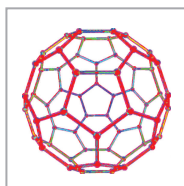
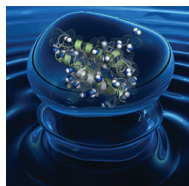
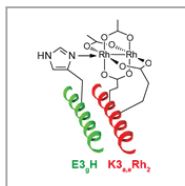
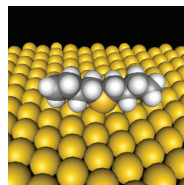
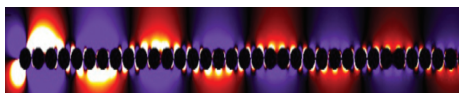
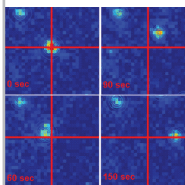
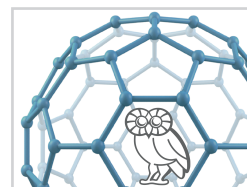
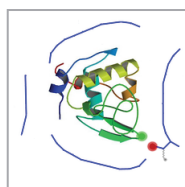
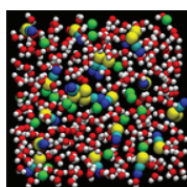
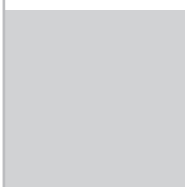
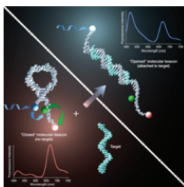
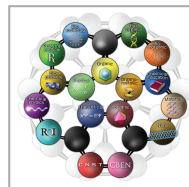
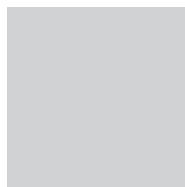
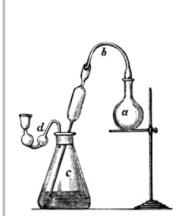
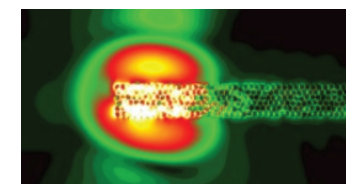
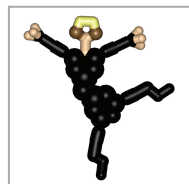
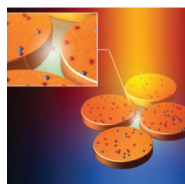
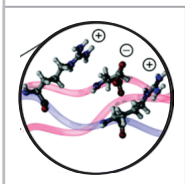


2020 - 2021



# DEPARTMENT OF CHEMISTRY

## Graduate Program Handbook



Rice University  
Department of Chemistry

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**Graduate Student Handbook**  
**Table of Contents**

2020 - 2021

(Updated: July 2020)

<b>I. ABOUT THE PH.D. IN CHEMISTRY</b>	<b>Page 3</b>
Some Wisdom on How to Be a Good Researcher.....	4
<b>II. ADMINISTRATIVE</b>	<b>Page 5</b>
A. Administrative Staff .....	5
B. Graduate Stipend .....	5
C. Mail .....	6
D. ESTHER (Employee and Student Tools, Help, and Electronic Resources) .....	6
E. Student Health Insurance .....	6
F. Title IX .....	6
G. Graduate Studies Forms Library .....	7
H. Applying for a Social Security Number .....	8
I. ChemPals & First Year Students Mentoring Program .....	9
J. 2019-2020- CGSA (Chemistry Graduate Student Association) .....	9
<b>III. GENERAL ANNOUNCEMENTS</b>	<b>Page 10</b>
<b>IV. REQUIREMENTS FOR THE PH.D. IN CHEMISTRY</b>	<b>Page 10</b>
A. Research.....	10
B. Coursework .....	11
C. Responsible Conduct of Research .....	11
D. Teaching .....	11
E. Qualifying Examination.....	11
F. Advancement to Candidacy for the Ph.D. ....	11
G. Satisfactory Performance.....	12
H. Requirements for the MA in Chemistry .....	12
I. Appeal .....	13
<b>V. PROGRAM PROTOCOL</b>	<b>Page 13</b>
A. Changing Laboratories .....	13
1) Advisor's Responsibilities .....	13
2) Student's Responsibilities .....	14
3) Graduate Studies Committee's Responsibilities .....	14
B. Primary Appointment is Outside the Chemistry Department.....	15
C. Course Requirements.....	15
1) Lecture Courses .....	15
2) CHEM 600 - Chemistry Seminars.....	16
a) Presentation Seminar .....	16
b) Student Seminars .....	17
c) Chemistry Department Seminars.....	17

Rice University  
Department of Chemistry

---

d) CHEM 600 Grades .....	18
1. Presentation Seminar .....	18
2. Attendance .....	18
3) CHEM 700 - Teaching Practicum .....	20
4) CHEM 800 - Graduate Research .....	20
D. Course Waivers.....	21
E. Annual Evaluation .....	21
F. Time Away .....	21
G. Probation and Dismissal .....	21
H. Conflict Resolution.....	22
I. Reduction or Termination of Financial Support .....	22
J. Graduate and Postdoctoral Studies Guidelines for Academic Probation, Dismissal, Petitions, and Grievances .....	22
K. Achievement Awards .....	22
<b>VI. TYPICAL TIMELINE FOR A PH.D. STUDENT</b>	<b>Page 25</b>
<b>VII. FIRST YEAR OF GRADUATE PROGRAM</b>	<b>Page 26</b>
A. Early Matriculate .....	26
B. Orientation (O-week) and Registering for Courses .....	26
C. UNIV 594 - Responsible Conduct of Research Requirement .....	28
D. Adding Courses / Dropping Courses .....	28
E. Joining a Lab .....	29
<b>VIII. SECOND YEAR OF GRADUATE PROGRAM</b>	<b>Page 30</b>
A. Advancement to Candidacy .....	30
B. Qualifying Exam .....	31
<b>IX. ADVANCEMENT TO CANDIDACY TO GRADUATION</b>	<b>Page 31</b>
A. Ongoing Requirements.....	31
B. Annual Evaluations .....	32
C. Thesis Defense.....	32
<b>X. APPENDIX I – QUALIFYING EXAM GUIDELINES</b>	<b>Page 33</b>
<b>XI. APPENDIX II – EXAMPLE OF ONLINE STUDENT EVALUATION</b>	<b>Page 39</b>
<b>XII. APPENDIX III - WEISS SCHOOL OF NATURAL SCIENCES POLICY     – GRADUATE STUDENT TIME OFF</b>	<b>Page 41</b>
<b>XIII. BENEFITS &amp; RESOURCES FOR RICE GRADUATE STUDENTS</b>	<b>Page 42</b>

# Rice University

## Department of Chemistry

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### I. ABOUT THE Ph.D. IN CHEMISTRY

Welcome to the Rice University Department of Chemistry! The department encompasses those at Rice who investigate the composition, properties, structure, reactivity and mechanisms of transformations of matter. Among us are theorists and experimentalists, organic chemists and inorganic chemists, physical chemists and biological chemists, scientists and engineers. Rice is a terrific place to do research in Chemistry. The department has developed two Nobel laureates and many members of the National Academy of Sciences.

For decades, Rice culture has promoted interdisciplinary research. Most Rice Chemistry professors have additional appointments elsewhere, including four of the five science departments and four of the eight engineering departments on campus. We have particularly strong programs in nanoscale science, theoretical Chemistry, inorganic materials, experimental physical Chemistry, biological Chemistry, supramolecular Chemistry, biophysics and environmental Chemistry. Rice University is a member of the Texas Medical Center, which is the largest in the world, and the Department of Chemistry is at the center of important breakthroughs in nanomedicine.

Our graduate program is sharply focused on promoting the highest level of achievement for each Rice doctoral student. The program is highly selective, admitting only about 25 graduate students a year. These small numbers ensure that Rice graduate students have exceptional access to faculty time, instrumentation and other resources. As a consequence, Chemistry graduate students at Rice develop unusually strong publication records. To ensure that financial constraints are not an obstacle, we waive the application fee for domestic students who have a GPA of 3.7-or-above, and provide a generous stipend and full-tuition waiver for those students who enter our doctoral program.



## Some Wisdom on How to Be a Good Researcher

- You are a junior research colleague, not a lab assistant or technical support. You are learning how to conduct research, not just how to perform experiments or calculations.
- Aim to become a creative, independent researcher, and strive to perform novel, creative research in the process.
- Think critically: always question yourself, your advisor, your colleagues, and the literature.
- Read the literature: first, capture the essence of articles, not the details; then, go back to the most relevant articles and look for details where appropriate. The amount of the scientific literature on all subjects in Chemistry is huge, and you have to be able to separate the important things from the less relevant.
- Set long-term research goals: what do you want to achieve? Why is it important? What will you and others learn from your research?
- Set short-term objectives accordingly. Mountains are climbed one step at the time. How can you break the long-term goals into shorter-term objectives? How can you achieve the first few objectives? If you can't see a clear path, can you break down your objectives further?
- Don't take shortcuts. Often, there is a right way and an easy way to solve a problem: they rarely coincide. Choose the right way over the easy way. Build each step of your research on sound foundations.
- Think creatively and not only when you're in the lab. Think about your problem while you shower, while you cook, while you drive, before going to sleep. If you're too tired to think creatively, take a break with your friends or family - then get back at your problem!
- Work hard and persistently: a good Ph.D. dissertation requires four to five or even more years of dedicated hard work.
- You, your advisor, and your colleagues are going into uncharted territory; thus, none of you can know where the dead ends are. Making mistakes and meeting dead ends is normal. Overcome frustration, learn from mistakes, and improve! Keep trying new things every time!
- Once you've thought hard about a problem, challenge your thinking with your colleagues, advisor, and other professors. Explain to them what you're trying to do and how, in both formal and informal settings. Don't be afraid to look stupid: the only people who have stupid ideas are those who have no ideas! Listen critically to your colleagues' replies for any useful advice. Can they point you towards useful work in other areas you have overlooked? Do they know of methods, materials, theories, etc., that you can bring to support your problem?
- Set high standards for yourself first and then for your collaborators.
- Do not be narrow-minded! Do not concentrate only on your specific area of research. Try to learn as many different scientific topics as possible. Frequently, new things are discovered on the border between different fields and subjects.

Rice University  
Department of Chemistry

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## II. ADMINISTRATIVE

### A. Administrative Staff

*Chemistry graduate students are welcome to ask any of our staff for assistance at any time.*

NAME	TITLE	PHONE EXT.	LOCATION	EMAIL (@rice.edu)
Vicky Armstrong	<i>Executive Administrator</i>	x2895	HBH 05	vstrong
Nancy Adler	<i>Academic Program Administrator</i>	x2906	SS 111	nancyneil
Carlos Cabello	<i>Chemistry Store Manager</i>	x3255	SS 113	ccabello
Javier Chavez	<i>Storekeeper II</i>	x3257	SS 101	jjchavez
Susan Cudnik	<i>Storekeeper I</i>	x3275	SS 113	scudnik
Ruxin Feng	<i>Teaching Stockroom Manager</i>	x3488	DBH 278	ruxin.feng
Corina Knowlton	<i>Program Administrator</i>	X2653	DBH 341	cknowlton
<b>Pam On</b>	<b><i>Graduate Program Administrator</i></b>	<b>x5820</b> <b>(cell 832-629-6371)</b>	<b>SS 111</b>	<b>pon</b>
Pedro R. Prado	<i>Lead Financial Administrator</i>	x3868	SS 111	prprado
Abby Vacek	<i>Facilities/Purchasing Administrator</i>	x5402	SS 111	akv1
Patricia Villanueva	<i>Seminar &amp; Event Coordinator</i>	x4082	SS 111	pv9
Anita Walker	<i>Undergraduate &amp; Classroom Coordinator</i>	x4027	DBH 243	aawalker
Selena Zermeno	<i>Department Coordinator</i>	x3277	SS 111	bar4

### B. Graduate Stipend

Individuals paid on a semimonthly schedule receive a consistent amount of pay twice each month. Graduate student payroll (GR) direct deposits are issued on the 15<sup>th</sup> day of the month and the last day of the month, or the previous business day if the pay date falls on a holiday or weekend. Each pay week in the semimonthly pay period runs from 12:01 a.m. Sunday until 12:00 midnight the following Saturday. If you have any questions regarding your stipend, please contact the Graduate Program Administrator, Pam On ([pon@rice.edu](mailto:pon@rice.edu)).

Rice University  
Department of Chemistry

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### C. Mail & Packages

Graduate Student mailboxes can be found in SS 111 and BRC near the freight elevator on the 1<sup>st</sup> floor. Please see Pam On ([pon@rice.edu](mailto:pon@rice.edu)) if you do not have a mailbox. Students who are assigned to labs in the BRC can contact Camy Noelck for mail-related questions: 713-348-8415/[camy@rice.edu](mailto:camy@rice.edu). FedEx and UPS Packages are received at the Space Science receiving dock, SS 101.

### D. ESTHER (Employee and Student Tools, Help, and Electronic Resources)

ESTHER is the Rice University web application for students, faculty, and staff. Students will use this application to register for classes, retrieve data such as grades, and access account information.

For information about how to use ESTHER, please visit the following site:  
[http://registrar.rice.edu/students/ESTHER\\_FAQs/](http://registrar.rice.edu/students/ESTHER_FAQs/).

#### Resources in ESTHER:

- ✓ Update your contact information
- ✓ Register
- ✓ Add and drop courses
- ✓ View your course schedule
- ✓ Access your final grades
- ✓ View your unofficial transcript
- ✓ Obtain enrollment verifications
- ✓ Print your degree application
- ✓ View course & instructor evaluation comments for previous semesters
- ✓ Identify holds on your account
- ✓ View financial aid information
- ✓ View your employment information, such as your past pay stubs (if applicable)
- ✓ Review charges and payments
- ✓ Pay your account online
- ✓ Changes to forms (W4 & direct deposit information)

### E. Student Health Insurance

*Student Health Insurance:* Rice University requires all degree-seeking students to have health insurance. Students electing to enroll in the Rice Student Health Plan may opt to be billed annually or semi-annually. Contact the Cashier's Office for payment options (713-348-4946). You must complete an insurance waiver form to waive your enrollment in the Rice Student Health Plan.

*Health Data Form (HDF):* ALL new undergraduate students and graduate students are required to submit a properly completed Health Data Form (HDF) to Rice University Student Health. All students under the age of 30 years, regardless of classification, must provide formal documentation of vaccination against meningococcal disease. (<https://health.rice.edu/>)

### F. Title IX

Rice encourages any student who has experienced an incident of sexual, relationship, or other interpersonal violence, harassment or gender discrimination to seek support. There are many options

available both on and off campus for all graduate students, regardless of whether the perpetrator was a fellow student, a staff or faculty member, or someone not affiliated with the university.

Students should be aware when seeking support on campus that most employees are required by Title IX to disclose all incidents of non-consensual interpersonal behaviors to Title IX professionals on campus who can act to support that student and meet their needs. The therapists at the Rice Counseling Center and the doctors at Student Health Services are confidential, meaning that Rice will not be informed about the incident if a student discloses to one of these Rice staff members. Rice prioritizes student privacy and safety, and only shares disclosed information on a need-to-know basis.

If you are in need of assistance or simply would like to talk to someone, please call **Rice Wellbeing and Counseling Center**, which includes Title IX Support at 3311 / (713) 348-3311.

Policies, including the Sexual Misconduct Policy and Student Code of Conduct, and additional information regarding Title IX can be found at [safe.rice.edu](http://safe.rice.edu).

### **G. Graduate Studies Forms Library**

[The Office of Graduate & Postdoctoral Studies](http://graduate.rice.edu) (GPS) keeps a very useful library of commonly needed forms for everything from leave of absence to candidacy petition to thesis submission. They can be found at <http://graduate.rice.edu/forms/>.

Specific forms include:

#### **Enrollment**

- Leave of Absence
- Short Term Medical Release and Parental Leave
- Withdrawal (a statement of withdrawal is also required)

#### **Registration and Transfer Credits**

- Registration forms can be found at the Office of the Registrar's website <https://registrar.rice.edu/>
- Transfer Credit forms are available through the Office of the Registrar

#### **Candidacy**

- Candidacy Petition Instructions
- Master's Candidacy Petition
- Doctoral Candidacy Petition
- Request for Extension of Time to Candidacy

#### **Thesis Defense**

- Thesis Defense Instructions
- Electronic form for announcing your defense as required by the General Announcements
- Request for Extension of Time to Defense



### Thesis Submission

- Thesis Submission Instructions
- Master's UMI Agreement Form
- Doctoral UMI Agreement Form

### Degree Conferral

- Registrar's Application for Degree (all degree candidates)
- Petition for a Non-thesis Master's
- Petition for an Automatic (or Candidacy) Master's
- Graduation Checklists

### Commencement

- Check the [graduate.rice.edu/graduation](http://graduate.rice.edu/graduation) website (Degree Conferral and Graduation) for information regarding commencement weekend in mid-March prior to **your commencement**.

## H. Applying for a Social Security Number

Generally, international students are eligible to apply for a social security number (SSN) or an Individual Tax Payer Identification Number (ITIN) after 10 days in the US.

For more information, please visit <https://www.ssa.gov/ssnumber/> or the employment section on OISS website <http://oiss.rice.edu/forms/>

It is advised to obtain a Social Security Number as soon as possible in order to decrease tax withholdings from graduate stipends.

To be eligible, the student must meet *all* the following requirements:

- ✓ Student is on F-1 visa status.
- ✓ Student is currently enrolled full-time.
- ✓ Student has secured employment, i.e. on-campus job, off-campus CPT/OPT, research assistant or teaching assistant in academic department (*fellowships are **not** considered employment*).
- ✓ Student has been in the United States for more than 10 days.
- ✓ Student has been registered as a full-time student in SEVIS.

If all requirements have been met, please follow these procedures:

- ✓ Request the Graduate Program Administrator, **Pam On** ([pon@rice.edu](mailto:pon@rice.edu)) to complete the "Employer Verification Form", available in the Office of International Students & Scholars or on-line at <http://oiss.rice.edu/forms/>.
- ✓ Take the completed form to OISS to complete the SSA Letter of Support.
- ✓ Once you receive your Social Security Number, go to Payroll to submit your information.

Rice University  
Department of Chemistry

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### I. ChemPals & First Year Students Mentoring Program

The Chemistry Department, with the assistance of CGSA, invites each new student to be a part of the incoming student mentoring program, ChemPals.

CGSA (Chemistry Graduate Student Association) is a group dedicated to the service of Rice Chemistry graduate students. They act as a liaison between graduate students and the Department as well as plan speakers, monthly happy hours, and outings! Through CGSA, the ChemPals program was developed and implemented. ChemPals are current graduate students in our Chemistry Department who serve as your “go to” - particularly during your 1<sup>st</sup> year as you transition into Grad/Rice life. Each incoming student receives a ChemPal.

You can contact the CGSA President, **Vanessa Espinoza** ([vbe1@rice.edu](mailto:vbe1@rice.edu)) or **Pam On** ([pon@rice.edu](mailto:pon@rice.edu)) for additional information.

### J. 2020 - 2021 CGSA (Chemistry Graduate Student Association) Board Members

Position	Name	Rice Mail Address
President	Vanessa Espinoza	<a href="mailto:vbe1@gmail.com">vbe1@gmail.com</a>
Vice President	Rachael Kress	<a href="mailto:rnk1@rice.edu">rnk1@rice.edu</a>
Secretary	Zhihua Cheng	<a href="mailto:zhihua.cheng@rice.edu">zhihua.cheng@rice.edu</a>
Treasurer	Aaron Bayles	<a href="mailto:ab93@rice.edu">ab93@rice.edu</a>
Inventory	Yigao Yuan	<a href="mailto:yigao.yuan@rice.edu">yigao.yuan@rice.edu</a>
GSA Representative	Tracy Yu	<a href="mailto:ly35@rice.edu">ly35@rice.edu</a>
Academic Speaker Coordinator	Alex Al-Zubeidi	<a href="mailto:aa106@rice.edu">aa106@rice.edu</a>
Career Speaker Coordinator	Niklas Gross	<a href="mailto:ng27@rice.edu">ng27@rice.edu</a>
Social Chair	Ceci Martinez Jimenez Kevin Shumard	<a href="mailto:cecilia.martinez@rice.edu">cecilia.martinez@rice.edu</a> <a href="mailto:ks91@rice.edu">ks91@rice.edu</a>

CGSA Webpage: <https://chemistry.rice.edu/chemistry-graduate-student-association>

### III. GENERAL ANNOUNCEMENTS

Rice University publishes its "General Announcements" (GA) each year. These are the official rules of the university and can be found at <http://ga.rice.edu/>. The section titled "Graduate Students" outlines the basic rules and expectation for all graduate students at Rice University. Students must be in agreement with the General Announcements and Code of Conduct found at: <https://sjp.rice.edu/code-of-student-conduct>

While all students are bound by these minimum requirements, many programs including the Ph.D. in Chemistry have additional requirements. The second portion of the General Announcements is the section specific to the Department of Chemistry, which can be found at <https://chemistry.rice.edu>. This section details all of the basic requirements for earning a Ph.D. in Chemistry. This section from the most recent general announcements is reproduced below:

*In case there is conflicting information, university-wide regulations take precedence over department-wide regulations, which take precedence over research group-wide regulations.*

When in doubt, students should seek help first at the department level (Graduate Program Administrator, Chair of Graduate Studies, Advisor, and/or Department Chair) and then at the Central Administration level (Office of Graduate and Postdoctoral Studies). It is very important and useful to follow this order and not to contact all sources at the same time.

#### **Requirements for MA and Ph.D. in Chemistry**

For general requirements, see Graduate Degrees (<https://ga.rice.edu/graduate-students/academic-opportunities/degrees/>). Students who have completed coursework equivalent to that required for a BA or BS in Chemistry may apply for admission to the Ph.D. program. For more information, see Admission to Graduate Study (<https://ga.rice.edu/graduate-students/academic-policies-procedures/admission/>). Students are not normally admitted to study for an MA degree.

### IV. REQUIREMENTS FOR THE Ph.D. IN CHEMISTRY

#### **A. Research**

The Ph.D. in Chemistry is awarded for original research in chemistry. During the first semester of residence, students select a research advisor from among the members of the faculty. In some cases, students may choose research advisors outside of the department. Approval of the department chair is required to formalize these advising relationships. The research advisor will guide the student in the choice of an appropriate research topic and in the detailed training required to complete that project. Students must successfully complete CHEM 800 Graduate Research and CHEM 600 Chemistry Seminars every semester of residence. Candidates earn a Ph.D. after successfully completing at least 90 semester hours of advanced study in Chemistry and related fields, culminating in a thesis that describes an original and significant investigation in Chemistry. The thesis must be satisfactorily defended in a public oral examination. The student must pass the thesis defense before the end of the 16th semester of residency.

## **B. Coursework**

Within the first two years, the student must complete six 3 credit lecture courses at Rice University, or their approved equivalent. In order to satisfy this requirement, each of these courses must satisfy all following criteria:

- They must be approved by the department's Graduate Studies Committee.
- Chemistry graduate courses must be at the 500 level or higher. Certain 300- and 400-level courses in other departments may be acceptable with **prior** approval by the department's Graduate Studies Committee. A maximum of three lower-level courses in other departments can count towards the six-class requirement, and these do not count towards the University-wide requirement of 90 credits at the 500 level. Courses must be in technical subjects in science or engineering. Courses in teaching, presentation, or management will not be counted toward the six-class requirement.
- Each course must be passed with a grade of B- or higher. It is possible to repeat or replace a maximum of 2 courses, upon approval of the department's Graduate Studies Committee.
- Students who pursue both the BS and the Ph.D. at Rice need not duplicate course work for the two degrees. However, teaching as an undergraduate does not substitute for the teaching requirements in the Ph.D. program.

## **C. Responsible Conduct of Research**

Each graduate student must successfully complete the ethics course UNIV 594.

## **D. Teaching**

Each graduate student must participate in teaching (CHEM 700) for the equivalent of **three (3)** semesters. An average of a B- in all 3 courses is required. Assignments are determined by departmental needs.

## **E. Qualifying Examination**

The qualifying exam has written and oral components (the expectations are available in the department office). The committee will be composed of three faculty members, excluding the research advisor. The written document must be submitted to the committee at least one (1) week before the date of the oral examination. The examination must be taken by the last day of class at the end of the student's 4<sup>th</sup> semester in residency. Any follow-up work required by the committee must be completed by the assigned date, and the exam must be passed by the end of the 6<sup>th</sup> semester. For detailed information, see "X - Appendix I - Qualifying Examination Guidelines".

## **F. Advancement to Candidacy for the Ph.D.**

After completing the required coursework, teaching, and qualifying examination each student must petition to Advance to Candidacy for the Ph.D. degree. Upon advancement, a student chooses a thesis committee with the guidance and approval of the research advisor and department chair. The thesis committee must be a minimum of 3 faculty members:

1. Your Ph.D. advisor
2. Two members of your Qualifying Exam Committee
3. One faculty member whose primary appointment is in a department outside of Chemistry

Rice University  
Department of Chemistry

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*(If one of the members of your QE Committee is outside the Chemistry Department they will qualify as an outside committee member)*

4. Optional - The student and Ph.D. advisor may also include additional faculty as they wish to more thoroughly evaluate the work.

Detailed information regarding choosing a thesis committee can be found in the GA at <https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-doctoral-degrees/>

### G. Satisfactory Performance

To remain in good standing, a student must:

- Be enrolled full time in a departmentally approved research group beginning the second semester, and every semester thereafter.
- Upper Level Lecture Courses *(additional information can be found on page 15)*
  - Maintain an overall GPA of 3.0 (B) or higher in upper level lecture courses
- CHEM 600 - Chemistry Seminars *(additional information can be found on page 16)*
  - Receive a semester grade of 3.0 (B) or higher
  - A grade of 2.67 (B-) or below will place you on probation
- CHEM 700 - Teaching Practicum *(additional information can be found on page 20)*
  - Receive a semester grade of 3.0 (B) or higher
  - A grade of 2.67 (B-) or below will place you on probation
- CHEM 800 - Graduate Research *(additional information can be found on page 20)*  
*Failure to maintain satisfactory grades and sufficient progress in research will result in probation and possible dismissal.*
  - Receive a semester grade of 3.0 (B) or higher
  - A grade of 2.67 (B-) or below will place you on probation

All graduate students are evaluated annually to ensure that they are making appropriate progress towards the degree (see “Section XI - Example of Online Student Evaluation”). The student, advisor, or department may request a meeting between the student and a faculty committee at any time to evaluate progress or to determine a course of action. If progress is unsatisfactory, the committee may recommend a semester of probation, which could result in dismissal from the program if progress remains unsatisfactory in the probationary semester and any following. A second probation at any time will lead to dismissal.

### H. Requirements for the MA in Chemistry

Although students are not normally admitted to study for an MA, graduate students may earn the MA after obtaining approval of their candidacy for the Ph.D. The MA may also be earned by students who do not achieve Ph.D. candidacy by satisfying all following requirements:

- *Completing the six one-semester courses required for Ph.D. candidacy*

- *Producing a Master's thesis that presents the results of a program of research approved by the Department*
- *Passing a final Master's thesis defense and submitting the thesis to the Office of Graduate and Postdoctoral Studies*
- *Following the university requirements for the thesis Master's degree*  
<https://ga.rice.edu/graduate-students/academic-policies-procedures/regulations-procedures-thesis-masters-degrees/#text>

## **I. Appeal**

Students may petition the Chemistry Graduate Studies Committee for variances on these academic regulations. Contact your Graduate Program Administrator (Pam On) to obtain more information on *Academic Petitions*.

## **V. PROGRAM PROTOCOL**

### **A. Changing Laboratories**

After a student has joined a research group, either the student or the advisor might determine that this match is not suitable. Keep in mind that changing laboratories is likely to set the student's timeline back several months. Before taking any actions, students should first discuss the situation with the current PI and explore all possible solutions (e.g., changing the project, receiving more supervision). If the student decides to change labs, approval of the Graduate Studies Committee and Department Chair is required.

A student is required to find a new research advisor to continue in the program if:

- She/he has been asked to leave the lab by her/his advisor.
- A student may *elect* to leave her/his research group based on research area, perceived mismatch in student/advisor personality, or other irreconcilable differences.

Regardless of the reasons the original student/advisor relationship has ended, the case is referred to the Graduate Studies Committee as soon as possible.

#### **1) Advisor's Responsibilities:**

If an advisor determines that a student's research performance is not adequate for timely progress toward a Ph.D., the advisor must discuss and establish expectations with the student. In addition, the expectations, reasons, and timeline should be followed-up in writing and given to the student. A minimum timeline of 1-2 months (half a semester) is recommended by the Graduate Studies Committee. The written evaluation must be shared with the student and the Co-Directors of Graduate Studies. If the student fails to meet the expectations set by the deadline, the advisor can ask the student to leave the group after documenting in writing how the student has continued to fail. Two written statements are therefore requested before an advisor can ask a student to leave her/his group.

In addition, for letter grades of B (not a failing grade) and below (B- and lower triggering an

automatic probation) in CHEM 800, a written evaluation by the advisor is required. The evaluation needs to document the reasons for the grade, how performance issues can be addressed moving forward, and a timeline for the expectations expressed, assuming that the student is not asked to leave the group immediately (i.e. it is the first written evaluation documenting lack of performance). This evaluation needs to be sent to the student as well as the Co-Directors of Graduate Studies. Note that this requirement is in addition to the yearly evaluations and it is triggered based on CHEM 800 research grades each semester.

## 2) Student's Responsibilities:

A student who is considering changing advisors should consult with the Co-Directors of Graduate Studies or the Department Chair. To avoid potential conflicts that may result in a change of labs, students are encouraged to communicate often with their advisors and, in case of any issues, ask for written feedback and a suggested path forward including deadlines.

It is, furthermore, the right of every student to ask for her/his thesis committee to meet anytime and to provide feedback in order to resolve potential conflicts. If the thesis committee has not been established, the Graduate Studies Committee will assign an appropriate committee.

After changing the lab, it is the student's responsibility to call a meeting of her/his thesis committee to evaluate the success of the transfer and if the student is making reasonable progress in a new group. This must be done at the end of the first semester after transferring to a new group.

## 3) Graduate Studies Committee's Responsibilities:

- a) Determine whether it is appropriate for a student to try to find a new lab and stay in the program, or if the student should depart from the program.
- b) If the student is approved to look for another lab, the committee must decide how long the student has to find a new advisor and recommend whether it would be appropriate to provide any bridge resources to support the student while she/he is not affiliated with a lab. The department chair will formally be the student's advisor during any time the student is between labs, and will submit grades and other evaluations of the student.
- c) If the student finds an advisor willing to support her/him, the committee will determine if the particular student/advisor match has sufficient promise to go forward. The committee may solicit letters from: the student, the previous advisor, and any potential new advisor(s). The committee may also ask the student to make a presentation on items such as: research achievements with the previous advisor, likely research projects with the proposed advisor, reasons for moving, or anything else relevant to the case in question. If the committee does not gain adequate confidence that changing advisors will lead to a positive outcome, the student will not be allowed to continue in the program. Generally speaking, the fewer years that the student has been with her/his original advisor the more favorable the outlook of the committee will be. Transfers during a student's 1<sup>st</sup> year are relatively common and usually due to student/advisor mismatch. Transfers after advancement to candidacy can create a major setback in timeline to graduation.

- c) If a student changes advisors prior to achieving candidacy, the committee, in consultation with the new advisor, will determine a reasonable timeline for the qualifying exam to be completed. In some circumstances it may be more suitable to have the student defend a Master's thesis.
- d) A student who changes advisors after achieving candidacy will join the new lab on research probation (regardless of her/his previous status). This probation must be resolved by a meeting with the thesis committee at the end of the first semester in the new lab, in which the student must convince the committee that the transfer has been successful. If a student changes advisors early in graduate school, the qualifying exam will serve as the evaluation for whether the transfer has been successful.

### **B. Primary Appointment is Outside the Chemistry Department**

The Department of Chemistry has many faculty members whose primary appointment is in another Rice department but who have a joint appointment in Chemistry (all these faculty are listed on the Chemistry Department webpage). Students are permitted to choose these faculty members as their primary research advisor without any special permission. Students, however, are not free to choose faculty members without an appointment in Chemistry except under very rare circumstances, and this requires approval from both the Co-Directors of Graduate Studies and the Department Chair.

### **C. Course Requirements**

#### **1) Lecture Courses**

To advance to candidacy every student must successfully complete a minimum of six (6) lecture course equivalents (3 credit courses count as 1 equivalent; 1.5 credit lecture courses in Chemistry count as 1/2 of an equivalent) in upper level chemistry, math, science or engineering courses. The cumulative course grade point average (GPA) for all courses must be 3.0 (B) or greater. However, an individual course grade of 2.33 (C+) or below during a given semester will require the course to be retaken or replaced with another course.

It is also possible to repeat or replace a maximum of 2 courses, upon approval of the Departments' Graduate Studies Committee.

Recently the Department of Chemistry has also begun offering half semester courses. Two of these courses, and some select half semester courses from other departments, can be combined to count towards the 6 lecture course requirement.

Some students may come to Rice having already completed advanced work at another institution and may qualify to have one course of the 6 lecture courses requirement waived (see course waivers below). The department allows a great deal of flexibility in what courses fulfill this requirement. However, to qualify, courses in Chemistry must be of the 500 level. In some instances, courses outside the Department of Chemistry at the 300 or 400 level may count toward the 6 lecture courses requirement.



Rice University  
Department of Chemistry

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*All 300 or 400 courses taken outside of the Department of Chemistry require the written approval of the Chair of Graduate Studies and your Ph.D. advisor to qualify for the 6 lecture courses requirement.*

Courses that **do not** qualify towards the six-course requirement include: courses in management, administration, writing and presentations (including thesis preparation), seminars, and teaching courses. This does not mean that you cannot or should not take these courses, only that they do not count towards the requirement. There are many instances in which it may be important and desirable to take such courses and, with agreement from his or her research advisor, the student is encouraged to take these classes. *If you have any doubt about whether a particular course counts towards your degree or not, please contact one of the Co-Directors of Graduate Studies, John Hutchinson ([Jshutch@rice.edu](mailto:Jshutch@rice.edu)) or Eugene Zubarev ([zubarev@rice.edu](mailto:zubarev@rice.edu)) for clarification.*

**2) CHEM 600 - Chemistry Seminars**

Chemistry graduate students are required to register for a section of CHEM 600 each semester (including the semester the thesis is defended). There are 3 components that make up CHEM 600:

- a) **Presentation Seminar** – The student must present a seminar annually according to the following schedules:

**FALL MATRICULATE**

Year	Fall Semester	Spring Semester
1 <sup>st</sup>	N/A	Background and Preliminary Results
2 <sup>nd</sup>	Practice Qualifying Exam	Qualifying Exam
3 <sup>rd</sup>	N/A	Research Progress
4 <sup>th</sup> and higher	Research Progress	N/A

Rice University  
Department of Chemistry

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**SPRING MATRICULATE**

*Please notify the faculty member running your section to schedule you to present*

Year	Spring Semester	Fall Semester
1 <sup>st</sup>	N/A	Background and Preliminary Results
2 <sup>nd</sup>	N/A	Practice QE & Qualifying Exam
3 <sup>rd</sup>	N/A	Research Progress
4 <sup>th</sup> and higher	N/A	Research Progress

- b) Student Seminars** - Attend a minimum of **SIX (6)** one-hour student seminar sessions in any CHEM 600 section.

In the Spring semester, due to qualifying exams this required minimum might be adjusted, and the graduate students will be informed if there is a change. CHEM 600 seminars typically have two speakers, but sessions with only one speaker due to scheduling problems also count.

The master schedule is the public “CHEM 600” [Google calendar](#) on the Departmental web page. It is recommended that students subscribe to this calendar. Contact **Anita Walker** ([aawalker@rice.edu](mailto:aawalker@rice.edu)) if you are unable to link to the calendar.

Attendance at student seminars will be verified by the speaker rubrics that will be submitted at the conclusion of the seminar. **Failure to submit a rubric(s) will be counted as absent.** The evaluator’s name will be removed from the rubric and they will be returned to the speaker as feedback.

Attendance can be tracked here:

[https://docs.google.com/spreadsheets/d/1dnDVS1n\\_f2uRx075kIPfBg0EhbogHJTnWGEGMA\\_YcY0/edit#gid=0](https://docs.google.com/spreadsheets/d/1dnDVS1n_f2uRx075kIPfBg0EhbogHJTnWGEGMA_YcY0/edit#gid=0)

- c) Chemistry Department Seminars** - Attend a minimum of **SIX (6)** Chemistry Department seminars of your choice. The seminars that qualify are compiled in the public “CHEM seminars” [Google calendar](#). It is recommended that students subscribe to this calendar as well at:

<https://calendar.google.com/calendar/embed?src=ricechemseminars%40gmail.com&ctz=America/Chicago>.

Rice University  
Department of Chemistry

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Attendance at Departmental seminars will be verified by the submission of the departmental rubric at the conclusion of the seminar. Failure to submit a rubric will be counted as absent.

**d) CHEM 600 Grades**

Grades for CHEM 600 are determined by two factors:

1. **Presentation Seminar** (see above schedule)

The quality of the presentation. If the student has presented during a given semester the instructor for the section will assign an **initial CHEM 600 grade**, based on her/his presentation. Each presentation will be approximately 20 minutes long followed by 5 minutes of questions.

The Qualifying Exam presentation may be 30-45 minutes long followed by questions. Concentrate on the experimental design, theoretical models, and results that you obtained *yourself*. The 1<sup>st</sup> year talk may be largely from literature, but for other talks only ~5 minutes of the talk should be of an introductory nature.

2. **Attendance at Six (6) Student Seminars and Six (6) Department Seminars**

If the student has presented during a given semester, the instructor for the section will assign an initial grade based on their presentation. This initial grade is then used to determine the final grade by the student's attendance at both student seminars and department seminars. For each shortfall of the six (6) mandatory attendances for the student seminars and departmental seminars the student will be penalized two fractional letter grades (e.g., A to B+).

If the student is not required to present during a given semester her/his initial base grade will be an "A".

Substitutions between student and department seminars are not allowed, *unless arranged with the Co-Directors of Graduate Studies before the semester begins*.

Examples:

Presentation Grade	Student Seminars Attendance	Department Seminars Attendance	Penalization for <6 Dept and Student Seminars (# fractional letter grades)	Final CHEM 600 Grade
A	6	6	0	A
A	6	5	2	B+
<b>B+</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>*B+</b>
A	5	5	4	B-
B+	5	6	2	B-

☆ *If you fulfill the required attendance, your presentation grade will be your final CHEM 600 grade.*

A grade of B or higher is necessary to maintain good standing in the department. A grade of B- or below will place you on probation. **Two** probationary events over the course of your Ph.D. may result in your expulsion from the program.

**Exceptions/Alternative Arrangements to Student and Department Seminars:** Expected attendance of student talks and department seminars may need to be prorated for students in certain circumstances (see examples below). Arrangements must be made with the Chairs of Graduate Studies **before** the semester begins. ***No negotiations on grading and attendance proration will be made at the end of the semester.***

Exceptions for **prorated** student and department seminars may include:

- If a student graduates during the semester.
- The student's thesis defense can count for the CHEM 600 talk if it's presented in the semester that the student is scheduled to present. If the student is certain that she/he will defend in a given semester, they may cancel their regular CHEM 600 talk that semester. However, if the student ends up not defending that semester, she/he will have skipped their presentation and will not pass CHEM 600 that semester.
- Research demands at an off-campus location. It is possible that during a particular semester the student will be unable to attend CHEM 600 due to research demands at another location (for example, an internship) or other interruptions of her/his normal schedule.
- If a student has a TA assignment during the Department seminars.

The above are the minimum guidelines for all sections of CHEM 600. Each semester the faculty member running your section of CHEM 600 may **add** requirements which you will be obligated to follow, but will never reduce any of the above requirements. Any additional requirements will be communicated to you during the first session section.

Please be sure to show appropriate respect to the speakers. During CHEM 600 and departmental seminars, laptops may be used only to take notes on the talk. The user should alert the speaker(s) beforehand that she/he will be using a laptop to take notes and should sit in the first or second row so that the audience can see that the computer is being used for an appropriate purpose. Please alert the Co-Directors of Graduate Studies Dr. John Hutchinson and Dr. Eugene Zubarev) if you become aware of any incidents in which this policy is not sufficiently effective. Arriving late is disruptive, and isn't fair to either the speaker who's trying to concentrate, or to the audience who arrived on time. The use of cell phone is also strongly discouraged. **Late arrivals will not be counted toward your CHEM 600 attendance requirements.**

### 3) CHEM 700 - Teaching Practicum

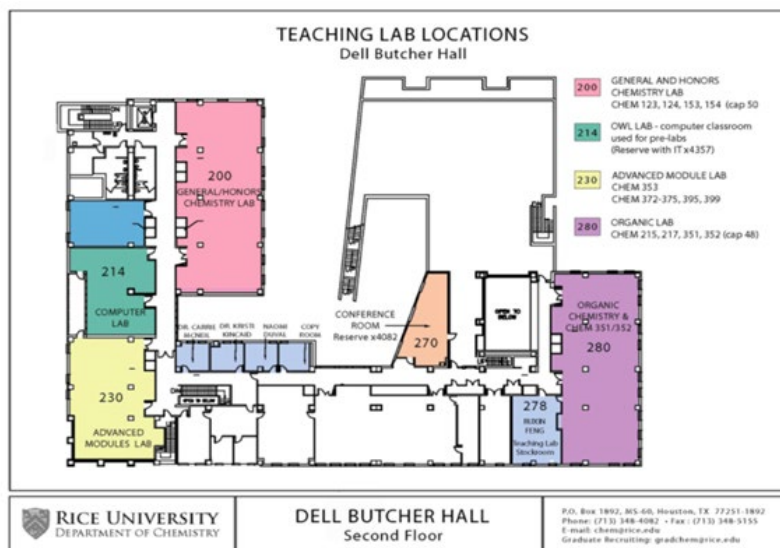
All graduate students are required to complete an equivalent of three teaching units through the CHEM 700 Teaching Practicum course. This course focuses on providing the tools necessary to effectively teach chemical concepts to undergraduate students, primarily in a teaching lab setting.

# Rice University

## Department of Chemistry

Outside of lab-specific responsibilities (given by the lab instructor), additional formal teaching training will be used to provide useful tips and techniques that can be employed while teaching, as well as to assist students in oral and written communication. The time commitment for CHEM 700 is 8-10 hr./week over a 16-week period (the week before classes formally begin to the week after the last class, 128-160 hr. total).

Because CHEM 700 is always taken for 2 credit hours whether a full or half course is taught, the number of CHEM 700 credit hours is not indicative of the number of teaching units the student has taught. The tally of teaching units is kept by the department office and is distributed annually.



#### 4) CHEM 800 - Graduate Research

For your first semester at Rice your grade in CHEM 800 will be determined by your participation in the faculty introductory talks and your three lab summaries (see Section VII-E, “Joining a Lab” for detailed information). You can still receive an A in CHEM 800 if you miss one faculty presentation; however, every presentation you miss after this will reduce your grade by two fractions of a letter grade (e.g. A to B+). Additionally your grade will be reduced by two fractions for every day your lab summaries are late. In short, everyone should receive an “A” in CHEM 800 their first semester if they are diligently researching their options for research.

After you have joined a lab your advisor will assign your letter grade based on your progress in research for the remainder of your time at Rice. A grade of B- or worse will result in the student being placed on a probation. Please note that any grade below an “A” should be concerning and you are recommended to discuss as soon as possible with your advisor why you received the lower grade and what you can do to improve it. Two semesters of poor performance (B- or below) will in most cases result in the student being removed from the Ph.D. program.

**★ You must register for CHEM 800 for fall, spring, and summer semesters and remain a full time student to receive a stipend.**

#### D. Course Waivers

Students are normally required to successfully complete 6 lecture courses (or their equivalent) in Chemistry or courses which are pertinent to their thesis objectives (Chemical Engineering, Biochemistry, Physics, etc.). In some cases, students start their Ph.D. program after already completing

# Rice University

## Department of Chemistry

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substantial graduate course work, i.e. a Master's degree from another university. If a student has a Master's degree with all "A" grades in their fall semester, they can automatically have one (1) course waived. If you qualify for a course waiver, you are asked to check in with **Pam On** ([pon@rice.edu](mailto:pon@rice.edu)) at the beginning of the spring semester to establish an official record of your 1 course waiver.

### **E. Annual Evaluation**

Students are evaluated each year. First year students are evaluated based on success in joining a laboratory, completion of coursework and TA assignments. This evaluation is carried out by the Graduate Committee and no written document is required from the student or provided to the student unless deficiencies are noted.

Second year students are evaluated based on their performance on their Qualifying Exam by a committee of three faculty members. A written evaluation is provided to the student by the chair of the committee.

Third year and older students are evaluated via a web evaluation form. Instructions for this can be found in section XI.

Sixth year students, in addition to the annual evaluation form, need to have a meeting with their thesis committee. It is the student's responsibility to contact the thesis committee and arrange a room and meeting time. This meeting needs to occur during the first semester of the academic year. It is also the responsibility of the student to communicate to the Chemistry Graduate Studies Committee the conclusions of this meeting.

### **F. Time Away**

The Weiss School of Natural Sciences Policy regarding Graduate Student Time Off is found on page 41, APPENDIX XII.

Graduate school is a full-time, 12 months per year, occupation. Graduate students are expected to coordinate and obtain approval for time away with their research advisors sufficiently far ahead of time to avoid any conflicts.

### **G. Probation and Dismissal**

Students may be put on probation for a variety of reasons including, but not limited to, the following:

- 1) Overall GPA of lecture courses being below 3.0 (B)
- 2) Earning a grade of B- or less in CHEM 600, 700, or 800
- 3) Failing the Qualifying Exam

Upon being placed on probation, you will receive an email stating the reason you were placed on probation which will be copied to your research advisor and placed in your permanent file. Your first offense is only a warning. However, if you are placed on probation a second time, you will be dismissed from the Chemistry Ph.D. program unless your research advisor petitions the department to request you be allowed to continue in the program. If your advisor makes this request, a full faculty vote is required as to whether to keep you in the program or not.

*★ Please note: If you do particularly poorly in one semester of lecture courses it might be extremely difficult to improve your GPA back to an acceptable 3.0 or better in the following semesters. Even if your second semester grades are better than 3.0, if the total GPA is still below 3.0 this would qualify as a probationary event. Because of this, you are strongly urged to consider your course selection and load carefully at the beginning of the semester as well as before the drop deadline to avoid impossible situations. This especially applies to first year graduate students.*

#### **H. Conflict Resolution**

During the course of your Ph.D., it is possible that you may have a conflict with your research advisor over issues concerning your rate of progress, time to complete your degree, graduation or other scientific issues. While it is best to resolve these problems independently, there are many instances in which it is beneficial to have additional input. At any time a student, her/his advisor, or a thesis committee member can call a meeting to help resolve whatever the conflict might be. In such a meeting the student will make a brief presentation of research progress to her/his committee consisting of the research advisor plus two additional faculty members. Students are furthermore strongly encouraged to talk to any member of the graduate studies committee for input and best course of action. If a conflict cannot be resolved and it is determined that a change of labs is the only solution, the Graduate Studies Committee will work with the student to find a new advisor, as long as the student is otherwise in good academic standing. Please see section IV on page 13 for additional information.

#### **I. Reduction or Termination of Financial Support**

Students who are not making adequate progress in research or who have been placed on probation for other reasons may have their financial support removed and may also be removed from the Chemistry Ph.D. program.

#### **J. Graduate and Postdoctoral Studies Guidelines for Academic Probation, Dismissal, Petitions, and Grievances**

Please refer to the Graduate and Postdoctoral Studies website for university guidelines for academic probation and dismissal, petitions and appeals, and grievances and problems located at <https://gps.rice.edu/discipline> .

#### **K. Achievement Awards**

The Departmental graduate student **Achievement Awards** are presented to qualified students each year based on merit. Please see the below chart for Chemistry awards and processing.

## CHEMISTRY AWARD PROCESS FOR GRADUATES

\* The award information is subject to change

Award Title	Background Info	Semester/Event Awarded	# Awards	Stipend Support	Stipend Support Duration	One-Time Award	Eligibility	Application Deadline	Materials to Submit	Process
<b>Hasselmann Fellowship</b>	The fund was established in 1980 by Marjory Meyer Hasselmann for studies in the field of Chemistry.	Spring Commencement Reception	1-2	Yes	1 Year	\$1,000	3-4 year (current)	March 15th	CV	Student Emails Pam their CV & 1st author papers by deadline date
<b>Norman Hackerman Fellowship</b>	This award is intended for a graduate student in chemistry who demonstrates similar commitment and achievement to that which Dr. Hackerman exemplified during his academic and scientific career.	Spring Commencement Reception	1	Yes	1 Semester	\$2,000	3-4 year (current)	March 15th	CV	Student Emails Pam their CV & 1st author papers by deadline date
<b>Stauffer-Rothrock Scholarship</b>	The Stauffer-Rothrock Scholarship was established in 1968 in memory of E.S. Rothrock. Rothrock was awarded the first distinguished service award for outstanding achievement in the chemical engineering	Spring Commencement Reception	1	Yes	1 Year	\$1,000	3-4 year (current)	March 15th	CV	Student Emails Pam their CV & 1st author papers by deadline date
<b>Margrave Thesis Award</b>	Recognize a grad for an outstanding thesis.	Spring Commencement Reception	1 (two on occasion)	No	N/A	\$1,000	Graduating Students	~April 15 (for commencement)	Thesis, LOR & CV	Faculty Emails Pam Thesis & LOR
<b>Stephen C. Hofmann Award</b>	The Stephen C. Hofmann Award recognizes outstanding early achievement towards the Ph.D. degree and superb performance on the qualifying exam.	Fall/Orientation	Varies	No	N/A	\$500	N/A	N/A	N/A	QE Scores



Award Title	Background Info	Semester/Event Awarded	# Awards	Stipend Support	Stipend Support Duration	One-Time Award	Eligibility	Application Deadline	Materials to Submit	Process
<b>Turner, Richard Memorial Award</b>	Academic excellence in organic chemistry. Dr. Turner, an internationally recognized organic chemist, spent his life at Rice University.	Fall/Orientation	1	No	N/A	\$500	Research in Organic Chem	March 15th	CV	Student Emails Pam their CV & 1st author papers by deadline date
<b>Harry B. Weiser Leadership</b>	Awarded to graduate student(s) who exhibited above and beyond departmental service such as in a leadership role with graduate recruiting	Fall/Orientation	4-5	No	N/A	\$1,000	All Grads	N/A	N/A	Department decision
<b>Harry B. Weiser Teaching</b>	Awarded once a year based on TA performance. The faculty nominate with the support of student evaluations.	Fall/Orientation	5-7	No	N/A	\$500	TAs	June 15th	LOR & Student Evaluations	Course Instructors emails Pam Nominations
<b>Harry B. Weiser Research</b>	Awarded each year to Graduate students recognized for outstanding research	Fall/Orientation	3	No	N/A	\$1,000	3-4 year (current)	March 15th	CV	Student Emails Pam their CV & 1st author papers by deadline date

6/24/2019

## VI. TYPICAL TIMELINE FOR A Ph.D. STUDENT

### Year 1

*The most important objective of the 1<sup>st</sup> year is to secure placement into a laboratory (typically done near the end of October).*

In the first year, most students complete:

- 6 lecture courses in advanced Chemistry or other math, science or engineering discipline
- 1 or 2 units of teaching
- Give their first CHEM 600 presentation during the second semester

### Year 2

*The primary objective of the 2<sup>nd</sup> year is to complete the Qualifying Exam and advance to candidacy.*

- Any required lecture courses not completed in Year 1 must be completed before the end of Year 2.
- The 3 units of teaching must be completed by the end of the third year, but most students complete these by the end of Year 2.
- CHEM 600 presentations are made both semesters in the second year. The presentation in the second semester of the second year is the Qualifying Exam. At the end of the second year many students will have published their first paper. All other students should be near the submission of their first paper or should have made major progress towards this goal.

### Year 3 and Beyond

*With most of the requirements of the Ph.D. behind you, almost all of your energy should now be focused on research towards your Ph.D. defense.*

While the rate of publication varies from discipline to discipline and from lab to lab, the best way to measure your progress towards this goal is by the quality and quantity of publications.

- Graduate students in the third year and higher must continue to participate in CHEM 600 every semester they are enrolled as a student in the Chemistry Ph.D. program.
- You must give an oral presentation in the spring semester (3rd year) or fall semester (4th year and above). See CHEM 600 guidelines for details.

## Graduation

The required time to complete a Ph.D. depends on many variables including the type of project you are working on, how hard you work, how smart you are and, many times, how lucky you are. However, most Rice students will graduate with a Ph.D. in 4-6 years with 5 years being the most typical.

The last hurdle you face as a student will be to write your thesis and publicly defend it in front of a committee of at least three faculty members, one of whom must be your Ph.D. advisor and one of whom must be a Rice faculty member who has a primary appointment outside the Department of Chemistry.

More detailed information can be found in the sections below.

## VII. FIRST YEAR OF GRADUATE PROGRAM

### A. Early Matriculate

Some students may come to Houston early (between May 16 and August 15) to work in a lab over the summer. This is a way to get a head start on picking an advisor during a time when you do not have all of the distractions of course work and teaching assignments. During this time you will be paid at the existing stipend rate, which also means that the professor you work for will be paying you. In order to do this, you will need an agreement that the particular faculty member is willing and able to support you during this time. The Chair of Graduate Studies or department chair can help you find a suitable match if you ask before coming.

It is important to realize that by working for this faculty member during the summer, neither you nor the professor is committed to a long-term relationship. You may find that the science, lab atmosphere, and personality of the professor you have chosen are exactly what you are hoping for in a Ph.D. program. On the other hand you may find that some aspect of that lab is not what you had hoped. Similarly, the professor may find that you are exactly the kind of intelligent, hard-working student that she/he hopes to recruit, or she/he may not. If it works out for both parties, you are on your way to choosing a lab. If it doesn't work, you have gained valuable experience and have full, normal time to select an advisor.

### B. Orientation (O-week) and Registering for Courses

Your first semester at Rice will begin with Orientation Week (or O-week) during which you will learn the basics about Rice and the Department of Chemistry. The major events of O-week will include presentations by many of the faculty interested in recruiting students this year. This is a good way to make your first contact with faculty if you did not participate in summer research.

Faculty advisors will review your background and assist you in selecting courses. Most students will select three 3-credit advanced Chemistry or other science lecture courses in addition to UNIV 594 (Responsible Conduct of Research), CHEM 600 (1 credit, the *Chemistry Seminars*), and CHEM 800 (variable number of credits, *Graduate Research*).

Rice University  
Department of Chemistry

The majority of incoming students will also teach their first semester and therefore be enrolled in CHEM 700 (2 credits, the *Teaching Practicum*). There will also be a special information session regarding your teaching assignment during orientation.

• **Registering for Courses:**

To be a full-time student and receive a stipend, you **must** be enrolled in a minimum of 9 credit hours every semester (6 credit hours during summer session). To ensure that students remain full-time even after dropping a class or even two, a student should be enrolled in at least **15** credit hours every semester. A variable number of credit hours of CHEM 800 (*Graduate Research*) should be added such that the total credit hours equal at least 15.

Six example schedules for your first semester are shown below:

3 Lectures & No TA			3 Lectures & TA		
CHEM 501*	3	This is the most common schedule for a first semester graduate student.	CHEM 501*	3	This is the second most common schedule for a first semester graduate student.
CHEM 547*	3		CHEM 547*	3	
CHEM 542*	3		CHEM 542*	3	
UNIV 594	1		UNIV 594	1	
CHEM 600	1		CHEM 600	1	
CHEM 800	4		CHEM 700	2	
<b>Total Credits</b>	15		<b>Total Credits</b>	15	
2 Lectures & No TA			2 Lectures & TA		
CHEM 501*	3	Students who feel they may be especially challenged their 1 <sup>st</sup> semester or who feel that the offered courses are particularly unsuited to their needs may elect to take only 2 lecture courses.	CHEM 501*	3	Students who feel they may be especially challenged their 1 <sup>st</sup> semester or who feel that the offered courses are particularly unsuited to their needs may elect to take only 2 lecture courses.
CHEM 542*	3		CHEM 542*	3	
UNIV 594	1		UNIV 594	1	
CHEM 600	1		CHEM 600	1	
CHEM 800	7		CHEM 700	2	
<b>Total Credits</b>	15		<b>Total Credits</b>	15	
		<b>However</b> , in this case where no TA duties are assigned, the student should be aware that they are leaving a great deal of work for later semesters.			

Rice University  
Department of Chemistry

4 Lectures & No TA			4 Lectures & TA		
CHEM 501*	3	Students with particularly good preparation coming to Rice may elect to take 4 lecture courses. This option is particularly viable since: <ul style="list-style-type: none"> <li>• <i>The student will have no TA duties</i></li> <li>• <i>Your later semesters will be more free for research</i></li> </ul> <b>However</b> , please note that it is far better to earn 3 - A's than it is to earn 4 - B's (or worse). Be prepared to drop one of your classes if the work load is too much.	CHEM 501*	3	Students with particularly good preparation coming to Rice may elect to take 4 lecture courses. This is <b>advantageous</b> as your later semesters will allow for research.  <b>However</b> , please note that it far better to earn 3 - A's than it is to earn 4 - B's (or worse). Be prepared to drop one of your classes if the work load is too much.
CHEM 547*			CHEM 547*	3	
CHEM 442*	3		CHEM 542*	3	
CHEM xxx	3		CHEM 5xx	3	
UNIV 594	3		UNIV 594	1	
CHEM 600	1		CHEM 600	1	
CHEM 800	1		CHEM 700	2	
<b>Total Credits</b>	4	CHEM 800	2		
	18	<b>Total Credits</b>	18		

☆ Note: the 500 level courses shown on this table are arbitrary and utilized for example only.

### Registering for Courses (Summer Session & Last Semester)

- You must also register for CHEM 800 for the summer session to remain a full time student.
- In your 5th and later semesters your schedule might look like this:

Course	Credits
CHEM 600	1
CHEM 800	14

The changing number of credits of CHEM 800 is indicative of the transition from a mixed emphasis on coursework and research towards total dedication to your research.

### C. UNIV 594 - Responsible Conduct of Research Requirement

All students are required to register for UNIV 594 “Responsible Conduct of Research” during their first semester as a student. Responsible conduct of research (RCR) is defined as the practice of scientific investigation with integrity. It involves the awareness and application of established professional norms and ethical principles in the performance of all activities related to scientific research.

### D. Adding Courses / Dropping Courses

Adding and dropping courses near the beginning of a student's first semester requires the signature of one of the Co-Directors of the Graduate Studies Committee, John Hutchinson ([Jshutch@rice.edu](mailto:Jshutch@rice.edu)) or Eugene Zubarev ([zubarev@rice.edu](mailto:zubarev@rice.edu)). Dropping courses after the drop deadline (typically the 10<sup>th</sup> week of the semester) is usually **not** permitted.

Rice University  
Department of Chemistry

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### E. Joining a Lab

The department is ultimately responsible for each student's education, and faculty members cannot unilaterally admit students into their labs. Students join labs through a three-way agreement with a faculty member and the department. The Chemistry Department's policy is for graduate students to rotate and join labs with Chemistry Core and Joint Faculty members. Adjunct members do not qualify. Please view the [Department of Chemistry's](#) website for detailed information about [Core](#) and [Joint](#) Faculty members.

Students are not committed to any labs during a shopping period that runs from fall matriculation midterm of the fall semester in the middle of November). The lab-joining process is initiated by the student, who should submit by email to **Pam On** ([pon@rice.edu](mailto:pon@rice.edu)) an ordered list of three (3) labs in which she/he is interested by the end of the shopping period (before midterm of the fall semester). The faculty will be informed of the choices, and a faculty member listed as a student's first choice may then accept that student if the department approves. If necessary, similar processes will place students in their second choice (or in very rare cases, a lower choice lab). Any extra-departmental agreements are meaningless. If a student and faculty member were to make a private agreement to work together and one party then discovers an undesirable trait in the other before the departmental approval, it would be best for everyone to seek other partners. Where a student worked over the summer or had a desk during the shopping period is immaterial to the lab-joining process; neither student nor faculty member have any obligation to continue the relationship. Research during the shopping period is allowed but not encouraged. It is only 7 weeks and students are busy, so it's very unlikely that students will achieve anything substantial. Faculty should not pressure students to do experiments during the shopping period to assure/permit admittance. Students should inform the chair if they feel pressure.

It is essential that students learn as much as possible about many labs. To facilitate this process, each student must submit three (3) one-page summaries, each of which describes her/his investigations into one of three different labs. These will be spaced throughout the shopping period (due **September 11, October 2, October 23**) to keep students engaged in the shopping process. Students should cover a paper from the lab, a group meeting, or an ongoing project discussed with the professor or a lab member. By that time the student should also attend at least one group meeting (if this is not logistically possible, meet individually with lab members) and have a personal meeting with the professor. By 5 p.m. of the due date, the document should be emailed to **Pam On** ([pon@rice.edu](mailto:pon@rice.edu)), **Dr. Hutchinson** ([Jshutch@rice.edu](mailto:Jshutch@rice.edu)), **Dr. Zubarev** ([zubarev@rice.edu](mailto:zubarev@rice.edu)), and the professor whose lab was reviewed (who should alert Drs. Hutchinson and Zubarev if the one page description is not adequate, the student did not attend a group meeting or an equivalent, or she/he did not have a personal discussion with the student). The ownership is on the student. Students who don't use this process to convince the faculty that they have thought carefully about three options by **October 30** will be assigned a lab later in the semester.

To summarize, you will need to:

- ✓ Write **three (3)** one-page reports on different research groups.
- ✓ The three documents should be emailed to [Jshutch@rice.edu](mailto:Jshutch@rice.edu), [zubarev@rice.edu](mailto:zubarev@rice.edu), [pon@rice.edu](mailto:pon@rice.edu), and the professor whose lab was reviewed by 5 p.m. on their respective due dates of September 11, October 2, and October 23.

Rice University  
Department of Chemistry

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- ✓ A hard-copy ordered list of three prospective advisors should be submitted to **Pam On**, Space Science 111 building by **4:00 p.m. Friday, October 30**.

Students who applied to the Rice Chemistry Ph.D. program to continue a formal advising relationship may bypass this process and join a lab directly. Examples are:

- 1) A new graduate student who was previously a Rice undergraduate and who has performed undergraduate research can ask to be immediately affiliated with her/his undergraduate research advisor.
- 2) A new graduate student who worked as a visiting researcher *before applying* to the Rice Ph.D. program can also ask to be immediately affiliated with that lab. After this request has been made, the above-described departmental verifications still apply but the student need not complete the three lab investigations. This early request to bypass the normal system must be completed on or before the first lab report is due (September 7).

Students cannot bypass the lab reviews if their sole previous affiliation with a potential advisor is research the summer before matriculation.

If a student is unable to find an advisor at the end of the second semester they will be placed on probation (For fall matriculates the end of the second semester would be considered the end of the spring semester. For spring matriculates the end of the second semester would be considered the end of the summer semester). If a student is unable to find an advisor by the end of the 3<sup>rd</sup> semester they will be dismissed from the Chemistry Graduate Program.

## VIII. SECOND YEAR OF GRADUATE PROGRAM

### A. Advancement to Candidacy

Your second year in the Rice Ph.D. program has one major goal: advancement to candidacy. A student who has advanced to candidacy has completed all the requirements for a Ph.D. with the exception of their Ph.D. thesis. As discussed below, a student who has advanced to candidacy must still stay in good standing (including participation in CHEM 600 and adequate performance in CHEM 800). In order to advance to candidacy, a student must:

- Successfully complete 6 lecture courses (or their equivalent) as described above.
- Successfully complete three teaching units.
- Successfully complete (pass) their qualifying exam.
- Get approval of the Ph.D. advisor who confirms that the student is making adequate progress toward a Ph.D.
- Get departmental approval to continue in the Ph.D. program as confirmed by the signature of the Department Chair.

If you did not complete your coursework requirements in your first year at Rice, you must now complete them. Most students will still have one or two semesters of teaching.

## B. Qualifying Exam

In addition, the major challenge for a student's second year is the successful completion of their qualifying exam. Complete details are available in the *Qualifying Exam Guidelines*, which is revised annually and included as an appendix to this student handbook. In all cases, the student is required to write a proposal which describes:

- The research that they have completed up until this point in their degree
- The conclusions they can draw from this work
- Their proposed work for the remaining Ph.D. (which, on average, is an additional three years of study)

In addition to this written document, the student presents their work in a public seminar where anyone may ask questions. After the question and answer session, your committee will excuse the public and your exam will continue in private until your committee is satisfied that they can fully evaluate your work. Based on your written work, your public presentation and your ability to answer questions both in public and private, your committee will give you a numeric score in several categories, and detailed written feedback.

Each student either:

- 1) **Passes** - no further work required
- 2) **Incomplete** - some portion of the exam requires revision which will be detailed by the committee
- 3) **Fails** - they are required to leave the program unless their Ph.D. Advisor successfully petitions the full department to retake the QE to stay in the PhD program, or pursue a MA thesis degree.

Requirements for the Master's Thesis degree can be found at

<https://chemistry.rice.edu/graduate-degree-requirements>

☆ The full and official details of the qualifying exam process are detailed in the *Qualifying Exam Guidelines* document found in Appendix I.

## IX. ADVANCEMENT TO CANDIDACY TO GRADUATION

### A. Ongoing Requirements

After advancement to candidacy, a student's last major goal is to complete their Ph.D. thesis. While this is the focus, the student still has other obligations. In particular, all students are required to enroll and participate in CHEM 600 every semester they are a student. Failure to successfully complete the requirements of CHEM 600 (a grade of B- or lower) can lead to probation and/or expulsion from the program. Additionally, the student must make adequate research progress every semester as defined by their grade in CHEM 800. Any grade of B- or below in CHEM 800 results in a student being put on probation. Two semesters of bad performance in CHEM 600 or CHEM 800 typically result in a student being removed from the Ph.D. program.

The amount of time necessary for this and the actual composition of the thesis vary greatly with four to six years being typical. During this time a student typically publishes multiple peer-reviewed papers, which are critical milestones used to judge progress toward a Ph.D. Although your Ph.D. advisor usually has the best view of what qualifies as a sufficient body of work in your field when you are ready to defend your Ph.D., the Ph.D. degree is conferred by the department and university.



# Rice University

## Department of Chemistry

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The quality of your work must be of sufficient quality to pass the scrutiny of a thesis committee that (minimally) includes 3 faculty members:

1. Your Ph.D. advisor
2. Two members of your Qualifying Exam Committee
3. One faculty member whose primary appointment is in a department outside of Chemistry  
*(If one of the members of your QE Committee is outside the Chemistry Department they will qualify as an outside committee member)*
4. Optional - The student and Ph.D. advisor may also include additional faculty as they wish to more thoroughly evaluate the work.

### **B. Annual Evaluations**

Students, third year and older, will be evaluated annually after being advanced to candidacy. These evaluations will serve a dual objective: (1) fulfill university requirements and (2) formalize and improve student-advisor communication channels in terms of progress and expectations. Evaluations will be performed electronically through a web evaluation. A sample of this evaluation form can be seen in **Appendix II**. Take the time to fill this score sheet carefully and entirely. Your advisor will fill a similar form evaluating your performance and the scores of the two forms will be compared. Differences of two points or more between the scores of the student and advisor forms in questions 1-3 will involve further evaluation by the Graduate Studies Committee, which could include calling for a meeting of the student with the Thesis Committee. It is encouraged that you maintain regular communication with your advisor about research and expectations in order to avoid discrepancies in the evaluation, and thus further involvement from the Graduate Studies Committee. It is expected that both students and their advisors will have access to both evaluations.

Completing the evaluation is an annual departmental requirement and failing to complete it on time will have consequences that could include lowering the research grade for the semester, academic probation, and dismissal from the graduate program. The link to access the annual evaluation will be sent to you by email from the Graduate Program Administrator (**Pam On**), on behalf of the Graduate Studies Committee, by May 1 and needs to be completed by May 31.

Students who have defended their thesis by May of the current year do not need to fill the evaluation form. Students in their 6<sup>th</sup> year and older need to meet with their thesis committee once a year during the first semester of the academic year. It is the responsibility of the student to contact the thesis committee and set the meeting, as well as to inform the Graduate Studies Committee of the conclusions of that meeting. Failing to complete this requirement will have consequences that could include lowering the research grade for the semester, academic probation, and dismissal from the graduate program.

### **C. Thesis Defense**

When the student and advisor come to the conclusion that the required work for a Ph.D. is complete or nearly complete, the time comes to write the definitive work. The student should check <http://graduate.rice.edu/thesis/> for up-to-date deadlines, checklists, and formatting requirements. In particular, examine the "Doctoral Thesis Submission" document and the "Thesis Format" and "Thesis Template Library" documents.

Rice University  
Department of Chemistry

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Please update **Pam On** ([pon@rice.edu](mailto:pon@rice.edu)) during this process as she can help make sure that you are aware of all deadlines and administrative issues associated with defending your thesis.

When scheduling your thesis defense, please keep in mind that arranging a time that is suitable for you and the three or more faculty members on your committee is often difficult. Do not try to schedule this at the last minute! You will likely not get the date you want and may also unfavorably predispose your committee towards you. In particular, defense dates in February, March and April are very popular as they are the last times you can defend and still march in that year's graduation. Consequently, these dates are more difficult to reserve than others.

In addition to all the information provided on the above web page, please remember that your thesis committee must have adequate time to review your work. You must submit to your committee a copy of your thesis **a minimum of two (2) weeks** before your thesis defense. This should usually be a hard copy. However, it may be in the form of an electronic document if there is an unavoidable reason why providing a hard copy is impossible (for example, due to travel), but this should be arranged and agreed upon by all members of the committee ahead of time. If the thesis is not turned in to the committee two weeks before the oral presentation, your exam will be cancelled and rescheduled for a later date.

In addition, an electronic PDF copy of your thesis must be sent to the Chemistry Department Graduate Administrator (**Pam On**) ([pon@rice.edu](mailto:pon@rice.edu)) a minimum of two weeks before your thesis defense.

Finally, your thesis defense must be advertised on the Rice event web page **a minimum of two (2) weeks** prior to your defense. Thesis defense announcements may be submitted through GPS at <http://events.rice.edu/rgs/>.

*☆ The above is not meant to be an official or comprehensive list of all requirements and time lines for the thesis submission and defense. The official and comprehensive documentation of requirements can be found at <http://graduate.rice.edu/thesis/>. Also, you may contact **Pam On** ([pon@rice.edu](mailto:pon@rice.edu)).*

## **X. APPENDIX I - Qualifying Exam Guidelines**

The purpose of the qualifying examination is to establish the extent to which the student has achieved intellectual independence and has demonstrated the research accomplishments appropriate to become a Ph.D. candidate. The examination consists of (1) a written proposal which summarizes research achievements and describes future goals and (2) a public research seminar immediately followed by a closed oral defense in front of a faculty committee.

The written document must be submitted and defended before the end of the fourth semester of residence. In addition to the written and oral exam, the student must also request a letter of evaluation from his/her advisor and ensure that it is sent to all the members of the exam committee and Pam On ([pon@rice.edu](mailto:pon@rice.edu)). This letter is due at the same time as the written document.

### Criteria

The student is evaluated on his / her ability to demonstrate:

- ✓ A mastery of relevant background material, recent literature, and chemical concepts relevant to the described work
- ✓ A clear research plan and understanding of the reasons why the research is being pursued at both a strategic level and day-to-day practical level that is sufficient and realistic for a 5-year Ph.D. (i.e., within the next 3 years)
- ✓ A track record of concrete, scientifically rigorous research achievement
- ✓ The ability to make a clear, concise presentation of scientific information and to verbally answer questions from the committee related to the presented research and to general, fundamental chemical concepts.

### Written Document

The written document is a combination of a research summary and research proposal. The ideal examination document should convey to the reader (1) that the student has identified a scientific problem or sub-discipline for study and has become an expert in this field, (2) that a careful research plan, appropriate for a single graduate career, has been developed that will create significant new scientific knowledge, and (3) that significant progress has already been made such that it appears likely that the student will complete the work necessary for the Ph.D. degree in an appropriate time frame.

**Deadlines:** Regardless of the student's oral presentation date, all students defending in the Spring semester are required to submit their written proposal by **4 PM on Monday, March 2nd**. Students defending outside of the Spring semester must turn in their proposal at least one week before the scheduled exam date. The text should be received both in electronic and hardcopy by all members of the exam committee. It is the responsibility of the student to make sure the committee has received the document on time. Failure to turn in the written document on time will result in failure of the exam (see below).

**Length:** The entire document, excluding Supporting Information and References, shall be 3500 - 7000 words. Supporting information and references may be of any appropriate length and do not count against the above word total. Documents that violate length restrictions will not be accepted.

**Format:** The document should be prepared in the *J. Am. Chem. Soc.* Template for Articles, which is accessible at [http://pubs.acs.org/page/jacsat/submission/jacsat\\_templates.html](http://pubs.acs.org/page/jacsat/submission/jacsat_templates.html). Note that there is a **word** limit rather than a **page** limit. It's important to develop expertise with templates, but the close spacing and small font makes it difficult to write comments. Please be willing to generate a version double-spaced in 12-point font on request.

**Figures:** Figures should be incorporated into the text as near as reasonable to the place where they are first mentioned. **IMPORTANT:** Figures must be properly referenced ("taken from ...", "adapted from ...", etc.). Figures not referenced will be assumed to be the sole creative work of the student.

**Organization:**

- ✓ **Abstract:** Concise (250 word maximum) summary of proposal goals and justifications.
- ✓ **Introduction and Background Literature:** Broadly, what are you trying to do and why is it important? What is already known about this topic? What researchers are currently leading the field? What are the major problems or gaps in knowledge in this field? What has your chosen lab already done in this area?
- ✓ **Specific Aims:** Exactly what are you trying to do? Each of the 2-5 aims should be described concisely in 1-3 sentences.
- ✓ **Timeline:** Describe the timeline in which the above Aims are expected to be accomplished (can be a graph).
- ✓ **Experimental Strategy:** Specifically, what experiments will be performed to address the Specific Aims? If synthesis is required, are the steps reasonable? What is the mechanism? If an analytical technique is used, how does it work? Can it accomplish what is proposed? Is the instrument available at Rice? Does the order of the experiments make sense? Are there alternative routes to accomplishing your goals if your primary approach fails?
- ✓ **Research Accomplishments:** Since coming to Rice, what have you (not the people in your lab) accomplished related to this goal? If you have already published or have a manuscript in review, you should indicate that here and what your specific contribution to that work has been. This section should be written as a logical summary of experiments and their ramifications. Key figures, graphs or images which help summarize this work are useful. However, detailed experimental procedures and data should be included in the Supporting Information section sufficient to prove any claims described here. In some circumstances you may have done a significant amount of work on a different project that has not worked out or is not related to the current proposal. Because one goal of the qualifying exam is to assess research achievement, it may be appropriate to discuss work on such projects here, describing the concrete results that led to significantly altering research goals.
- ✓ **Expected Outcomes:** Assuming success in the experiments outlined in Experimental Strategy, what will the consequences of your work be? What will you have accomplished?
- ✓ **References (no word limit):** These should be in a modified J. Am. Chem. Soc. format which includes the title of the article for example (please note that journal names should be properly abbreviated, e.g.: J. Am. Chem. Soc., not Journal of the American Chemical Society):

Bachilo, S. M.; Strano, M. S.; Kittrell, C.; Hauge, R. H.; Smalley, R. E.; Weisman, R. B. "Structure-Assigned Optical Spectra of Single-Walled Carbon Nanotubes" *Science* 2002, 298, 2361-2366.

Your references should be almost entirely from the primary literature. References to outstanding reviews or textbooks may be appropriate for broad, well known or old concepts. The internet is not typically acceptable. Avoid Wikipedia. **Improper referencing may be construed as plagiarism and result in failure of the qualifying examination and/or expulsion.** The Rice Honor Code, as always, is in effect for this examination.

- ✓ **Supporting Information (no word limit):** This should include detailed JACS-style experimental procedures for all experiments described both in your Experimental Strategy and in your Research

Rice University  
Department of Chemistry

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Accomplishments. Any data necessary to prove the results mentioned in Research Accomplishments should be included here. Portions of this section can be taken directly from any manuscripts already written by the student (but still must be properly referenced).

Written documents which do not follow the guidelines described above may be returned for revision before the oral examination takes place or result in failure of the examination (see below).

### Oral Defense

The student will present his or her work as a public seminar using a professional-quality presentation. These will be scheduled as part of CHEM 600. The student is responsible for the technical aspects of the presentation (for example the working of the projector and interface with the computer). The presentation should last 25-30 minutes and will be followed by questions from the general audience. Following the public presentation and questioning, the closed portion of the defense will commence with only the members of the student's committee. The examination may include (but is not limited to): clarification of a point or a request to discuss a point in more detail to ascertain whether the student understands in detail the concepts being presented; speculative questions to force the student to consider new ideas or alternative approaches and to think on her/his feet; and questions addressing fundamental chemical concepts relevant to the described work. The student will be scored independently by each committee member on four questions (see below) from 1–5 with a 5 being the best possible score.

### Possible Outcomes

The exam committee has the following options after having reviewed the student's written and oral proposal and advisor's letter of recommendation. The decision will typically be made by the committee immediately following the examination, but always within 72 hours.

- 1) **Pass.** If the average score on each of the four questions is 3 or above, and the committee feels that no revisions, corrections or addendums are needed, the student passes. Nothing further is needed from the student.
- 2) **Incomplete.** The student neither passes nor fails the qualifying exam. An incomplete denotes a strong performance exhibiting solid achievement, but with one or more areas in which the student's progress towards the thesis could be facilitated by doing something more. A written revision/addition is probably expected. Additional experimental work may also be requested. *The committee chair will describe in writing exactly what is required of the student and the timeline for its completion.* Please see "Exam Revisions" below.
- 3) **Fail.** The student fails the qualifying exam. This is typically the result of multiple major flaws in scientific reasoning and / or a significant deficiency in research progress. The committee believes that advancement to candidacy is not appropriate in this case, and the student is generally not permitted to retake the exam. The student's research advisor may petition the full department to allow the student to defend a Master's thesis if she/he believes this is warranted or retake the QE. If the Master's thesis is successfully defended the student may be promoted to Ph.D. candidacy. In any case, the student is placed on probation.

### Exam Revisions

Within one week of the oral examination, the committee chair will prepare a written analysis of the student's exam performance, and will provide a copy of this analysis to the student, her/his advisor, and the Co-Directors of Chemistry Graduate Studies. If the student scores an incomplete on the examination, this document will clearly indicate what is being asked of the student and provide concrete deadlines for the tasks requested. When corrections or additions to the written document are requested, the student should provide an itemized commentary describing the changes made in response to each point raised by the committee. If the committee has asked for an in person defense of the revision, public or private, any written documents must be turned in one week before the established meeting date. The committee will inform the student if revisions are sufficient within two weeks of receipt of that document. The committee may score the revision as a Pass, Incomplete or Fail. If the student passes, nothing further is needed. If the student earns an incomplete or a fail, the student is placed on probation. Further, if the student is given an incomplete the student's research advisor may choose to allow the student to defend a Master's thesis if she/he believes this is warranted. If not, the student must leave the Chemistry program. If the committee scores the revision as a fail the student's research advisor may petition the full department to allow the student to defend a Master's thesis. If not, the student must leave the Chemistry program. In the case that a student is placed on the Master's track, a successfully defended Master's thesis may allow the student to be promoted to Ph.D. candidacy.

### Questions and Scoring

The committee member will evaluate the student's performance in each category on a 1-5 scale as follows:

- 5 - Performance quality (not necessarily quantity) consistent with that of a very good Ph.D. defense.
- 4 - Performance quality (not necessarily quantity) would be adequate, but not exceptional, at a Ph.D. defense.
- 3 - Performance that is expected for a Ph.D. candidate. Achievement/knowledge is beyond that expected of a first-year graduate student or undergrad (i.e., in terms of accomplishments, significantly more work is presented than that expected of an undergrad during a school year or REU session).
- 2 - First-year graduate student level knowledge/achievement
- 1 - Clear deficiencies

To pass each category, students must average a **3** from their committee members. A mean below 3 in any category equates to not passing the qualifying exam. Only that deficient category need be addressed to pass a second effort. A low score in the research progress section may indicate the presenter should go back to the lab for several months before a re-examination

#### 1. Mastery of Scientific Concepts

*Did the student demonstrate a mastery of relevant background material, recent literature, and chemical concepts relevant to the described work?*

**2. Research Progress**

*Has the student demonstrated a track record of concrete, scientifically rigorous research achievement? To pass this category, a student must present results that are well supported by rigorous data appropriate for someone who has completed a quarter or more of the expected time to the Ph.D. degree.* In most chemical disciplines, this would require a substantial progress towards a publishable manuscript, such as proving or disproving a hypothesis, establishing an appropriate mass of sufficiently interesting facts, or developing an instrument, method, or approach with unambiguous value.

**3. Proposed Work**

*Did the student present—through both written and oral communication - a well thought out and scientifically significant proposal for future work, and did the student present a sensible research plan to carry out this plan?*

**4. Presentation/Communication**

*Did the student make a clear, concise presentation of scientific information (written and oral) and answer questions from the committee? The written document should be to the standards of a submission to a peer reviewed journal such as *J. Am. Chem. Soc.* The oral presentation should be of the quality necessary for a national meeting such as the ACS.*

**5. Mastery of Chemical Literature**

*Has the student demonstrated an ability to locate, retrieve, read and interpret current chemical literature?*

## XI. APPENDIX II - Example of Online Student Evaluation

### 2018 – 2019 Student – Chem Dept. Annual Evaluation

Due Date: FRIDAY, MAY 31, 2019

The following form is part your annual departmental evaluation. This evaluation covers May 16, 2018 – May 15, 2019. If you have questions, please contact pon@rice.edu. All fields in this evaluation need to be completed.

Please note that the evaluations will be shared with both the advisor and student.

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#### General Information

##### Student \*

First Last

##### Advisor \*

##### Student ID Number \*

##### Rice Email Address \*

##### Matriculation Term and Year \*

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#### Instructions

Answer the following questions on a scale of 1-5 (1=Deficient; 2=Fair; 3=Good; 4=Very Good; 5=Outstanding) in relation to this academic year.

##### 1.) What is your assessment of your research progress during this academic year? \*

1  2  3  4  5

##### 2.) How motivated do you feel towards working on your research project? \*

1  2  3  4  5

##### 3.) Rate how you feel about your research laboratory: \*

1  2  3  4  5

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#### Instructions

For the next 2 questions, please select from numbers 0-10.

##### 4.) Indicate the number of peer-reviewed manuscripts this year (May 16, 2018 – May 15, 2019) in which you appear as author (or co-author): \*

0  1  2  3  4  5  6  
 7  8  9  10

##### 5.) Indicate the number of oral and poster presentations (excluding Chem 600) you presented this academic year (May 16, 2018–May 15, 2019): \*

0  1  2  3  4  5  6  
 7  8  9  10



Rice University  
Department of Chemistry

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6.) Select the teaching opportunities you experienced during this past academic year: \*

TA    Grader    Instructor    None

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Written Evaluation

Using the space below, briefly explain what you were expecting to accomplish (research wise) at the beginning of this past academic year. \*

Based on the expectations described above, briefly indicate your accomplishments during this academic year. \*

Briefly describe any major research roadblocks and how they should be resolved. \*

Briefly describe what you expect to accomplish during the upcoming year. \*

**APPENDIX XII**

*October 15, 2019*

**Wiess School of Natural Sciences Policy  
Graduate Student Time Off**

*Effective November 15, 2019*

- Full time graduate students are entitled to 10 weekdays of paid annual leave based on a 12-month appointment, for any reason, in addition to [University Staff holidays](#). Unused days may not be carried forward year to year and do not accrue payable time upon departure. Graduate students must coordinate their vacation plans with their advisers sufficiently far in advance to avoid last-minute conflicts. Graduate students who are teaching must also coordinate their plans with their teaching supervisor or graduate chair. Students may sometimes be required to work on University Staff holidays in order to staff ongoing projects and operations; students who work on a University Staff holiday will be able to use this paid day off at another time.
- Time away for professional activities (conferences, workshops, interviews, for instance) shall not count against paid annual leave.
- Short absences (those anticipated to be less than one week) due to a student's illness or that of a family member should be granted upon notice to a student's supervisor, provided they are commensurate with the episode. These should not be deducted from paid annual leave.
- If a graduate student cannot fulfill the duties of his or her appointment due to a medical emergency or the adoption or birth of a child, the student may be temporarily released from their academic responsibilities. Enrollment and stipend support may be continued for up to six weeks or until the appointment expires (whichever occurs first). A full description of the University short-term medical and parental release policy may be found on the [Office of Graduate and Postdoctoral Studies website](#).
- Graduate students who would like to report a deviation from this policy should talk to their department ombudsperson, their department chair or the Natural Sciences ombudsperson.