the awarding of the Ph.D. degree in Coastal and Marine System Science.

**Coursework**

Each student accepted to the CMSS Ph.D. degree program must complete a minimum of 90 hours beyond the bachelor’s degree or 60 hours beyond the master’s degree, including the 15 hour Core Curriculum (Appendix 1). Up to one-third of the required hours may be taken at the 5000-level with approval from the student’s graduate advisory committee. Normally, 5000-level courses will be taken by students in their first year if they were admitted without holding a master’s degree. The remainder of hours must be taken at the 6000-level. The majority of these hours will be in formal research, but the program requires a minimum of 18 credit hours (for students with an M.S. degree) or 30 credit hours (for students without an M.S. degree) of regular graded coursework on a Ph.D. degree plan.

To clarify the expectations of admitted students, those entering the CMSS doctoral program from the BS level will come from programs in the natural science, math or engineering that include at least one year each of biology, chemistry, geology, and physics, as well as Calculus II, and statistics. Those students entering with other degrees will likely need the courses noted above, equivalents, or demonstrated competencies in coastal and marine biological, chemical, geological and physical science. Any student who is unable to demonstrate these interdisciplinary competencies in coastal and marine systems will be required to do leveling work.

**Degree Plan**

The graduate advisory committee will evaluate each student’s past coursework and experience as well your research interests to formulate a tentative degree plan. *The degree plan must be approved by the end of the second long semester by both the graduate advisory committee and OGS.* Students who are unable to demonstrate proficiency in the natural sciences, mathematics, or geospatial technology will be required to take undergraduate or graduate leveling courses and possibly complete a master’s degree prior to entry into the CMSS doctoral program. In most cases, leveling courses will not apply towards the total minimum credit hours required for the Ph.D. degree.

The *emphasis area* is a phrase that best expresses the student’s intended focus within the broad field of coastal and marine systems. The student defines an emphasis area, with assistance from the graduate advisory committee, and then states it on the degree plan. There is no established list of emphasis areas from which to choose. Rather, each student uniquely formulates an emphasis area based upon academic interests. Electives and the research project will normally relate to the emphasis area.
After the graduate advisory committee approves the degree plan, it must be filed with the College of Science and Technology CMSS Academic Advisor, CMSS Program Administrative Assistant, and OGS. After a tentative degree plan is finalized, the graduate advisory committee must approve any changes or elective coursework if the courses are to be applied to the total semester hours required for the degree. Prior to graduation, your Committee Chair will circulate a final degree plan that includes any approved changes from the tentative degree plan to the student, advisory committee, College Dean, and Graduate Dean for final approval.

Transfer of Credit

A maximum of 12 semester hours of graduate level academic courses may be transferred from an approved institution with the approval of your graduate advisory committee. Grades in transferred courses must be a B (or equivalent) or better. Degree-seeking CMSS students may also be able to take coursework at another accredited U.S. institution or an approved international institution provided they received a final grade of B (or equivalent) or better. You must obtain approval for such courses from your graduate advisory committee prior to enrolling. Hours earned at other institutions while admitted to the CMSS program will be treated as transfer hours and subject to the limitations described above.

Coursework without formal grades or with grades other than letter grades (for example, CR, P, S, U, H, etc.) cannot be accepted for transfer credit unless the institution where the course was taken can also provide an A-B equivalent grade. Transfer credit for coursework from any college or university must be shown in semester credit hours or equated to semester credit hours. Official transcripts are sent directly to OGS (normally these transcripts are provided at the time of application). Transfer courses are not included in the calculation of the GPA.

Minimum Grade Point Average & Academic Probation

In order to remain in good standing, the university requires students to maintain a minimum grade point average of 3.0 (“B”) for all graduate work undertaken. The university places a student on probation if their cumulative graduate grade-point average falls below 3.0 at the end of a semester. The university will allow a graduate student on probation to complete one additional semester of work to raise their GPA, but will terminate the student at the end of that next semester if he/she does not achieve an overall 3.0 grade point average at the end of that semester. Students who are terminated cannot re-enroll at TAMU-CC for graduate study for two years and will need to reapply to be considered for readmission. Grades of “C” or worse are included in calculating your GPA but they are not counted towards fulfillment of the CMSS degree requirements. In addition, the university will not count any course with a grade below "C" for graduate credit.
Course Load Requirements & Restrictions

Unless granted a leave of absence (in writing), all students are required to maintain continuous registration until they complete all requirements for graduation from the CMSS Program. In addition to continuous registration, all students must complete a minimum of 9 credit hours in two consecutive long semesters to meet the residency requirement.

A graduate student may register for up to 15 hours of coursework in a regular semester, or up to 7 hours in a single summer session. Registration for a higher course load requires approval of the Dean of the College of Science and Technology.

You are considered a full-time student if you are registered for at least 9 semester credit hours/semester during the fall or spring semesters (3 semester credit hours during a 10-week summer semester, or 3 semester credit hours during either 5-week summer semester). In addition, the minimum number of hours required to define your enrollment status may depend on the requirements of any financial aide you receive. In general:

- CMSS Fellowships: 9 hr during Fall, Spring, or 3 hr during either 5-wk summer session;
- Scholarships or Loans: varies, check with lending agency or entity granting the scholarship;
- Other Teaching Assistantships or Research Fellowships: varies, check with department or faculty member;
- Students with Research Fellowships offered by faculty members generally enroll in the amount of hours that are commensurate with the amount of time or other resources they must commit to a student's research and dissertation.

Continuous registration is defined as successfully completing 6 credit hours of advisor- or committee-approved coursework during each academic year (September-August). Students who fail to complete 6 hours in any academic year will be classified as inactive. Students who fail to complete at least 6 hours of approved coursework during the next full semester will be dropped from the program. If you are dropped from the program, you must reapply for admission.

You must be registered during the semester when the Qualifying Exams and the Final Dissertation Defense are scheduled. Students may not be registered in absentia during the semester the dissertation is submitted (normally the graduating semester). Students not completing all requirements of the Final Dissertation Defense by end of the semester, such as turning in an approved final draft by published deadlines, will receive a grade of In Progress (IP). The student must register for the same course in the subsequent semester, paying all the appropriate tuition and fees, to receive a final grade for the course.

Seminars

All students in residence are required to complete 3 hours of CMSS 6102 (Seminar) during at least three semesters as part of the Core Curriculum. All students must present a Dissertation Proposal Seminar to fellow students and their graduate advisory committee no later than their third enrollment in CMSS 6102 and preferably before much of the project’s research is
conducted (see Research Proposal and Dissertation below). All students must also present a Final Dissertation Research Seminar prior to the final dissertation defense/oral examination. Although there is no requirement that the dissertation research seminar be presented in CMSS 6102, it is an appropriate venue.

Qualifying Examination & Admission to Degree Candidacy

To be admitted to candidacy for the CMSS Ph.D. degree you must have a cumulative GPA and a degree plan GPA of at least 3.0, satisfy the residence requirement (completion of 9 credit hours in two consecutive long semesters), pass the qualifying examination, complete all formal course work on the degree plan (excluding dissertation project research hours and CMSS 6399), and have an approved dissertation proposal on file with the College of Science and Technology Dean’s Office (Academic Advisor) and OGS. You must be admitted to degree candidacy at least 1 year before the date of the final dissertation defense/oral examination. OGS will not authorize a final dissertation defense/oral examination for any doctoral student who has not been admitted to candidacy.

After the completion of any required leveling courses and the CMSS Core Curriculum, all students must pass a Qualifying Examination to be admitted to degree candidacy. This examination may be scheduled when the student is within 6 semester credit hours of completing coursework (excluding dissertation project research hours and CMSS 6996) but must be completed after 12 and before 24 months of entering the program. If leveling work is not needed, students should complete the Qualifying Examination by the end of their second full year.

The Qualifying Examination usually involves written exams from each graduate advisory committee member, followed by an oral exam administered by the committee as a whole. In order to establish the emphasis area, the oral exam starts with a 15-minute oral presentation by the student describing the planned thesis work. Questions at the oral exam can cover any aspect of the emphasis area, any aspect of the written exam, and any other topic a committee member deems relevant. Qualifying Examinations must be scheduled by submitting the appropriate paperwork to the OGS. The written exams must be taken on no more than four consecutive days. The oral exam should be scheduled no sooner than one week after, but no later than one month after the written exams are completed. Students are advised to consult with each committee member well in advance to determine how to prepare to take the exams and to schedule the exam.

Exam schedules must be arranged so that all members of your advisory committee can be present. Committee members (but not the chair) may participate from remote sites via telephone or other media. Any member of the graduate advisory committee who must be absent should arrange with a member of the CMSS Ph.D. faculty from his or her department to sit at the examination as a substitute and should notify OGS, in writing, of the proposed substitution at least one week prior to the examination. In an emergency, the absent faculty member may clear the substitution with OGS by telephone, and follow-up with a written confirmation. Only one substitution is allowed. No substitutions for the chair of the committee will be approved. If a chair cannot attend a scheduled examination, or if two (or more) members of an advisory committee must be absent, the examination must be rescheduled.
The graduate advisory committee chairman will report the results of the examination in a form to the College of Science and Technology Dean’s Office (Academic Advisor) and OGS signed by all committee members. This form must be submitted to the OGS within 10 working days of the scheduled qualifying oral examination date and at least 14 weeks prior to the date of the final dissertation defense/oral examination. If you successfully pass the Qualifying Examination, you will be advanced to candidacy at the beginning of the next semester. At that point you must complete all remaining requirements for the degree within 7 years from the date of admission.

Individuals unable to pass the Qualifying Examination(s) will be dropped from the program. If you fail the Qualifying Examination, there is no obligation for a re-examination. At their discretion, the graduate advisory committee and the OGS may allow one re-examination when adequate time has passed to allow students to address inadequacies emerging from the first examination (normally six months). The advisory committee may request that the student retakes the entire exam or only those portions that were not passed, or the committee may recommend that the student complete a master’s degree and be administratively withdrawn from the doctoral program.

**Research Prospectus/Proposal**

The CMSS program strives to give doctoral students a comprehensive knowledge of their professional fields as well as training in the methods of research. Students must conduct original research related to CMSS program goals. Many classes will require you to write research proposals and/or peer-reviewed publications as part of the graded class assignments. Original research and the publication of results are an obligatory part of any Ph.D. program.

The required dissertation involves an independent, detailed research project of importance to the international scientific community. The student’s graduate advisory committee will guide the conception, design, construction, and execution of a systems-based inquiry and will review and approve the dissertation manuscript. Normally, an edited version of the dissertation will be published. Your graduate advisory committee may require such publication as part of the defense process.

**Research Prospectus**

The doctoral student, along with their graduate advisory committee, designs and plans the dissertation research project. This plan should be formalized in a “Prospectus,” a brief 2 page document summarizing the motivation, goals and methods of the student’s intended research project, as well as the expected benefits or outcomes. The Prospectus is a prologue to the formal Research Proposal and should be presented to the graduate advisory committee at an early meeting.

The Introduction to the Prospectus should briefly explain the area of interest and scholarly motivation for the research. One or a few clearly stated objectives should be listed. The Prospectus should conclude with an approach on how, where, and when the research will be accomplished. *The Prospectus will be submitted, along with the degree plan, to the College of
Science and Technology Dean’s Office (Academic Advisor), and OGS no later than the end of the second long semester (fall/spring).

Research Proposal

The dissertation research proposal is an organized description of the dissertation research. The proposal should be concise and provide a compelling rationale for the proposed research. The proposal must include a brief but complete synthesis of previous research on the problem, the significance or novelty of the research, and a detailed plan (experimental protocol) for carrying out the research and eventual analysis of the results. The proposal must also include a timeline with distinct milestones to guide the student and the advisory committee in assessing progress, as well as the budget. The proposal should be approved by the advisory committee prior to beginning substantial research, and normally will be completed by the end of the second year of studies.

Appendix 2 provides detailed guidelines for preparing the dissertation research proposal. The proposal should be prepared in the style of a relevant peer-reviewed journal. A dissertation proposal must include the following sections, in this order:

1. Title page. See Appendix 3 for an example of a correctly spaced and formatted title page.
2. Project Summary. Like an abstract, the Summary should be a synopsis of the proposed activity suitable for publication and not more that one page in length. It should describe the activities of the project. The Summary must clearly address, in separate statements, the two merit review criteria that are used by national science programs: 1) the intellectual merit of the proposed activity; and 2) the broader impacts resulting from the proposed activity.
3. Background & Relevance. This section summarizes the available scientific literature related to the problem or topic and explains why the proposed research is necessary.
4. Purpose, Objectives and Hypotheses. This section explicitly states the purpose of the research project (e.g., to determine what effect sea-level rise has on oyster reef extent and morphology). The purpose should reflect the question(s) that the research hopes to answer, not the method used to conduct the research. The objectives provide the steps in the research (not explicit methods) that will be used to answer the question (e.g. to gather data on oyster reef extent and morphology in areas of rising sea level). Hypotheses provide the explicit questions and predictions that will be tested in order to answer the larger research question (e.g., what are the factors affecting the extent and morphology of oyster reefs as sea level changes?).
5. Study site. If field research is planned, then a description of the study area including a map must be included. The study site should be briefly characterized in terms of physical and/or biological attributes.
6. Methods. This section describes in detail the methods of data collection and analysis you will use to meet each research objective or hypothesis. This is arguably the most important part of the proposal. Be sure and include how and when you will obtain any necessary permits.
7. Timeline. The timeline should be a table that includes distinct milestones showing the schedule for both research and academic work. Milestones should include completion of coursework, preliminary examinations, data-gathering for each objective or hypothesis, and analysis of each objective or hypothesis, writing of dissertation, submission to committee, and graduation.

8. Budget (Appendix 3). The budget should reflect an accurate assessment of the expenses that will be incurred during the research project and by whom they will be paid. Include financial or other support obtained from all sources. Include each relevant item in the budget in the “Method” section of the proposal. Divide the budget into 4 subsections and present it in tabular form.
   a. Equipment. Include cost figures for each piece of non-expendable equipment that you must purchase to support your research. Do not include purchase costs for equipment already available for use at TAMU-CC, but make sure that such equipment is operational and available for your use. Obtain permission before using University equipment and expendables.
   b. Expendables. Estimate costs for all supplies, chemicals or other items to be exhausted during your research project. All items currently in stock must be replaced, so include replacement costs. Expendables include items such as traps, microscope slides, test tubes, glassware, aerial photography, and electronic data.
   c. Operational Expenses. Include cost estimates for data collection including travel, boat rental and other expenses. The use of University vehicles and boats requires approval by the Field Trip Coordinator and the Department Chairperson, or the research institute or center director with oversight over that vehicle.
   d. Document Preparation. Include cost estimates for all aspects of preparing the proposal and thesis, including the cost of having the final document bound. These costs are born by the student alone.

9. Budget Justification. This is a brief statement explaining why each element of the budget is necessary to accomplish the research.

10. Literature Cited. This section includes the complete citation for each article referenced in the proposal in the format of the format journal you have selected.

11. Biographical Sketch. The vitae must be 2 pages or less in length and should include five sections: 1) name, present address, contact information, and date; 2) Professional preparation including degrees listing most recent first; 3) Appointments to employment positions, listing most recent first; 4) Publications listing most recent first; and 5) Synergistic Activities, e.g. professional associations, presentations, professional activities, or any other relevant service.

After the proposal is completed, i.e., it is written well and formatted correctly, a draft copy must be submitted to the chair of the graduate advisory committee. After preliminary approval by the committee, the student should arrange to formally present the proposal in a public seminar. This presentation will clarify objectives, justification, methods, logic, or the proposed research and provide project orientation. The student and the graduate advisory committee must plan the timing, location, and format of the Dissertation Proposal presentation and the student must make a public announcement (Appendix 3) so that any interested persons may attend. All members of the committee should be present. The dissertation defense/final oral examination will not be permitted until this requirement is met.
Writing a successful proposal may require many drafts prior to approval by the entire advisory committee. Starting this process early is strongly advised. After the proposal meets the committee chair’s approval, each of the remaining committee members should be provided a copy for review. After all requested changes have been made and the committee is satisfied that all aspects of the proposal are in order, the final Dissertation Research Proposal must be delivered to the committee chairperson for his/her signature and then to the rest of the committee and Department Chairperson for signatures. Once all signatures are obtained, make copies to distribute to all members of the graduate advisory committee, and to the College of Science and Technology Dean’s Office (Academic Advisor). The original with signatures must be submitted to the OGS. Students must take this process into account when planning their research schedule.

Dissertation

Students will complete a study of the accepted standards of scholarly ethics and scientific integrity. This course will be offered as a component of the CMSS seminar in every Fall semester. Students must certify that they have completed this study before being accepted to candidacy.

The Ph.D. dissertation is a book-length, formal document that argues in defense of a particular thesis. Two important adjectives used to describe the dissertation are “original” and “substantial”. The research performed to support a thesis must be both, and the dissertation must show it to be so. In particular, a dissertation highlights original contributions. Once data collection and analysis are completed, the research should be organized into a meaningful format and explained in a written narrative. The written narrative follows the style and format standard to scientific papers.

Dissertation research will not always go according to plans. Students must be prepared to adopt new methods of data collection or analysis if necessary and in consultation with the graduate advisory committee. Students should plan to take advantage of any opportunities to pursue side projects, as time and resources permit, to enrich understanding of the research topic.

Appendix 2 outlines the guidelines for preparing the dissertation. Students may choose between two models of organizing the dissertation, the traditional model and the journal manuscript model. The traditional model presents the dissertation research in a single, cohesive manuscript. Information is presented sequentially and no section stands alone as a publishable document.

The journal manuscript model presents dissertation research as several discrete articles, each appropriate for submission to a journal, bound together as the dissertation document. In the journal manuscript model, information may be repeated as necessary between articles so that each can stand alone as an academic work. The journal manuscript format must also include an overarching introduction, a summary/conclusions section that brings the entirety of the research into context, and a literature cited section that encompasses the entirety of the manuscript. Regardless of whether the traditional or journal manuscript model is chosen, the entire document must be submitted in one journal style. In other words, in the journal manuscript model, even though it is likely that articles will be submitted to several different journals, the entire
dissertation must be presented in the style of only one journal. Headings and subheadings, punctuation, reference citations, and other details should follow the journal format exactly with few exceptions (details in Appendix 2).

The dissertation is a complete document that will be bound and filed in the University Library. The dissertation must include certain accessory pages. An annotated list appears below, presenting the order of appearance in the manuscript of all pages and sections of the dissertation. The dissertation has three main parts, preliminary pages, main text (or chapters) and supplementary pages organized as follows:

I. Preliminary Pages (both models)
   a. Title Page (Appendix 4)
   b. Approval Page (Appendix 4)
   c. Abstract (Appendix 4)
   d. Table of Contents
   e. List of Tables (if more than one)
   f. List of Figures (if more than one)
   g. List of Appendices (if more than one)
   h. Acknowledgments
   i. Dedication (optional)

II. Text
   a. Introduction (Overall introduction for journal manuscript model; may be repeated as necessary in each section)
   b. Materials and Methods (including study area in a separate section if acceptable in format journal; may be repeated as necessary in journal manuscript model)
   c. Results (may be repeated as necessary in the journal manuscript model)
   d. Discussion (may be repeated as necessary in the journal manuscript model)
   e. Summary and Conclusions (may be omitted in the traditional model if format journal does not include it; required in journal manuscript model)
   f. Literature Cited

III. Supplementary Pages
   a. Appendices (if appropriate)
   b. Biographic statement

When the draft is ready, submit it to the chair of your advisory committee. Submit the draft as if it were the final – make it as perfect as possible with respect to writing and grammar, punctuation and spelling, journal formatting requirements, and with all figures and tables in final format. Be prepared to go through the revision process numerous times before the committee chair is comfortable letting the rest of the committee review the document.

When the committee chair is ready for the document to be submitted to the rest of the committee, enough copies should be reproduced so that each member can have a copy. Ideally, committee members should return the corrected dissertation within two weeks of receipt. Students should check with committee members to ensure they have the time to review the document. A final draft delivered to the advisory committee one month prior to the dissertation seminar, would
allow two weeks before the scheduled final defense/oral examination date for the student to make recommended changes. After the committee has returned the corrected draft, students should review suggested changes with their advisory committee chair, and make the suggested changes, unless the chair directs otherwise. Students should be prepared to go through the revision process more than once before the committee members are comfortable signing off on the final document.

Students should be sure to give their advisory committee chair enough time to review the manuscript and leave themselves enough time to make changes. In other words, students should make sure that they have left ample time prior to deadlines for all members to have adequate time to review the document and for all the changes suggested by the committee to be made. *The dissertation should be essentially complete and ready for the committee’s signatures before the dissertation seminar and final defense/oral examinations.* Any member of the graduate committee or the Dean of the College of Science and Technology can reject the dissertation at any stage of the submission and approval process. Rejection of the manuscript can occur for many reasons including (but not limited to):

1. The manuscript does not conform to the required format
2. The manuscript is messy, poorly reproduced, or contains grammatical or spelling errors
3. The manuscript describes scientific data inconsistent with the research project approved in the dissertation proposal
4. The paper contains errors, inappropriate analysis of data, erroneous conclusions, or other scientific inaccuracies
5. The paper contains plagiarized work.

After a student has successfully presented the dissertation seminar, completed the defense/oral examination, and completed all changes to the dissertation manuscript that have been requested by the committee, the committee may sign the approval pages of the dissertation. At least four final copies of the document with original signatures will be required (one for the student, two for the library, and one for advisory committee chairperson). A fifth copy of the final signature page, but not the dissertation, must be filed with College of Science and Technology Dean’s Office (Academic Advisor). Check with the Mary and Jeff Bell Library and CMSS Program Coordinator for requirements beyond those listed. Additional signatures are needed from the department chairperson and the dean of the college. Additional copies will be required depending on the wants/needs of the advisory committee and the needs of those who provided financial support for the research. Copies must be submitted on acid-free paper of at least 25% cotton rag content (although 50% or 100% is preferred). Buy paper early because it is not always readily available locally, particularly toward the end of the semester.

After the copies are signed by their Committee Chairperson and members, a student must pay the binding fee to the University Business Office and retain the receipt. *Submit dissertation copies for signature approval first to the Department Chair, then College Dean, and then to OGS on or before the last day of classes for a given semester, to be forwarded to the Graduate Dean for final approval and signature.* The receipt showing payment for binding must accompany the dissertation copies. After obtaining the Graduate Dean’s signature, the student will be contacted to pick the copies up. Before delivering the copies to the library for binding, ensure you submit
a copy of the final signature page to the College of Science and Technology Dean’s Office (Academic Advisor).

Students will be notified when the bound copies are ready. It is the student’s responsibility to pick up the bound copies of the dissertation and distribute to the library and advisory committee chair. Students should also distribute other copies as needed to other committee members and funding entities.

The CMSS faculty expects students to submit dissertation research (in proper format) to a scholarly journal(s) for publication. If the advisory committee chair or other person(s) including other faculty or scientists from funding agencies etc. made a significant contribution to the research or writing of the manuscript to be submitted, then the person should be listed as a co-author on the published article. The student and the advisory committee Chair should agree about the order of authorship.

Seriously consider co-author status if a person:

1. Supported the work through a grant that was authored by them
2. Did a significant portion of field or laboratory work
3. Contributed materially and intellectually to the research
4. Contributed to the writing

In all cases, acknowledge the chair of the advisory committee, other members of the graduate advisory committee, other people that offered assistance and TAMU-CC in the publication. It is courteous to acknowledge persons, who assisted in any major way including moral support, lab/field assistance, and of course, any source of financial assistance.

**Dissertation Seminar & Final Defense/Oral Examination**

Once the dissertation is completed and approved by the advisory committee, the results of the research must be presented orally and publicly. Schedule the Dissertation Seminar and Final Defense and Oral Examination prior to April 15 for spring graduation, July 15 for summer graduation, and November 15 for fall graduation. The seminar should be scheduled and completed prior to the final defense/oral examination. The final defense/oral examination usually takes place immediately following the seminar, but it can be scheduled on a separate day if necessary to accommodate the schedules of committee members.
**Dissertation Seminar**

The Dissertation Seminar is a formal oral and visually supported presentation of the results of the research or of some pertinent aspect of the research. Although it will generally be longer than a paper presented at a scientific meeting, it should be similar in format and design. The defense should review parts of the dissertation including the background and relevance of the research, the methods, the results, and the conclusions. Professional quality visual aids must complement the oral presentation. As a general rule, the oral presentation should last about 45 minutes and at least 15 additional minutes should be allowed to answer questions at the end.

_Students must prepare and submit a formal announcement of the dissertation seminar to their committee chairperson for approval at least two weeks prior to the seminar date._ It is the student’s responsibility to contact each committee member and arrange a time and place for the event. All committee members must attend the seminar.

Appendix 4 gives an example of the correct format for the Dissertation Seminar notice. _The student is responsible for posting the seminar notice as an e-mail to all appropriate listservs at least one week prior to the seminar date. Email a copy of the seminar notice to the College of Science and Technology Dean’s Office (Academic Advisor) and CMSS Administrative Assistant._

**Final Defense/Oral Examination**

The purpose of the final defense and oral examination is to allow advisory committee members to gauge the scope of the student’s understanding of the principles and significance of the discipline of the dissertation research. It complements the qualifying examination, which gauged overall knowledge in the field, by allowing a more detailed assessment of specific knowledge as it applies to the dissertation research. The exact format and scope will vary among students depending on both their advisory committee and the nature of their research.

The graduate advisory committee will decide whether a student has passed the final defense and oral examination. Regardless of whether the student passes or fails, the committee will discuss with the student their assessment of the student’s performance. If a student fails, the exam may be retaken only once, and only after at least four months have passed.

**Time Limit to Complete Degree Requirements**

The length of time it takes you to complete the CMSS Ph.D. will depend on whether students enter the program with a bachelor’s or master’s degree, the amount (if any) of leveling coursework, concurrent employment or other commitments that may not allow full time graduate study, and choice of research project, among other factors.

Most students will take 4-6 years beyond the bachelor’s to complete all requirements for the CMSS Ph.D. degree. All requirements for the degree must be completed within 7 consecutive calendar years. Academic credit that is more than 7 years old at the time the degree is conferred cannot be applied towards the degree. After students have advanced to degree candidacy by
passing the required qualifying oral and written examinations, you must complete all remaining requirements for the degree within the 7 year time limit.

*Students must submit the final corrected dissertation to the Department Chair, College Dean and OGS for Graduate Dean’s final approval and have the document bound by the University library no later than one year after the final oral examination or within the 7-year time limit, whichever comes first.* The degree will not be awarded if these deadlines are not met.

**Graduation**

TAMU-CC confers graduate degrees at the close of each regular semester and 10-week summer session. Students expecting to complete work at the end of a given semester, must apply for graduation by submitting the electronic application for the degree to the Office of the Registrar (http://registrar.tamucc.edu/student/forms.html) by the deadline published each semester in the OGS calendar (http://newweb.tamucc.edu/academics/academic_cal.html). Final degree audits are done when application is made.

**IMPORTANT CONTACTS**

CMSS College Advisor: Martha Simek, FAC 170, martha.simek@tamucc.edu, 361-825-3721.
CMSS Program Coordinator: Paul Montagna, HRI 210A, paul.montagna@tamucc.edu, 361-825-2040.
CMSS Administrative Assistant: Nikole Akins, HRI 122, nikole.adkins@tamucc.edu, 361-825-2005.

**GET CONNECTED**

Join the CMSS listserv by sending a message with “Subscribe” in the subject to cmsslist@sci.tamucc.edu or go to http://www.sci.tamucc.edu/students/listserves.html.
APPENDIX 1

CMSS Program Coursework Requirements
CMSS Core Curriculum Course Descriptions
### CMSS Program Coursework Requirements

#### A. Admission from a Bachelor’s Degree Option (90 semester credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMSS 6102</td>
<td>Seminar in Earth System Science (1 sem. hr x 3)</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6303</td>
<td>Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6305</td>
<td>Natural Systems Modeling</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6330</td>
<td>Spatial Systems Science</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6370</td>
<td>Coastal Management and Ocean Law</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective coursework</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Research coursework</td>
<td>54</td>
</tr>
<tr>
<td>CMSS 6699</td>
<td>Dissertation defense</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

#### B. Admission from a Master’s Degree Option (60 semester credit hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMSS 6102</td>
<td>Seminar in Earth System Science (1 sem. hr x 3)</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6303</td>
<td>Systems Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6305</td>
<td>Natural Systems Modeling</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6330</td>
<td>Spatial Systems Science</td>
<td>3</td>
</tr>
<tr>
<td>CMSS 6370</td>
<td>Coastal Management and Ocean Law</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective coursework</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Research coursework</td>
<td>33</td>
</tr>
<tr>
<td>CMSS 6699</td>
<td>Dissertation Defense</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
</tr>
</tbody>
</table>
CMSS Core Curriculum Course Descriptions

These courses are to be taken by all CMSS Ph.D. Program students entering with a bachelor’s degree. See “Degree Requirements” above for details on the core curriculum. Elective courses are described in the Graduate Catalog. Information on leveling courses may be found there or in the Undergraduate Catalog.

CMSS 6102. 1 sem. hr. (1:0)
SEMINAR IN EARTH SYSTEM SCIENCE
Advanced topic study and presentation by students, faculty, or visiting scientists. Meets one hour weekly. Must be taken three times by all Ph.D. students.

CMSS 6303. 3 sem. hrs. (3:0)
SYSTEMS ANALYSIS
Statistical analysis for data collected in several variables. Topics include sampling from multivariate normal distribution, multivariate analysis of variance, discriminant analysis, principle components, and factor analysis. Prerequisite: Math 5315 Statistical Methods in Research I, undergraduate equivalent, or consent of instructor.

CMSS 6305. 3 sem. hrs (3:0)
NATURAL SYSTEMS MODELING
Parameterization of natural systems through the identification and characterization of input/output pathways, regulators, and sinks. Construction, testing, and use of various types of models: conceptual, ecosystem, and numeric. Prerequisites: MATH 5315 Statistical Methods in Research I and MATH 5316 Statistical Methods in Research II, or permission of instructor.

CMSS 6330. 3 sem. hrs. (3:0)
SPATIAL SYSTEMS SCIENCE
Introduction and advanced usages of mapping datums, coordinate systems, and accuracy requirements for geographic information systems (GIS). Use of GIS tools to investigate statistical patterns and relationships among maps and geo-databases. Derivation of new maps and analysis based on spatial context, patterns, surface configuration, proximity, connectivity and flows. Prerequisites: MATH 5316 Statistical Methods in Research II; a working knowledge of ArcView and/or ArcGIS; or permission of instructor.

CMSS 6370. 3 sem. hrs. (3:0)
COASTAL MANAGEMENT AND OCEAN LAW
Intensive study of the 1972 National Coastal Zone Management Act and subsequent coastal management programs. The Texas program, which is administered by the General Land Office, will be dealt with in depth as the central focus of the course. Statutory law relating to citizen, state, and federal rights and duties as they impact coastal and maritime law will be studied including applicable Texas real property law. Students will use case law studies relating to those rights and duties and Public Trust Doctrine cases to gain an integral part of understanding the responsibilities of governments and rights of citizens.
CMSS 6996  1-9 sem. hrs.
RESEARCH
Independent research conducted under supervision of an advisor. Open to Coastal and Marine System Science students who have not yet passed the qualifying exam and with consent of their graduate advisor. The course is graded with an S or U, and may be repeated.

CMSS 6998  1-9 sem. hrs
DISSERTATION RESEARCH
Research related to Ph.D. dissertation project. Open only to degree candidates having passed the qualifying exam in Coastal and Marine System Science with consent of their graduate advisor. The course is graded with an S or U, and may be repeated.

CMSS 6699  6 sem. hrs
DISSERTATION DEFENSE
Open only to degree candidates in Coastal and Marine System Science with consent of their graduate advisor. Students should enroll in this course during the last semester of the CMSS PhD program. To successfully complete this course the student must pass the dissertation defense as well as have a final copy of the dissertation signed by the full graduate committee and approved for binding and distribution. A course section will be created for the student to enroll. A grade of Credit/No Credit will be assigned for the class with the possibility to assign the grade of IP or In Progress. If a grade of IP is assigned, the course must be repeated the following semester(s) until the course is passed.
APPENDIX 2

Guidelines for Preparation of the Research Proposal and Dissertation Manuscript
PREPARING THE RESEARCH PROPOSAL AND DISSERTATION MANUSCRIPT

Make all narrative material of the dissertation clearly understandable to the reader through careful, well-organized writing, meaningful figures and tables, and adequate utilization of references. Several publications available in the TAMU-CC library answer specific questions regarding the style of scientific writing, including the Council of Science Editors (CSE) Style Manual, the United States Government Printing Office Style Manual, and others. No corrections of letters or figures should be visible on the final copies.

FORMAT JOURNAL

When writing the dissertation proposal and dissertation, follow the general format and style of for submitting manuscripts (“Guide/Instructions for Authors”) of a respected scholarly journal in the field of your research. However, you should not follow the final style of journals such as the use of double columns on a text page, literature citation methods other than the name-date system, etc., nor can the typed manuscript duplicate every printing technique. Do not follow the journal's "Instructions to Contributors" except with regards to formatting headings and subheadings, figures and tables, figure and table captions and text callouts, abbreviations, etc. These instructions are primarily for the convenience of the editors and printers of the journal and do not necessarily apply to the format of dissertation proposals or dissertation manuscripts. The journal that you choose as the "Format Journal" for your graduate manuscript must be readily available in the TAMU-CC library. Your committee must approve your Format Journal choice before you begin to write the manuscript. It is usually a good idea to use the same Format Journal for both the proposal and final manuscript.

PAPER SIZE AND QUALITY

Print the final or duplicate dissertation manuscripts on clean, white paper. Use paper with at least 25% rag content; higher rag content is preferable. This paper may be difficult to obtain locally, and towards the end of each semester local office-supply stores are quickly depleted of stock by the demand from TAMU-CC graduate students, so check supplies well in advance.

FONT STYLE

Print the manuscript using 10 or 12 characters-per-inch (cpi) type size with a plain book-type font such as Helvetica or Times Roman, not some unusual font. Use the same font throughout the paper including figures and tables; do not mix fonts. When using a computer printer, make sure that (1) you print the manuscript with a letter-quality or laser printer; (2) the paper meets the size and quality standards defined herein; and (3) the manuscript meets all other style and format conventions established in this guidebook. The type must be clean.

ITALICS AND UNDERLINING

Follow your format journal in italicizing or underlining scientific nomenclature, foreign words, abbreviations and titles. When underlining a word, use a continuous underline; do not leave a
space in the underline between letters. Separately underline each word of a multiword term, leaving a gap between adjacent words.

SPACING

In general, double-space your dissertation proposal and dissertation manuscript. The exceptions to this rule are for quotations exceeding six typed lines (inset and single-space these) and footnotes (which you should avoid). Figure and table captions should also be single-spaced. One line should separate a table caption from the table header and two lines should separate any embedded figure or table from text on the same page.

MARGINS

No letters may extend beyond a left-hand margin of 1.5 inches and a 1-inch margin along the other three edges of the page. The extra margin on the left side allows for binding of the completed dissertation. All figures and tables must also conform to these margins. Do not hyphenate (split) words between lines.

PAGINATION

Number all pages in the dissertation proposal or dissertation manuscript except the Title and Approval pages. Page numbers on all numbered pages should appear in the top right corner approximately 1 inch from the top and right-hand edges of the page.

Number the preliminary pages of the dissertation with lower case Roman numerals. The Abstract page is the first numbered page; it follows the Title and Approval pages and is numbered iii.

Number the text and supplementary pages of the dissertation proposal or dissertation manuscript with Arabic numerals. The first page of the narrative text begins with 1 and the numbering runs consecutively to the end of the manuscript.

HEADINGS AND SUBHEADINGS

The style and format for all headings and subheadings in the dissertation proposal and dissertation manuscript should follow the standard practice of the format journal. Start each major heading (i.e., Methods, Study Area, Results, Discussion, etc.) on a new page. Subheadings should fall naturally within the text, but should never appear alone as the last line on a page (“orphan”). If a subheading is the last line of text, start it at the beginning of the next page.

TITLE PAGE AND FORMAT

Appendices 3 and 4 provide examples of correctly spaced title pages for the research proposal, title, approval, and abstract pages of the dissertation manuscript.
Tables & Figures

Tables and figures, regardless of size, may appear on separate pages or within the text itself. Place them in the manuscript as close as possible to their first reference in the text (generally the page on or immediately following the first reference). Make sure that figures and tables are relevant and useful to the reader, and use as many as are necessary to fully report on the results of your research. If a figure or table is relevant, but represents ancillary information or “raw” data, include in an appendix rather than in the main text of the manuscript. If you place tables or figures in landscape format on a page, the top of the table or figure should be at the binding side of the paper.

Give each table or figure a number and caption, and transcribe these exactly on the List of Tables or List of Figures page; if a figure or table caption is more than one sentence, then put only the first sentence into the list. Make captions as concise as possible, but clearly describe the content of the figure or table. Follow exactly the format and style for figures and tables prescribed by the Format Journal.

Construct tables using the “Table” function found in all word processors. Titles for tables must appear on the same page as the table, and should be placed above the table. Make horizontal rules mimic the Format Journal. Vertical rules should not be used. If a table is more than one page long, there should be no closing line on the first page and the second page of the table should have a caption reading “Table #. Continued.” Multi-page tables should always begin on a new page; in other words, the first few lines of a multi-page table should not appear embedded within the text.

Figures consist of graphs, maps, drawings, photographs, and other illustrations. All visual material that you prepare must be neat, clean, and professional in appearance; hand-lettering is unacceptable. Avoid the use of color except when absolutely necessary.

Consult the CSE Style Manual, U.S. Government Printing Office Style Manual, or other scientific writing guides for suggestions concerning proper preparation of figures. Reproduce all figures on suitable paper for inclusion in the proposal or dissertation manuscript.

Photographs constitute a figure; either print digital photos on lightweight flexible paper (8.5 x 11 inches) or secure original prints to individual manuscript copies by use of rubber cement, spray cement, or photo mounting cement.

Type captions for figures below the figure (preferred) or place titles on a facing page. If the caption is placed on a facing page, it should be centered on the back side of a blank page (the caption should be in the center of the page, however, the type itself should not be formatted as “centered” but should be left flush as in all other cases, unless otherwise in Format Journal). If placing captions on the facing page, margin requirements for the facing page are reversed; that is, the 1.5 inch margin of a facing page will be on the right side of the page. Place the page number, however, on the opposite (blank) side in the standard position.
If reduced, tables and figures must remain large enough to be easily read (no less than 10 point type). Large materials such as maps can be put as separate inserts in a pocket. Fold oversized materials, such as large maps or charts that you cannot reduce in size but must include in the dissertation, so that they measure no more than 7.5 x 10 inches, enclose them in a close-fitting envelope and attach inside the back cover of the bound document.

FOOTNOTES

Footnotes should not appear within the regular text of the dissertation manuscript (they are permissible as explanatory notes in tables) except in rare circumstances. If they are absolutely necessary and the Format Journal permits their use, follow the journal format exactly.

CITING LITERATURE IN THE TEXT

Cite all references to the literature in the text using the name-date system which is the method most widely used in the sciences, e.g., Stilt (2000) or (Heron, 1995; Seagull 1996; Seagull and Plover, 1996). Choose a Format Journal that uses this system. Do not cite sources by number, i.e. (1). If you use or adapt a figure from another author, cite the source in the figure caption.

LITERATURE CITED

Generally, follow the format in the Format Journal when you develop the Literature Cited section. Use the same system of abbreviations, punctuation, underlining, and italics as the Format Journal. There is one exception (mainly applies to chemistry Format Journals): if the Literature Cited section of your Format Journal does not list the title of an article, make sure that you do include it to enhance the usefulness of your citations to readers.

DUPPLICATING THE MANUSCRIPT

There are two acceptable methods of reproducing copies of dissertation proposals and dissertation manuscripts: (1) photocopying and (2) printing via computer printer. Reproduce the various text pages of your manuscript using only one method of duplication. The reproduction must be of high quality. Broken type or faint print is unacceptable, as are photocopies with dark or blurred lines, dark edges, or spotty pages. Reproductions of tables and figures must be consistent in quality with the rest of the manuscript, although different methods of reproduction may be involved.
APPENDIX 3

Format of the Research Proposal Title Page
Format of the Research Proposal Budget
Format of the Research Proposal Seminar Announcement
Format of the Research Proposal Title Page

TITLE SHOULD APPEAR IN ALL CAPITALS
AND BE CENTERED

a research proposal prepared by
YOU A. STUDENT
MONTH, YEAR

for
The Graduate Committee
Coastal and Marine System Science Program
Department of Physical and Environmental Sciences
Texas A&M University-Corpus Christi
Corpus Christi, Texas

Approved:

___________________________________
Dr. A. Palmtree, Chairperson

___________________________________
Dr. B. Waves, Member

___________________________________
Dr. C. Gull, Member

___________________________________
Dr. D. Sand, Member

___________________________________
Dr. E. Trout, Department Chairperson

Format: Title of Journal used as format.
### Format of the Research Proposal Budget

Table 1. Proposed budget for dissertation research.

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>Cost ($)</th>
<th>TAMU-CC</th>
<th>Personal</th>
<th>Other*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cryostat</td>
<td>1900.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photographic light meter</td>
<td>30.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spotting Scope, 45x</td>
<td>110.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Expendables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Petri dishes</td>
<td>60.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photo print paper</td>
<td></td>
<td></td>
<td>76.00</td>
<td></td>
</tr>
<tr>
<td>Microslides, cover glasses</td>
<td>27.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reagent grade ethyl alcohol</td>
<td>80.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Operational Expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel, data collection</td>
<td>320.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boat Rental</td>
<td>40.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Document Preparation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissertation expenses</td>
<td>200.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publication and reprints</td>
<td>300.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>$2300.00</td>
<td>$660.00</td>
<td>$180.00</td>
<td></td>
</tr>
</tbody>
</table>

*Funds provided by student Grant-in-Aid-of Research from Sigma Xi.*
Format of the Research Proposal Seminar Announcement

(Note: Time, date and room are examples only)

RESEARCH PROPOSAL SEMINAR NOTICE
COASTAL AND MARINE SYSTEM SCIENCE PROGRAM
DEPARTMENT OF PHYSICAL AND ENVIRONMENTAL SCIENCES
TEXAS A&M UNIVERSITY-CORPUS CHRISTI

SUBJECT: Official Title of Your Research Proposal

SPEAKER: You A. Student

DATE: Tuesday, March 15, 2005

TIME: 3:00 p.m.

PLACE: Center for Instruction, TAMU-CC
       Room 109

ABSTRACT

A 50-200 word abstract of your research proposal should appear here.

[NOTE: Students should post this notice electronically to faculty members and graduate students involved in the CMSS and other graduate programs via the cmss-list, and escistu-list listserves. Ensure you email a copy of the announcement to the College of Science and Technology Dean’s Office (Academic Advisor) and CMSS Administrative Assistant.]
APPENDIX 4

Format of the Dissertation Title Page
Format of the Dissertation Approval Page
Format of the Dissertation Abstract Page
Format of the Dissertation Seminar Announcement
THE TITLE SHOULD APPEAR IN ALL CAPITALS
AND BE CENTERED

A Dissertation

by

YOU A. STUDENT

Submitted to the Office of Graduate Studies of
Texas A&M University–Corpus Christi
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Month, Year

Major Subject: Coastal and Marine System Science
Format of the Dissertation Approval Page

THE TITLE SHOULD APPEAR IN ALL CAPITALS

AND BE CENTERED

A Dissertation

by

YOU A. STUDENT

Submitted to the Office of Graduate Studies of
Texas A&M University – Corpus Christi
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Approved as to style and content by:

Dr. A. Palmtree
(Chair of Committee)

Dr. D. Sand
(Member)

Dr. B. Waves
(Member)

Dr. E. Trout
(Department Chair)

Dr. C. Gull
(Member)

Dr. F. Crabs
(Dean, College of Science & Technology)

Month, Year

Major Subject: Coastal and Marine System Science
Format of the Dissertation Abstract Page

ABSTRACT

The Title Should Appear in Upper and Lowercase and be Centered (Month, Year)

You. A. Student, B.S., University of Florida
M.S., University of Texas
Chair of Advisory Committee: Dr. A. Palmtree

The text of the abstract begins here, has indented paragraphs, and is double-spaced. It may be more than one page long if necessary to fully summarize the rationale for the study, the methods, results, and discussion, and a summary of the implications of the study.
Format of the Dissertation Seminar Announcement

(Note: Time, date and room are examples only)

DISSEPTATION SEMINAR NOTICE
COASTAL AND MARINE SYSTEM SCIENCE PROGRAM
DEPARTMENT OF PHYSICAL AND ENVIRONMENTAL SCIENCES
TEXAS A&M UNIVERSITY-CORPUS CHRISTI

SUBJECT: Official Title of Your Dissertation

SPEAKER: You A. Student

DATE: Tuesday, March 15, 2005

TIME: 3:00 p.m.

PLACE: Center for Instruction, Texas TAMU-CC
Room 109

ABSTRACT

The abstract of your dissertation or graduate project should appear here (shortened version if necessary). An abstract of 50-200 words length is recommended for inclusion in the Graduate Seminar Notice.

[NOTE: Students should post this notice electronically to faculty members and graduate students involved in the the CMSS and other graduate programs via the cmssstu-list, pals-list, escifac-list, and escistu-list listservs. Ensure you email a copy of the announcement to the College of Science and Technology Dean’s Office (Academic Advisor) and CMSS Administrative Assistant.]
APPENDIX 5

CMSS Ph.D. Program Application Checklist
CMSS Ph.D. Program First-Year Checklist
CMSS Ph.D. Program Degree Requirements Checklist
CMSS Ph.D. Program Application Checklist

☐ Complete the Texas Common Application and submit the application fee. Online applications are preferred.

☐ Submit an essay of not more than 1000 words describing educational backgrounds, career interests, goals and challenges. Include any relevant supplemental materials such as publications or resumes of relevant experiences, and contacts made with professors in the CMSS program.

☐ Request 3 letters of evaluation/recommendation.
- You should request evaluations/recommendations from individuals who are familiar with your academic achievement and potential and provide them with the required evaluation forms.
- If you have been out of school for a number of years and are unable to contact former professors, you may request evaluations/recommendations from people such as employers who are familiar with you and who can comment on your potential to succeed in the program.
- Completed evaluation/recommendations should be signed over the flap of the envelope by the person completing the form/letter and be mailed directly to OGS.

☐ Request official transcripts from all senior-level post-secondary institutions you attended. Transcripts must be sent directly to OGS. An official statement of the award of the degree or diploma is required for each degree completed.

☐ Request that the required test scores (GRE and/or TOEFL) be sent directly from the Educational Testing Service to OGS (Code 6849)
- GRE and TOEFL scores must be not more than 5 and 2 yrs old, respectively
- International graduate students seeking assistantships must also obtain “English Proficiency Certification”

☐ Apply separately for financial assistance. Deadline is March 1.

☐ Application receipt for priority deadlines:

<table>
<thead>
<tr>
<th></th>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Students</td>
<td>February 1</td>
<td>August 1</td>
</tr>
<tr>
<td>International Students</td>
<td>February 1</td>
<td>June 1</td>
</tr>
</tbody>
</table>

43
CMSS Ph.D. Program First-Year Checklist

☑ Meet with CMSS Program Coordinator prior to enrolling for first semester classes

☑ Form Graduate Advisory Committee (GAC) by end of first semester
  ▪ Speak with individual faculty about research interests
  ▪ Committee must include at least 3 CMSS Ph.D. Faculty
  ▪ Decide on a primary advisor (Committee Chair)
  ▪ Form and meet your committee no later than end of second semester

☑ Prepare the Tentative Degree Plan with your GAC no later than end of second semester
  ▪ Leveling coursework
  ▪ Elective coursework
  ▪ Dissertation topic
  ▪ Formulate Research Prospectus

☑ Office of Graduate Studies (OGS) appoints a Graduate Faculty Representative (GFR)

☑ Meet GAC at least annually to update progress

*Each time an item is checked off this list, send an email with the date completed to the and CMSS Administrative Assistant.*
CMSS Ph.D. Program Degree Requirements Checklist

I. Coursework

☐ Leveling coursework (if necessary) as specified by GAC
☐ Tentative Degree Plan and Research Prospectus approved by OGS by end of second semester, but no later than 18 months after beginning the doctoral program
  ▪ Minimum 90 hrs beyond bachelor’s degree, or 60 hrs beyond master’s degree
  ▪ 15 hrs Core Curriculum, including 3 hrs CMSS 6102 Seminar
  ▪ No more than 1/3 of hrs at 5000 level
  ▪ 3.0 minimum GPA
  ▪ Research Prospectus (2-5 pages) developed with GAC
  ▪ Final Degree Plan for signature approval to Dept. Chair, College Dean, and OGS no later than before census day (12th class day) of the semester prior to the graduating term.
  ▪ Deadline to apply for graduation is the last day of classes in the semester prior to graduation.

II. Research Proposal

☐ Independent, detailed, original, systems-based inquiry
☐ Research Prospectus presented to committee and submitted to OGS by end of the second semester (2-5 pages)
☐ Dissertation Research Proposal
  ▪ Modified from Research Prospectus with GAC input
  ▪ Submit draft to Committee Chair for approval
  ▪ Present, after Chair approval and public announcement, to CMSS 6102 Seminar
  ▪ Present to GAC for approval signatures
  ▪ Signed version submitted to OGS; Copies to College Advisor, CMSS Administrative Assistant, and GAC members
  ▪ Should be approved by end of second year of graduate study

III. Admission To Candidacy [Major Decision Point]

☐ Residence requirement: At least 9 credit hours in 2 consecutive semesters
☐ Completed formal coursework on Tentative Degree Plan
  ▪ excluding research hours and CMSS 6399
  ▪ 3.0 minimum GPA
☐ Dissertation Proposal on file with OGS
  ▪ Formulate Dissertation Proposal from Research Prospectus
  ▪ Assistance and approval from GAC
  ▪ Present Dissertation Proposal Seminar in CMSS 6102 Seminar
☐ Qualifying Examinations
  ▪ Written examination from each GAC member
- Oral examination with GAC
- Schedule when within 6 hrs of completion of formal coursework: Notify OGS
- Must be registered for credit at time of exams
- Speak with each GAC member to prepare
- Must pass within 12 months of coursework completion
- Notify OGS of outcome

IV. Teaching Experience
- A relevant teaching experience of at least 3 credit hours is required
- Consult with the CMSS Program Coordinator to make arrangements

V. Dissertation
- Data collection and analysis completed
- Choose format and prepare according to guidelines
  - Multiple iterations of editing
  - With Chair approval, provide copies to GAC at least 1 month prior to final defense
  - Committee returns corrected versions within 2 weeks
  - Review and incorporate suggested changes along with Chair
  - Additional review by GAC may be required
- Submit final corrected version of Dissertation to OGS following successful defense
  - Incorporate any final changes
  - At least 4 copies will be required
  - GAC members sign approval page
  - Department Chair and Dean of Science and Technology sign approval page
  - Pay Binding Fee to Business Office and retain receipt
  - Submit copies (with binding receipt) to CMSS Program Administrative Assistant and OGS before final day of semester
  - Pickup approved copy and deliver to University Library
  - Prior to delivery to University Library, provide copy of full signature page to College of Science and Technology Dean’s Office (Academic Advisor)
- Note: Completion of the CMSS Ph.D. is driven by the dissertation as a product of research, rather than by external factors or commitments

VI. Dissertation Defense
- Must have been admitted to Degree Candidacy at least 1 year prior to defense
- Must be registered for credit (or pay “Thesis Fee”) for semester in which the final defense takes place
- Apply for graduation in College of Science and Technology Dean’s Office (Academic Advisor) by published deadline. The student must complete all requirements for the
degree at least three weeks prior to the end of the semester in which the degree will be conferred.

- Contact GAC to schedule Dissertation Seminar and Final Defense
  - Should be held prior to April 15, July 15, or November 15
- Submit formal seminar announcement to committee chair at least 2 weeks in advance
- Schedule rooms for seminar and defense
- Post announcement to relevant Listservs at least 1 week in advance
- Email copy to College of Science and Technology Dean’s Office (Academic Advisor)
- Present Dissertation Seminar and stand for the Final Defense
- Complete all requirements for the degree at least three weeks prior to the end of the semester in which the degree will be conferred.

*Tracking progress toward the degree is very important and the responsibility of the CMSS Program Coordinator. Each time the student has accomplished a milestone on this list, the student should send an email with the date completed to the CMSS Administrative Assistant.*