



# TEXAS A&M UNIVERSITY CORPUS CHRISTI

## **MASTER IN CHEMISTRY STUDENT HANDBOOK**

**ACADEMIC YEAR 2019– 2020**

### **College of Science and Engineering**

Texas A&M University - Corpus Christi (TAMU-CC)

6300 Ocean Dr., Unit 5802 Corpus Christi, TX 78412  
Phone (361) 825-2814

*Updated: 18 June 2019*

## TABLE OF CONTENTS

<b>SECTION I. CHEMISTRY MASTER PROGRAM</b> .....	<b>1</b>
THE PURPOSE OF THIS HANDBOOK.....	1
PROGRAM MISSION .....	1
PROGRAM TRACKS.....	1
STUDENT LEARNING OUTCOMES .....	1
Chemistry Master Staff.....	2
<b>SECTION II. ADMISSION REQUIREMENTS</b> .....	<b>3</b>
Program Admission Deadlines.....	3
Admission Review Process/Timeline.....	3
Assistantships.....	3
Teaching Assistantship.....	3
Research Assistantships.....	5
Eligibility.....	5
Amount of Stipend.....	5
Out of State Tuition Waiver.....	5
Cost of Education.....	5
New Student Orientation.....	5
<b>SECTION III. ACADEMIC PROGRESSION</b> .....	<b>6</b>
<b>Program Degree Requirements</b> .....	<b>6</b>
Graduate Advisory Committee.....	8
Degree Plan.....	9
Culminating Event/Exit Requirements.....	9
Notification of Intent to Graduate.....	9
<b>SECTION IV. PROGRAM SPECIFIC INFORMATION</b> .....	<b>9</b>
Research Prospectus.....	9
Structure of Thesis Proposal.....	10
Format of Thesis Proposal.....	12
<b>SECTION V. COURSE OFFERING SEQUENCE</b> .....	<b>15</b>
Planned Course Offerings.....	15
<b>SECTION VI. APPENDICES</b> .....	<b>16</b>
Appendix 1: Chemistry Master Program Application Checklist.....	16

Appendix 2: Chemistry Program First Year Checklist.....	17
Appendix 3: Chemistry MS program Degree Requirements Checklist.....	18
Appendix 4: Thesis Defense.....	19
Appendix 5: Format of the Thesis Defense Announcement.....	20
Appendix 6: Degree Plan Non-Thesis Option.....	21
Appendix 7: Degree Plan thesis Option.....	22

## **SECTION I. CHEMISTRY MASTER PROGRAM**

### **The Purpose of this Handbook**

This handbook is a companion for the catalog of your year of entry: <http://www.tamucc.edu/academics> and in case of any contradiction the catalog or record is the true source of information. The Graduate Studies handbook provides university-wide information relative to student resources, academic policies, financial assistance, graduation and thesis guidelines [http://gradcollege.tamucc.edu/current\\_students/masters\\_students.html](http://gradcollege.tamucc.edu/current_students/masters_students.html).

The section on the thesis proposal and the project of the other track in this handbook are particularly important; they are not covered in the Graduate Studies Handbook but are essential in understanding the path to graduation with a Master's Degree in Chemistry.

### **Program Mission**

The mission of the Master of Science program in Chemistry is to prepare students for technical careers, careers in chemical education at the secondary level or who aspire to enroll in a doctoral program. This program is designed to provide students with a quality experience that will help them grow as scholars and as professionals.

### **Program Tracks**





Students pursuing the Master of Science degree in Chemistry will choose between a Thesis Track and a Professional Track. The Thesis Track requires 30 hours of course work and results in a written thesis and thesis defense. This track is intended for full-time students who are supported by Research Assistantships or Teaching Assistantships. The Professional Track requires 36 hours of course work and is appropriate for students who pursue a master's degree while working or wish to take courses part-time.

### **Student Learning Outcomes**

Students will:

- Possess a broad understanding of chemical concepts
- Possess enhanced knowledge of a specific area of chemistry, including relevant scientific literature, related to their thesis or professional paper
- Have the ability to accurately describe and assess chemistry related research both orally and in writing

## Chemistry Master Staff

	<p>Fereshteh Billiot, Professor of Chemistry Chemistry Master Program Coordinator Phone: (361) 825-6067, Office: Center for Sciences 207, Phone: (361) 825-6067, <a href="mailto:fereshteh.billiot@tamucc.edu">fereshteh.billiot@tamucc.edu</a> Administer and support the Chemistry Graduate program Collaborate with faculty and graduate students on all issues related to the Chemistry Graduate program</p>
	<p>Ronnie Emanuel Academic Advisor Office: Center for Instruction, Suite 350 Phone: (361)825-3928 <a href="mailto:ronnie.emanuel@tamucc.edu">ronnie.emanuel@tamucc.edu</a> Advice on program requirements Coordinate with student admission process Liaison for student with College of Graduate Studies regarding required documentation submitted for educational career.</p>
	<p>Alessandra Garcia, Senior Administrative Assistant, Office: NRC 3500, Phone: (361) 825-2814, <a href="mailto:alessandra.garcia@tamucc.edu">alessandra.garcia@tamucc.edu</a>. Create Independent Studies and Research courses Assist students for travel arrangement</p>
	<p>Richard Coffin, Ph.D., Professor and Chair of Physical and Environmental Science Department Office: Natural Resources Center, Room 3500, Phone: (361) 825-2814, <a href="mailto:richard.coffin@tamucc.edu">richard.coffin@tamucc.edu</a> Coordinate course scheduling and teaching assignments for chemistry faculty</p>

## SECTION II. ADMISSION REQUIREMENT

Applicants must comply with university procedures for admission to the degree program. Incomplete applications will not be considered. Persons seeking admission to the MS Program in Chemistry should first contact the program faculty and identify a faculty member willing to serve as the graduate advisor. Applicants will not be admitted to the program without a graduate advisor. Persons seeking admission to the MS Program in Chemistry should consult the [Admissions](#) section of the graduate catalog for university requirements for admission. In addition to the documents required by the Office of Recruitment and Admissions, applicants must submit GRE general test scores, an essay of at least 300 words describing their educational and career interests, goals, and challenges, and three letters of evaluation from persons knowledgeable about their potential for success in graduate studies. Applicants may optionally submit other relevant materials, e.g., copies of published works or reports of past scientific research. All materials submitted will be considered. Applicants who already hold an earned graduate degree from a regionally accredited university need not submit GRE scores.

Students accepted to the degree program in chemistry are expected to enter the program with undergraduate degrees in chemistry. Students accepted to the degree program with insufficient background in chemistry will be required to take undergraduate or graduate prerequisite courses prescribed by their advisory committees. These courses may or may not apply towards the total required for the master's degree.

Teaching assistant positions are available to graduate students admitted as degree-seeking students. The completed Teaching Assistant Application and letters of recommendation should be submitted to the address indicated on the application. The deadline for submitting applications is February 15 for the following academic year.

### **Program Admission Deadlines**

The Chemistry MS program has two types of application deadlines: 1) priority deadlines and 2) final deadlines. All students should strive to meet the priority deadline because it is used to make decisions regarding funding of assistantships. Applications received after the priority deadline will be considered as late applications, and funding options that were available for priority deadline applications may no longer be available. International students have earlier deadlines because of the time required to process visa applications for international students.

<b>International Students</b>	<b>Fall</b>	<b>Spring</b>
Priority deadline to receive complete applications.	February 15	August 30
Last date to receive complete applications	May 1	October 31
<b>Domestic Students</b>	<b>Fall</b>	<b>Spring</b>
Priority deadline to receive complete applications.	March 15	September 30
Last date to receive complete applications	July 15	November 15

*This handbook is intended to be read in conjunction with the Graduate Catalog: <http://catalog.tamucc.edu/index.php> and the College of Graduate Studies Handbook [http://gradcollege.tamucc.edu/current\\_students/masters\\_students.html](http://gradcollege.tamucc.edu/current_students/masters_students.html).*

Admission deadlines for the Master's in Chemistry coincide with graduate college admissions deadlines, found at [http://gradcollege.tamucc.edu/current\\_students/graduate\\_calendar.html](http://gradcollege.tamucc.edu/current_students/graduate_calendar.html). Please see [http://gradcollege.tamucc.edu/new\\_students/application\\_process.html](http://gradcollege.tamucc.edu/new_students/application_process.html) for pertinent information. See also [http://gradcollege.tamucc.edu/new\\_students/](http://gradcollege.tamucc.edu/new_students/) for FAQs on the admission process and international admissions.

### **Admission Review Process/ Timeline**

Students apply through the Graduate College. Once all the documents are complete, they will be forwarded to the Chemistry Graduate Coordinator. The Chemistry Graduate Coordinator will direct the admissions committee to review the application and call for comments. When the Chemistry Graduate Coordinator decides that discussion has concluded, he or she will ask the admissions committee to vote on whether to recommend admission.

The admissions committee for the MS in Chemistry consists of four program faculty members on rotating two-year terms plus the applicant's identified graduate advisor. Within 30 days of the date on which all application requirements have been met, the admissions committee will vote on the application. The applicant will be notified by e-mail of the decision within 5 days of the committee vote.

### **Assistantships**

Students seeking full consideration for graduate assistantships should have a completed application file submitted by the priority deadline of March 15 (Fall admission only). However, applicants must apply separately for scholarships and assistantships at the College website: <http://sci.tamucc.edu/students/gradfunding.html>. After the priority deadline, any awards will be made on a first come, first served basis. Students who have received offers of assistantships must notify the Chemistry Program Coordinator (Dr. Feri Billiot) and the College of S&E Dean's office of their acceptance by **April 15** or within one week of receiving the offer letter, whichever is later. Otherwise, the University will assume that the offer has been rejected and will make offers to other students.

Admission to the program is decided independently of financial awards. Students must first be accepted into the program before financial awards can be considered. For details regarding graduate assistantships, refer to the CGS Graduate Assistantship Handbook at: [http://gradschool.tamucc.edu/funding/assets/Graduate\\_Assistantship\\_Handbook.pdf](http://gradschool.tamucc.edu/funding/assets/Graduate_Assistantship_Handbook.pdf).

### **Teaching Assistantships**

Teaching assistantships are available on competitive basis each year through the College of Science and Engineering; see <http://sci.tamucc.edu/students/gradfunding.html>. The State of Texas requires international graduate students whose native language is not English to obtain English proficiency certification before serving as graduate teaching assistants. See CGS Graduate Assistantship Handbook for details.

### **Research Assistantships**

A limited number of research assistantships are available through the individual faculty members. Consult with faculty individuals for more information.

### **Eligibility**

All students who hold assistantships of any type must be enrolled as full-time students (at least 9 graduate hours during the fall and spring semesters, and 3 hours during the combined summer session) in the Chemistry graduate 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 assistantships may be available but must be applied for separately. Check the CGS website for additional funding opportunities <http://gradschool.tamucc.edu/fundinginfo.html>

### **Amount of Stipend**

Currently, Master's students who hold assistantships are paid a stipend of \$1,200/month.

### **Out-of-State Tuition Waiver**

Graduate assistants are eligible for a tuition waiver that reduces tuition to Texas Resident rates. However, this must be applied for each semester and a student must work in a half-time (20 hrs/week) position and be enrolled in 9 credit hours during fall and spring semesters and 3 credit hours during the summer to be eligible for the waiver. To apply for the waiver, visit the College of Graduate Studies website: <http://gradschool.tamucc.edu/funding/assistantships.html#teaching>

### **Cost of Education**

Graduate education can be expensive and many students may want to estimate their financial commitment. The College of Graduate Studies has information available so that students can estimate the cost of attendance. Visit this website: [http://gradschool.tamucc.edu/funding/cost\\_of\\_attendance.html](http://gradschool.tamucc.edu/funding/cost_of_attendance.html)

### **New Student Orientation**

A New Student Orientation Session is offered every Fall and Spring semester as part of the Graduate Student Orientation. For additional information on this event please visit [http://gradschool.tamucc.edu/current\\_students/orientation.html](http://gradschool.tamucc.edu/current_students/orientation.html).

Topics covered during the session include:

- The College of Graduate Studies
- The Big Picture of Graduate Degrees
- Getting to the Master's Degree
- University and Program requirements



## SECTION III. ACADEMIC PROGRESSION

### Program Degree Requirements

Each student accepted to the Master of Science in Chemistry degree program must complete a minimum of 36 semester hours for the non-thesis “Professional” track and a minimum of 30 semester hours for the thesis track.

Students will choose between thesis and professional (non-thesis) options. Students following either option will be required to take a core of chemistry/chemistry-related courses to provide a broad background, and to select elective courses in consultation with their advisory committee to provide in-depth education in a particular area of emphasis related to chemistry. A student will define an emphasis area for his or her graduate studies with assistance from the graduate advisor and advisory committee. The emphasis areas include the traditional areas of chemistry such as analytical chemistry, biochemistry, environmental chemistry, inorganic chemistry, materials chemistry, physical chemistry or theoretical chemistry; or the student may choose an MS degree in chemistry related to one of the other graduate programs at TAMUCC such as the Coastal and Marine System Science Program.

A graduate student who has met with his or her advisory committee, formulated a degree plan approved by the graduate committee, and has the plan on file is considered a degree candidate. A student must have advanced to degree candidacy by the end of the second full semester of graduate study following admission to the program. A student’s advisory committee must approve any subsequent changes to the degree plan. A change from the thesis to the professional (non-thesis) option or vice versa requires that the student file a new degree plan as approved by the advisory committee.

All Chemistry MS students must successfully complete at least six semester hours per academic year to remain in the program.

All Chemistry MS students must enroll in [CHEM 5303 Research in the Chemical Sciences](#) during their first semester, or the first semester it is offered after being enrolled in the program.

All Chemistry MS students must pass a final oral exam, to be administered by their advisory committee, during their last semester before graduation.

#### *Thesis Track*

---

	<u>Sem. Hrs.</u>
1. Core courses (CHEM 5303 and CHEM 5317)	6
2. Electives from list below	18
3. Thesis Proposal – CHEM 5392	3
4. Thesis Submission – CHEM 5394	3
	Total 30

## 1. The Core courses

---

- CHEM 5303 Research in the Chemical Sciences **3 sem. hrs.**
- CHEM 5317 Advanced Instrumental Analysis **3 sem. hrs.**

## 2. Elective courses may be chosen from the following list.

---

- CHEM 5321 – Molecular Ecology **3 sem. hrs.**
- CHEM 5322 – Supramolecular Chemistry **3 sem. hrs.**
- CHEM 5341 – Advanced Organic Chemistry **3 sem. hrs.**
- CHEM 5352 – Computational Chemistry **3 sem. hrs.**
- CHEM 5361 – Organic Geochemistry **3 sem. hrs.**
- CHEM 5362 – Chemical Oceanography **3 sem. hrs.**
- CHEM 5369 – Advanced Molecular Spectroscopy **3 sem. hrs.**
- CHEM 5375 – Stable Isotope Biogeochemistry **3 sem. hrs.**
- CHEM 5421 – Aquatic Chemistry **4 sem. hrs.**
- CHEM 5417 – Advanced Environmental Chemistry **4 sem. hrs.**
- CHEM 5431 – Environmental Instrumental Analysis **4 sem. hrs.**
- CHEM 5490 – Advanced Topics **variable sem. hrs.**
- CHEM 5993 – Thesis Research **up to 9 sem. hrs.**

## 3. Thesis

---

Each student in the thesis track will produce a written thesis and defend their thesis at the final oral examination. The thesis will ordinarily be addressed in three steps, CHEM 5392 Thesis Proposal, CHEM 5993 Thesis Research, and CHEM 5394 Thesis Submission. The student should submit their proposal (CHEM 5392) by the end of their second semester. Some semesters will involve investigating the proposal (Thesis Research), with completion and the final oral examination (Thesis Submission) during the final semester. See the Graduate Catalog for grading and procedures for the Thesis course sequence.

### *Professional Track*

---

	<u>Sem. Hrs.</u>
1. Core courses	12
2. Electives from list below	24
	Total 36

## 1. The Core courses

- 
- CHEM 5303 Research in the Chemical Sciences **3 sem. hrs.**
  - CHEM 5317 Advanced Instrumental Analysis **3 sem. hrs.**
  - CHEM 5369 Advanced Molecular Spectroscopy **3 sem. hrs.**
  - CHEM 5397 Directed Research **3 sem. hrs.**

## **2. Elective courses may be chosen from the following list.**

---

- CHEM 5321 – Molecular Ecology **3 sem. hrs.**
- CHEM 5322 – Supramolecular Chemistry **3 sem. hrs.**
- CHEM 5341 – Advanced Organic Chemistry **3 sem. hrs.**
- CHEM 5352 – Computational Chemistry **3 sem. hrs.**
- CHEM 5361 – Organic Geochemistry **3 sem. hrs.**
- CHEM 5362 – Chemical Oceanography **3 sem. hrs.**
- CHEM 5375 – Stable Isotope Biogeochemistry **3 sem. hrs.**
- CHEM 5421 – Aquatic Chemistry **4 sem. hrs.**
- CHEM 5417 – Advanced Environmental Chemistry **4 sem. hrs.**
- CHEM 5431 – Environmental Instrumental Analysis **4 sem. hrs.**
- CHEM 5490 – Advanced Topics **variable sem. hrs.**

## **3. Project**

---

Each student in the Professional Track will write and submit a professional paper which is defended at the final oral examination. The culmination of the project should correspond with CHEM 5397 Directed Research, which is completed during the student's final semester.

### **Graduate Advisory Committee**

The purpose of the graduate advisory committee is to provide guidance and technical advice from a diverse viewpoint throughout the student's research experience. The committee chair (typically the graduate advisor) is the principal source of research guidance. The other members of the committee are selected by the student and should be chosen to provide complementary expertise to that of the committee chair. All committee members must have graduate faculty status at TAMUCC.

The chair is selected at the start of the student's first semester, and the full committee must be selected within the first two semesters. The advisory committee must be documented with Form A: Thesis Advisory Committee Appointment Form available at [http://gradcollege.tamucc.edu/contact\\_us/forms.html](http://gradcollege.tamucc.edu/contact_us/forms.html) (despite the name of the form, this applies to both tracks of the program). Any changes to the committee require that Form D: Thesis Committee Member Change Request form, which is filed with the College of Graduate Studies.

Preliminary drafts of the thesis or professional paper are typically reviewed by the committee chair. The final draft of the written product is presented to the full committee for comments and/or changes before it is submitted. The final approval of the thesis occurs at the final oral examination (described further below)

### **Degree Plan**

The degree plan (see Appendix II) will be administered by the academic advisor (see personnel in Section II). The degree plan must be completed within the first semester and must be signed by all committee members.

### **Culminating Event/Exit Requirements**

The culminating event is the final oral examination, also known as the Final Defense. Grades for the final course, CHEM 5394 Thesis Submission, will be entered only after all requirements have been met.

### **Notification of Intent to Graduate**

Graduation upon completion of the course requirements is NOT automatic. The semester before graduation is anticipated, students should obtain an application from the Office of Admissions and Records by the deadline date indicated in the University Class Schedule. Deadline dates are also available on the Texas A&M University-Corpus Christi website.

## **SECTION IV. PROGRAM SPECIFIC INFORMATION**

A thesis must conform to the Chemistry Program and College of Graduate Studies institutional standards. The following guidelines will help ensure the thesis is completed and submitted appropriately. Consult the CGS Master's Student Handbook for specific formatting and submission requirements.

### **Research Prospectus**

The Chemistry program strives to train all master's students comprehensively including with knowledge in their professional fields as well as training in the methods of research. Students must conduct original research related to Chemistry program goals. Many classes will require students to write thesis proposals and/or peer-reviewed publications as part of the graded class assignments.

The master's student, along with the student's graduate advisory committee, designs and plans the thesis research project. This plan should be formalized in a "*Prospectus*", a brief two-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 thesis proposal and should be presented to the graduate advisory committee at an early meeting.

The introduction section of 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 Engineering Dean's Office (Academic Advisor), no later than the end of the **second long semester** (fall/spring).

### **Structure of Thesis Proposal**

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 substantial research.

The proposal must include the following sections, in this order:

1. Title page. See example of a correctly spaced and formatted title page below.
2. Project Summary. Like an abstract, the summary should be a synopsis of the proposed activity suitable for publication and not more than 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, and Objectives. This section explicitly states the purpose of the research project. 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
5. Methods. This section describes in detail the methods of data collection and analysis used to meet each research objective. This is arguably the most important part of the proposal. Be sure and include how and when any necessary permits are obtained.
6. 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, and analysis of each objective, writing of thesis, submission to committee, and graduation.
7. Budget. 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 “Methods” 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 must be purchased to support 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. Obtain permission before using University equipment and expendables
  - b. Expendables. Estimate costs for all supplies, chemicals or other items to be exhausted during the 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.
8. Budget Justification. This is a brief statement explaining why each element of the budget is necessary to accomplish the research.
9. Literature Cited. This section includes the complete citation for each article referenced in the proposal in the format of the selected Format Journal.

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 for approval.

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 thesis proposal must be delivered to the committee chairperson for signature and then to the rest of the committee and the program coordinator for signatures.

Once all signatures are obtained, make copies of the proposal to distribute to all members of the graduate advisory committee, and to the College of Science and Engineering Dean's Office (Academic Advisor). Students must take this process into account when planning their research schedule.

### **Format of Thesis Proposal**

Make all narrative material of the thesis proposal 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.

Prepare the manuscript using styles in a word processor. Styles allow one to reformat the document quickly. The font should be 10 or 12 characters-per-inch (cpi) type size with a plain book-type font such as Helvetica or Times New Roman, not some unusual font. Follow the 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. In general, double-space the thesis proposal and thesis manuscript. The exceptions to this rule are for quotations exceeding six typed lines (inset and single-space these) and footnotes (which should be avoided). 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. Number all pages in the thesis proposal or thesis manuscript except the Title and Approval pages. Number the preliminary pages of the thesis proposal with lower case Roman numerals. The Abstract page is the first numbered page; it follows the Title and Approval pages and is numbered iii. The style and format for all headings and subheadings in the thesis proposal and thesis 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.

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 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 tables or figures are placed in landscape format on a page, the top of the table or figure should be on the left side. 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. Use the caption style of the word processing program for figures, which usually places the caption below the figure.

Footnotes should not appear within the regular text of the 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. 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 a figure from another author is used or adapted, cite the source in the figure caption. Generally, follow the format in the Format Journal when developing 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 the Format Journal does not list the title of an article, make sure to include it to enhance the usefulness of the citations to readers.

#### Format of the Thesis 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  
The Chemistry Program  
Department of Physical and Environmental Sciences  
Texas A&M University-Corpus Christi  
Corpus Christi, Texas

Approved:

---

Name, Chairperson

---

Name, Member

---

Name, Member

---

## SECTION V. COURSE OFFERING SEQUENCE

### Planned Course Offerings

FALL	SPRING	MAYMESTER	SUMMER I	SUMMER II
Annually: CHEM 5303 CHEM 5317 CHEM 5417	Annually: CHEM 5369 CHEM 5375 CHEM 5362	None	Annually: CHEM 5993	Annually: CHEM 5993
Even years: CHEM 5321 CHEM 5421	Even years: CHEM 5361  Odd years: CHEM 5352 CHEM 5341			

The actual courses offered may differ from the sequence listed above. Some elective courses listed in Section IV may not be offered during the student's time within the program.

## SECTION VI. APPENDICES

### **Appendix 1: Chemistry Master 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 Chemistry 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 CGS.
- Request official transcripts documenting all senior-level post-secondary institutions you attended. Transcripts must be sent directly to CGS. 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 CGS (Code 6849)

GRE and TOEFL scores must be not more than 5 and 2 years old, respectively

International graduate students seeking assistantships must also obtain “English Proficiency Certification”

- Apply separately to College of S&E for financial assistance.

## **Appendix 2: Chemistry Program First-Year Checklist**

- Meet with Chemistry 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 Chemistry graduate Faculty
  - ❖ Decide on a primary advisor (Committee Chair)
  - ❖ Form and meet GAC *no later than* end of second semester
  
- Prepare the Tentative Degree Plan with the GAC no later than by end of second semester
  - ◆ Leveling coursework
  - ◆ Elective coursework
  - ◆ Thesis topic
  - ◆ Formulate Research Prospectus
  
- 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 Chemistry Administrative Assistant.*

## **Appendix 3: Chemistry MS Program Degree Requirements Checklist**

### **I. Coursework**

- Leveling coursework (if necessary) as specified by GAC
- Tentative Degree Plan and Research Prospectus approved by CGS and copy to the College of Science and Engineering Dean's Office (Academic Advisor) by end of second semester
  - ❖ Minimum 30 credit hours for Thesis track and 36 hours for non-thesis track
  - ❖ 9 hrs Core Curriculum
  - ❖ 3.0 minimum GPA
  - ❖ Final Degree Plan for signature approval to Dept. Chair, College Dean, and CGS no later than before census day (12<sup>th</sup> 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. Thesis Proposal**

- Independent, detailed, original, systems-based inquiry
- Thesis Research Proposal
  - ❖ Modified from Prospectus with GAC input
  - ❖ Submit draft to Committee Chair for approval
  - ❖ Present to GAC for approval signatures
  - ❖ Signed version submitted to College Dean; Copies to College Advisor, Chemistry Administrative Assistant, and GAC members
  - ❖ Should be approved by end of first year of graduate study

### **III. Thesis**

- 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 Thesis to CGS following successful defense
  - See CGS Master's Student Handbook for instructions

## **Appendix 4: Thesis Defense**

- Must be registered for credit for semester in which the final defense takes place
- Apply for graduation in College of Science and Engineering 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 Thesis Seminar and Final Defense
  - Must be held at least six weeks prior to graduation
- 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 Engineering Dean's Office (Academic Advisor)
- Present Thesis 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.

## **Appendix 5: Format of the Thesis Defense Announcement**

DEPARTMENT OF PHYSICAL AND ENVIRONMENTAL SCIENCES  
TEXAS A&M UNIVERSITY-CORPUS CHRISTI

SUBJECT: Official Title of Your Thesis

SPEAKER: Student's Name

CHAIR: Advisor's Name

COMMITTEE: Committee Members

DATE: [Insert Day, month date, year]

TIME: 0:00 a.m./ p.m.

PLACE: Building

Room

### **ABSTRACT**

The abstract of thesis 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 Chemistry master program and other graduate programs via the scitech-list, and pens-listservs. Ensure an email of the announcement is sent to the College of Science and Engineering Dean's Office (Academic Advisor) and Chemistry Administrative Assistant.

This handbook is intended to be read in conjunction with the Graduate Catalog: <http://catalog.tamucc.edu/> and the College of Graduate Studies Handbook [http://gradcollege.tamucc.edu/current\\_students/masters\\_students.html](http://gradcollege.tamucc.edu/current_students/masters_students.html).

## Appendix 6: Degree Plan Non-Thesis Option

TEXAS A&M UNIVERSITY-CORPUS CHRISTI  
COLLEGE OF SCIENCE AND ENGINEERING  
MASTER OF SCIENCE IN CHEMISTRY  
**DEGREE PLAN - NON-THESIS OPTION**

Catalog: 2019-2020

Name \_\_\_\_\_ Banner ID # \_\_\_\_\_  
 \_\_\_\_\_ Telephone (home) \_\_\_\_\_  
 \_\_\_\_\_ Telephone (work) \_\_\_\_\_

Previous Degrees \_\_\_\_\_ Discipline \_\_\_\_\_

School \_\_\_\_\_ Year \_\_\_\_\_

Admission term \_\_\_\_\_

### Emphasis Area

THESIS TITLE: \_\_\_\_\_

### Required Courses

Course	Title	Grade	SCH	YR/SEM	Career
CHEM 5303	Research in the Chemical Sciences (required 1st sem)	_____	3	_____	_____
CHEM 5317	Advanced Instrumental Analysis	_____	3	_____	_____
CHEM 5369	Advanced Molecular Spectroscopy	_____	3	_____	_____
CHEM 5397	Directed Research (max credit 6 SCH)	_____	3	_____	_____

### Advanced Electives (24 hours Minimum)

CHEM 5321	Molecular Ecology (3 SCH)	_____	3	_____	_____
CHEM 5322	Supramolecular Chemistry (3 SCH)	_____	3	_____	_____
CHEM 5341	Advanced Organic Chemistry	_____	3	_____	_____
CHEM 5352	Computational Chemistry	_____	3	_____	_____
CHEM 5361	Organic Geochemistry	_____	3	_____	_____
CHEM 5362	Chemical Oceanography	_____	3	_____	_____
CHEM 5375	Stable Isotope Biogeochemistry	_____	3	_____	_____
CHEM 5417	Advanced Environmental Chemistry (4)	_____	4	_____	_____
CHEM 5421	Aquatic Chemistry (4)	_____	4	_____	_____
CHEM 5490	Advanced Topics (1-4 SCH)	_____	_____	_____	_____
	Additional Courses from relevant fields may apply with committee approval	_____	variable	_____	_____

GPA (Min 3.0)

Requirement Summary \_\_\_\_\_

**TOTAL HOURS** (36 min)

Non-Degree to Degree hrs (9 max)

Transfer Hours (9 Max)

Approved By: Print and sign name below

GAC Chair	_____	date
Com. Member	_____	date
Com. Member	_____	date
Student	_____	date
Program Coordinator	_____	date



## Appendix 7: Degree Plan Thesis Option

TEXAS A&M UNIVERSITY-CORPUS CHRISTI  
COLLEGE OF SCIENCE AND ENGINEERING  
MASTER OF SCIENCE IN CHEMISTRY  
**DEGREE PLAN - THESIS OPTION**

Catalog: 2019-2020

Name \_\_\_\_\_ Banner ID # \_\_\_\_\_  
 \_\_\_\_\_ Telephone (home) \_\_\_\_\_  
 \_\_\_\_\_ Telephone (work) \_\_\_\_\_

Previous Degrees \_\_\_\_\_ Discipline \_\_\_\_\_

School \_\_\_\_\_ Year \_\_\_\_\_

Admission term \_\_\_\_\_

### Emphasis Area

THESIS TITLE: \_\_\_\_\_

### Required Courses

Course	Title	Grade	SCH	YR/SEM	Career
CHEM 5303	Research in the Chemical Sciences (required 1st sem)	_____	3	_____	_____
CHEM 5317	Advanced Instrumental Analysis	_____	3	_____	_____
CHEM 5392	Thesis Proposal	_____	3	_____	_____
CHEM 5394	Thesis Submission	_____	3	_____	_____

### Advanced Electives (18 hours Minimum)

CHEM 5321	Molecular Ecology (3 SCH)	_____	3	_____	_____
CHEM 5322	Supramolecular Chemistry (3 SCH)	_____	3	_____	_____
CHEM 5341	Advanced Organic Chemistry	_____	3	_____	_____
CHEM 5352	Computational Chemistry	_____	3	_____	_____
CHEM 5361	Organic Geochemistry	_____	3	_____	_____
CHEM 5362	Chemical Oceanography	_____	3	_____	_____
CHEM 5375	Stable Isotope Biogeochemistry	_____	3	_____	_____
CHEM 5417	Advanced Environmental Chemistry (4)	_____	4	_____	_____
CHEM 5421	Aquatic Chemistry (4)	_____	4	_____	_____
CHEM 5490	Advanced Topics (1-4 SCH)	_____	4	_____	_____
	Thesis Research (max total 36 SCH)				
CHEM 5993	Additional courses from relevant fields may apply with committee approval	_____	variable	_____	_____

GPA (Min 3.0)

Requirement Summary \_\_\_\_\_

**TOTAL HOURS** (36 min)

Transfer Hours (9 Max)

Non-Degree to Degree hrs (9 max)

Print and sign name

Approved By: \_\_\_\_\_

below

GAC Chair \_\_\_\_\_

date \_\_\_\_\_

Com. Member \_\_\_\_\_

date \_\_\_\_\_

Com. Member \_\_\_\_\_

date \_\_\_\_\_

Student \_\_\_\_\_

date \_\_\_\_\_

Program Coordinator \_\_\_\_\_

date \_\_\_\_\_

