

Graduate Student Handbook

Department of Chemistry



Sam Houston State University

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Getting Started and Orientation

Welcome

Welcome to the Chemistry Graduate Program at Sam Houston State University. This guide is for SHSU Chemistry graduate students. It is meant to act as a supplement to the handbook that is provided by the SHSU Graduate School.

If you have any questions, please send them to the chemistry graduate advisor, Dr. Gross (gross@shsu.edu).

The Graduate School and Orientation

There is some general guidance and graduate orientation information on the Graduate School's webpage. The links below can also be found on their website.

- Orientation - <https://www.shsu.edu/dept/graduate-studies/orientation.html>
 - **This orientation is mandatory for new international and students who graduated from SHSU more than one year ago.**
- Accepted Student Checklist: <https://www.shsu.edu/dept/accepted-students-bearkat-orientation/accepted/checklist/graduate.html>
- International Student Checklist: <https://www.shsu.edu/dept/accepted-students-bearkat-orientation/accepted/checklist/graduate-international.html>

Graduate Assistantships and Funding

Students in the Chemistry graduate program are normally supported on a graduate assistantship (approximately \$18,000/year).

Duties

Students on a graduate assistantship will be assigned to help with teaching labs, tutoring or storeroom/preparation duties. These will be assigned by the department chair upon factoring departmental needs and student preferences indicated on the application. The workload is expected to be 20 hours per week.

Eligibility

To receive the graduate assistantship, the student must be in academic good standing at Sam Houston State University. This means a graduate student must maintain an overall grade point average of at least 3.0 on all graduate coursework attempted to receive the assistantship.

Tuition

If students are from out-of-state or out-of-country, their graduate assistantship will get out-of-state tuition waived to in-state tuition. However, this requires a form to be filled out when they arrive. So, before that point the computer will show a tuition bill listed with higher out-of-state tuition.

Alternative Funding

In certain instances, students may hold assistantships in conjunction with other campus departments or units. Students may also be supported by a faculty member's research grant

Additional Scholarship and Funding Opportunities

Robert A. Welch Summer Research Fellowship

Students working on their MS thesis research during the summer are awarded this fellowship in the amount of \$2,250 unless their research is already supported by another source of funds for at least that amount. Students must also register for CHEM 6398 during the summer of the award. This award is typically applied automatically, and an application is not necessary.

College of Science and Engineering Technology

The College of Science and Engineering Technology (COSET) Graduate Achievement Scholarship is a \$1,500 competitive scholarship awarded to students demonstrating outstanding academic progress in a COSET graduate program. To be considered for the COSET Graduate Achievement Scholarship, a student must be enrolled full-time in a graduate program in the College of Science and Engineering Technology and have an SHSU graduate GPA. Students in their first semester of a COSET graduate program are not eligible for the scholarship. Students who are already receiving a scholarship as a bonus to their graduate assistantship (generally, those students in their first year who have been awarded a graduate assistantship), are not eligible for the scholarship. Certain exceptions are permitted; interested students are highly encouraged to inquire about eligibility. Please direct inquiries to the current associate dean in the COSET office. Also, see the COSET [website](#) for more information.

*The application deadline for the fall scholarship is **July 1st**, and the application deadline for the spring scholarship is **December 1st**.*

The Graduate School (TGS)

The General Graduate School Scholarship is intended for high-quality students in SHSU graduate programs. Applications for this \$1000 scholarship will be accepted for both new and current students. Students may submit new applications each semester while enrolled in graduate programs. Application can be found on the [Scholarship 4 Kats Portal](#) (Search under Opportunities for The Graduate School General Scholarship after completing the General Application). Students are required to complete their general scholarship application in the portal along with The Graduate School General Scholarship opportunity. There is typically an email advertisement sent out for this a month before the deadline.

*The application deadline for the fall scholarship is **August 1st**, and the application deadline for the spring scholarship is **December 1st**.*

The Graduate School also has [additional research and travel funding opportunities](#).

Coursework

Registration

First semester

Students register for the following courses:

- CHEM 6398 Graduate Research in Chemistry
- CHEM 5100 Chemical Literature and Seminar
- Two CHEM 5000 level lecture courses

Subsequent semesters

Students will typically register for the same until their fourth semester, where CHEM 5100 is no longer needed and will likely only need to register for one final CHEM 5000 level course.

Courses

Seminar

CHEM 5100. Chemical Literature & Seminar. 1 Hour.

Students typically enroll in seminar for three semesters.

Lecture courses

These lecture courses are offered on a rotating schedule and there are typically only two offered each semester. A total of 21 credit hours or 7 lecture courses are needed. (This is assuming a student takes three hours of CHEM 5100)

CHEM 5361. Physical Organic Chemistry. 3 Hours.

CHEM 5362. Organic Reaction Mechanisms. 3 Hours.

CHEM 5367. Chemical Nano Sensing. 3 Hours.

CHEM 5368. Analytical Spectroscopy. 3 Hours.

CHEM 5372. Advanced Biochemistry I. 3 Hours.

CHEM 5373. Drug and Toxin Biochemistry. 3 Hours.

CHEM 5374. Chemistry of Coordination Compounds. 3 Hours.

CHEM 5375. Organometallic Chemistry. 3 Hours.

CHEM 5381. Advanced Physical Chemistry Thermodynamics. 3 Hours.

CHEM 5382. Symmetry and Spectroscopy. 3 Hours.

CHEM 5385. Selected Topics in Adv Chem. 3 Hours.

Thesis and Research

CHEM 6099. Thesis. 1-3 Hours.

Registration required during the semester of thesis defense.

CHEM 6398. Graduate Research in Chemistry. 3 Hours.

Registration required during semesters that research is being performed. A grade of IP is assigned until the research is complete.

The official policies regarding degree requirements can be found in the [Graduate Catalog](#).

Academic Performance

A graduate student who falls below a 3.0 overall grade point average at the close of any semester during which one or more semester credit hours are attempted will be placed on probation. If an enrolled student on probation fails to achieve a minimum 3.0 overall grade point average at the close of the next semester following the starting of the probation, the student will be academically terminated.

A student who earns a grade of "C" in any course (repeated or distinct course) within the academic program may have their graduate status reviewed by a committee comprised of the department/school or college's graduate faculty. The committee will recommend an appropriate remediation for the student.

A graduate student who earns a grade of "F" in any graduate course will be terminated from graduate studies.

Those students who earn a grade of "F" during the semester of their anticipated graduation will be terminated from graduate studies and will not be eligible to graduate in that term. The appropriate academic dean may place on probation, retain on probation, or terminate any student deficient in grade points without regard to the regulations previously stated.

Any appeal for a review of the termination of graduate status should be directed in writing through the graduate advisor of the program, then to the chair of the department/school, then to the academic dean of the college, and finally to the Provost and Vice President for Academic Affairs.

See also [Academic Policy Statement 910312](#) regarding academic probation, suspension, dismissal, and termination.

Research-Based Master's Thesis

See Appendix B for a checklist of these items.

Advisor Selection

Before selecting a thesis research advisor, new graduate students in the Chemistry Department are required to interview with all of the active research faculty **within three weeks of the first class day** in the student's first semester. The current version of Research Interview and Advisor Selection form is available from Dr. Gross. A list of active research faculty can also be found in Appendix A. Questions about this process can also be directed to Dr. Gross.

Advisory Committee Selection

Each thesis will need to have a committee of at least three members. Typically, this will be the thesis research advisor and two other chemistry faculty members. Students should discuss their potential committee with their thesis research advisor first. The thesis committee members should be selected **before the end of the first year**. The form for this can be found on the College of Science and Engineering Technology (COSET) [website](#). Once the form is filled out, it should be submitted to Dr. Gross. If the committee is acceptable the form will be signed and forwarded to the COSET Dean's office for final approval.

Thesis Prospectus

In collaboration with their research advisor, students should write a prospectus for their thesis. Students should plan ahead and realize that they will need to work with their advisor for quite some time revising and improving the document before it is distributed to their committee. The committee will need time to read it and the student will usually have corrections to make. Once the committee approves, then the prospectus will need to be approved by the Chemistry Chair, Dr. Donovan Haines. **Please allow one week for the chair's review as there will likely be several prospectuses to approve at the same time.** Finally, the prospectus along with the signed approval form should be submitted to the COSET Dean's Office. All of this must be done by the published deadline (typically mid-March or mid-October) in the **semester before the thesis defense** (although, this can be done in earlier semesters). The form for this can be found on the COSET [website](#).

Thesis

Students should start writing their thesis as early as possible (it is a good idea to use SHSU thesis template, see TGS [website](#)). Students will need to work with their advisor for quite some time revising and improving the thesis document before it is distributed to their committee. The committee will need time to read it before the defense (two weeks is typical). After the defense, there will usually be corrections based on the committee's feedback. Once the appropriate corrections are made, the thesis should be sent back to the committee members for final approval. Also, the committee members will need to sign a thesis approval form, which can be found on the COSET [website](#). The form will also likely be provided to the student by the COSET office once a thesis defense is passed. After the committee approves of the thesis, then it should be submitted to the thesis and dissertation specialist (email tgsthesis@shsu.edu) in TGS for final review. The thesis should also be submitted to Shellie Armstrong in the COSET Dean's Office. All of this must be done by the published deadline (see the [SHSU academic calendar](#)). More information and deadlines can be found Graduate School [website](#)

Thesis Defense

Pre-Defense

- Complete a [thesis initiation sheet](#). The form can be found Graduate School [website](#).
- Submit a draft of thesis for format and style review. See the section above and the Graduate School [website](#) for details. Make sure to also complete the [embargo](#) form if needed. (email tgsthesis@shsu.edu)
- Register for CHEM6099 and apply to graduate through the Registrar's office.
- The thesis defense should be scheduled with your committee to find a date before the (see the [SHSU academic calendar](#)). Students should keep in mind that finding a time that works for all committee members may be difficult, and often requires a student's defense to take place weeks before the actual deadline. When a date and time that works for the defense, the student should find and reserve a room (talk to Rachell Haines) to hold the defense in.
- A draft of the complete thesis should be given to committee members at least two weeks prior to the defense (this time period may depend on the committee members).
- The SHSU Graduate School (TGS) has a [public defense announcement form](#) to submit. This includes a template to create signs announcing the defense to the university community. These signs should be posted at least one week ahead of time. Usually, these are posted at the elevators on the 1st and 3rd floor of CFS and in the Chemistry Department office. The signs include the thesis title, your name and department, the fact that it is an MS thesis defense, and the room, date, and time of the defense. Sometimes abstracts are included; this can be discussed with the research advisor. The sign should also be sent to Dr. Gross so that it can be posted to social media outlets and sent to department members by email.

The Thesis Defense and Comprehensive Exam in Chemistry

The defense itself starts with an open (public) presentation of the student's research (about 1 hour with questions). After it ends, everyone except the student, the committee, and interested faculty is asked to leave. The committee will then carry out the closed portion of the thesis defense and simultaneously the oral comprehensive examination. Make sure to bring both the [thesis defense form](#) and [comprehensive exam form](#) for your committee to sign after your defense and exam. These forms can be found on the COSET [website](#). The signed forms should be submitted to Dr. Gross and Shellie Armstrong. Students should also keep a copy for their records.

What should be expected during the comprehensive exam in chemistry?

The comprehensive exam will involve asking students questions related to their thesis and testing their general knowledge of chemistry. **More details will be added here later.**

Students typically pass both the thesis defense and oral comprehensive examination simultaneously. Although, because they are separate entities and they both have pass/fail options, it is possible to pass one and not the other. Should a student fail one or more examinations, a re-examination shall be permitted per departmental or college guidelines, as appropriate. If this is the situation, the student should discuss options with their committee and coordinate how to move forward. A third examination may be permitted only with the approval of the appropriate academic dean and the department.

Post-Defense

- Upon a successful defense, comments and thesis corrections from the committee members should be discussed with the research advisor
- A revised version of the thesis should be provided to the committee.
- Once the committee members approve of the thesis document, they should complete the [Thesis/Dissertation Approval Form](#), which can be found on the COSET [website](#). The completed form should be sent to each of the committee members (not the research advisor) to sign. Once signed, the committee member can send the form to Shellie Armstrong in the COSET Dean's Office. The research advisor does not need to submit one of these forms; they will approve of the thesis through the electronic route sheet (see the next point).
- Submit an [Electronic Route Sheet](#) and select an embargo option if applicable. Once submitted, the route sheet automatically forwards to the next person whose approval is required (this is where the research advisor will sign/approve). The deadline for starting the route sheet
- Submit the final draft of the thesis to the Thesis and Dissertation Specialist in TGS for 2nd draft review of the complete document with all committee revisions and get approval to submit the

thesis to Vireo. (email tgsthesis@shsu.edu) After reviewing the document, the Thesis and Dissertation Specialist will send you the PDF copy of your document which is ready for publication. Submit the PDF copy of thesis to the Vireo system.

(<http://www.shslibraryguides.org/thesisguide/vireo>)

- Submit the final draft (or near final draft) to Shellie Armstrong in the COSET Dean's Office.

The above steps may occur in an order different than that listed above. This will depend on the timing of your defense and the deadlines listed on the SHSU academic calendar or COSET graduate deadlines.

Appendix A – List of Graduate Research Faculty

Dr. Benny Arney

(organic)

chm_bea@shsu.edu

CFS 326; 294-1531

Dr. Richard Schaugaard

(computational inorganic)

rns034@shsu.edu

CFS114; 294-1527

Dr. Dustin Gross

(organic)

degross@shsu.edu

CFS317d; 294-4067

Dr. David Thompson

(analytical)

det002@shsu.edu

CFS317e; 294-3270

Dr. Donovan Haines

(biochemistry)

haines@shsu.edu

CFS317a; 294-1530

Dr. Tarek Trad

(materials)

tmt033@shsu.edu

CFS317f; 294-1533

Dr. Meagan Hinze

(organic and biochemistry)

mehinze@shsu.edu

CFS317j; 294-1060

Dr. Adrian Villalta-Cerdas

(education)

axv067@shsu.edu

CFS108; 294-2556

Dr. Chris Hobbs

(organic)

chobbs@shsu.edu

CFS317c; 294-3750

Dr. Darren Williams

(physical)

williams@shsu.edu

CFS317g; 294-1529

Dr. Ilona Petrikovics

(biochemistry)

ixp004@shsu.edu

CFS221e; 294-4389

Dr. Kit Zall

(inorganic)

zall@shsu.edu

CFS304; 294-1525

Appendix B - MS Degree Checklist

Chemistry MS Program

<i>What to do</i>	<i>When to complete or deadline</i>	<i>Completed</i>
<i>Interview with research faculty and choose your research advisor</i>	<i>End of the third week of the first semester</i>	
<i>Select the Thesis Advisory Committee</i>	<i>End of first year (12 months)</i>	
<i>Submit an approved Thesis Prospectus</i>	<i>Published deadline the semester before the defense</i>	
<i>Complete 21 hours (7 lecture courses) from at least 4 different subdisciplines</i>	<i>Typically 2 courses per semester, then one course in the fourth semester</i>	
<i>Complete 3 hours (3 semesters) of the seminar course</i>	<i>Typically taken during each of the first three semesters</i>	
<i>Complete 3 hours of CHEM 6398 (Research)</i>	<i>A grade will be assigned during the last semester of research</i>	
<i>Complete 3 hours of CHEM 6099 (Thesis)</i>	<i>Taken during the semester the student defends their thesis</i>	

Thesis and Defense

<i>What to do</i>	<i>When to complete or deadline</i>	<i>Completed</i>
<i>Register for CHEM6099 and apply to graduate</i>	<i>At the beginning of the semester of the defense</i>	
<i>Submit thesis initiation sheet and embargo request form TGS</i>	<i>At the beginning of the semester of the defense</i>	
<i>Submit a draft of thesis for format and style review to TGS</i>	<i>Published deadline during the semester of the defense</i>	
<i>Schedule the defense and complete the public announcement form</i>	<i>At least two weeks before the actual defense date</i>	
<i>Defend the thesis</i>	<i>Published deadline during the semester of the defense</i>	
<i>Submit an electronic route sheet</i>		
<i>Committee members submit thesis approval forms to COSET</i>		
<i>Submit a final draft of the thesis for format and style review to TGS</i>		
<i>Submit a final draft (or near final draft) of the thesis to COSET</i>		
<i>Submit the approved PDF copy of thesis to the Vireo system</i>		

The official policies regarding degree requirements including additional information about the steps outlined above can be found in the [Graduate Catalog](#).