

# Curriculum and Student Guide

## Cell and Molecular Biology Graduate Program

**Revised March 2018**

The purpose of this Handbook is to introduce the CMB Graduate Program to prospective and new students and to provide a resource to current students and faculty.

This Handbook is divided into two sections (Doctor of Philosophy Degree and Master of Science Degree):

### **1. Doctor of Philosophy Degree**

- Program of Study
- Program Completion Requirements
- Graduate Student Performance Standards

### **2. Master of Science Degree**

- Program of Study
- Program Completion Requirements
- Graduate Student Performance Standards

Please don't hesitate to contact me by phone (775-784-1391) or by email ([Berninsone@unr.edu](mailto:Berninsone@unr.edu)) if you have questions or I can be of assistance as you progress in the CMB program at UNR.

Patricia Berninsone, Ph.D.  
Associate Professor  
Director, Cell and Molecular Biology Graduate Program  
University of Nevada, Reno  
Reno, NV 89557  
Phone: (775)784-1391  
[berninsone@unr.edu](mailto:berninsone@unr.edu)

**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.

## 1. DOCTOR OF PHILOSOPHY DEGREE

### Brief Introduction

Cell and Molecular Biology is an interdisciplinary program, part of the Molecular Biosciences graduate programs along with Biochemistry and Molecular Biology, and Cell and Molecular Pharmacology and Physiology. The CMB program includes faculty across campus, including the School of Medicine, the College of Science, and the College of Agriculture, Biotechnology and Natural Resources. Study programs lead to the Master of Science or Doctor of Philosophy degree. Additionally, medical students in the School of Medicine may earn a M.D. /Ph.D. degree through the program.

The highly interactive program offers a wide range of study options dealing with contemporary cell and molecular biology. Graduate fellowships for the cellular and molecular biology program are available on a competitive basis. Contact the program office for more information.

### Program Objectives/Student Learning Outcomes (SLOs)

The Molecular Biosciences graduate programs at the University of Nevada at Reno provide an integrated course of study for students seeking a PhD or MS degree in biomolecular-related research. Over 60 participating Faculty members are drawn from nine different departments. The program provides a supportive environment for over 100 graduate students with excellent opportunities in a broad range of biological and biomedical research areas.

### Program of Study

The minimum requirements for a Ph.D. degree are set by the Graduate School at 72 graduate units, including 24 credits of Dissertation, at least 30 units of 700-level courses and one credit for Comprehensive Exam. A maximum of **24** units of course work (with grades of "B" or better) from a master's degree program may be allocated toward the doctoral degree. (A *Credit Transfer Evaluation Request Form* available online from the Graduate School must be approved by the student's advisory committee, the Graduate Program Director and, the Dean of the Graduate School.)

#### The minimum CMB Ph.D. Degree requires:

CMB core curriculum	22 credits
CMB research and dissertation	24 credits
Electives	20 credits
Total credits required	72 credits

The required courses for each individual Ph.D. student must be determined in conjunction with the student's advisor and graduate advisory committee and the approval of the Program Director.

#### Core Curriculum (22 credits required)

BCH 613, Molecular Biophysics,	3 credits
BCH 705, Molecular Genetics,	3 credits – offered every FALL

CMB 701 <sup>1</sup> , Laboratory Practicum I	3 credits
CMB 702 <sup>1</sup> Laboratory Practicum II	3 credits
CMB 703, Laboratory Practicum III (see Appendix A)	3 credits
CMB 710, Cell Biology,	4 credits – offered every SPRING
CMB 730, Classroom/Laboratory Teaching (see Appendix B)	0 credits
CMB 790, Graduate Seminar (1 credit)	Up to 6 credits
CMB/BCH/CMPP 794, Colloquium (1 credit)	Up to 6 credits
PHAR 725 Ethics in research	2 credits – Offered FALL odd years
CMB 795 <sup>2</sup> Comprehensive Exam	1 credit

<sup>1</sup> The CMB 701 and CMB 702 courses should be taken even if the student is NOT formally rotating through a minimum of two different laboratories.

<sup>2</sup> Grades for Comprehensive Examination (CMB 795) must be filled by the end of the semester following the semester in which you registered for the course. If a grade is not filled by then, you will have to register again to receive credit for that course.

Electives (20 credits required)

BCH 605 Molecular Biology	3 credits
BCH 610 Plant Physiology	3 credits
BCH 613 Molecular Biophysics	3 credits
BCH 617 Metabolic Regulation	3 credits
BCH 706 Functional Genomics	3 credits
BCH 707 Protein Structure and Function	3 credits
BCH 709 Bioinformatics	3 credits
BCH 718 Plant Mol Biol & Biotech	3 credits
BCH 740 Enzymology	3 credits
BCH 793 Independent Study	1-3 credits
BCH 794 Colloquium	1-8 credits
BIOL 604 Population Genetics	3 credits
BIOL 610 Plant Physiology	3 credits
BIOL 615 Evolution	4 credits
BIOL 650 sect. 1002 Genomics and Bioinformatics	3 credits
BIOL 653 Immunology	3 credits
BIOL 654 Genomic Conflict, Epigenetics and Human Disease	3 credits
BIOL 656 Molecular Basis of Epigenetics	3 credits
BIOL 666 Developmental Biology	3 credits

BIOL 675 Neurobiology	3 credits
BIOL 677 Genes, Brain, and Behavior	3 credits
BIOL 682 Cell Biology of Disease	3 credits
BIOL 705 Principles and Applications of Flow Cytometry	3 credits
BIOL 792 sect. 1028 Computational Tools for Genomic Biology	2 credits
BME 601 Intro to Biomedical Engineering	3 credits
BME 626 Biomedical Engineering	3 credits
BME 725 Ethics and Scientific Research	2 credits
BME 730 Introduction to Imaging & Optics	3 credits
CMPP 740 Neuroeffector Mechanisms	3 credits
CMPP 750 Molec. Mech. of Excitability	3 credits
MICR 670 Cellular Microbiology	3 credits
MICR 676 Cancer Immunobiology	3 credits
MICR 700 Biotechnology Today & Tomorrow	2 credits
MICR 780 Intro Cellular Immunology	3 credits
MICR 784 Molecular Mech Virus	3 credits
NURS 717 Advanced Pathophysiology	3 credits
PHAR 600 Introduction to Human Pharmacology	3 credits
PHAR 710 Molecular Pharmacology	3 credits
PHAR 730 Introduction to Imaging & Optics	3 credits
PHAR 750 Cellular & Molec Mech Excitability	3 credits

*Courses not listed above may meet program requirements. Please inquire about specific courses.*

*See Appendix A for a Course Yearly Breakdown and Example Plan of Study.*

A full-time graduate student may not register for more than sixteen (12) graduate units in any semester, or more than six (6) graduate units in any six-week summer session. Graduate assistants may not register for more than twelve (12) graduate units per semester. More than 12 credits requires an overload memo from the director.

Students who register for nine (9) graduate units or more in a semester are considered full-time. To be considered full-time for financial aid purposes, all graduate students, including those on assistantships, must be enrolled in at least nine (9) graduate units; a minimum of 72 graduate units is required, including at least 48 units in course work. At least 30 units of 700-level courses beyond the bachelor's degree, not including dissertation units, are required for the doctoral degree.

## **Program Completion Requirements**

### 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 is .1 to .6 points below that needed for a 3.0 GPA are put on probation. Students are 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 .7 or more grade points below that needed for a 3.0 GPA are dismissed. Dismissed students are no longer in a graduate program but may take graduate-level courses as a Grad Special. 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 a graduate program. Any courses taken to raise their GPA will be included in the graduate special/ transfer credit limitation (9 credits for master's degrees).

### 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 is requested on the [Graduate Credit Transfer Evaluation Request form](#)<sup>1</sup> 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 earning a doctoral degree.

---

<sup>1</sup> <https://www.unr.edu/Documents/graduate-school/GraduateCreditTransferEvaluationRequest.pdf>

### Committee Selection Guidelines

**First Year of Study** - The Co-Directors of the Molecular Biosciences Program will advise students during their first year of graduate study. First year students will enroll in CMB 701/702 (Research Rotation in the fall and spring of their first year). These rotations are intended to expose students to the range of research in the Molecular Biosciences Program and to aid in the selection of an advisor. Students should rotate in at least two different laboratories. In the first two weeks of the first semester, students will attend presentations by CMB faculty interested in recruiting students into their laboratory in order to become familiar with faculty research and available research opportunities.

**Selection of the Advisory/Examining Committee** – Upon completion of the second rotation, each student will select a Dissertation Advisor who will serve as chair of their Advisory/Evaluation Committee. The Dissertation Advisor must agree to take the student on and will be responsible for supporting the student's research and providing a stipend consistent with CMPP guidelines. Students who are unable to identify a willing mentor at the completion of the second rotation will be advised by the members of the Student Oversight Committee over the summer following the first year of study. If a mentor cannot be found, the Committee will provide the Program Director with a written summary of the student's performance in course and research work and may recommend that the student be dismissed from the Ph.D. program. Once a mentor is chosen student should complete the declaration of mentor form and submit to the Graduate school: [Declaration of Advisor form](#)<sup>2</sup>

The Advisory/Examining committee will consist of at least *five* members of the Graduate Faculty: the Committee Chair/Permanent Advisor, at least two members of the CMB Graduate Program, at least one faculty member from a department in a field related to the student's major, and at least one graduate faculty member representing the university-at-large. (For doctoral students, the research advisor may be a different faculty member than the permanent chair.) Students may request the appointment of a qualified faculty member from another university or from a relevant discipline or profession. Formal approval of the student's advisory/examining committee is made by the Graduate Dean. The Advisory/Examination Committee will hold an initial meeting prior to or early in the fall semester of the second year of study. The committee will approve the Qualifying Exam, the program of study, and the dissertation. It will also conduct the formal oral part of the doctoral dissertation defense and serve in an advisory capacity to the student during his or her tenure in the CMB program. The student and committee will meet annually to prepare a written progress report consisting of a list of the courses the student has taken, the courses proposed for the next year, and the tentative date for the Qualifying Exam. The committee should review the students program of study which should be initially submitted to the Graduate School no later than the day of the qualification day: [Program of Study form](#)<sup>3</sup>

---

<sup>2</sup> <https://www.unr.edu/Documents/graduate-school/Declaration-of-Advisor.pdf>

<sup>3</sup> <https://www.unr.edu/Documents/graduate-school/program-of-study.pdf>

**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

### Comprehensive Exams

Students must pass a Comprehensive Exam consisting of a written research proposal and oral examination by the Advisory/Examination Committee in order to be a candidate for a Ph.D. degree. Students are required to enroll in CMB 795 in the semester in which they plan to take the Comprehensive Exam. Students are allowed 2 semesters to complete the Comprehensive Exam – sign up for the class in one semester and finish in the 2<sup>nd</sup> semester, then a grade change form is submitted. Failure to complete the Qualifying Exam will result in an Incomplete in this course.

The grant proposal of the Comprehensive Exam may be in the standard NIH format for a multi-year R21 grant as described in PHS form 398 ([Grant Website<sup>4</sup>](#)) or other format as recommended by the Committee.

This may include (suggested page limits):

1. Abstract (1 page)
2. Specific Aims (1 page)
3. Research Strategy (6 pages)
  - a. Background
  - b. Significance
  - c. Innovation
  - d. Preliminary Studies (optional)
  - e. Approach
4. Literature Cited
5. Human Subjects or Vertebrate Animals (as appropriate) (3 pages)

It should not include personnel, budget or facilities pages. Standard English grammar and spelling and accurate citation to work by others are required.

The topic must be approved by the Advisory/Examining Committee before the student begins writing. It can be an extension of the student's current research problem if it represents a significant advance or novel approach to the problem. It cannot be the same as a research project described in any grant submitted by the

---

<sup>4</sup> <https://grants.nih.gov/grants/funding/phs398/phs398.html>

advisor or collaborators. Resources that may be consulted include the library, PubMed, the Advisory / Examining Committee, other researchers and other students. The finished document must be the student's own work. The proposal should be sent out to the examining committee at least two weeks prior to the date of the comprehensive examination to allow time for the committee to evaluate the proposal.

The student's doctoral committee will formally examine the student orally on the grant. If the grant proposal is not considered acceptable, a revised grant proposal will be due two months from the date of the first examination. If the student fails the second examination he or she will be dropped from the program. This exercise is viewed as an important component of the student's training and education. To pass the exercise, students will need to be well-versed in the current literature in their field, and be able to formulate and defend their research plan and methodology. Students will also be expected to answer questions about the principles and factual basis of the research being proposed as well as any principles and facts of biomedical science that the committee feels the student should know to advance to candidacy. This exam will introduce the student to the style, complexities and nuances of the grant proposal process and will begin to develop those skills necessary for obtaining extramural research grants and for defending their ideas before other scientists.

In order for a student to pass the Qualifying Exam, the Advisory/ Evaluation Committee must reach a consensus that the student has written an acceptable proposal and performed satisfactorily in the oral examination. This consensus will be provided to the Program Director. If the Committee cannot reach such a consensus, they may offer the student the opportunity to revise the written proposal, to repeat the oral examination, or both within a period determined by the Committee. Alternatively the Committee will provide the Program Director with a written summary of the student's performance in Qualifying Exam, course and research work and a recommendation that the student be dismissed from the Ph.D. program. The Program Director and Advisory/ Evaluation Committee will decide if the student's work merits awarding a Master's Degree or if the student should be dismissed from the CMB Graduate Program. The final decision will be forwarded to the Graduate School. Per Graduate School policy, students cannot continue in the CMB Ph.D. program without passing the Qualifying Exam.

### Thesis Requirements

**Dissertation and Final Examination Requirements** - Prior to choosing a date for the final oral examination, graduate students must submit a copy of their final dissertation for review by their examining committee. The dissertation does not have to be in its final form, but must contain sufficient information to allow their committee to make an informed decision about the state of completion of their studies. The purpose of the review is to discern whether a student has sufficiently completed their studies to schedule the public seminar and final examination.

The format of the dissertation must meet the requirements of the Graduate School. If a student has first author publications accepted in refereed journals, the student may solicit the committee to use these publications together with an appropriate introductory chapter in lieu of the standard dissertation format.

The committee may determine that additional chapters are required along with the published papers. The thesis should be sent out to the examining committee at least **four weeks prior** to the date of the thesis defense.

Following acceptance of the dissertation by the Advisory/Examination Committee, all doctoral candidates in the CMB program will schedule and present a public research seminar on their dissertation research. This seminar will constitute part of the final examination and must be presented while the candidate is still in residence. Following the public seminar, the Advisory/Examination Committee will conduct a final oral examination in closed session. This oral examination will be conducted in accordance with the examination requirements of the Graduate School. Doctoral candidates may register for one credit of Independent Study during the semester in which this seminar is presented.

### **Graduate Assistantships**

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. State-funded assistantships (GTA/GRA) may be held for a maximum of: five (5) years for doctoral degree students.

For more information on graduate assistantships please refer to:

[General information](#) <sup>5</sup>

[Graduate Assistantship handbook](#) <sup>6</sup>

### **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 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](#) <sup>7</sup> 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 \(OISS\)](#) <sup>8</sup> directly.

---

<sup>5</sup> <http://www.unr.edu/grad/funding/graduate-assistantships>

<sup>6</sup> [http://www.unr.edu/Documents/administration-finance/hr/hr-graduate/GA\\_handbook.pdf](http://www.unr.edu/Documents/administration-finance/hr/hr-graduate/GA_handbook.pdf)

<sup>7</sup> <https://studentinsurance.usi.com/UNR/unr-grad>

<sup>8</sup> <https://www.unr.edu/oiss>

## [Information on Graduate health insurance](#)<sup>9</sup>

### Leave of Absence

**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](#)<sup>10</sup> available on the Graduate School website 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 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](#)<sup>11</sup> available on the Graduate School website. 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.

### Graduate Student Association

The [Graduate Student Association \(GSA\) Website](#)<sup>12</sup> 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.

### Graduate Student Performance Standards

---

<sup>9</sup> <http://www.unr.edu/grad/health-insurance>

<sup>10</sup> [http://www.unr.edu/Documents/graduate-school/leaveofabsencer\\_9.23.pdf](http://www.unr.edu/Documents/graduate-school/leaveofabsencer_9.23.pdf)

<sup>11</sup> <https://www.unr.edu/Documents/graduate-school/Notice-of-Reinstatement-Graduate-Standing.pdf>

<sup>12</sup> <https://www.unr.edu/gsa/>

All graduate students in the CMB program are considered full-time scientists, and as such are expected to adhere to high standards of professional and personal behavior. Following are standards that are required of students, and disciplinary actions that may be taken if a student fails to measure up to these standards.

1. Performance and Effort
  - a. All CMB students are required to adhere to the scientific misconduct policy of the University of Nevada, Reno (Ethical Standards in the Conduct of Research). Failure to adhere to these standards may be grounds for removal from the CMB graduate program, at the discretion of the Program Director.
  - b. Time commitment. Students are required to complete a leave of absence form and submit this form to the CMB program each period that they do not report to work. Approval by the student's thesis advisor is required.
  - c. Outside employment. Graduate students are considered full-time professionals, and as such may not simultaneously hold outside employment while registered in the program.
2. Disciplinary Actions.
  - a. Evaluation of a student's performance will be determined by the Student Advisory Committee (SAC). The SAC may receive input from individual faculty and students. After preliminary considerations, the committee will inform the student of areas of concern, and may suggest disciplinary action.
  - b. Specific disciplinary actions include the following: i) probationary status, which may include loss of financial support and/or non-registration; ii) permanent expulsion from the program, which may be implemented without a probation period.
3. Attendance
  - a. The CMB Program schedules an annual research retreat for graduate students, faculty, and research fellows. All graduate students are required to attend. Furthermore, students are required to present their research findings at this conference, either as a poster or talk, as determined by the retreat organizing committee. Graduate students who have completed their first or second year of studies may present their findings by either the poster or oral presentation method. Graduate students who have been in the CMB Program for less than one year are required to attend but not required to present research findings.
  - b. All graduate students are required to attend Colloquium (Journal club) and Seminars even though they may have satisfied the core credit requirement by formally enrolling in CMB/BCH/CMPP 794.

## **2. MASTER OF SCIENCE DEGREE: CMB MS**

### **Brief Introduction**

Cell and Molecular Biology is an interdisciplinary program, part of the Molecular Biosciences graduate programs along with Biochemistry and Molecular Biology, and Cell and Molecular Pharmacology and Physiology. The CMB program includes faculty across campus, including the School of Medicine, the

College of Science, and the College of Agriculture, Biotechnology and Natural Resources. Study programs lead to the Master of Science or Doctor of Philosophy degree. Additionally, medical students in the School of Medicine may earn a M.D. /Ph.D. degree through the program.

The highly interactive program offers a wide range of study options dealing with contemporary cell and molecular biology. Graduate fellowships for the cellular and molecular biology program are available on a competitive basis. Contact the program office for more information.

### **Learning Objectives/Student Learning Outcomes (SLOs)**

The Molecular Biosciences graduate programs at the University of Nevada at Reno provide an integrated course of study for students seeking a PhD or MS degree in biomolecular-related research. Over 60 participating Faculty members are drawn from nine different departments. The program provides a supportive environment for over 100 graduate students with excellent opportunities in a broad range of biological and biomedical research areas.

### **Program of Study**

#### Completion Requirements

CMB core curriculum	14 credits
CMB research and thesis	6 credits
Electives	<u>10 credits</u>
Total credits required	30 credits (with at least 18 units of 700-level courses)

#### Core Curriculum Courses (12 credits required)

CMB 710 Cell Biology	4 credits
BCH 705 Molecular Genetics	4 credits
CMB 701 Laboratory Practicum I	3 credits
CMB 790 Graduate Seminar	2 credits
CMB 794 Colloquium	2 credits
PHAR 725 Ethics in Research	2 credits (Fall of even years only)
Statistics (if not previously taken)	

#### An Example Plan of Study

(Elective courses can be found in Ph.D. requirements, above)

#### Semester I (Fall):

BCH 705 Molecular Genetics	4 credits
CMB 701 Laboratory Practicum I	3 credits
CMB 790 Graduate Seminar	1 credit

CMB 790 Graduate Seminar	<u>2 credits</u>
Total credits	10 credits

**Semester II (Spring):**

CMB/BCH/BIOL/CMPP 794 Colloquium	1 credit
CMB 710 Cell Biology	4 credits
Statistics	<u>3 credits</u>
Total credits	8 credits

<<**SELECT ADVISOR AND DEFINE RESEARCH PROJECT**>>**Semester III (Fall):**

Electives	4 credits
CMB/B CH/BIOL/CMPP 794 Colloquium	1 credit
Thesis	<u>2 credits</u>
Total credits	7 credits

**Semester IV (Spring):**

CMB 790 Graduate Seminar	1 credit
CMB/B CH/CMPP 793 Independent Study	1 credit
Thesis	<u>3 credits</u>
Total credits	5 credits

**Grand Total:** 30 credits

## **Program Completion Requirements**

It is the student's responsibility to fulfill all requirements in a timely manner.

### Academic Requirements

Academic requirements as determined by the Graduate School and the Program will be met by all CMB students. Required courses will be chosen from core courses as outlined in section (B) above.

### General Procedures and Examination Requirements

1. During the second semester of residence in the CMB program, each student must select, in consultation with the CMB program director and the desired faculty member, a research/thesis advisor from among the CMB faculty. Selection depends on a mutual agreement between the student and the desired advisor, and the program cannot guarantee the availability of any particular advisor. This advisor will serve as chair of the student's advisory/examination committee.
2. After having selected a research advisor, the student will arrange for two additional CMB group faculty to serve as an advisory/examination committee. At least one additional faculty will be appointed, representing the University at large, to meet Graduate School requirements. These additional appointments will be subject to approval of the committee chairperson (research/thesis advisor). Permanent constitution of the committee will be subject to the approval of the CMB Director. This committee will approve the final thesis, conduct the formal oral part of the thesis defense, and serve in an advisory capacity to the student during his or her tenure in the CMB program.

### Thesis Examination Requirements

Prior to formally choosing a date for the final oral examination, graduate students must submit a copy of their final thesis for review by their examining committee. The thesis does not need to be in its final form, e.g. thoroughly referenced, perfect grammar, etc., but must contain sufficient information to allow their committee to make an informed decision about the state of completion of their studies. The purpose of the review is to discern whether a student has sufficiently completed their studies to announce a date for their final examination. After acceptance of the thesis (see Doctoral section for nature of thesis) by the advisory/examination committee, all M.S. candidates will schedule and present a research seminar on their thesis research which will be open to the public. This seminar will constitute part of the final examination and must be presented while the candidate is still in residence. Following the public portion of this seminar, the advisory/examination committee, expanded to include all appointed Graduate School representatives, will conduct, in closed session, a final oral examination, which will be so conducted as to meet all relevant examination requirements of the Graduate School.

## **Graduate Student Performance Standards**

All graduate students in the CMB program are considered full-time scientists, and as such are expected to adhere to high standards of professional and personal behavior. Following are standards that are required of students, and disciplinary actions that may be taken if a student fails to measure up to these standards.

1. Performance and Effort

- a. All CMB students are required to adhere to the scientific misconduct policy of the University of Nevada, Reno (Ethical Standards in the Conduct of Research). Failure to adhere to these standards may be grounds for removal from the CMB graduate program, at the discretion of the Program Director.
- b. Time commitment. Vacation time will be limited to 3 weeks per year. Students are required to complete a leave of absence form and submit this form to the CMB program each period that they do not report to work. Approval by the student's thesis advisor is required.
- c. Outside employment. Graduate students are considered full-time professionals, and as such may not simultaneously hold outside employment while registered in the program.

2. Disciplinary Actions.

- a. Evaluation of a student's performance will be determined by the Student Advisory Committee (SAC). The SAC may receive input from individual faculty and students. After preliminary considerations, the committee will inform the student of areas of concern, and may suggest disciplinary action.
- b. Specific disciplinary actions include the following: i) probationary status, which may include loss of financial support and/or non-registration; ii) permanent expulsion from the program, which may be implemented without a probation period.

3. Attendance

- a. The CMB Program schedules an annual research retreat for graduate students, faculty, and research fellows. All graduate students are required to attend. Furthermore, students are required to present their research findings at this conference, either as a poster or talk, as determined by the retreat organizing committee. Graduate students who have completed their first or second year of studies may present their findings by either the poster or oral presentation method. Graduate students who have been in the CMB Program for less than one year are required to attend but not required to present research findings.
- b. All graduate students are required to attend Colloquium (Journal club) and Seminars even though they may have satisfied the core credit requirement by formally enrolling in CMB/BCH/CMPP 794.

### 3. Graduate School Forms:

You will need to become familiar with a set of forms from the Graduate School. They can be obtained from this website:

#### [Forms and Deadlines Website](#)<sup>13</sup>

As you progress through the program:

[Graduate Credit Transfer Evaluation Request Form](#)<sup>14</sup>

[Declaration of Advisor/Major Advisor/Committee Chair form](#)<sup>15</sup>

- For master's students, the completed form must be submitted to Graduate School by the end of the student's second semester
- For doctoral and MFA students, the completed form must be submitted to Graduate School by the end of the student's third semester

[Program of Study Requirements \(instructions & form\)](#)<sup>16</sup>

- For master's students, the completed form must be submitted to Graduate School by the end of the student's third semester
- For doctoral students, the completed form must be submitted to Graduate School by the end of the student's fourth semester

[Change in program of Study](#)<sup>17</sup>

[Change of Advisory Committee](#)<sup>18</sup>

[Doctoral Degree Admission to Candidacy/Comprehensive Examination Report](#)<sup>19</sup>

- For doctoral students who completed all requirements except for the dissertation

[Application for Leave of Absence](#)<sup>20</sup>

For PhD graduation:

[Doctoral Dissertation Filing Guidelines](#)<sup>21</sup>

[Dissertation Title Form](#)<sup>22</sup>

Doctoral Committee Approval page (5 committee members)

Doctoral Committee Approval page (6 committee members)

Doctoral Microfilming Agreement (Only if you are submitting paper, print this)

Doctoral Complete Microfilming Agreement (see online form)

<sup>13</sup> <https://www.unr.edu/grad/forms-and-deadlines>

<sup>14</sup> <https://www.unr.edu/Documents/graduate-school/GraduateCreditTransferEvaluationRequest.pdf>

<sup>15</sup> <https://www.unr.edu/Documents/graduate-school/Declaration-of-Advisor.pdf>

<sup>16</sup> <https://www.unr.edu/Documents/graduate-school/program-of-study.pdf>

<sup>17</sup> <https://www.unr.edu/Documents/graduate-school/2change-of-program-of-study.pdf>

<sup>18</sup> <https://www.unr.edu/Documents/graduate-school/3change-of-advisory-committee.pdf>

<sup>19</sup> <https://www.unr.edu/Documents/graduate-school/17doctoral-degree-admission-to-candidacy-updated.pdf>

<sup>20</sup> [https://www.unr.edu/Documents/graduate-school/leaveofabsencer\\_9.23-1.pdf](https://www.unr.edu/Documents/graduate-school/leaveofabsencer_9.23-1.pdf)

<sup>21</sup> <http://www.unr.edu/grad/forms/dissertation-filing-guidelines>

<sup>22</sup> <http://www.unr.edu/grad/graduation-and-deadlines/dissertation-title-form>

[Doctoral Degree Notice of Completion](#)<sup>23</sup>

- Completed form should be submitted after all requirements have been met

Doctoral Final Review Approval transmittal

Survey of Earned Doctorates (see online form)

[Exit Survey](#)<sup>24</sup>

**For MS graduation:**

[Master's Thesis Filing Guidelines](#) <sup>25</sup>

Master's Committee Approval page (3 committee members)

Master's Committee Approval page (4 committee members)

Master's Microfilming Agreement (Only if you are submitting paper print this)

Master's Complete Microfilming Agreement (see online form)

[Master's Degree - Notice of Completion](#)<sup>26</sup>

- Completed form should be submitted after all requirements have been met

Master's Final Review Approval transmittal

[Exit Survey](#)<sup>27</sup>

**General**

[Graduation Application](#) deadlines <sup>28</sup>

---

<sup>23</sup> <https://www.unr.edu/Documents/graduate-school/notice-of-completion-doctoral-degree.pdf>

<sup>24</sup> <https://www.unr.edu/grad/forms-and-deadlines/exit-survey>

<sup>25</sup> <http://www.unr.edu/grad/forms/thesis-filing-guidelines>

<sup>26</sup> <https://www.unr.edu/Documents/graduate-school/notice-of-completion-master-degree-updated.pdf>

<sup>27</sup> <https://www.unr.edu/grad/forms-and-deadlines/exit-survey>

<sup>28</sup> <https://www.unr.edu/grad/graduation-and-deadlines>

## Appendix A

### An Example Plan of Study: CMB PhD

#### Semester I (Fall):

BCH 705 Molecular Biology	3 credits
CMB 701 Laboratory Practicum I	3 credits
PHAR 725 Ethics in research	2 credits
CMB/BCH/CMPP 790 Seminar	<u>1 credit</u>
Total credits	9 credits

#### Semester II (Spring):

CMB 710 Cell Biology	4 credits
CMB 702 Laboratory Practicum II	3 credits
CMB/BCH/BIOL/CMPP 794 Colloquium	1 credit
Statistics (if needed)	<u>3 credits</u>
Total credits	11 credits

#### Summer Session I:

CMB 703 Laboratory Practicum III	3 credits
Or Dissertation credits	
Total credits	3 credits

**<<SELECT ADVISER AND BEGIN TO DEFINE RESEARCH PROJECT>>**

#### Semester III (Fall):

B CH 613 Molecular Biophysics	3 credits
Electives	4 credits
CMB/BCH/BIOL/CMPP 794 Colloquium	<u>1 credit</u>
Total credits	8 credits

**<<SELECT COMPREHENSIVE EXAMINATION COMMITTEE & INITIATE EXAM>>**

#### Semester IV (Spring):

Electives	5 credits
Dissertation	3 credits
CMB/B CH/CMPP 794 Colloquium	<u>1 credit</u>
Total credits	9 credits

## &lt;&lt;COMPLETE COMPREHENSIVE EXAMINATION&gt;&gt;

**Semester V (Fall):**

CMB 790 Graduate Seminar	1 credit
CMB/BCH/MICR/PHAR 793 Independent Study	3 credits
CMB/BCH/BIOL/CMPP 794 Colloquium	1 credit
Dissertation	<u>3 credits</u>
Total credits	8 credits

**Semester VI (Spring):**

CMB 730 Classroom/Laboratory Teaching	0 credits
Dissertation	<u>8 credits</u>
Total credits	8 credits

**Semester VII (Fall):**

CMB/B CH/BIOL/CMPP 794 Colloquium	1 credit
Electives	3 credits
Dissertation	<u>6 credits</u>
Total credits	10 credits

**Semester VIII (Spring):**

Dissertation	8 credits
CMB 790 Graduate Seminar	<u>1 credit</u>
Total credits	9 credits

**Grand total:** 72 credits