

Clarkson University

CHEMISTRY GRADUATE HANDBOOK

2020 - 2021

Dear Chemistry Graduate Student:

This handbook is designed to let you know what the Department of Chemistry & Biomolecular Science expects of you as a chemistry MS or PhD student, with guidelines, details and resources for all of the steps along the way. Please review the contents and use it as a resource through the years. You will have questions so please reach out and use the assistance available to you from:

Faculty Advisor

Department Staff: [Chair & Administrative Assistants](#)

Student Administrative Services: sasgrad@clarkson.edu

The Graduate School/A & S Graduate Coordinator: Colin Bronchetti, sciencegrad@clarkson.edu

CBS Chair of the Graduate Committee

Chemistry and Biomolecular Science Graduate Student Association (CBGSA): cbgsa@clarkson.edu

Become involved. Join professional and student organizations which will support you and build your professional experience and network.

**Welcome to the Chemistry Graduate Program
At Clarkson University.**



Clarkson™

Getting involved in student groups and organizations builds skills and networks while supporting your professional development.
Your participation is encouraged.



Chemistry and Biomolecular Science Graduate Student Association (CBGSA)

<https://sites.google.com/clarkson.edu/cbgsa>

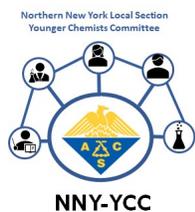
cbgsa@clarkson.edu



Women's Association of Graduate Students (WAGS)

Provides support & mentoring women in Clarkson University Arts & Science and Engineering graduate programs for the development of the student's professional network and to encourage and support professional development.

Twitter: [@ClarksonWAGS](https://twitter.com/ClarksonWAGS)



**American Chemical Society- Northern NY Local Section
Younger Chemists Committee (NNY-YCC):**

NNY-YCC was started by undergraduate and graduate students from Clarkson University, SUNY Potsdam, SUNY Plattsburgh, SUNY Canton, and St.

Lawrence University. NNY-YCC connects young chemists in the region, to support their professional development, and enable them to be future leaders in their chosen profession. To become a member, visit their website:

<https://nnyycc2020.wixsite.com/nny-ycc>

nnyycc2020@gmail.com

[International Younger Chemists Network](#)



Northern New York Local Section of the American Chemical Society

ACS activities in Northern New York and access to many ACS resources.

<https://communities.acs.org/community/society/component-websites/northern-new-york-local-section>



Clarkson University Electrochemical Society (CU-ECS) student chapter

The Clarkson University ECS student chapter is dedicated to encouraging communication and collaboration in electrochemistry research at Clarkson University and helping its members succeed in their academic careers.

CU-ECS was named a 2020 Chapter of Excellence by the ECS Board of Directors. The award recognizes CU-ECS as one of the top three outstanding student chapters globally.

nnyecsstudentchapter@clarkson.edu

https://knightlife.clarkson.edu/organization/cu_ecs

2020 – 2021 Chemistry Graduate Handbook

CLARKSON UNIVERSITY

School of Arts and Science

DEPARTMENT OF CHEMISTRY AND BIOMOLECULAR SCIENCE

GRADUATE STUDENT HANDBOOK

Requirements for the Master and Doctoral Degrees in Chemistry

INTRODUCTION:

The Clarkson University [Graduate Catalog](#) outlines university requirements for graduate admission and graduate degree completion and describes comprehensive university requirements. Please refer to the Clarkson University Graduate catalog for a complete description of university requirements.

The [Department of Chemistry & Biomolecular Science](#) has established supplemental department requirements for the successful completion of the Master (MS) and Doctoral (PhD) degrees in chemistry. This handbook can serve as **a comprehensive review of detailed expectations of the chemistry graduate student**, defined by degree, for students making their application decisions and an excellent guideline for accepted students throughout their graduate career at Clarkson.

Scheduled Orientation; Clarkson's Graduate Program offers orientation annually in late August, prior to the beginning of classes. New graduate students are required to attend all sessions relevant to their program of study. This schedule will include the schedule of **Chemistry Placement Exams**.

New graduate students who have been offered and accepted a [Teaching Assistantship \(TA\)](#) will be required to participate in the TA BOOTCAMP [STEM 501 - 01 STEM Pedagogy and Professionalism] course offered annually in July. Dates, location and schedule will be sent by the A&S Graduate Coordinator directly to TA participants prior to arrival. Graduate students who have been offered and accepted a [Research Assistantship \(RA\)](#) will come directly to the Clarkson University campus in Potsdam, NY and will be oriented to the campus and the department by their sponsoring faculty member and his/her research group. The Chemistry Graduate Committee offers a department based orientation annually in late August for all chemistry graduate students.

Mail; mail is received in the Chemistry Department mail room, Science Center 125. Graduate students should use this address for research supplies ordered from outside vendors **and may use this address for personal mail if they choose**. Graduate student mail is sorted to the group mail slot of the student's advisor.

The correct mailing address is:

(Student Name)
Clarkson University
8 Clarkson Avenue
CU Box 5810
Potsdam, NY 13699
USA

Keys; Graduate students are administered keys to buildings, labs, office space, classrooms and teaching rooms as approved by their advisor. Request keys from department administrative assistant who will complete the Access Request Form on the student's behalf. Laboratory keys will not be provided until **after the student has completed laboratory safety training and the Laboratory Safety Checklist for each lab being used.** Keys must be returned to Campus Safety & Security upon completion of degree or before permanently leaving Clarkson University.

Lab safety training; It is important to ensure that we are all working safely in our laboratories and adhering to Clarkson University, Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA) and New York State fire safety regulations and guidelines. Thus, all individuals that work in a research or teaching laboratory involving hazardous materials, including, but not limited to chemicals, biologicals, blood borne pathogens, lasers, radiation, and/or nanoparticles, are **required** to complete general laboratory safety training with the Environmental Health & Safety Department. A **lab-specific safety checklist** must also be completed with your laboratory principal investigator and submitted to the Environmental Health & Safety Department. Laboratory keys will not be distributed until these training requirements have been completed.

ID; every student receives a Clarkson University identification card through Campus Safety & Security as part of the orientation process.

Housing; Clarkson does not offer on-campus accommodations for graduate students. It is the student's responsibility to secure appropriate off-campus housing. *As soon as you know you are definitely coming to Clarkson, you should secure an apartment immediately.* We strongly suggest that you arrive on campus at least 2 weeks prior to the start of classes. The following link offers a variety of housing rental options. [Graduate Student Housing Options](#)

Grading System; the grades A+, A, A-, B+, B, B-, C+, C, and P are acceptable for credit toward a graduate degree. In order to graduate, an average of B or better must be earned in non-dissertation courses and seminar work. The grade of P will not affect the average.

Students failing to perform satisfactorily will be separated from the University. (See Graduate Student Academic Standing & Separation Policy, [in the Clarkson Graduate Catalog](#)).

Incomplete Grades; A student who is unable to complete the requirements of a course because of extenuating circumstances may seek an Incomplete grade (I) for the course. Whether an "I" grade is given is entirely at the discretion of the faculty member for the course, although the faculty member may ask the Dean of Students Office if it has relevant information regarding the students' request. The conferring of an "I" grade carries the presumption that it is possible for the course to be completed with a passing grade; in cases where the missing work is such that it cannot be completed after the end of the term, or where completion of the missing work could not possibly result in a passing grade for the course, an "I" grade should not be given.

Satisfactory Progress; Graduate students are required to maintain satisfactory academic progress. In order to maintain satisfactory academic progress, students must be able to complete their degree within the published maximum timeframe allowed for that particular degree. Multiple factors determine this: the courses and other academic requirements remaining to complete the degree program, the time remaining to complete these, other program/degree requirements, and the mathematical possibility of achieving the 3.000 cumulative GPA required for graduation.

Time Limits; After the comprehensive examination is passed; all work done specifically for the master degree is to be completed within a period of **5 calendar years**; all work done specifically for the doctorate is to be completed within a period of **7 calendar years**.

Supplemental Requirements; The required minimum credit hours, (30) for the master degree and (90) for the doctoral degree, are in addition to any undergraduate courses required for those students who fail the placement examinations.

All of the courses used in the fulfillment of course requirements must have catalog numbers of **500 or above**.

Seminar Requirements; (See CHEMISTRY DEPARTMENT SEMINAR REQUIREMENTS section of this document.)

Directed Study/Special Topics Courses; no more than two of the six required courses for the MS degree can be directed study or special topics courses, and no more than two such courses are acceptable toward the PhD degree.

PLACEMENT EXAMS

Placement exams are administered to permit the evaluation of a student's preparation for graduate work. The results of the placement exams have an advisory function in determining possible remedial coursework to support the student's success in the program and/or will assist the student/advisor team in selecting graduate courses. Any remedial action will be determined by the faculty advisor, after consultation with the placement committee for the sub-discipline.

- **Clarkson Graduate Catalog**

Every chemistry graduate student must take four out of five placement examinations before attending classes for the first semester as a graduate student. A student is required to show satisfactory preparation for graduate work in at least three areas of examination. These exams are administered prior to the beginning of every semester, as needed. The placement examinations will be at a level corresponding to a good undergraduate background in chemistry. It is highly recommended that entering students prepare for these exams with study and review prior to their arrival at Clarkson. Students will be notified by the Chair of the Chemistry Graduate Committee and/or the Arts & Sciences Graduate Coordinator regarding scheduled dates for the exams and will be provided with a list of texts to support recommended study and review.

There are five separate placement examinations, one in each of these areas:

- **physical chemistry**
- **analytical chemistry**
- **inorganic chemistry**
- **organic chemistry**
- **bio-chemistry**

Each examination is given by a committee appointed by the chair of the department. The possible grades on the placement examinations are PASS and FAIL. These grades have the following meanings:

PASS certifies that the student's preparation for graduate work in the area of the examination is satisfactory.

FAIL certifies that the student's preparation for graduate work in the area of the examination is un-satisfactory. A student who fails an exam has the following two options:

1. Petition the Graduate Committee Chair (in writing via email) to retake the placement examination. Only one retake is allowed.
2. Remedy the deficiency by auditing an undergraduate course(s) or taking a course(s) as required by the faculty advisor after consultation with the

examination committee. The student must achieve a grade of B or better for each such course.

Where there are undergraduate deficiencies these must be reconciled by the third semester of the graduate program. A student who does not pass a placement examination the second time, or who receives a grade lower than B in a required course may be immediately terminated.

Those entering graduate students who have been offered RA or TA support, and who fail three placement examinations, are subject to review by the Graduate Committee and the research advisor and may lose their research or teaching assistantship or fellowship. This may require the student to self-fund their education.

If a student fails a placement examination and that student has applied for or received transfer credit in a graduate course consisting primarily of material upon which the student was examined and found to be deficient, transfer credit will not be permitted for that course.

TRANSFER CREDITS

An official transcript from each university for which transfer credit is requested must be on file in the Graduate School (copy must be on file in the departmental office) before approval can be considered. A graduate student studying for a Master degree can receive no more than ten transfer credits which must have been obtained over and above the requirements for a BS degree. PhD candidates having obtained a MS degree can be given a maximum of 30 transfer credits in lieu of the MS degree. Normally, only courses with grades of B or better can be transferred.

To receive transfer credit, the student should submit a [Graduate Transfer Credit Request Form](#) to the chair of the Graduate Committee of the Department of Chemistry and Biomolecular Science. The information on the form should identify the specific courses and number of credit hours for which transfer credit is requested. In addition, the name of the text and a copy of the original course syllabus or outline and a copy of the transcript of grades from the student file should be included. (The faculty member reviewing the course should be able to clearly determine the course content from the material provided.)

The Chair of the Graduate Committee and the instructor of the corresponding Clarkson course will review transfer credit requests and recommend to the departmental Graduate Committee whether and how much transfer credit should be granted. [Keep in mind, if a student fails a placement examination, transfer credit will not be given for any graduate course consisting primarily of material upon which the student was examined and found to be deficient.] The

decisions of the departmental Graduate Committee must be approved by the Chair of the Department of Chemistry and Biomolecular Science and the Dean of the School of Arts & Sciences, but are otherwise final.

SELECTION OF A RESEARCH ADVISOR

Teaching Assistants (TAs), other fellowship recipients and self-pay students are encouraged to discuss possible research topics with several members of the department before selecting a research topic and an advisor. Research Assistants (RAs) are expected to work on a specific topic for the advisor who makes the assistantship available.

TEACHING ASSISTANTSHIPS

During 2020 -2021 (June 14, 2020 – June 12, 2021) teaching assistantships carry stipends of \$26,780 plus tuition. Instructional requirements are up to 20 hours of service per week in laboratory or other designated work for the university during the academic year, or 12 hours of service per week in the above designations during the calendar year. (Not available in all graduate programs.)

- **Clarkson University Graduate Catalog**

Chemistry TA appointments are awarded by the Department of Chemistry & Biomolecular Science. TA support will be contingent upon satisfactory performance of teaching assignments, course and research work. To continue in a TA position a graduate student must be fulfilling all of their teaching obligations as determined by the course faculty member, teaching evaluations and student comments will be considered as part of the assessment. They must also be making adequate progress toward the completion of their graduate degree, as determined by their advisor in consultation with the Graduate Committee and Department Chair. **Teaching Assistantships are a 12 month/40 hour per week appointment and, except for scheduled vacation and allowable holidays, TAs are expected to work full time on research during the summer months.** In addition, they may occasionally be asked to perform other department related tasks during the summer months.

RESEARCH ASSISTANTSHIPS

Research Assistantships permit concentration in the student's research field during the period of study. Stipends for 2020 - 2021 (June 14, 2020 – June 12, 2021) are \$26,780 or more per year plus full tuition. Forty hours of service per week, inclusive of classroom work and research duties, are required. (Not available in all graduate programs.)

- **Clarkson University Graduate Catalog**

Chemistry Research Assistantships (RAs) are awarded by individual faculty members who have a research grant or contract funds supporting specific research projects. RA appointments may or may not be renewed – depending on availability of funds and satisfactory progress demonstrated by the student. Renewal of RA support will be the prerogative of the research advisor. The Principle Investigator (PI) can terminate an RA appointment at any time. **Research Assistantships are a 12 month/40 hour per week appointment and, except for scheduled vacation and allowable holidays, RAs are expected to work full time on research during the summer months.**

Termination of TA or RA Contract:

The assistantship contract will be terminated prior to its expiration date

- if a student voluntarily withdraws from the program,
- if progress towards degree is deemed unsatisfactory by the chair in consultation with the faculty, or
- when a student completes the degree requirements.

HOLIDAYS AND VACATION

University and Departmental regulations allow graduate students on full year TA and RA contracts **two weeks of vacation per year plus all holidays when the university is officially closed.** Specific vacation times should be determined in consultation with the student's advisor. For TA appointments vacation must be scheduled when classes are not in session. Please note that fall and spring semester breaks are not part of your time off unless you wish to take them as vacation days. Graduate students are expected to use those opportunities to further their education and research.

CHEMISTRY DEPARTMENT SEMINAR REQUIREMENTS

*The Department of Chemistry & Biomolecular Science organizes graduate student presentations as a seminar course, CM900, which is offered during both fall and spring semesters. **MS and PhD students are expected to attend departmental seminars for the entire duration of their graduate study, even if they have completed seminar credit requirements.***

Candidates for a MS or PhD degree in chemistry must:

- complete a minimum of 2 (for MS) or 6 (for PhD) credit hours of CM900, and
- present 1 (for MS) or 3 (for PhD) seminars, as part of their degree requirements

For the PhD program, the candidate can transfer an external **oral** presentation at a national or regional meeting which has been selected in consultation with the PhD advisor as the equivalent of 1 of the 3 required seminars. To transfer the presentation, the student must submit an email request to the chair of the Graduate Committee. The request should contain: the abstract of the presentation, the section in the conference proceedings that lists the presentation, and an endorsement of the faculty advisor stating that they approve the transfer.

Seminar Topics; Seminar presentation topics must be selected in consultation with the student's research advisor and the faculty member in charge of CM900. The topic of the final seminar for a PhD candidate is expected to be the student's own doctoral research.

Abstract; At least ten days in advance of their scheduled seminar, student presenters must submit to the department office notice of the seminar containing an abstract and references (email to the departmental administrative assistant with copy to the CM900 instructor). The abstract will be distributed for posting by the department office.

Other requirements; In addition to fulfilling their own seminar requirements, students are expected to participate in the discussions that follow the seminars given by other students, and to attend the seminars organized by the department for visitors and other speakers (Clarkson faculty, post-doctoral associates, invited presenters, etc.).

Students will pass or fail the course (CM900) on the basis of their performance as speakers, participants and assistants, and also on the basis of their attendance. At least 60% seminar attendance during each semester is required.

MS DEGREE REQUIREMENTS

CLARKSON UNIVERSITY REQUIREMENTS FOR THE MASTER DEGREE (MS)

The minimum graduation requirements for students in all Master degree programs at Clarkson are listed below. Additional graduation requirements are set by each degree program. Consult the department office for details.

A minimum of 30 credit hours of graduate coursework, as follows.

At least 20 credit hours of course and seminar work. The balance of coursework must be consistent with the research or professional experience component.

Only courses numbered 500 and above are accepted for graduate credit.

10 credit hours of transfer credit (B grade or better) may be accepted, or with the Dean of the Graduate School's approval, a maximum of 12 credit hours of transfer credit from a post-baccalaureate certificate program (B grade or better) may be accepted.

Satisfactory completion of a research or comparable professional experience, as follows;

A written thesis based on independent research;

A comprehensive examination; or,

An appropriate, professionally oriented special project.

At least one academic year of study beyond the B.S.

A cumulative GPA of 3.0 in courses used to meet graduation requirements.

All work must be completed in five calendar years.

A thesis or project submitted in partial fulfillment of the requirements for the Master of Science degree will be examined by a committee of at least three Clarkson faculty appointed by the student's department. After approval by the examining committee, a thesis requires signature approval by the Dean of the Graduate School, and two copies of the thesis will be deposited in the University library.

Each department has its own specific requirements, but the common element throughout is the practical orientation of the program.

-Clarkson Graduate Catalog

SUPPLEMENTAL CHEMISTRY DEPARTMENT REQUIREMENTS FOR THE MASTER DEGREE (MS)

The required minimum credit hours (30) cited above are in addition to any undergraduate courses or remedial study required for those students who fail the placement examinations.

To successfully complete an MS degree in chemistry a student must take a minimum of 18 credit hours of graduate courses, excluding seminar (CM900). Research credit hours (CM990, Thesis, Dissertation or Special Project) accepted towards the degree cannot exceed ten. No more than two of the six required courses for the MS degree can be directed study or special topics courses. The student who plans to continue working toward the PhD degree in chemistry after receiving the MS degree should take the PhD regulations into account when planning their MS program. All of the courses used in the fulfillment of course requirements must have catalog numbers of 500 and above.

A candidate for the MS degree in Chemistry must complete all seminar requirements, (as detailed in *Department Seminar Requirements* section of this document).

A candidate for the MS degree in chemistry must perform research satisfactory to the advisor and must submit a written report/thesis on the results of their work.

If a candidate is terminating with an MS degree, a thesis must be prepared and orally defended to a committee consisting of a minimum of three committee members. If a candidate is continuing for a PhD degree, either a report or thesis must be submitted; if the thesis option is chosen it must be orally defended in accordance with university regulations. The nature, scope, and length of the report/thesis will be prescribed by the student's research advisor.

Clarkson University Master Thesis Requirements and Final Examination

“A thesis or project submitted in partial fulfillment of the requirements for the Master of Science degree will be examined by a committee of at least three Clarkson faculty appointed by the student’s department. All three reviewers should sign off on the student’s completion notice.”

- Clarkson University Graduate Catalog

Supplemental Chemistry Department Master Thesis Requirements

The final oral examination for the MS degree in chemistry should begin with the candidate’s summary of the MS research. This summary must not exceed 30 minutes, and is immediately followed by an examination on the subject matter of the dissertation. The examination will be open to the public, but only members of the examining committee will decide whether the dissertation and the oral examination are acceptable. Any candidate who cannot adequately defend his or her MS dissertation will have the grade of pass or fail deferred and will be given one additional opportunity to repeat the final oral examination.

MS Program Form; excel form available in: [Graduate Completion Information](#)

[MS Thesis Title Page Format Sample](#)

[MS Thesis Sample Committee Signature Page](#)

[Guidelines for Preparing Your MS Thesis](#)

PHD DEGREE REQUIREMENTS

CLARKSON UNIVERSITY REQUIREMENTS FOR THE DOCTORAL DEGREE (PhD)

The minimum requirements for all students in Doctor of Philosophy (PhD) degree programs are described below.

A minimum of 90 credit hours, as follows.

- *A minimum of 24 credit hours coursework.*
- *A minimum of nine course credit hours taken in residence (includes distance learning courses offered by Clarkson University).*
- *A minimum of six credit hours of seminar.*
- *A maximum of 30 credits transferred from a MS degree towards PhD degree requirements (B grade or better).*

A minimum of three academic years of full-time graduate study or the equivalent in part time study.

- *Two years of study must be in residence at Clarkson.*
- *Students matriculated in an off-campus PhD program are exempt from this residency requirement*

Satisfactory completion of the PhD comprehensive examination for admission to candidacy (“candidacy procedure”) within two years of full-time study after admission to the PhD program or, for part-time students, before completing 66 credits.

After completion of the candidacy procedure, the student will be identified as a “PhD Candidate.”

- *Students who fail the candidacy procedure may make a second attempt according to department guidelines.*
- *A student who does not successfully complete the candidacy procedure within the time allowed may be dropped from the graduate program.*

A written dissertation must be submitted by each candidate and defended orally as part of the final examination.

Any changes in the student’s degree program must be approved by the Department Chair and Dean of the school.

- Clarkson Graduate Catalog

SUPPLEMENTAL CHEMISTRY DEPARTMENT REQUIREMENTS FOR THE DOCTORAL DEGREE (PhD)

The required minimum credit hours (90) are in addition to any undergraduate courses or remedial work required for those students who fail the placement examinations. No more than two directed study or special topics courses are acceptable toward the PhD degree. All of the courses used in the fulfillment of course requirements must have catalog numbers of 500 and above.

A candidate for the PhD degree in Chemistry must complete all seminar requirements, (as detailed in *Department Seminar Requirements section of this document*).

A master degree earned at Clarkson is not accepted in lieu of any graduate course credit.

Clarkson University Requirements for the Comprehensive Examination and Admission to PhD Candidacy

“A comprehensive examination based on general preparation in the major field must be taken within two years after admission to the PhD program. If the comprehensive examination is failed twice, the student will be dropped.”

- Clarkson University Graduate Catalog

Supplemental Chemistry Department Requirements for Comprehensive Examinations

The comprehensive examination is administered by the department examination committee. It is given when needed and arrangements for taking it must be made with the student's research advisor and the chair of the graduate committee. The student must submit a request for a comprehensive examination at least four weeks prior to the proposed date of the examination, informing the chair of the graduate committee of their intent to take the comprehensive exam. The exam must be taken within the first two years of participation in the PhD program. Failure to take the exam within the first two years might result in termination of TA and RA support.

Comprehensive Exam Committee; Selection of committee members will be done in consultation with the thesis advisor and approved by the chair of the department. The inclusion of potential members of the thesis dissertation committee is encouraged. A minimum of two faculty members in the examination committee is required.

Scheduling; the candidate is responsible for making appropriate scheduling arrangements. The student will contact members of the comprehensive examination committee and schedule a date and time for the oral exam (up to 2 hours might be required). The candidate will also make arrangements to reserve a room for the event. (This can be accomplished in collaboration with the department administrative assistant.)

Content; the comprehensive exam consists of two parts:

- Research Proposal
- Oral Defense

Research Proposal; The candidate will prepare a written proposal in the research area of their PhD thesis. The proposal must be submitted to members of the committee at least two weeks

before the scheduled exam date. Hard copy or electronic versions are both acceptable; the candidate should consult each committee member regarding their format preference.

The proposal must be clear, readily legible, and conform to the following requirements:

- **Project Summary;** proposal includes a summary of the proposed work and the title and name of the primary investigator (PI) and their mentor(s). The summary should be a self-contained description of the activity with a length of no more than one page.
- **Project Description;** proposal includes a project description which provides a clear statement of the work to be undertaken and must include:
 - objectives and proposed schedule of the work
 - hypothesis for the proposed experiments
 - expected significance of the research
 - the relation to present state of knowledge in the field and to current work employed by the PI and others in the field {appropriately referenced}
 - preliminary data can be included when available
 - future plans, including the rationale for experiments and potential alternative approaches, should be emphasized
 - up to, but no more than, 15 pages in length (excluding references); the 15 pages should include all figures, schemes, photographs, etc.
- **References Cited;** proposal includes a references cited section which has no page limit and is in addition to the 15 page project description. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title (or book title), volume number, page numbers, and year of publication

The entire proposal must use Arial, Courier New or Palatino Linotype at a font size of 10 points or larger; Times New Roman at a font size of 11 points or larger; or Computer Modern family of fonts at a font size of 11 points or larger. A font size of less than 10 points may be used for mathematical formulas or equations, figures, table or diagram captions and when using a Symbol font to insert Greek letters or special characters. Please be cautioned, however, that the text must still be readable. No more than six lines of text within a vertical space of one inch; margins, in all directions, must be at least one inch.

Oral Defense; The candidate will prepare an oral defense which includes:

- **Presentation;** the candidate will prepare an oral presentation on the proposal (20-30 minutes in length)
- **Question and answer period;** the committee will ask questions regarding, but not limited to, the area of the candidate's thesis. Questions from the broader field will also be asked. Additional questions might be asked if the candidate failed to pass the placement exam in an area relevant to their work.

- **Panel discussion;** discussion is with committee members only; this defense is not open to public.

Comprehensive Examination Grading; the grade for the comprehensive exam is PASS/FAIL. If the candidate fails the comprehensive exam or is judged to be minimally prepared they need to retake the exam (in the same format) within a six month period.

Retaking Exam; a candidate can take the comprehensive examination a maximum of 2 times. A student who fails the comprehensive examination twice, or who does not repeat it successfully within six months, may remain in the chemistry program as an MS candidate but will not be allowed to continue as a candidate for the PhD.

CLARKSON UNIVERSITY DOCTORAL THESIS REQUIREMENTS & FINAL EXAMINATION

Final Examination; A final examination must be passed. This examination will include, as a minimum, an oral examination based on the dissertation. For the final oral examination, a committee will be selected by the faculty advisor and approved by the department chair and dean of the respective school. [Appointment of Final Examination Committee, School of Arts & Sciences, Graduate Studies](#). The committee will consist of a minimum of five members. The members should include at least four Clarkson faculty of assistant professor rank or higher and possessing an earned doctoral degree. At least one of the members must be from a department other than the candidate's major department. With the approval of the Provost, an external examiner with appropriate credentials from another University or industry may also be appointed to serve as one of the five committee members. This committee will judge the technical competence of the dissertation and the oral presentation. Final completion paperwork and an electronic copy of the accepted dissertation (on CD) must be received in the student's School office no later than 10 working days before commencement to confer degrees to qualify a student to receive a degree at the end of the spring semester. Before final submission of the PhD dissertation, each student will be responsible for submitting their dissertation for publication, and paying any associated fees.*

[Instructions for PhD Dissertation Preparation and Defense](#)

Chemistry Department Supplemental Requirements for Doctoral Thesis and Final Examination

Selection and Composition of the Examining Committee; Each final oral examination is administered by a committee selected by the candidate in consultation with the dissertation advisor and approved by the Chair of the Department of Chemistry and Biomolecular Science and the Dean of the School of Arts & Sciences.

The examining committee must have a minimum of five Clarkson faculty, of assistant rank or higher, and possessing a PhD degree. The thesis advisor serves as the committee chair.

The student must do the following:

- Consult with their dissertation advisor to formally identify committee members,
- Complete the, Appointment of PhD Final Examination Committee form, obtaining the following signatures:
 - all committee members
 - dissertation advisor
 - Chair of the Department of Chemistry and Biomolecular Science
- Submit completed form to the Dean of Arts & Sciences for approval. The completed form must be returned before the dissertation is submitted.

Advisor Approval and Distribution of Thesis to Committee; after the advisor determines that the dissertation is satisfactory, the department will examine the document for adherence to the required format and standards. Student will then distribute the compliant document to the examination committee members, electronic and/or hard copy format, depending on individual committee member's preference. Final examination committee members are allowed a minimum of three weeks for review of the dissertation after it has been received.

Please note; the student who wishes to receive the PhD degree in chemistry at commencement exercises should allow approximately a six week time-frame for the following procedures:

Advertising and Scheduling the Examination

The candidate and the advisor/department are responsible for reserving the exam space and for advertising the dissertation defense. Advertisement should be to the entire Clarkson community and should be completed one to two weeks in advance of the defense.

Dissertation Defense; The final oral examination for the PhD degree in chemistry should begin with the candidate's summary of the dissertation research. This summary must not exceed 30 minutes, and is immediately followed by an examination on the subject matter of the dissertation. The examination will be open to the public, but only members of the examining committee will decide whether the dissertation and the oral examination are acceptable. Any candidate who cannot adequately defend their dissertation will have the grade of pass or fail deferred and will be given one additional opportunity to repeat the final oral examination.

Rules Governing the Format of a Report, Thesis or Dissertation; all documents are generally expected to conform to high standards of style and appearance as well as scientific content.

Clarkson Graduate School Formatting Guidelines should be consulted for sample title page, sample committee signature page and other guides to formatting. [Graduate Completion Information](#) (Formatting guidelines are located below "Forms required")

Formatting; the report, thesis, or dissertation must be double-spaced, with the exception of the following, which should be single spaced: quotations as paragraphs, captions, items in tables, lists, graphs, footnotes/endnotes and bibliography. Must be neat in presentation.

Margins; side margins are to be an inch and a half wide (1 1/2") on the left, and one inch wide (1") on the right. Top and bottom margins will also be one inch (1").

Numbering; each page in the report, thesis, or dissertation must be assigned a page number and the numbering method must be consistent throughout the document. Numbering may be inserted at the top right corner or bottom center, and should not be outside the one inch (1") margin. A one inch (1") margin must be maintained above or below the number. Small Roman

numerals are used for the preliminary pages. The numbering begins with ii (the title page counts as i, but the number does not appear). The remainder of the document (including text, tables, figures, photographs, appendices, and bibliography) is numbered in Arabic numerals (1, 2, 3, etc.).

Font; The entire proposal must use Arial, Courier New or Palatino Linotype at a font size of 10 points or larger; Times New Roman at a font size of 11 points or larger; or Computer Modern family of fonts at a font size of 11 points or larger. A font size of less than 10 points may be used for mathematical formulas or equations, figures, table or diagram captions and when using a Symbol font to insert Greek letters or special characters. Please be cautioned, however, that the text must still be readable. Margins, in all directions, must be at least one inch.

Title page; the Graduate School offers sample page format in online graduate completion information, see link above. Also include a signature page which will be signed by the committee members.

Tables and figures; tables and figures should immediately follow the page of text on which they are first mentioned. A very short table may be included on a page together with text; however, a longer table should be placed on a separate page. Titles for tables, figures, graphs, or photos should appear at the bottom of the page on which it appears. EXCEPTION: Material necessitating horizontal binding should be placed such that the top is at the bound edge of the thesis with the title on the side opposite the binding.

Preliminary material; the preliminary material should include the following sections in the order indicated:

- title page; the Graduate School offers sample page format in online graduate completion information, see link above.
- committee signature page, the Graduate School offers sample page format in online graduate completion information, see link above.
- abstract will outline the work performed; mathematical formulas, diagrams, and other illustrative materials are not recommended for the abstract,
- dedication page (optional),
- acknowledgment page,
- table of contents,
- list of tables, including number, title, and the number of the page(s) on which they appear,
- list of figures, including number, brief caption, and the page on which the full caption appears,
- additional items which should follow the main text:
 - list of references
 - appendices

Chemistry Department RULES GOVERNING THE SUBMISSION OF A REPORT, THESIS, OR DISSERTATION

General Information

- all documents must be submitted in their final form (after all corrections have been completed) to the Department of Chemistry & Biomolecular Science department office a minimum of 14 days prior to the commencement at which the student expects to receive the degree
- the following completed items must also be submitted with the final thesis:
 - degree completion form; [Graduate Student Completion Notice Form](#)
 - updated degree program form; excel form available in graduate completion information, see link above.

Chemistry Department DEGREE COMPLETIONS AND DISTRIBUTION OF FINAL COPIES

MS Completions; MS final projects should be reviewed by three Clarkson faculty members, and all three reviewers must sign the student's completion notice. Two (2) copies of thesis will be given to Clarkson's library for circulation and archiving;

- one (1) copy of thesis, in electronic format, will be sent to the chemistry department administrative assistant for departmental records

PhD Completions;

- one (1) electronic copy of dissertation on CD (for University archives)
- completed SED (Survey of Earned Doctorates) - two options for submission:
 - online - review the SED Submission Procedures for how to complete the SED online <https://sedsurvey.org/DoctoralGraduates/CurrentQuestionnaire>
 - hard copy - complete, print, and follow directions on SED Survey website for mailing
- submit electronic copy of dissertation to ProQuest for publishing.
<http://www.etsadmin.com/clarkson>

You must consult your faculty advisor prior to completing the ProQuest form. Your thesis might be subject to pre-existing copyright agreements or might include sensitive material that should not be released publically. You must have the approval of the faculty advisor before submitting to ProQuest. We recommend a delayed public release of 2 years. – Chemistry Graduate Committee

ADDITIONAL INFORMATION

Additional information can be found at: [Graduate School Completion Information](#)
Check the site regularly as degree requirements and completion forms could change.

Final Thesis Acceptance Date Following Defense; Final copies of the thesis must be received in the Graduate School no later than the second week of classes of the semester following the semester when defense was completed or the student must register and pay for one credit hour of thesis.

Students with Completed Degrees; Students who have completed degree requirements, who are unregistered or inactive should not be allowed to use Clarkson facilities and/or laboratories for reasons of liability.

Exceptions; Exceptions to some of the requirements and rules described in this document may be granted in unusual circumstances. The student who believes an exception is justified should first consult with their advisor, and then with the Chair of the chemistry department's graduate committee. The student should then submit a written petition to the Chair of the Department of Chemistry & Biomolecular Science requesting any exception.

Additional Clarkson University links which may be useful to the Chemistry Graduate Student:

[New Graduate Students](#)

[Academic Calendar](#)

[Office of Information Technology](#)

[Potsdam Campus Maps & Directions](#)

[International Center](#)

[Clarkson Catalog](#)

[Graduate Student Completion Information](#)

[Graduate Completion Checklist](#)

[School of Arts & Sciences](#)

[Forms Used By Student Administrative Services \(SAS\)](#)