

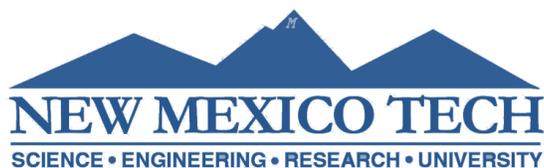
# DEPARTMENT OF CHEMISTRY

## CHEMISTRY PH.D. AND M.S. GRADUATE HANDBOOK 2016 - 2017



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**Department of Chemistry**  
**October 27<sup>th</sup>, 2016**

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## 1. General Requirements for Ph.D. and M.S. Degree

### A. Undergraduate Proficiency Requirement

All graduate students are required to demonstrate a minimal level of knowledge in the five areas of chemistry; analytical, biochemistry, inorganic, organic, and physical chemistry by satisfying the undergraduate proficiency requirement by the beginning of the fourth semester in residence, excluding summer semesters.

### B. Placement Exams

Incoming graduate student must take a set of placement exams to assess the student's proficiency of undergraduate chemistry. These examinations will be administered and graded by a panel of chemistry faculty. The passing mark for each exam will be 40 percent. There will be two parts in Analytical, and Physical chemistry exams. Analytical chemistry part I will be based on topics in undergraduate quantitative chemical analysis and part II will be based on topics in undergraduate advanced instrumental methods. The physical chemistry part I covers the topics related to chemical thermodynamics while part II covers topics related to quantum chemistry. The organic chemistry exam will have only one part yet it will cover both undergraduate Organic Chemistry I and II course materials. The organic chemistry faculty will recommend remedial courses based on student performance in the organic chemistry exam. The biochemistry placement exam assesses fundamental knowledge of biochemical structure and function, emphasizing the topics normally covered in undergraduate Biochemistry I. In order to pass any placement exam student must obtain a score of 40 percent or above for each part of the corresponding exam.

### C. Remedial Courses

In the event a student fails to obtain a score of 40 percent for any part of the exam, student must take the respective remedial undergraduate course recommended by the Chemistry Graduate Admission Committee. These recommendations are communicated to students via Remedial Course Requirement Form ([Appendix A](#)). A student must pass these remedial courses with a minimum letter grade of "B-" within the timeline stipulated by the Admission Committee and the Progress Committee. The graduate progress committee will monitor and enforce the fulfillment of these remedial course requirements. These remedial courses cannot be counted towards a student's graduate degree credits. Placement exams and the suggested remedial undergraduate courses are as follows;

Entrance Exam	Remedial undergraduate course	
	Part I	Part II
Analytical	CHEM 311	CHEM 411
Biochemistry	CHEM 441	
Inorganic	CHEM 443	
Organic	CHEM 333/CHEM 334	
Physical	CHEM 331	CHEM 332

In the event a student fails to obtain a B- for a remedial course, the student will have the final opportunity to fulfill the undergraduate proficiency requirement by re-taking the entrance exam before the beginning of the fourth semester of study (excluding summer). A student, who does not fulfill undergraduate proficiency requirements after the final attempt, will be dismissed from the chemistry graduate program.

## 2. Additional Requirements for the Ph.D. Degree

### A. Research and Academic Advisor

Every first-year graduate student is required to meet at least five research faculty members and discuss their research interests before selecting a graduate research advisor. These discussions will ensure that every graduate student is aware of research possibilities before formally requesting to join a specific research group. Students will be provided with a form ([Appendix B](#)) which is to be completed and returned to the Chemistry Office no later than November 20<sup>th</sup> for fall admissions and April 20<sup>th</sup> for Spring admissions. The Graduate Progress Committee will inform the students of their decision regarding research advisors by the end of the semester. These decisions will be made based on both student and faculty member's preferences.

For students with a research advisor in the chemistry department, the research advisor will also serve as the student's academic advisor. Upon approval of the department, students may choose a research advisor that is not a chemistry faculty member. In this case, a chemistry faculty member will serve as the student's academic advisor. The academic advisor must be a member of the student's advisory committee.

### B. The Graduate Advisory Committee

#### i. Graduate Advisory Committee Formation:

Once the research advisor has been chosen, the Graduate Advisory Committee must be formed no later than the end of the second semester in residence. The purpose of the Advisory Committee is to advise the student on his or her coursework and research and to evaluate the student's seminars, candidacy exams, and dissertation.

#### ii. Graduate Advisory Committee Composition:

The committee will consist of the research advisor and four additional members invited by the student and subject to the advisor's approval.

- A majority (at least 3) of the committee must be either tenured or tenure-track faculty from the Department of Chemistry. At least one member of the committee must be from a department other than chemistry. The inclusion of a committee member from outside New Mexico Tech is not required, but is encouraged.
- Graduate students must setup their graduate committee on Banner web and submit for approval. The Department Chair and Graduate Dean must approve the composition of the committee.
- A committee meeting is required once a year, and should be held in conjunction with the seminars that the student is giving. At least 4 of the 5 committee members must be present at the annual meetings, except for the dissertation defense, when all committee members must participate.
- If a student has not earned a Ph.D. by the end of his/her fifth year, the committee will assess the student's overall performance and decide if the student will continue in the Ph.D. program and provide advice on how to complete the degree in a timely manner.

### **C. Advanced Course Requirement**

Beyond the remedial courses, a minimum of 52 credit hours is required. These hours are distributed as follows:

- 500-level chemistry classroom courses: 21 credit hours with a letter grade
- CHEM 529 or 530 (Seminar): 2 credit hours with a letter grade
- COMM 575 and CHEM 555 (Proposal writing): 5 credit hours with a letter grade
- CHEM 595 (Dissertation): 24 credit hours

Students may substitute up to 6 credit hours of classroom courses at the 300-level and above from other departments for the 500-level chemistry classroom courses. Additional 500-level courses from other departments may be used in place of the 500-level chemistry classroom courses, upon approval of the student's advisory committee. The student's advisory committee must approve their course plan. A GPA of "B-" or lower during any semester will place the student on academic probation.

#### **i. COMM 575 & CHEM 555 - Research Proposal Writing**

All Ph.D. students are required to complete both COMM 575 and CHEM 555 in a sequence, no later than the end of their third year. In the first semester, students will register for COMM 575 during which students will learn the basics of proposal writing in a more structured course environment. During the second semester, students will register for CHEM 555, under their research advisor, to develop an original research proposal required for their candidacy examination (see below). Students are required to present a 45-minute public seminar on the proposal, as a partial fulfillment of CHEM 555. Proposal seminar will not satisfy the graduate seminar requirement (CHEM 529/530).

Upon completion of all the course requirements of CHEM 555 (submission of a written proposal, presenting a 45-minute public seminar and defending the written proposal), a grade letter will be assigned by the student's research adviser. Student must complete these requirements within the semester that he/she registered for CHEM 555. When assigning a course grade for CHEM 555, student's research advisor may take into consideration the assessment report of the oral defense by the Graduate Advisory Committee.

#### **ii. CHEM 529/530 - Graduate Research Seminars**

Every student must present at least two departmental seminars. One seminar may be based on any chemistry-related topic, and must be given before the beginning of their fourth semester. A second seminar must be based on the student's Ph.D. research and must include detailed research findings and interpretation. The second seminar must be given after the student becomes a Ph.D. candidate and during the penultimate semester before the thesis defense is attempted. It is the student's responsibility to inform his/her committee members and the chemistry faculty members of these seminars and to make sure the seminars are posted on the NMT Calendar at least 2 weeks before the presentation. A majority of the advisory committee members must be in attendance at the seminars.

Graduate students must take CHEM 529/530 for a letter grade in the semester they are presenting a seminar. They must also audit CHEM 529/530 in semesters when they are not presenting. Attendance at all departmental seminars is mandatory for all graduate students.

### **D. Grade Point Average**

The Graduate College requires that a 3.00 average be maintained in all graduate work attempted at New Mexico Tech. A grade of "C" or higher must be obtained in order to receive graduate credit in a given course, but all grades will be included in calculating the overall grade point average. Any course with a grade below 'C' must be repeated before graduation.

## E. Reasonable Progress

Graduate students are expected to complete at least half of their total proficiency and core course requirements during the first academic year in residence. The Graduate Advisory Committee will monitor the coursework and research progress of individual students and make periodic recommendations regarding renewal of teaching assistantships, degree completion deadlines, realistic degree objectives, and other matters. Graduate students are required to complete Graduate Requirement Check List Form ([Appendix C](#)) during their first Graduate Advisory Committee meeting and submit to the Graduate Progress Committee. Students must update this form every year.

## F. Candidacy Examination

To progress from the level of a Ph.D. student to a Ph.D. candidate, a Ph.D. student must pass the candidacy examination. The candidacy examination consists of a set of written exams and the oral defense of a research proposal in the presence of the student's Advisory Committee.

### i. Eligibility to Candidacy Examination

To be eligible to take the candidacy examination, the student must

- a. Have satisfied the undergraduate proficiency requirement as described in Section 1.
- b. Have completed a minimum of 18 graduate credit hours (or 9 graduate credit hours with prior masters) in 500-level chemistry courses at NMT. (See page 6)
- c. Have a cumulative average of 3.00 (grade 'B') or greater on graduate course work at NMT.
- d. Satisfactory progress in graduate research work decided by the research advisor and advisory committee.

### ii. Procedures and Schedules for the Candidacy Examination

This requirement must be completed by the end of the student's third year. Only Ph.D. candidates are permitted to register for CHEM 595 (Dissertation). A student who fails to meet this requirement may be dropped from the Ph.D. program. A student on academic probation is not eligible to take the candidacy exam.

The candidacy examination is a two-part examination. The first part consists of five written examinations, based on student's research while the second part consists of an oral defense of an original research proposal submitted by the student.

#### a. Research Proposal

The written Research Proposal should involve a topic, which is distinct from the student's dissertation research problem. The proposal idea should originate from the student. During preparation of the proposal, students should work independently and can work with their research advisor as a resource. Students should work on the development of this proposal and use COMM 575 and CHEM 555 as a resource.

#### b. Description of the Research Proposal

Although the uniqueness of the proposal is important, emphasis should also be placed on such items as:

- Why is the problem worthy of investigation?
- What is the central question to be addressed in the proposed research?
- What is the working hypothesis?

- How will the proposed research activities test this hypothesis?
- What outcomes can be expected if the hypothesis is (in) correct?
- What alternate research activities might be considered to further test the hypothesis or test alternative hypotheses if the current one is invalid?

The scope of the problem should be such that a single investigator in a research university, with access to the usual research equipment, could make significant progress toward meeting the key objectives in a year of work.

The research proposal should adhere to the following format with a minimum length of 10 double-spaced pages including figures with no appendices. Appropriate references should be cited by number in text. Page margins must be 1 inch from all sides. Font type must be Arial and font size must be 11.

**Introduction:** (~2 pages) Concise presentation of the problem and its significance with a summary of the relevant literature adequate to identify the current state of knowledge and justify the research question.

**Research Question:** (1 paragraph) Explicit statement of the research question and the working hypothesis about the answer to that question. It must be clear that the working hypothesis is motivated by the current state of knowledge in the field based on the background information presented in the introduction and that the hypothesis is testable.

**Significance of the Proposed Research:** (1 page) Concise statement of the importance of the problem and the impact of the proposed studies. Specifically, what will become possible as a result of the proposed research that is not currently possible?

**Proposed Studies:** (6-7 pages) Description of the proposed research activities with a clear statement of how research activities and/or key experiments will test the working hypothesis. Discussion of the expected outcomes, if the working hypothesis is correct, and what alternative outcomes might be expected, if the working hypothesis is proved invalid. Detailed procedures and techniques for the proposed research activities should only be included to address non-routine methods or issues that are particularly significant to the success of the proposed work (e.g., determination of the stereochemistry of a key synthetic intermediate where the outcome has no definite precedence in the literature or details of an optical setup for detecting a signal that has not been implemented previously). The discussion should also identify the aspects of the proposed research that are likely to be most challenging and where the likelihood for success is most uncertain with a critical assessment of what factors influence the potential outcomes.

**References:** A list of references in ACS Style format should be provided, including the titles of all references. This section is not included in the page limit.

### c. **Written Examination**

The PhD candidate must submit the research proposal to his/her advisory committee at least 14 days prior to the start of the written candidacy exams. Each member in the advisory committee will submit one exam question based on the topic of the proposal

to the student's academic advisor. The candidate must answer all the questions in the written exam in one continuous seven-day period. Each committee member will establish the format and grade his or her own exam question. The committee will evaluate candidate's overall performance in the written exam and decide his/her progress towards oral examination.

**d. Oral Examination**

The PhD candidate who succeeds in the written exam will defend the proposal within 30 days of final written exam. During the defense, the candidate will give a 45-minute public seminar on the proposal, followed by a question and answer session that is open only to the candidate and committee members. (Proposal seminar is also a partial fulfillment of the requirements for CHEM 555; but does not satisfy the graduate seminar requirement). During the oral exam, candidate will be assessed on overall progress, knowledge of fundamental chemical principles and chosen area of specialization, and general competency for Ph.D. research. Deficiencies in the written exam may be re-evaluated during the oral exam. All committee members must be present during the seminar and oral examination. The candidate is responsible for scheduling and room reservation and must ensure that it is announced for public in NMT Calendar at least 2 weeks prior to the seminar.

Immediately following the oral examination, the committee will evaluate the student's success on oral examination and decide if the student passes the candidacy exam. A Ph.D. student who fails the candidacy exam or otherwise does not fulfill these requirements will be dismissed from the Ph.D. program. Upon approval of the chemistry faculty, students failing the candidacy exam may be permitted to enter the M.S. program.

Please note, no grade letter will be assigned to CHEM 555 until all the course requirements (submission of a written proposal, presenting a 45-minute public seminar and defending the written proposal) are completed. Upon completion of CHEM 555, a grade letter will be given by the student's research adviser.

**G. Final Defense**

The focus of the student in the Ph.D. program is to propose and complete original research. The doctoral dissertation demonstrates the candidate's capacity for independent research.

**i. Prior to Final Defense**

The student may register for dissertation hours only after successfully advancing to candidacy. A minimum of 24 credit hours distributed over one or more years must be devoted to the dissertation after candidacy has been achieved. A candidate for a degree, before registering for the final semester of enrollment, must announce intent to complete to the Registrar by filing an "Intent to Graduate" form. Deadlines for submitting a Declaration of Intent are June 1 for those completing their degrees in August, July 1 for those completing their degrees in December, and December 1 for those completing their degrees in May. The Intent to Graduate form must include a copy of the student's course program and must be signed by the student's academic advisor and the Center for Graduate Studies.

**ii. During the Semester of Final Defense**

The candidate must be registered during the semester in which the completed dissertation is submitted to the Center for Graduate Studies. Students may pay a fee to defend between

semesters, but they must have been registered the semester before and they must have permission of their full committee. All of the above requirements must be completed two weeks before the first day of subsequent semester or the student must enroll and pay for registration.

### **iii. Dissertation**

The Ph.D. candidate must present a written dissertation to their committee at least 21 days prior to the defense. Details of format requirements can be found on the Center for Graduate Studies webpage. Completed digital theses or dissertations and digital copies of independent study abstracts must be submitted to and approved by the Graduate Office no later than two weeks prior to the end of the semester in which the requirements for the degree are to be completed. Please visit the Center for Graduate Studies web pages or the Center for Graduate Studies for information on submission of digital manuscripts. Digital manuscripts must be submitted and approved by the Center for Graduate Studies two weeks prior to the end of the semester in which the requirements for the degree are to be completed. A copyright form must be completed and signed at time of submission of the digital manuscript.

### **iv. Oral Defense**

Oral defense of the Ph.D. dissertation is required prior to graduation. The dissertation must be defended before the NMT faculty under the supervision of the student's advisory committee. All committee members must attend the defense. The student is responsible for scheduling the defense at a day and time when this is possible and must ensure that this presentation is publicly announced in NMT Calendar at least 2 weeks prior to the event. On the defense date, the candidate must give a public, oral presentation of their research. Following the public presentation and discussions, the candidate will defend his/her research in a closed session open only to the Graduate Advisory committee.

### **v. Publications**

Each Ph.D. candidate is required to have at least one research article accepted by a peer-reviewed journal prior to graduation. Generally, significantly more research publications are expected. A student's inclusion as first author of the publication(s) is highly encouraged.

### **vi. Committee Decision**

The committee members will then discuss the written dissertation and oral defense without the student's presence and decide if the student passes. Candidates failing the dissertation defense will be dismissed from the Ph.D. program. Upon approval of the department, students failing the oral defense may be permitted to enter the M.S. program.

### **vii. Departmental Clarification**

The Chemistry department must certify to the Center for Graduate Studies that the general requirements are being satisfied and that the candidate is making satisfactory progress. Certification is transmitted to the Center for Graduate Studies on a form provided by the Center for Graduate Studies;

The *Report of the Advisory Committee* which records the actions of the student's advisory committee.

### **viii. Completion of Requirements**

A record of all steps completed in a particular student's program is kept in the Center for Graduate Studies. When all the requirements are completed, the record of the program is sent to the Registrar for the student's permanent file. If the graduation and other fees have been paid, and a Declaration of Intent has been filed and approved by the Registrar, the candidate's name will be presented to the Faculty Senate for recommendation of conferral of degree to the Regents.

### **3. Requirements for Ph.D. Students with Prior Master's Degree**

Students entering the Ph.D. program with a prior M.S. degree may be given approval to pursue the plan outlined below. The choice to approve this option is made by the Graduate Admission Committee. Students are advised to note that M.S. degrees awarded by foreign institutions and those in fields outside of chemistry may not be counted.

All requirements for the Ph.D. are the same as for students with no prior M.S. degree, except the following: Course requirements

A minimum of 40 credit hours is required. These hours are distributed as follows:

- 500-level chemistry classroom courses: 9 credit hours with a letter grade
- CHEM 529 or 530 (Seminar): 2 credit hours with a letter grade
- COMM 575 and CHEM 555 (Proposal writing): 5 credit hours with a letter grade
- CHEM 595 (Dissertation): 24 credit hours

Students may substitute up to 3 credit hours of courses at the 300-level and above from other departments for the 500-level chemistry classroom courses. Additional 500-level courses from other departments may be used in place of the 500-level chemistry classroom courses, upon approval of the student's advisory committee. The student's advisory committee must approve their course plan. A GPA of "B-" or lower during any semester will place the student on academic probation.

### **4. Master's Degree**

**A. Research and academic advisor** – Same as Ph.D. Program (page [5](#))

#### **B. The Graduate Advisory Committee**

**i. Graduate Advisory Committee Formation:**

Once the research advisor has been chosen, the Graduate Advisory Committee must be formed no later the end of the second semester in residence. The purpose of the Advisory Committee is to advise the student on his or her coursework and research and to evaluate the student's seminars, candidacy exams, and dissertation.

**ii. Graduate Advisory Committee Composition:**

The committee will consist of the research advisor and two additional members invited by the student subject to the advisor's approval.

1. At least half of the committee (2 faculty members) must be either tenured or tenure-track faculty from the Department of Chemistry. At least one member of the committee must be from a department other than chemistry. The inclusion of a committee member from outside New Mexico Tech is not required, but is encouraged.

2. Graduate students must set up their graduate committee on Banner web and submit for approval. The Center for Graduate Studies must approve the composition of the committee.
3. A committee meeting is required once a year, and should be held in conjunction with the seminars that the student is giving. At least 2 of the 3 committee members must be present at the annual meetings, except for the thesis defense, when all committee members must participate.
4. If a student has not earned a M.S. by the end of his/her third year, the committee will assess the student's overall performance and decide if the student will continue in the M.S. program and provide advice on how to complete the degree in a timely manner. Three years is the maximum duration allowed by the Center for Graduate Studies to complete a Master's degree.

### **C. Advanced Course Requirement**

Beyond the remedial courses, a minimum of 30 credit hours is required, including;

- At least 24 credit hours of approved course work, with at least 12 credit hours of 500-level courses, exclusive of research credits with a letter grade
- 6 credit hours of the classroom coursework must be from a department other than Chemistry with a letter grade
- CHEM 529 or 530 (Seminar): 1 credit hours with a letter grade
- CHEM 591 (Thesis): 6 credit hours

The student's advisory committee must approve their course plan.

#### **i. Biochemistry Option**

Students earning a Master of Science degree in Chemistry can receive a Biochemistry Option through cooperation with the Biology Department. Students interested in such a program should consult their advisor and the pre-medical advisor. The requirements for the biochemistry option are the same as those for a Master of Science in Chemistry, except that the students must take for a grade letter:

- CHEM 521 and 547
- A minimum of six (6) credit hours of upper-division/500-level classroom courses in biology, selected from the following: BIOL 331, 333, 351, 352, 356, 488, 501, 531, 537, 551, 552, 566, 587, 588.

#### **ii. CHEM 529/530**

Every M.S. student must give one departmental seminar prior to the defense of their M.S. thesis. The seminar should focus primarily on their M.S. research. It is the student's responsibility to inform his/her committee members and the chemistry faculty members of these seminars and to make sure the seminar are announced in NMT Calendar at least 2 weeks before the presentation. A majority of the advisory committee members must be in attendance at the seminar.

Graduate students must take CHEM 529 or CHEM 530 for credit in the semester they are presenting a seminar. They must also audit CHEM 529/530 in semesters when they are not presenting. Attendance of all departmental seminars is mandatory for all graduate students.

**D. Grade Point Average** – same as Ph. D. program (page [6](#))

**E. Reasonable Progress** - same as Ph. D. program (page [6](#) and [Appendix D](#))

**F. Final Defense**

M.S. students must present a written thesis to their committee 21 days prior to the defense. The student must ensure that this presentation is publicly announced in the NMT calendar at least 2 weeks prior to the event. On the defense date, the student must give a public, oral presentation of the conducted research. All faculty members on the student's committee must be in attendance at the defense. Following the public presentation and discussions, the candidate should defend his/her research in a closed session open only to the Graduate Advisory committee and the student. The committee members will then discuss the oral defense without the student's presence and decide if the student passes. Candidates failing the oral defense will be dismissed from the M.S. program.

**5. Academic Probation and Suspension**

**A. Academic Probation**

Any student who fails to maintain satisfactory progress will be put on probation for one semester. Any student who fails to maintain satisfactory progress for two consecutive semesters will be suspended from regular graduate student status. Such students may apply for special (non-degree) status without financial support. After completion of six credit hours (three for part-time students) within a single semester in courses approved for the degree program with a grade-point average of 3.0 or better and no grade less than C, the student may petition the Graduate School for return to regular graduate status. Any such petition must include the written support of the academic advisor and department chair. At most 12 credits earned while a special graduate student can be applied to a graduate degree.

**B. Academic Suspension**

Graduate students who fail to achieve satisfactory academic progress for a second consecutive semester will be placed on academic suspension. A graduate student on academic suspension is denied the privilege of enrolling at New Mexico Tech for the specified period of time.

**6. Standard Forms**

Graduate students should consult with their research advisors regarding preparation of these forms, but the student is responsible for submission of forms by the deadlines that are published each semester. Samples of these forms are attached on the following pages. Other standard forms are available online at Center for Graduate Studies Webpage.



Department of Chemistry  
 Graduate Admission Committee  
 Undergraduate Remedial Course Requirement Form

Name					
Banweb ID					
Graduate Program (prior MS or no prior MS, if PhD)					
Research Interest					
Placement Exam Results	<b>Area</b>	<b>Part I</b>	<b>Part II</b>	<b>Date</b>	<b>Comments</b>
	Analytical				
	Biochemistry				
	Inorganic				
	Organic				
	Physical				
Remedial Courses Needed To Fulfill Placement Exam/s Requirement	<ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> <li>9.</li> </ol>				
Comments					

The chemistry graduate admission committee imposed these requirements, based on the recommendation of the respective divisions. These requirements cannot be overruled and overwritten without the collective consent of the academic advisor, student's graduate committee, student's progress committee, department chair, and dean of the graduate studies.

-----  
 Sally Pias / Date

-----  
 Menake Piyasena /Date

-----  
 Mahinda I Ranasinghe /Date

I, ....., agree to the above requirements.

-----  
 Student

-----  
 Date

801 Leroy Place Jones  
Hall 259 Socorro, NM  
87801 Phone:  
575-835-5263 Fax:  
575-835-5364

**Graduate Research Advisor Selection Form**

Every first-year graduate student is required to meet at least **five** research faculty members and discuss their research interests before selecting a graduate research advisor. These discussions will ensure that every graduate student will be aware of research possibilities before formally requesting to join a specific research group.

This form is to be completed and returned to Chemistry Office no later than the November 20<sup>th</sup> for fall admission and April 20<sup>th</sup> for Spring admission.

Student Name: \_\_\_\_\_ Degree Sought: \_\_\_\_\_

**Please select one (or more) research divisions with which you want to be affiliated**

- |                                  |                                 |                          |
|----------------------------------|---------------------------------|--------------------------|
| Atmospheric and Environmental    | Bioanalytical                   | Biomedical and Medicinal |
| Physical and Fundamental Studies | Solar Energy and Sustainability |                          |

**Please request the interviewed faculty to print his/her name, sign and date**

Name of the faculty member	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Please identify your top three choices for research advisor**

- First Choice \_\_\_\_\_
- Second Choice \_\_\_\_\_
- Third Choice \_\_\_\_\_

I certify that I met and discussed research interests with the above listed chemistry faculty members.

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**To be completed by the Graduate Progress Committee**

Research Advisor Assigned: \_\_\_\_\_

I agree to serve as this student's research advisor

Advisor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

I approve this assignment of research advisor

Department Chair's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Graduate Student Requirements Check Form Doctoral Student

Students must pick this form up from the Chemistry Office before your annual meeting, update the information and return the form as soon as possible after the meeting. It is strongly recommended that you meet with your committee more frequently. Meetings should include at least a brief report on progress on course program and/or research.

Name: \_\_\_\_\_

ID#: \_\_\_\_\_ email: \_\_\_\_\_

Date of Admission \_\_\_\_\_ Entrance Rating \_\_\_\_\_ /10\*

Prior Masters (Y/N) \_\_\_\_\_

\*A copy of the Admission Requirements Form should be attached.

### Placement Exams

Remediation must be completed before the beginning of the fourth semester in residence; excluding summer.

<u>Exam</u>	<u>Passed*</u>	<u>Remedial Course</u>	<u>Semester</u>	<u>Grade</u>
Analytical	_____	_____	_____	_____
Biochemistry	_____	_____	_____	_____
Inorganic	_____	_____	_____	_____
Organic	_____	_____	_____	_____
P Chem	_____	_____	_____	_____

\*A signed copy of the Remedial Course Requirements form should be attached.

## Graduate Committee

Must be formed before the end of the second semester in residence. Must have 5 members; at least 1 outside member and 3 chemistry faculty. A committee meeting is required once a year, and should be held in conjunction with the seminars that the student is giving. At least 4 of the 5 committee members must be present at the annual meetings, except for the dissertation defense, when all committee members must participate.

Date Formed \_\_\_\_\_

Members\* \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Meeting Date(s)      \_\_\_\_\_      \_\_\_\_\_  
   \_\_\_\_\_      \_\_\_\_\_  
   \_\_\_\_\_      \_\_\_\_\_  
   \_\_\_\_\_      \_\_\_\_\_  
   \_\_\_\_\_      \_\_\_\_\_

\*The Academic Advisor should be noted.

## Seminars

Must complete a minimum of 2 seminars. One must be completed before the candidacy exam is attempted and one must be completed after the candidacy exam has been passed and no later than the semester before the thesis defense is attempted.

Title                      \_\_\_\_\_                      Date      \_\_\_\_\_  
   \_\_\_\_\_                      \_\_\_\_\_  
   \_\_\_\_\_                      \_\_\_\_\_



Candidacy Exam

All previous requirements, except the second seminar, must be completed before the candidacy exam is attempted. This requirement must be completed by the end of the student's third year.

Date Attempted \_\_\_\_\_

Passed (Y/N) \_\_\_\_\_

Dissertation

Must have passed the Candidacy Exam before the dissertation can be defended.

Title \_\_\_\_\_

Date Attempted \_\_\_\_\_

Passed (Y/N) \_\_\_\_\_

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<u>Progress Comm*</u>	<u>Satisfactory Progress**</u>	<u>Date</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

\*The members of the Graduate Progress Committee should initial and date at each review.

\*\*Upon each review, the Graduate Progress Committee will note if the student is making satisfactory progress toward completing their degree. If it is deemed the student is not making satisfactory progress, a note of explanation will be given and the student's Academic Advisor will be notified.

## Graduate Student Requirements Check Form Master's Degree Student

Students must pick this form up from the Chemistry Office before your annual meeting, update the information and return the form as soon as possible after the meeting. It is strongly recommended that you meet with your committee more frequently. Meetings should include at least a brief report on progress on course program and/or research.

Name: \_\_\_\_\_

ID#: \_\_\_\_\_ email: \_\_\_\_\_

Date of Admission \_\_\_\_\_ Entrance Rating \_\_\_\_\_ /10\*

Prior Masters (Y/N) \_\_\_\_\_

\*A copy of the Admission Requirements Form should be attached.

### Placement Exams

Remediation must be completed before the beginning of the fourth semester in residence; excluding summer.

<u>Exam</u>	<u>Passed*</u>	<u>Remedial Course</u>	<u>Semester</u>	<u>Grade</u>
Analytical	_____	_____	_____	_____
Biochemistry	_____	_____	_____	_____
Inorganic	_____	_____	_____	_____
Organic	_____	_____	_____	_____
P Chem	_____	_____	_____	_____

\*A signed copy of the Remedial Course Requirements form should be attached.



## Coursework

Minimum of 30 credit hours, including; at least 24 credit hours of approved course work, with at least 12 credit hours of 500-level courses, 6 credit hours of the classroom coursework from a department other than Chemistry, 1 credit hours for seminar (CHEM 529/530), and 6 credit hours of research (CHEM 591).

### 500/300-Level Courses

<u>Course Code</u>	<u>Semester</u>	<u>Grade</u>	<u>Credits</u>	<u>Total Credits</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

### Others

<u>Course</u>	<u>Semester</u>	<u>Grade</u>	<u>Course</u>	<u>Semester</u>	<u>Grade</u>
<u>CHEM 529</u>	_____	_____	<u>CHEM 530</u>	_____	_____

Dissertation

Must have passed the Candidacy Exam before the dissertation can be defended.

Title \_\_\_\_\_

Date Attempted \_\_\_\_\_

Passed (Y/N) \_\_\_\_\_

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<u>Progress Comm*</u>	<u>Satisfactory Progress**</u>	<u>Date</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

\*The members of the Graduate Progress Committee should initial and date at each review.

\*\*Upon each review, the Graduate Progress Committee will note if the student is making satisfactory progress toward completing their degree. If it is deemed the student is not making satisfactory progress, a note of explanation will be given and the student's Academic Advisor will be notified.