This brochure is designed to present the most pertinent information on the courses, examinations, and other requirements of the Chemical Physics Ph.D. program. The UNR General Catalog should be consulted for authoritative information.

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1 Entry into the Graduate Program in Chemical Physics

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Note: This handbook lists graduate program academic policies and procedures. It includes information on graduate school policies, degree requirements, timeline for degree completion, committee selection guidelines and comprehensive exam/thesis requirements. Every effort has been made to make this handbook accurate as of the date of publication; however, this handbook does not constitute a contractual commitment. Graduate programs may not offer all of the courses as described, and policies are subject to yearly review and changes with program director and Graduate Council approval.

All up-to-date graduate forms and resources can be found on the Graduate Forms and Deadlines Website¹. An updated online version of this graduate handbook² can also be found through the Graduate School.

1.1 Admission into the Program

Brief Program Description:
The Ph.D. degree in chemical physics provides an interdisciplinary curriculum for those students whose primary research interests are in atomic and molecular physics and physical chemistry. While requiring the student to complete a rigorous selection of courses that outline the foundations of modern chemical physics, the program also offers extreme flexibility in the choice of dissertation topic as the student may choose any of the affiliated faculty in either the Department of Physics or the Department of Chemistry to serve as a research adviser. The program is offered by the College of Science.

Program Objectives/Student Learning Outcomes (SLOs):
• Theoretical knowledge
• Research methods, planning, and experiment design
• Literature research and communication skills
• Scientific creativity and independence

The Chemical Physics program confers only the Ph.D. degree. The Admissions to Chemistry Graduate Website³ may also provide helpful resources. Master’s degree students follow the course of study laid out by either the physics or chemistry department. Admission of a student into the Chemical Physics program can occur by one of three routes: either:

1. Direct admission into the Chemical Physics Ph.D. program following the completion of an under graduate or Master’s degree, or

2. Admission into the Ph.D. degree program of either the chemistry or physics department with subsequent induction into the Chemical Physics program upon satisfactory performance in courses and/or the comprehensive examination (see below).

¹ https://www.unr.edu/grad/forms-and-deadlines
³ https://www.unr.edu/chemistry/degrees/graduate-resources/admissions
Admission into the program will be decided by the individual departments’ admissions committees under consultation with the Chemical Physics Program director. The department through which a student gains admission to the program will henceforth be referred to as the “admitting department.” Financial support for an incoming student, usually in the form of a teaching or research assistantship, is administered by the admitting department and/or by individual research groups.

Graduate School Academic Requirements:

All graduate students must maintain a cumulative graduate GPA of 3.0. If their GPA drops below 3.0, they are either placed on probation or dismissed. Undergraduate courses will not count towards graduate GPA.

Probation: students whose cumulative graduate GPA falls between 2.31 and 2.99 are automatically placed on academic probation for one semester. If they fail to raise their cumulative GPA to 3.0 by the end of one semester, they are dismissed from their graduate program. Thesis, dissertation, S/U graded credits, and transfer credits have no impact on a student’s GPA.

Dismissal: students whose cumulative graduate GPA is 2.30 or lower are dismissed. Dismissed students are no longer enrolled in their graduate program but may take graduate-level courses as a Grad Special. Dismissed students wishing to complete their degree must obtain approval to take graduate-level courses, raise their graduate GPA to at least 3.0, and then re-apply to their graduate program. Any courses taken in an effort to raise their GPA will be included in the graduate special/transfer credit limitation (9 credits for master’s degrees).

Please refer to Nevada System of Higher Education CODE on Student Program Dismissal Procedures (SPDP) and review conference policies: (NSHE CODE, Chapter 11, Sections 1-3). If program dismissal is based upon failure to maintain required grades or a required GPA as described above, SPDP does not apply and the student may be summarily dismissed from the graduate program.

The Graduate Student Association (GSA) represents all graduate students and promotes the welfare and interests of the graduate students at the University of Nevada, Reno. The GSA works closely with appropriate university administrative offices, including the Graduate School and Student Services and reports to the President of the University. The GSA government functions through the Council of Representatives, Executive Council and established committees.

1.2 Graduate Record Examination Scores and Transcripts

Scores on the Graduate Record Examination (GRE) must be filed with the Graduate School by the student prior to admission to graduate standing. The Graduate School requires an undergraduate grade point average of 3.0 or better for formal admission into a Ph.D. program at the university. A student entering the program upon completion of a Master’s degree may use the graduate grade point average to meet this requirement.

1.3 Registration Exams

Registration exams are administered separately by the chemistry and physics departments to all entering graduate students prior to registration. They are used to assess each student’s background and to search out deficiencies in the student’s background in molecular physics or physical chemistry so that more effective course advisement can be given. Chemical physics students gaining admission to the program through the chemistry department are required to take the registration exam in physical chemistry, as well as exams in mechanics (covering basic Newtonian mechanics at the level of a first-semester course in physics) and mathematics (covering calculus, differential equations, and some complex analysis). The registration exams also serve the role of the Qualifying Examinations required by the Graduate School for the Ph.D.

https://www.unr.edu/gsa/
The Chemical Physics program curriculum consists of a core of 15 credits of required courses (5 courses), 31 credits of electives [of which 12 credits maybe “Independent Study”, 3 may be “Dissertation”, and 8 credits may be “Physical Chemistry Colloquium”], 2 credits of student seminar (Chemistry 790 or Physics 790), and 24 credits of “Dissertation”). The five required courses are:

1. PHYS 101 Mathematical Physics
2. CHEM 757 or PHYS 721 Quantum Chemistry or Quantum Theory I
3. PHYS 722 or CHEM 750 Quantum Theory II or Theoretical Physical Chemistry
4. CHEM 755 or PHYS 732 Statistical Thermodynamics or Statistical Mechanics
5. PHYS 702 or CHEM 752 or PHYS 725 or CHEM 754 Classical Mechanics or Chemical Kinetics or Laser Physics or Molecular Spectroscopy

Students must take at least two 700-level courses in each of the Chemistry and Physics departments to satisfy their course requirements. Elective courses at the 600- or 700-level must be approved by the student’s Graduate Advisory Committee.

Elective Courses (Chemistry and Physics Options) – Please consult the catalog and an advisor:

- CHEM 631 - Advanced Inorganic Chemistry
- CHEM 635 - Chemical Synthesis
- CHEM 637 - Separation Chemistry and Metallurgy of the Rare Earths
- CHEM 639 - Green Chemistry and Sustainability
- CHEM 642 - Advanced Organic Chemistry
- CHEM 643 - Organic Spectroscopy and Structure
- CHEM 644 - Organic Structure Determination Laboratory
- CHEM 649 - Polymer Chemistry
- CHEM 650 - Advanced Physical Chemistry
- CHEM 651 - The Elementary Physical Chemistry of Macromolecules
- CHEM 655 - Instrumental Analysis
- CHEM 690 - Independent Study in Chemistry
- CHEM 692 - Advanced Topics in Chemistry
- CHEM 700 - Supervised Teaching in College Chemistry
- CHEM 707 - Research Instruments Practicum
- CHEM 711 - Theoretical Inorganic Chemistry
- CHEM 712 - The Less Familiar Elements
- CHEM 713 - Organometallic Chemistry
- CHEM 714 - Special Topics in Inorganic Chemistry
- CHEM 740 - Methods of Organic Synthesis
- CHEM 741 - Advanced Organic Structure Elucidation
- CHEM 742 - Theoretical Organic Chemistry

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5 https://catalog.unr.edu
6 https://catalog.unr.edu/preview_program.php?catoid=24&poid=17841#_ga=2.263018316.1734667738.1516134576-1916886029.1499968381
• CHEM 743 - Special Topics in Organic Chemistry
• CHEM 744 - Stereochemistry and Conformational Analysis
• CHEM 745 - Strategy of Organic Synthesis
• CHEM 751 - Special Topics in Physical Chemistry
• CHEM 752 - Chemical Kinetics
• CHEM 754 - Molecular Spectroscopy
• CHEM 755 - Statistical Thermodynamics
• CHEM 757 - Quantum Chemistry
• CHEM 788 - Research Conference
• CHEM 789 - Graduate Seminar I
• CHEM 790 - Graduate Seminar II
• CHEM 791 - Professional Paper
• CHEM 793 - Independent Studies
• CHEM 794A - Colloquia
• CHEM 794B - Colloquia
• CHEM 794C - Colloquia
• CHEM 795 - Comprehensive Examination
• CHEM 797 - Thesis
• CHEM 799 - Dissertation
• PHYS 604 - Computational Techniques in Physics
• PHYS 608 - Nuclear and Elementary Particle Physics
• PHYS 622 - Applicat Quantum Mech
• PHYS 623 - Adv Physics Lab
• PHYS 625 - Therm & Stat Physics
• PHYS 626 - Physics Of Solids
• PHYS 627 - Plasma Physics
• PHYS 652 - Physics of Oscillations and Waves
• PHYS 653 - Special and General Theory of Relativity
• PHYS 661 - Modern Optics and Photonics
• PHYS 683 - Special Topics in Physics
• PHYS 684 - Special Topics in Physics
• PHYS 693 - Special Problems
• PHYS 701 - Mathematical Physics
• PHYS 702 - Classical Mechanics
• PHYS 704 - Computational Techniques in Physical Science
• PHYS 707 - Solid State Physics
• PHYS 708 - Nuclear Physics
• PHYS 711 - Electromagnetic Theory I
• PHYS 712 - Electromag Theory II
• PHYS 721 - Quantum Theory I
• PHYS 722 - Quantum Theory II
• PHYS 725 - Laser Physics
• PHYS 727 - Plasma Theory
• PHYS 732 - Statistical Mechanics
• PHYS 740 - Fluid Dynamics
• PHYS 761 - Atomic and Molecular Physics
• PHYS 762 - Physics of Fundamental Interactions
• PHYS 771 - Advanced Topics
1.5 Choice of Research Advisor

The Chemical Physics program requires a completed research dissertation. During the first semester in residence, each student should consult with the various faculty members associated with the Chemical Physics program. These consultations should be arranged by the student. They generally involve discussion of the type of research programs of interest to the faculty member. After these consultations, the student chooses a faculty member under whose direction the dissertation research will be performed. The faculty member is asked by the student to serve as the student’s research director and advisor. Choice of the research director should be made no later than the end of the second semester of graduate studies. A list of those faculty affiliated with the Chemical Physics program and their research area is given below.

**Department of Physics**

- **W. Patrick Arnott**  
  Ambient air quality measurements
- **Bruno Bauer**  
  Experimental studies of plasma waves and instabilities
- **Andrei Derevianko**  
  Theoretical physics
- **Roberto C. Mancini**  
  Theory and modeling of laser-produced transient plasmas
- **Hans Moosmüller**  
  Atmospheric and aerosol physics
- **Alla Safranova**  
  Theoretical plasma physics
- **Timur Tscherbul**  
  Theoretical atomic, molecular and chemical physics
- **Jonathan Weinstein**  
  Ultracold atomic and molecular physics

**Department of Chemistry**

- **Mario A. Alpuche**  
  Electrochemical methods for energy conversion
- **Sean M. Casey**  
  Semiconductor surface science
- **Kent M. Ervin**  
  Cluster ion reactions and photophysics
- **David M. Leitner**  
  Theoretical chemistry, biophysical chemistry
- **Samuel Odoh**  
  Computational materials chemistry
- **Matthew J. Tucker**  
  Ultrafast spectroscopy, biophysical chemistry
- **Sergey Varganov**  
  Electronic structure theory and molecular dynamics
1.6 Graduate Advisory Committee

**Doctoral Programs:** Consist of a minimum of five graduate faculty members; the chair, at least two faculty members from the student’s major department/program, at least one faculty member from a department in a field related to the student’s major, and at least one Graduate School representative.

In case of interdisciplinary graduate programs, the Graduate School Representative cannot have a primary appointment in the same department (or other appropriate major unit) as the student's committee chair.

Formal approval of all student advisory committees is made by the Graduate Dean.

After a student has chosen a research advisor, he or she should consult with the advisor to form a Graduate Advisory Committee. The student should be prepared to suggest members for the committee which must have at least five members: two from each of the chemistry and physics departments (including the research advisor), and one from an outside department.

The student initiates the Declaration of Advisor/Major Advisor/Committee Chair Form and other necessary paperwork necessary to form this committee and the research advisor acts as its chairman. The committee is responsible for formally approving the student’s program of study and for administering the Oral Comprehensive Exam and the Final Oral Examination upon the completion of the research dissertation. The appointment of this committee should be accomplished no later than the beginning of the student’s third semester at the university.

1.7 Program of Study

Students admitted to graduate standing must have their initial course work approved by the Graduate Advisory Committee. An approved Program of Study Form must be submitted to the Graduate School no later than the completion of 24 graduate credits (by the end of the student’s fourth semester).

The Graduate Advisory Committee should be convened by the research advisor to discuss the student’s proposed program of study. Generally, the student and advisor work together to decide on the courses that will be taken by the student during the graduate program. These courses are selected to fit the student’s vocational objectives and provide background useful for research while at the same time meeting the requirements for the Ph.D. degree (see Section III). The student will need to pick up the Program of Study forms from the Graduate School office in Getchell Library and have these forms filled out prior to meeting with the Graduate Advisory Committee. The student should arrange a suitable time and place for the meeting after consulting with committee members. The committee then meets with the student to discuss and approve the proposed program. As part of this meeting, the student might be asked to give a brief presentation describing his or her proposed research. This helps the committee become better acquainted with the student and allows it to better evaluate the proposed course of study. Completion of the program of study form is required for an RA or TA contract in the second year of study.

**Assistantships and Additional Graduate Work Resources**

All graduate students holding an assistantship (teaching GTA or GRA) are considered Nevada residents for tuition purposes. Non-resident tuition is only waived for the duration of the assistantship. To be eligible for an assistantship, students must be admitted to a degree-granting program and be in good academic standing. The student must have an overall GPA of at least 3.0 and must be continuously enrolled in at least 6 graduate level credits (600-700) throughout the duration of the assistantship.

7 [https://www.unr.edu/Documents/graduate-school/Declaration-of-Advisor.pdf](https://www.unr.edu/Documents/graduate-school/Declaration-of-Advisor.pdf)
8 [http://www.unr.edu/Documents/graduate-school/program-of-study.pdf](http://www.unr.edu/Documents/graduate-school/program-of-study.pdf)
State-funded assistantships (GTA/GRA) may be held for a maximum of: three (3) years for master’s degree students and five (5) years for doctoral degree students.

For current information, please visit the Graduate Assistantships Website\(^9\) and the Graduate Assistantships Handbook\(^10\).

**Health Insurance**

All domestic degree seeking graduate students, who are enrolled in six or more credits (regardless of the course level) in a semester, will be automatically enrolled and billed for the University sponsored health insurance\(^11\) for each term they are eligible (fall & spring/summer). If a student has other comparable coverage and would like to waive out of the student health insurance, it is the student’s responsibility to complete the University online waiver form\(^12\) prior to the deadline. If approved, a health insurance waiver is good for the current academic year only. A new waiver must be submitted each academic year. All international graduate students are required to carry student health insurance, and the cost will be automatically added to your student account. Any international graduate students with insurance questions must contact the Office of International Students and Scholars (OISS)\(^13\) directly.

2. General Requirements

2.1 Credit Hours

Registration in 9 graduate credits or more each semester is considered full time. The normal course load taken by students who are serving as regular Teaching Assistants is about 9 credits.

2.2 Course Work Performance

**Good Standing**

UNR Overall Graduate Course Work GPA of 3.0 or Better

**Probationary Status**

UNR Overall Graduate Course Work GPA Balance Below 3.0

**Dropped from Graduate Standing**

UNR Overall Graduate Course GPA Balance of 7 or More Grade Points Below 3.0

**Official Graduate School Policy:**

**Continuous Enrollment:** To maintain “good standing” all graduate students are required to enroll in a minimum of three (3) graduate credits each fall and spring semester until they graduate. International students may be required to enroll in nine graduate credits each fall and spring semester depending on the requirements of their visa. All students holding assistantships (whether teaching or research assistantships) are required to enroll in a minimum of six (6) graduate credits each semester they hold the assistantship.

**Leave of Absence:** Students in good standing may request a leave of absence by completing a Leave of Absence form\(^14\) during which time they are not required to maintain continuous registration. Usually, a leave of absence is approved for one or two semesters. The leave of absence request may be extended by the student filing an additional leave of absence form. Students applying for a leave of absence should not have any “incomplete” grades which could be

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\(^9\) [https://www.unr.edu/grad/funding/graduate-assistantships](https://www.unr.edu/grad/funding/graduate-assistantships)
\(^10\) [https://www.unr.edu/Documents/administration-finance/hr/hr-graduate/GA_handbook.pdf](https://www.unr.edu/Documents/administration-finance/hr/hr-graduate/GA_handbook.pdf)
\(^11\) [https://www.unr.edu/grad/health-insurance](https://www.unr.edu/grad/health-insurance)
\(^12\) [https://studentinsurance.usi.com/UNR/unr-grad](https://studentinsurance.usi.com/UNR/unr-grad)
\(^13\) [https://www.unr.edu/oiss](https://www.unr.edu/oiss)
changed to “F” and have a detrimental impact on their cumulative GPA. Requests for leave of absences must be received by the Graduate School no later than the last day of enrollment for the semester the leave is to begin.

**Reinstatement:** When a student has been absent for one semester or more without an approved leave of absence, he or she may request reinstatement via the Reinstatement form. This form allows the program the option to recommend the student be re-admitted to their graduate program based on their previous admission OR require the student to re-apply for admission which would require students to submit a new application for admission and pay the application fee. The Notice of Reinstatement to Graduate Standing must be received by the Graduate School no later than the last day of enrollment for the semester the reinstatement is to begin.

### 2.3 Comprehensive Examinations

In addition to the formal course work, written and oral comprehensive examinations must be taken. The written part of the comprehensive examination will be taken by the student within one year of the completion of the 5 required courses in the Chemical Physics program, but can be taken any time after four of the required courses have been completed. The exam will focus on the material covered by those courses. The Chemical Physics Program Director coordinates the writing of the exam, soliciting problems from those faculty who have recently taught the required courses.

The oral part of the comprehensive examination is taken immediately after completion of the written part (normally within 1-2 weeks) and is supervised by the student’s Graduate Advisory Committee. The oral examination will cover the same broad range of topics treated by the written comprehensive exam and is designed to allow the Graduate Advisory Committee to better evaluate the student’s general background in chemical physics. General questions pertaining to the student’s dissertation research project may also be posed.

The student performance (pass/fail) on the written and oral parts of the comprehensive examination will be evaluated by the student’s Graduate Advisory Committee. Successful completion of both the parts of the comprehensive examination will be necessary for the student’s continued good standing in the Chemical Physics program. Unsatisfactory performance on the first attempt at the comprehensive examination may be rectified by retaking both parts of the exam within six months of the first attempt. Unsatisfactory performance on the second attempt will result in dismissal from the program. Comprehensive exam results are acceptable toward fulfilling the Ph.D. degree requirements for a period of 4 years following the end of the semester in which the examination was satisfactorily completed.

### 2.4 Seminars

Students are also required to participate in the seminar program. This means attending both students’ seminars and seminars presented by visitors to the physics and chemistry departments. All students must give a minimum of 2 seminars (see Sec. 3.4), of which one will function as a “final” seminar delivered upon completion of the dissertation.

### 2.5 Time Limitation for Completion of Advanced Degrees

All requirements for the doctoral program, excluding prerequisite graduate course work or master’s degrees, must be completed within eight years from the time of admission. It should be noted that the average Ph.D. degree in Chemical Physics should take about five years. Be sure to consult the time limits on comprehensive examinations (Sec. 2.3).

Students must register for an appropriate course load at least one semester or summer session each year or obtain an “approved leave” from the admitting department. Unless these approved
leaves are part of the student’s Graduate School records, extensions of the eight-year time limitation will not be approved by the Graduate School.

2.6 Admission to Chemical Physics from an M.S. Program

A student wishing to enter the Chemical Physics Ph.D. program while enrolled in a Master’s program in either Chemistry or Physics at UNR must first inform the research advisor of this intention. The research advisor, with the approval of the Chemical Physics faculty, then initiates the necessary paperwork through the Office of the Dean of the Graduate School. This includes adjusting the size of the Graduate Advisory Committee from three to five members. The new committee is then responsible for determining what portion of the Chemical Physics Ph.D. requirements remain to be fulfilled by the student, including both curriculum and comprehensive examination requirements.

For graduate students transferring into the Chemical Physics Ph.D. Program from another institution, without completing a degree at that institution, the Graduate School currently permits a maximum of 9 credits to be transferred. Note that a master’s thesis may not take the place of the Ph.D. dissertation either in whole or in part.

Students wishing to enroll in the Chemical Physics program with a completed M.S. in either Chemistry or Physics (or another subject deemed acceptable by the Chemical Physics admissions committee) earned at either UNR or another institution should apply for the program the same way as a student entering directly from an undergraduate program. The Chemical Physics admissions committee, in accordance with Graduate School regulations, will then determine what portion of the Chemical Physics Ph.D. requirements are transferable and which requirements remain to be fulfilled by the student. The Graduate School current permits a maximum of 24 credits to Note that a master’s thesis may not take the place of the Ph.D. dissertation either in whole or in part.

Transfer Credits:
These are credits transferred from another institution. Credits completed at UNR in another program or as a graduate special do not need to be transferred. Transfer credit can be requested on the Graduate Credit Transfer Evaluation Request form available on Graduate School website, and must be signed by the student, major advisor, and graduate director. Transfer credits applied to a master’s program must comply with the time limitation on master’s work (6 years). Thus, if a student took a course five years prior to admission, they would have to complete the degree within one year for the course to apply to the degree. Credits from a completed master’s degree will be exempt from the 8-year time limitation for those students pursuing a doctoral degree.

3. Requirements for the Ph.D. Degree

3.1 Minimum Credit Requirements

The minimum credit requirements for the Ph.D. are listed below:

<table>
<thead>
<tr>
<th>Required course credits</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Studies (CHEM 793 or PHYS 792)</td>
<td>12</td>
</tr>
<tr>
<td>Seminar¹</td>
<td>2</td>
</tr>
<tr>
<td>Electives²</td>
<td>18</td>
</tr>
<tr>
<td>Comprehensive Exam (CHEM 795)</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL Course Credits</strong></td>
<td>48</td>
</tr>
</tbody>
</table>

¹ http://www.unr.edu/Documents/graduate-school/GraduateCreditTransferEvaluationRequest.pdf
Dissertation Credits:  24
TOTAL CREDITS  72

1A minimum of two (2) seminar credits must involve an original oral presentation by the student.
2May include up to eight (8) credits of CHEM794 (“Physical Chemistry Colloquium”) and up to three (3) credits of PHYS799 or CHEM 799 (“Dissertation”)

3.2 Comprehensive Examinations

Students must achieve satisfactory performance on the written and oral comprehensive examinations, as determined by the Comprehensive Examination Committee and the Graduate Advisory Committee, within one year of completing the required courses. Failure on the first attempt of either the written or the oral examination may be rectified by taking the examination within six months of the failure. (See Sec. 2.3 for a description of the written and oral parts of the examination.)

Comprehensive exams are acceptable for a period of 4 years for the Ph.D. degree following the end of the semester in which the comprehensive examination requirement was fulfilled. (See Sec. 2.3) Students should enroll in CHEM 795 (1 credit) during the semester they take their comprehensive exam.

3.3 Language Requirement

The Chemical Physics program does not require a foreign language.

3.4 Seminar Requirements

Students are expected to give their first seminar no later than their third semester in graduate school. The first seminar is given on a literature topic chosen from a list provided by the chemistry faculty if the student is enrolled in CHEM 790, or is chosen by the student in consultation with the research advisor if the student is enrolled in PHYS 790. A “B” is the minimum acceptable grade for satisfying the seminar requirement. Students should consult with the faculty member in charge of either CHEM 790 or PHYS 790 to get an idea of what is expected. Also, students should carefully consult the “Seminar Guidelines” available in the chemistry department office.

The second student seminar is the final public presentation of the Ph.D. research, which is to be given on the same day as the Final Oral Examination, just before the examination.

3.5 Admission to Candidacy

The student should apply for admission to candidacy after passing the comprehensive examination. The student must initiate this procedure using forms obtained from the Graduate School and should submit the application for Admission to Candidacy Form no later than eight calendar months before the date of graduation. Consult the University Catalog for further details, especially concerning the time limit on Candidacy.

3.6 Approval of Dissertation and Final Oral Examination

17 https://www.unr.edu/grad/forms-and-deadlines
18 https://www.unr.edu/grad
After completion of a dissertation, the student is required to discuss it and defend it to the Graduate Advisory Committee. Consult the University Catalog for information about the required dissertation format, dates of submission, number of required copies, etc. A draft of the dissertation should be given to members of the examining committee (Graduate Advisory Committee) prior to the final typing so that corrections and suggestions can be incorporated. The completed, unbound dissertation must be submitted to the committee at least one week before the final examination. The meeting in which the dissertation and related topics are discussed is the Final Oral Examination. Consult the University Catalog for other details.

Please note that, when adhering to the Dissertation Filing Guidelines in the case of undertaking a dissertation, the appropriate forms must be submitted in accordance to your program’s final timeline: the Dissertation Title Form and the Dissertation Final Review Approval Form.

4. Graduate Student Evaluation Procedures

Graduate students in the Chemical Physics program are evaluated yearly by the Chemical Physics faculty to assess progress toward completion of requirements, including especially research. The purpose of these evaluations is to determine the candidate’s overall fitness for his or her chosen program. In addition, the evaluations should bring out any areas of unsatisfactory progress so that the student can be aware of them and correct them.

Included in this brochure is a Self-Evaluation Record and a Timetable of Events and the GS A-1 form from the Graduate School. The Self-Evaluation Record is intended to provide information about completed course work and comprehensive exams.

The timetable is a schedule of times for completion of the requirements for the Ph.D. degree within four to five years and is intended as a guide to the faculty in measuring progress. It should be noted that the Timetable is meant to be an appropriate time schedule of events—a goal to aim for—and not a schedule of firm deadlines for the completion of the requirements. It is recognized that it may not be possible to adhere to the schedule because of circumstances such as difficulty in scheduling classes, entering the program with deficiencies, etc. However, serious deviation from the schedule may be an indication of unsatisfactory progress.

The GS A-1 form describes the steps to be followed in pursuing a graduate degree program.

5. Timetable of Events

For students in the Ph.D. program entering with a Bachelor’s Degree, this section gives a recommended schedule for a four to five year program. The schedule appropriate for students entering the program with a Master’s degree will vary from individual to individual depending on the Chemical Physics requirements that are fulfilled by the student’s record in a Master’s program. Students falling in this category should consult with the research advisor or the director of the Chemical Physics program for a corresponding timetable of events.

1. First Year of Study

The following must be accomplished by the end of the first year of graduate study:

(a) Take registration examination before registration.
(b) Choose a research director by the end of the second semester and develop a graduate program in consultation with the Graduate Advisory Committee before the beginning of the third semester.

2. Second Year of Study
The following should be accomplished by the end of the second year of graduate study:
(a) Present first seminar by the end of the third semester.
(b) Complete the required course work (if scheduling permits).

Along with the completion of these requirements, some definite progress in dissertation research should be made by the end of the second year.

3. Third Year of Study
The comprehensive examinations must be taken within one year after completion of the required courses. Application for admission to candidacy should be filed soon after the comprehensive examination has been passed and other degree requirements have been completed. By the end of the sixth semester, the student has ideally spent two summers, one or two semesters fully, and two semesters partly on the dissertation research. Thus, significant progress in research work should have been made by this time.

4. Fourth and Fifth Years of Study
The completion of research and writing of the dissertation should be made during the fourth and fifth years. The final oral examination should be completed shortly after the dissertation has been written. This examination should be completed not later than the end of the fifth year.

Additional Forms
Graduation
Every student must purchase a graduation application by the designated deadline: May Graduation, March 1; August Graduation, June 1; December Graduation, October 1. After submission, you will receive an email within 3-8 weeks outlining the result of the graduation review. All candidates for graduation should visit their department advisor to confirm expectations for the final semester. Also visit the Graduation Application Website \(^{23}\) for further details. This graduation application link \(^{24}\) will direct you to MyNevada to apply for graduation.

Notification of Completion
This is a generic Doctoral Degree Notice of Completion Form \(^{25}\) which every student must complete in their graduating semester which relates to the cumulative project (dissertation, professional paper, comprehensive exam). Fill out the sections that apply to your requirements. The advisory committee listed on the program of study signs the form. The notice of completion must be submitted by established deadlines for graduation.

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\(^{23}\) https://www.unr.edu/grad/graduation-and-deadlines
\(^{24}\)https://my.nevada.unr.edu/psp/mporprd/EMPLOYEE/EMPL/h/?tab=PAPP_GUEST#_ga=2.29800959.1734667738.1516134576-1916886029.1499968381
\(^{25}\)https://www.unr.edu/Documents/graduate-school/notice-of-completion-doctoral-degree.pdf
Exit Survey
Take the Exit Survey\textsuperscript{26} to help the Graduate School continue to improve students’ experiences.

\textsuperscript{26} https://www.unr.edu/grad/forms-and-deadlines/exit-survey
### SELF EVALUATION RECORD: CHEMICAL PHYSICS PROGRAM

Name: __________________________

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<thead>
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<th>GRADUATE STUDY PROGRAM</th>
<th>Required</th>
<th>Elective</th>
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<td>Title</td>
<td>Credits</td>
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### COMPREHENSIVE EXAMINATIONS

Completion of Written Exam: __________________________

Completion of Oral Exam: __________________________

### SEMINAR EXAMINATIONS

Completion of First Seminar: __________________________

Completion of Second Seminar: __________________________