



Comparative Health Sciences Graduate Program
PhD and MS Student Handbook
2018 – 2019



Comparative Health Sciences Graduate Program (PhD, MS)

Overview

The program of Comparative Health Sciences is a multi-disciplinary program offering graduate training towards MS and PhD degrees. The program encourages applicants with interest in complex contemporaneous issues that require a multi-disciplinary approach to consider this program. Faculty involved in the program have interests including microbiology, ecology, immunology, nutrition, food science, bio-engineering, veterinary medicine, public health, human health, bioinformatics, mathematical modeling, microbiome, neuroscience and others.

The program encourages co-mentorship from different disciplines, but also accepts students working in traditional fields. The program has a strong international component and diversity of ideas and innovation is valued. Strong student involvement and participation in the program is sought.

The training involves classes, laboratory research, travel/presentations, outreach activities, teaching and direct participation in a seminar series. The students are supported by graduate teaching, graduate research assistantships, and scholarships provided by the program. The students' program is designed individually to support the needs of innovative research. Graduate students are expected to be major participants in the scientific output of the program and are given opportunities to publicly present findings.

Students are encouraged to review "The Guide to Success" on the Graduate School website, which covers all of the basic requirements for receiving a graduate degree at OSU (<http://gradschool.oregonstate.edu/success>). In addition, the Graduate School website has complete graduate course listings, online application and registration, and additional detailed instructions for completing a graduate degree.

Registration

The OSU Schedule of Classes is available online and contains academic regulations and registration procedures that apply to all students in the university, as well as the final examination week schedule. The online [catalog](#) is the source for up-to-date changes for the current and immediately upcoming term. It is your responsibility to register for the appropriate number of credits that may be required for any funding eligibility and/or to meet the requirements of the continuous enrollment policy. Problems arising from registration procedures, such as late registration, adding or withdrawing from courses after deadlines, or late

changes from letter or S/U grading are resolved through the [petition for late change in registration](#) filed with the Graduate School. A late registration fee may be applied.

Students are responsible for staying current on registration requirements that may supersede the Graduate School requirements (i.e., international, financial aid, veteran's).

[Comparative Health Sciences Website](#)
[Graduate School](#)
[Catalog Details](#)

Please review the graduate school [application process](#) and [Apply Online](#).

Primary Academic Contact: Luiz Bermudez, MD, Biomedical Sciences,
luiz.bermudez@oregonstate.edu

Administrative Contact: Lynette Hawthorne, Biomedical Sciences,
lynette.hawthorne@oregonstate.edu

Graduate School

What is the [Graduate School](#)?

- The Graduate School at OSU assures quality and consistent interpretation of Graduate Council policies related to graduate education across all programs. The [OSU Catalog](#) is the official source for information regarding OSU graduate education policy and procedures. It is the student's responsibility to refer to the catalog for this information.
- The Graduate School supports students throughout the academic [lifecycle](#), from admissions to degree completion.
- The Graduate Schools offers an array of [professional development opportunities](#) specific to the success of graduate students. Topics covered in these offerings include: research and ethics, teaching and facilitation, writing and communication, leadership and management, career skills, grad life and wellness. Please visit the Graduate School links to browse our student success offerings.

How to apply to the program: Admission Requirements

OSU Graduate Admissions Requirements

Please confirm (link below) that you meet all Oregon State University requirements.

[Graduate Admissions Requirements](#) for all applicants to Oregon State University

Comparative Health Sciences Requirements

If you meet OSU requirements, we encourage you to contact [participating faculty](#) whose research coincides with your interest. Individual faculty member can provide information on their research programs with possible positions for graduate students in their laboratory.

Grade Point Average (GPA)

A minimum GPA of 3.00 is required.

Graduate Record Examination (GRE)

Taking the GRE is recommended for domestic and for international program. [ETS GRE site](#) has information about the test.

Test of English as a Foreign Language (TOEFL)

Foreign applicants must meet the university minimum scores. Graduate Admissions Requirements (link above) has more information about the minimum testing requirements.

Graduate Assistantships

Graduate Research Assistantships (GRAs)

Students may receive GRA support directly from the grant of their major professor. The Program has a limited number of highly competitive scholarships that range from 1 to 2 years for a PhD program.

Laboratory Rotations

Health Insurance

Health insurance is mandatory for all graduate students. GRA employment includes a contribution of 85% of the cost More information is available at [Student Health Services](#).

Student Loans, Scholarships and Fellowships

Graduate students are often eligible for financial assistance in the form of student loans or limited university-wide scholarships. [Financial Aid and Scholarships](#) can provide more information.

How to Apply

Deadline

The deadline for applications is December 15th for the start of the following academic year.

Online Application

Required materials for the online applications include:

- Statement of Objectives
- Three letters of recommendation
- Transcripts
- GRE scores
- English Language test scores (if applicable)

[APPLY ONLINE HERE](#)

Admissions Requirements

Admit Term

Any Term

Required Tests

GRE – Verbal, Quantitative and Analytical. A score in the 50th percentile in each section is desirable. The GRE must be no more than 3 years old from registration.

International students: English Language Requirements

English language requirements for international applicants to this program are the same as the standard [Graduate School requirements](#).

[Graduate School Application Process](#) link

Minimum Course Loads

Course load requirements for graduate students are established by the Registrar and the Graduate School. You are considered a “full-time” graduate student if you are registered for 9–16 credits in a given academic term. You are considered a “part-time” graduate student if you have less than nine credits. If you are a degree-seeking student, you must be registered for a minimum of three graduate

credits in any term you wish to be enrolled and access university resources, including the term of the final defense. Students are responsible for staying current on course load requirements that may supersede the Graduate School requirements (i.e., international, financial aid, veteran's).

Continuous Graduate Enrollment

<https://catalog.oregonstate.edu/college-departments/graduate-school/#text>

The policy for Continuous Graduate Enrollment can be found by clicking on the link directly above, the click on "Policies Governing All Graduate Programs".

All graduate students enrolled in a degree program must register continuously for a minimum of 3 graduate credits each term (fall, winter, and spring terms) until all degree requirements are met, regardless of student's location. Students on approved leave are exempt from the continuous enrollment policy for the term(s) they are on leave.

Graduate students who use facilities or faculty/staff time during summer session are required to register for a minimum of 3 credits during the summer session. Students defending in the summer term are required to register for a minimum of 3 graduate credits.

Students may appeal the provisions of the continuous graduate enrollment policy if extraordinary circumstances arise by submitting a detailed request in writing to the Dean of the Graduate School. Scheduling difficulties related to the preliminary oral exam or the final oral exam are not considered an extraordinary circumstance.

Graduate assistantship eligibility requires enrollment levels that supersede those contained in this continuous enrollment policy. Various agencies and offices maintain their own registration requirements that also may exceed those specified by this continuous enrollment policy (e.g., those of the Veterans Administration, Immigration and Naturalization Service for international students, and those required for federal financial aid programs.) Therefore, it is the student's responsibility to register for the appropriate number of credits that may be required for funding eligibility and/or compliance as outlined by specific agency regulations under which they are governed.

NOTE: Students who are pursuing a certificate only are not subject to the continuous enrollment policy.

Leave of Absence

Leave of Absence status is available to eligible students who need to suspend their program of study for good cause. The time the student spends on approved leave will be included in any time limits prescribed by the university relevant to degree completion. Students on approved leave may not a) use any university facilities, b) make demands upon faculty time, c) receive a fellowship or financial aid, or d) take course work of any kind at Oregon State University. [Leave of Absence/Intent to Resume Graduate Study Forms](#) must be received by the Graduate School at least 15 working days prior to the first day of the term involved. Family Medical Leave (FML) may be granted at any point during a term. FML inquiries should be directed to medical.leave@oregonstate.edu.

NOTE: Students who are pursuing a certificate only are not subject to the Leave of Absence Policy.

Unauthorized Break in Registration

Degree seeking graduate students who take an unauthorized break in registration relinquish graduate standing at the University.

To have graduate standing reinstated after an unauthorized break, students are required to reapply to their program (complete the online graduate admission application, pay the application fee, and may be required to register for three graduate credits for each term of unauthorized break in registration). It is advisable that students in this situation state that they are applying for readmission in the application packet. A reapplication does not ensure admittance to the program.

Admission Criteria: No single criterion will serve as a basis for admission or denied to the Comparative Health Sciences Graduate Program.

1. Evidence of excellent scholarship and **research potential** from previous academic records, letters of recommendation and GRE scores.
 2. Professional goals compatible with a graduate degree in Comparative Health Sciences
 3. Scholarship interest compatible with one or more of the faculty who are active in the degree program.
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Significance of Temporary Advisor

At the time of admission to the program the student may be assigned a temporary faculty advisor or the student may select to go on a rotation of research programs. If in the end no faculty advisor has been selected, the coordinator of the program will serve as the temporary advisor the student.

INTO Program

The Comparative Health Science Graduate Program has a component associated with the OSU INTO (International Students).

Guidelines for pursuing a degree through the INTO Graduate Pathway program can be found here: <http://www.intostudy.com/en-gb/universities/oregon-state-university/programs/graduate-pathway-in-comparative-health-sciences>. A GPA of 3.0 is required.

Students who complete the year with good academic record may pursue their choice of MS, Non-Thesis MS or PhD CHS graduate programs in Comparative Health Sciences.

TERM 1	COURSE TITLE	CREDIT HOURS
ALS 165	Academic STEM Listening/Speaking	3
ALS 166	Academic STEM Reading/Writing	3
BI 314	Cell and Molecular Biology	4
BB 331	Introduction to Molecular Biology	3
	Topics in Comparative Medicine	2
	Total	15
TERM 2	COURSE TITLE	CREDIT HOURS
COMM 111	Public Speaking	3
WR 327	Technical Writing	3
ST 351	Introduction to Statistical Methods	4
	Laboratory Rotation	4

TERM 1	COURSE TITLE	CREDIT HOURS
	GRE Prep	0
	Total	14
TERM 3	COURSE TITLE	CREDIT HOURS
WR 362	Science Writing	3
BI 213	Principles of Biology	4
NUTR 240	Human Nutrition	3
NUTR 241	Applications in Human Nutrition	1
	Laboratory Rotation	4
	Total	15

Degree Program Components

- 45 credit hour program (M.S. – Thesis and M.S. Non-Thesis); 108 credit hour program (Ph.D.)
- 0 credit hours apply from Pathway
- 45 credit hours remaining towards degree (M.S.); 108 credit hours remaining toward degree (Ph.D.)

Career Paths

A Graduate Pathway in Comparative Health Sciences is for students with a strong interest in career-oriented research. For those whose interest may not include research in a lab, we offer a Non-Thesis M.S. degree.

As a graduate, you might find work in the following fields:

- Human and animal health
- Veterinary medicine
- Biology
- Science

A secondary MS degree

General Aspects when you arrive to the campus

Welcome to the Comparative Health Sciences Graduate Program. This is a multi-disciplinary program intended to offer opportunities to students who wish to carry out research to solve complex problems of health related sciences.

General Information:

Arrival in Corvallis

Corvallis is a small town with approximately 56,535 residents. It lies in the heart of the Willamette Valley, between the Cascade Mountains and the Coast Range, 80 miles south of Portland and 55 miles east of the Pacific coast. The climate is mild, with rainfall averaging about 40 inches annually. The main employers in Corvallis are Oregon State University, Good Samaritan Hospital, and Hewlett-Packard. Major performing arts facilities are found in Portland and Eugene (45 miles south).

When You Arrive:

Contact your major professor.

Your major professor is responsible for providing desk space for you in your College/Department.

Sign up for your ONID account:

If you haven't already done so, you must sign up for an ONID account. This account is used for all registration, records and communication with you and is very important. Please sign up for this account soon, as we will begin sending email information to that account beginning in September. For more information go to <http://onid.oregonstate.edu/> then click "Sign up for ONID" on the left.

University ID Card:

The OSU Card is the official identification card for students, faculty and staff. It functions as a meal card, library card and more! Graduate students may obtain their ID card from one week before and throughout their first term of registration. For Fall term, incoming graduate students may obtain their ID card anytime throughout the summer as well.

The Memorial Union (MU):

The Memorial Union provides many different services to the campus and community including restaurants, campus information, ATM machines, study rooms, a lounge, a convenience store, bowling, and billiards. The MU is also a great place to relax, study, and meet with people. There is also conference rooms located in the MU.

OSU Book Store:

The OSU Book Store is located on the OSU campus, across from Reser Stadium at the intersection of SW 26th Street & SW Washington Way.

Health:

The Student Health Center located in the Plageman Building (across from Weniger Hall) has MD and LPN services, pharmacy, etc. Contact them at 541-737-2721 for more information. The Benton County Health Department and the Benton County Mental Health Clinic (541-766-6835) both located at 530 NW 27th Street, provide a number of services.

Counseling/Community Resources:

A number of University counseling services are available to students and their families. These include the Counseling Center (541-737-2131) for personal, educational-vocational, and marriage counseling. ASOSU Office of Legal Advising was developed to assist and represent all currently enrolled students with their legal issues, especially landlord-tenant disputes and consumer issues among others. To make an appointment or obtain more information about the Office of Legal Advising they can be contacted at 541-737-4165 or by visiting 110 Student Experience Center. The Women's Center located in the Women's Center Building (541-737-3186) offers support for both men and women students. Community Outreach, Inc. located at 8th and Reiman Street offers a number of emergency services. Call 541-758-3000 for more information about the programs and eligibility. Many of their programs have restrictions, so call first to find out the requirements. The Center Against Rape and Domestic Violence (CARDV) provides counseling and support services including crisis intervention and temporary shelter for victims of abuse. For information call 541-758-0219 (office) or 541-754-0110 (hotline).

University Emergency Contacts

OSU is dedicated to providing a safe and secure learning and living environment for its community members. [The Department of Public Safety](#) provides resources, information, emergency phone numbers, and protocols for maintaining personal safety. Sign up for [OSU Alerts](#) to get timely messages delivered right to your phone or inbox regarding university closures and other emergency situations.

Academic and Support Resources

OSU offers a wide array of academic and support resources designed to meet graduate student needs. Some of the more commonly used resources are included below. For a more complete list, please visit the Graduate School's [Student Resources web page](#). Note that some services are campus-specific. See also [OSU Cascades Campus Life](#) and [Ecampus Student Services](#) for services specifically provided to graduate students pursuing degrees or certificates via those specific venues.

[Campus Safety](#) – Emergency phone numbers, university alerts

[Career Development Center](#) – Resume/CV, networking, job search strategies

[Childcare and Family Resources](#) – University child care centers, child care assistance

[Counseling and Psychological Services \(CAPS\)](#) – Individual and group counseling

[Cultural Resource Centers](#) – Cultural based community centers, social support

[Disability Access Services \(DAS\)](#) – Academic accommodations

[Equal Opportunity and Access \(EOA\)](#) – Employment accommodations, discrimination or bias response

[Financing your education](#) – Funding options and information, graduate awards

[Graduate Student Success Center \(GSSC\)](#) – Lounge, study space, printing, reservable meeting rooms

[Graduate Writing Center](#) – Writing workshops, groups, and 1:1 writing coaching

[Health Insurance](#) – Plans for graduate students and graduate employees

[Human Services Resource Center \(HSRC\)](#) – Food pantry, housing and food stamp assistance

[Institutional Review Board \(IRB\)](#) – Review for human subjects research

[Office of International Services \(OIS\)](#) – Visa and immigration advising

[Ombuds Conflict Management Services](#) – Informal, impartial conflict resolution advising

[Recreational Sports](#) – Dixon Recreation Center, intramural sports

[Statistics Consulting Service](#) – Graduate student research statistical advising

[Student Health Services \(SHS\)](#) – Clinic and pharmacy

[Student Multimedia Services \(SMS\)](#) – Poster printing, equipment and laptop loans

[Transportation Alternatives](#) – Bike, bus, SafeRide

[Transportation and Parking Services \(TAPS\)](#) – Parking permits, maps

[Valley Library](#) – Reference and research assistance, study spaces, research tools

Program and University Policies

Office Space Policy:

It is the implied, but not guaranteed, intent of the program to provide office space for graduate students during their studies at OSU. In actuality this responsibility generally falls upon your major professor. If your major professor is unable to find office space for you, please let the office know and we will see if something can be found.

Travel to Professional Meetings:

Graduate students who plan to present a paper or poster, or otherwise participate in a professional meeting can also apply for a small grant from the program. It has to have the approval of the Major Professor and the Coordinator of the Program. Deadline for application is one month prior to the meeting. Funds may be used for registration fees or for reimbursement of travel expenses. If granted for registration fees and then the trip is subsequently cancelled, it is expected that the program will be reimbursed for this expense.

The Graduate School also offers a Graduate Student Travel Award that students can apply for. The travel funds from this program are designed to provide graduate students with financial support to cover part of the cost of attending and presenting their scholarly achievements at prestigious conferences and venues. Award details and student eligibility can be found on the Graduate School website http://oregonstate.edu/dept/grad_school/travel.php. The awards are intended to cover up to half of the full cost of attending a conference (air and / or ground transportation, hotel, meals, and meeting registration). Approximately 10 awards will be made per quarter. The maximum award will be \$500 for domestic travel and \$1,000 for international travel.

For any questions regarding reimbursement (travel and other expenses) please

contact: Lynette Hawthorne, Biomedical Sciences,
lynette.hawthorne@oregonstate.edu

Insurance Coverage:

OSU recommends that all students maintain adequate health insurance coverage. International students are currently required to enroll in the OSU insurance plan. Graduate assistants and graduate fellows have a separate mandatory health insurance plan through their graduate appointment. You can read more about the insurance plans available to students at the link below.

<http://studenthealth.oregonstate.edu/insurance>

ASOSU Insurance Subsidy: All students who enroll in the OSU International or Domestic plans qualify to apply for the need-based insurance subsidy offered by ASOSU (Associated Students of OSU - student government). The insurance office does not run this subsidy but we feel it is important for students to know that it is available. The deadline to apply for this subsidy is the third Friday of the term, and the insurance charge must be paid in full by the deadline for students to be eligible. ASOSU information can be found at the link below.

<http://asosu.oregonstate.edu/>

Committee membership

i. Graduate Council Representative

A Graduate Council Representative (known as a GCR or Grad Rep) is required for all doctoral committees, all M.A.I.S. committees, and all master's degrees involving a thesis. Your GCR represents the OSU Graduate Council and ensures that all rules governing committee procedures are followed. Your GCR must be present at your formal exam(s), and will be responsible for some of the paperwork that the Graduate School requires. Per Graduate School guidelines, the GCR will also lead your committee's roundtable discussion following your final oral exam. Your GCR must be a graduate faculty member outside your major and minor area.

The GCR is a full voting member of your graduate committee. Many students select a GCR who can also add disciplinary expertise. Select your GCR using the online GCR list generation tool (<http://gradschool.oregonstate.edu/forms#gcr>) and be sure to allow ample time for this selection process. If you run into difficulty finding a GCR to serve on your committee, you can re-generate the list until you find someone who is willing to serve.

ii. Policy on non-OSU committee membership

Your [graduate committee](#) guides your course work and research and serves as your final examining committee. It is generally expected that all committee members or approved substitutes must be present for all formal meetings with the student (e.g. final oral exams). If you have a special case in which a committee member may need to participate remotely, you and your committee must assure that all the conditions for remote participation are met.

If the faculty member is not a member of the [Graduate Faculty](#) or is not approved for the role proposed, your major department/program will need to

nominate the proposed member to act in those roles using the [Nomination to Graduate Faculty form](#).

Committee structure is evaluated when your program of study is received by the Graduate School and when you schedule your formal examination(s).

GRADUATE PROGRAM GUIDELINES

For general information consult the [Graduate School](#)

Master of Science (M.S.) Program

See [flowchart](#) for successful MS Degree completion

Thesis Committee and Program Meeting

The [M.S. Thesis Committee](#) consists of 4 members of the OSU graduate faculty. The committee includes a Graduate Council Representative, who serves as advocate for appropriate process. A Program Meeting will be held no later than the end of the second term of work in the thesis lab. The Program meeting will cover two aspects: the proposed coursework (Program of Study) and the proposed research (Thesis Outline). This meeting will include all members of the committee. A [Program of Study](#) form should be completed during this meeting.

Program of Study (45 graduate credits required; i.e., 500 or 600 level, half the credits to come from 600 level):

- 24-33 coursework credits consisting of:
 - a. The required core sequence of 4 courses (3 credit and 1 credit courses).
 - b. 18-27 credits from diverse courses relevant to the thesis research offered by other programs IF agreed to by the thesis committee
- 12 Thesis credits
- *Note: 23 of the 45 credits must be graduate stand-alone courses (500/600 level) that are not derived from the 500 component of 400/500 courses. For example, after the 6 required first year core sequence credits and typical 12 thesis credits, 5 further credits must be graduate only.*
- *Note: Full time enrollment is 12 credits per term in the academic year and 9 in the summer. Maximum load permitted is 16 credits.*

Annual Meeting Requirements

Students are required to meet yearly with their committee to evaluate their progress. The student and major professor(s) must complete the Annual Graduate Student Progress Report form, have it signed by **all** members of the student's graduate committee, and return it to the assistant to the program.

Other Requirements

- Students must maintain an overall GPA of 3.0 and will be notified by the Graduate School if their GPA falls below 3.0 for any term. The cumulative GPA must be at or above 3.0 before the final exam can be taken. Grades C (=2.0) or below cannot be used as graduate credit.
- Candidates must complete one term of service as a Graduate Teaching Assistant before graduation. This is considered a valuable experience and an integral part of training towards a higher degree.

Final Defense

The Graduate Committee will conduct the final examination. Substitutions may be made if approved by the Program and Graduate School.

The student must contact members of the committee to arrange the date, time, and place of the defense, and then schedule the exam with the Graduate School not less than two weeks before the examination. One copy of the pre-text pages of the thesis must be submitted to the Graduate School. Copies of the thesis should be distributed to **all** committee members, two weeks prior to the exam. All members of the graduate committee should be physically present at the required graduate exam (for exceptions, see [Remote Participation](#) requirements).

The first part of the exam is the thesis presentation portion and is open to anyone. After the thesis seminar and open questions, the committee and student will continue in closed session with the oral examination of the thesis work and its relationship to microbiology.

- The decision on the outcome of the exam will be based on a Scoring Guide rubric. The committee will use this form to evaluate the student's performance (with specific reference to rubric items) at the conclusion of the defense.
- A copy of the scoring sheet needs to be returned to the office of Biomedical Sciences.

Doctor of Philosophy (PhD) Program see [flowchart](#) for successful PhD completion

Thesis Committee Program Meeting

The [Ph.D. Graduate Committee](#) consists of 5 members of the OSU graduate faculty. A Graduate Council Representative is included to serve as advocate for appropriate process. A Program Meeting will be held no later than the end of the first year of graduate enrollment. The Program Meeting will cover two aspects: the proposed coursework (Program of Study) and the proposed research (Thesis Outline). This meeting will include all members of the committee. A [Program of Study form](#) should be completed during the meeting.

Program of Study (108 graduate credits required, i.e., 500 or 600 level with at least 50% of the credits from the 600 level):

- At least 27 coursework credits consisting of:
 - a. The required core courses that must be taken during Year 1.
 - b. The remaining should be relevant to the thesis research and must be agreed to by the thesis committee.
- At least 36 Thesis credits
- Sufficient additional Thesis credits to reach 108 total credits.

Note: 54 of the 108 credits must be graduate stand-alone courses (500 or 600 level) that are not derived from the 500 component of 400/500 slash courses.

Note: Full time enrollment is 12 credits per term in the academic year and 9 in the summer. Maximum load permitted is 16 credits.

Thesis Outline

Students must prepare and submit to their committee an outline of the thesis project. This outline must be sufficiently detailed to enable the committee to evaluate the progress of the student on a yearly basis.

Annual Meeting Requirements

Students are required to meet yearly with their Graduate Committee to evaluate their progress. The Annual Graduate Student Progress Report Form must be completed by the student and major professor, signed by **all** members of the student's graduate committee, and returned to the assistant to the program.

Other Requirements

- Students must maintain an overall GPA of 3.0 and will be notified by the Graduate School if their GPA falls below 3.0 for any term. The cumulative GPA must be at or above 3.0 before the final exam can be taken. Grades at or below C (= 2.0) cannot be used as graduate credit.
- Candidates must complete one term of service as a Graduate Teaching Assistant before graduation. This is considered a valuable experience and an integral part of training towards a higher degree.
- Candidates must present two public presentations of their research in a national/international meeting/conference.

Preliminary Qualifying Examination

As outlined by the [Graduate School](#), to be admitted for the doctoral degree, students must pass a comprehensive Preliminary Examination conducted by the Graduate Committee. The purpose of this exam is to determine the student's understanding of their major and minor fields and to assess their capability for research. It involves a written research proposal on a topic that is or not from the student's thesis research, followed by an oral examination that features a presentation and then questions on the proposal topic. There will also be questions on more general topics drawn from the student's coursework and/or general area of thesis research. The Preliminary Examination is best taken after about two years, near the completion of the coursework on the Program of Study.

Scheduling the Preliminary Exam

The committee is contacted for:

- (1) Agreement on the research proposal topic
- (2) Setting the target date for completion of the written proposal
- (3) Acceptance of written proposal
- (4) Arrangement of a date, time, and place for the exam

Written Proposal

Students must write a proposal on an approved topic.

- The student will provide the committee with a brief summary of the topic.
- The topic may be on anything including a topic close to the student's thesis project and is at the discretion of the student's committee.
- The committee must approve the topic with no more than 1 dissenting vote (email votes are acceptable).

Unless otherwise specified by the committee, the proposal shall be based on the format of an NSF or NIH postdoctoral proposal. The format and length should be discussed with the committee; a general guideline follows.

- The length shall be 5-7 pages (single-spaced, not including references).
- The proposal should include the following sections:

Specific aims

Background and Significance

Research Design and Methods

Literature cited (not included in the page limit)

- Within these sections, the committee will be looking for the following components:

Clearly stated research problem

Clearly developed, testable hypothesis

Focused experimental aims

Contingency plans for aims/objectives

Appropriate experimental design

Appropriate data analysis methods

Justification for, and impact of, the proposed research

A realistic project timeline

The proposal should be submitted to the committee within the specified period after the committee has approved the topic (typically 4-6 weeks). The individual committee members must review the proposal and determine if the written proposal is acceptable for an oral exam defense. This review should take place within 1 week of submission.

- In the event revisions are required (i.e., the proposal is judged as being insufficiently developed to proceed with the oral exam), the student will have 4 weeks to modify and re-submit the proposal to the committee for a second decision.

- Once there is a decision to accept the proposal, the student must schedule the oral exam.

Oral Examination

The exam is scheduled with the Graduate School using the [Exam Scheduling Form](#).

- The oral exam must be at least 2 hours in length and is typically up to 3 hours long. The oral exam covering the thesis proposal should constitute about half of the exam time.
- All members of the graduate committee should be physically present at the required graduate exam (for exceptions, see [Remote Participation requirements](#)).
- The defense of the proposal should include a presentation of the proposal by the student (30 minutes), followed by questions from the committee members that are answered by the student.

Approximately half of the exam will be devoted to open questions

(a) The open questions may include anything related to science or the training of the student that the committee members deem relevant.

(b) It is recommended that the candidate practice answering questions with their advisor(s), committee members and/or other students.

- The decision to pass the individual is subject to the rules of the Graduate School, which gives the committee the options (i) to pass, (ii) not to pass and to terminate the student's work, (iii) not to pass and to allow a re-examination, or (iv) to recess and re-convene within two weeks.
- A copy of the scoring sheet needs to be returned to the office of Comparative Health Sciences.

Final Oral Examination

The examination committee will consist of the same members as for the Preliminary Examination, although substitutions may be made if approved by the Program and the Graduate School. The student must contact members of the committee to arrange the date, time and place, **then schedule the exam with the Graduate School not less than two weeks before the examination**. One copy of the pre-text pages of the [thesis](#) must be submitted to the Graduate School when

scheduling the exam. Examination copies must be distributed to **all** committee members two weeks prior to the examination. All members of the graduate committee should be physically present at all required graduate exam (for exceptions, see the [Remote Participation](#) requirements).

The first part of the exam is the thesis presentation portion, which is open to all interested parties. After the thesis seminar, the committee and student will continue in closed session to examine the thesis and its broader relationship to microbiology.

- The decision on the outcome of the exam will be based on a Scoring Guide/Rubric Sheet provided by the student and the major professor for the Ph.D. thesis defense. After the major professor explains how the guide will be used, each graduate committee member will be asked to use the form in documenting their assessment of the student. At the conclusion of the exam the committee will discuss the student's performance (per the Scoring Guide). The major professor will collect the completed forms for filing in the Biomedical Sciences Office.

Changing Your Committee Membership

<http://gradschool.oregonstate.edu/progress/graduate-committee>

If it becomes necessary to replace one of your committee members after your committee has been established or to substitute a committee member for a particular meeting, refer to your committee composition requirements. Ensure that your replacement member is a member of the Graduate Faculty and approved for his or her proposed role. If the faculty member is not a member of the [Graduate Faculty](#) or is not approved for the role proposed, your major department/program will need to nominate the proposed member to act in those roles using the [Nomination to Graduate Faculty form](#). Committee structure is evaluated when your program of study is received by the Graduate School and when you schedule your formal examination(s).

Grievance Procedures for Graduate Students

<http://gradschool.oregonstate.edu/progress/grievance-procedures>

Introduction

Policy

An important goal of Oregon State University is to maintain harmonious relations among students, faculty, and staff. To this end, candid and informal discussions between graduate students and others in the University are encouraged as a means of achieving harmony and of arriving at mutually satisfactory solutions to graduate student problems. Graduate education is based upon a mutuality of interests and respect among faculty and students. It is important that this mutual concern for the quality of education and the persons involved be fostered and preserved.

If the informal discussions of a grievance between a graduate student and his or her supervisor break down, the use of or participation in a grievance procedure shall not subject the graduate student, any witness, or any graduate student's representative to reprisal in any way by the supervisor, the department, the major professor, the student's graduate committee, or the University. Nor shall participation in the grievance procedure be reflected in any way in efficiency ratings, grades, evaluations, promotion opportunities, or graduate student employment relations.

All students desiring to appeal matters relating to their graduate degree should follow the Grievance Procedures for Graduate Students. These procedures are available at the link at the top of this section. Graduate assistants, whose terms and conditions of employment are prescribed by the [collective bargaining agreement](#) between OSU and the Coalition of Graduate Employees, American Federation of Teachers Local 6069, should also refer to that document and seek guidance from OSU's Office of Human Resources.

Scope

This statement of policy encompasses all facets of graduate education and employment of graduate students at Oregon State University except for those that are explicitly noted in this statement.

Decisions in Writing

A reasonable effort should be made to resolve any grievance at the lowest level possible. Any decision rendered at or above the level of the departmental administrator shall be in writing.

Academic Grievance Procedures

Scope

Issues that may involve complaints on academic matters fall into four general categories: (1) those items that derive from University-wide regulations and which are not unique to graduate students. Examples are grades, attendance, and academic dishonesty. (2) those items that derive from rules and regulations of the Graduate School and which apply specifically to graduate students (3) those items that derive from rules or regulations of a department or comparable administrative unit. (4) other grievances related to a graduate student's academic work and progress toward degree.

Grievance Procedures Related to University-Wide Academic Regulations

Grievances related to academic regulations for all students as adopted by the Faculty Senate (see the [Introduction to the Academic Regulations](#)) have the same channel of appeal for the graduate students as for undergraduates, except for the addition of the graduate dean.

The order of appeal will be (1) instructor, (2) administrator of department or comparable administrative unit, (3) academic dean, (4) graduate dean, (5) provost. The appeal procedures are in [576-022-0010](#).

Grievance Procedures Related to Graduate School Policies and Regulations

Graduate School policies and regulations may be found in the Graduate Bulletin, which is published annually. Appeals relative to the application or execution of these policies and regulations will have the following route: (1) major professor, (2) administrator of major department or comparable administrative unit, (3) graduate dean, (4) provost.

The graduate dean may refer a case to the Graduate Council or a committee of the Council prior to rendering a decision. If the graduate student is not satisfied with the decision of the graduate dean, and if the graduate dean has not referred the case to the Graduate Council or a committee of the Council, the student may

ask that the case be referred to the Graduate Council or a committee of the Council prior to the appeal to the Provost and Executive Vice President.

Grievance Procedures Involving Departmental Policies, Procedures, and Regulations

All OSU students holding a baccalaureate degree and not enrolled as postbaccalaureate or professional degree students are enrolled in the Graduate School. This is in contrast to undergraduate students who are enrolled in an academic school or college. Graduate students typically work for advanced degrees, which are administered through academic departments or comparable administrative units. The graduate faculty members have appointments in these academic units and these units have a direct influence on the quality of graduate education at OSU.

When grievances arise relative to the application of the rules, procedures or policies of a department or comparable academic unit, the order of appeal will be: (1) major professor, (2) administrator of department or comparable academic unit, (3) graduate dean, (4) provost.

Grievance Procedures Related to Academic Work and Progress Toward Degree

When other grievances arise related to a graduate student's academic work and progress toward degree, the order of appeal will be: (1) major professor, (2) administrator of department or comparable academic unit, (3) graduate dean, (4) provost.

Grievance Procedures for Non-degree Graduate Students

Non-degree graduate students holding a baccalaureate degree will have the following order of appeal: (1) instructor, (2) graduate dean, (3) provost.

Use of Designee

At any step of review beyond the instructor, the appropriate administrator may appoint a designee to act on his or her behalf in considering the grievance.

Time Limits

A grievance shall first be presented orally within 60 calendar days from the time the graduate student knew or should have known of the facts giving rise to the alleged grievance. At the level of departmental administrator, or above, the

grievance or appeal must be submitted in writing. The responsible administrator at each step below the graduate dean is required to respond in writing to the grievant within 15 calendar days from the time the grievance was received. The graduate dean shall respond within 30 calendar days, including review and reporting by a Graduate Council committee. Any appeal on the part of the grievant to the next step in the grievance procedure must be made within 15 calendar days from the time the grievant was informed of the action at the prior step.

If at any step of the grievance procedure the University fails to issue a response within the times specified, the grievance shall be considered denied. The grievant may file the grievance at the next step. If the grievant fails to file the grievance at the subsequent step within the time specified, the grievance will be considered withdrawn and cannot be resubmitted.

The indicated time limits are provided to assure speedy response to a grievance. However, the time period may be waived by mutual consent of the graduate student and the administrator.

Appeal to Graduate Dean

For any grievance submitted to the dean of the Graduate School, the dean may, at his or her discretion, refer the grievance to a special advisory committee of three persons comprising two members of the Graduate Council and a graduate student majoring in a department other than the one with which the student has a grievance. The dean of the Graduate School will render a decision in writing based on the facts of the case and the advice of the special committee if one is established.

Grievance Procedures Related to Employment of Graduate Students

Grievance procedures concerning employment can be found on the Office of Human Resources, Administrative Services, [Coalition of Graduate Employees \(CGE\) Contract Resources](#) page.

Grade Requirements and Program of Study

A grade-point average of 3.00 is required: 1) for all courses taken as a degree-seeking graduate student, and 2) for courses included in the graduate degree or graduate certificate program of study. Grades below C (2.00) cannot be used on a graduate program of study. A grade-point average of 3.00 is required before the final oral or written exam may be undertaken. Enforced graduate-level

prerequisite courses must be completed with a minimum grade of C. Programs may have more stringent grade requirements than those prescribed by the Graduate School.

Incomplete Grades

An “I” (incomplete) grade is granted only at the discretion of the instructor. The [incomplete](#) that is filed by the instructor at the end of the term must include an alternate/default grade to which the incomplete grade defaults at the end of the specified time period. The time allocated to complete the required tasks for the course may be extended by petition to the University Academic Requirements Committee. You can obtain the form from the Registrar’s Office. It is the student’s responsibility to see that “I” grades are removed within the allotted time.

Student Conduct and Community Standards

Graduate students enrolled at Oregon State University are expected to conform to basic regulations and policies developed to govern the behavior of students as members of the university community. The Office of Student Conduct and Community Standards (SCCS) is the central coordinating office for student conduct-related matters at Oregon State University.

Choosing to join the Oregon State University community obligates each member to a code of responsible behavior which is outlined in the [Student Conduct Code](#). The assumption upon which this Code is based is that all persons must treat one another with dignity and respect in order for scholarship to thrive.

Violations of the regulations subject a student to appropriate disciplinary action.

Academic Dishonesty

Academic Dishonesty is defined as an act of deception in which a student seeks to claim credit for the work or effort of another person, or uses unauthorized materials or fabricated information in any academic work or research, either through the Student's own efforts or the efforts of another. It includes:

- **CHEATING** — use or attempted use of unauthorized materials, information or study aids, or an act of deceit by which a Student attempts to misrepresent mastery of academic effort or information. This includes but is not limited to unauthorized copying or collaboration on a test or assignment, using prohibited materials and texts, any misuse of an electronic device, or using any deceptive means to gain academic credit.
- **FABRICATION** — falsification or invention of any information including but not limited to falsifying research, inventing or exaggerating data, or listing incorrect or fictitious references.
- **ASSISTING** — helping another commit an act of academic dishonesty. This includes but is not limited to paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, taking a test/doing an assignment for someone else by any means, including misuse of an electronic device. It is a violation of Oregon state law to create and offer to sell part or all of an educational assignment to another person (ORS 165.114).
- **TAMPERING** — altering or interfering with evaluation instruments or documents
- **PLAGIARISM** — representing the words or ideas of another person or presenting someone else's words, ideas, artistry or data as one's own, or using one's own previously submitted work. Plagiarism includes but is not limited to copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project and then submitting it as one's own. Academic Dishonesty cases are handled initially by the academic units, following the process outlined in the University's Academic Dishonesty Report Form, and will also be referred to SCCS for action under these rules.

Office of Equal Opportunity and Access

The OSU Office of Equal Opportunity and Access defines sexual harassment as the following:

- Unwelcome* sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature when:

- Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or education;
- Submission to or reject of such conduct by an individual is used as the basis for employment or education –related decisions affecting such an individual; or
- Such conduct is sufficiently severe or pervasive that it has the effect, intended or unintended, of unreasonably interfering with an individual's work or academic performance because it has created an intimidating, hostile, or offensive environment and would have such an effect on a reasonable person of that individual's status.

**Employee conduct directed towards a student – whether unwelcome or welcome – can constitute sexual harassment under OAR.*

There are two confidential resources to discuss reporting options: Center Against Rape and Domestic Violence (CARDV) provides 24/7 confidential crisis response at 541-754-0110 or 800-927-0197, and OSU Sexual Assault Support Services is available weekdays at 541-737-7604.

Student Records

Both federal and state laws permit Oregon State University staff to release directory information (e.g. name, address, degree program, birth date) to the general public without your consent. You can prohibit the release of directory information to the public by signing the Confidentiality Restriction form available from the Registrar's Office. It will not prohibit the release of directory information to entities of Oregon State University that have a "need to know" to accomplish their required tasks. It further will not prohibit Oregon State University departments from including your name on mailing lists for distribution of materials that are essential to your enrollment at Oregon State University.

Comparative Health Sciences Degree Program Participating Faculty

College of Veterinary Medicine

Mark Ackermann
Wendy Baltzer
Brianna Beechler
Luiz Bermudez
Rob Bildfell
Shay Bracha
Chris Cebra
Patrick Chappell
Katie Curran
Lia Danelishvili
Helio de Moraes
Brian Dolan
Chuck Estill
Jana Gordon
Elena Gorman
Jean Hall
Claudia Häse
Michael Huber

Ling Jin
Deidre Johns
Jennifer Johns
Anna Jolles
Mike Kent
Nicole LeBlanc
Christiane Löhr
Kathy Magnusson
Erica McKenzie
Jan Medlock
Tim Miller-Morgan
Milan Milovancev
Hernan Montilla
Hong Moulton
Fikru Nigussie
Jill Parker
Manoj Pastey
Sreekanth Puttachary

Stephen Ramsey
Dan Rockey
Duncan Russell
Justin Sanders
Mahfuzur Sarker
John Schlipf
Carla Schubiger
Katherine Scollan
Stacy Semevelos
Natalia Shulzhenko
Sean Spagnoli
Susanne Stieger-Vanegas
Susan Tornquist
Katy Townsend
Beth Valentine
Katja Duesterdieck-Zellmer

College of Pharmacy

Theresa Filtz
Arup Indra
Jane Ishmael

Chrissa Kiousi
Mark Leid
Andriy Morgun
Aleksandra Sikora

College of Public Health and Human Services

Anna Harding
Marie Harvey
Andy Houseman

Don Jump
Molly Kile

College of Agricultural Sciences

Gerd Bobe
Gita Cherian
Michelle Kutzler

Neil Shay
Antonio Torres

College of Engineering

Elain Fu
Adam Higgins
Joseph McGuire
Karl Schilke

Environmental & Molecular Toxicology

Siva Kolluri

College of Science

Thomas Sharpton

Required core courses that should be taken during year 1

- VMB 501 Research Perspectives Lab Rotations (3) (if necessary)
- ST 511 Methods of Data Analysis (4)
Graphical, parametric and nonparametric methods for comparing two samples; one-way and two-way analysis of variance; simple linear regression. Lec/lab.
- GRAD 520 Responsible Conduct of Research (1)
Covers 10 topics in responsible conduct of research: ethical decision making; human subjects; animal welfare; data acquisition; sharing and ownership; research misconduct; conflicts of interest; authorship; peer review; mentor/trainee responsibilities; and collaborative science. Useful to all students who conduct scholarly activity.
- MCB 525 Molecular and Cellular Biology Techniques (3)
An intensive laboratory course introducing modern methods for the manipulation of cellular macromolecules. Recombinant DNA technology, protein chemistry, and in situ hybridization methods presented in a format that emphasizes experimental continuity. The course requires two weeks of intensive full-time involvement.
or
Molecular Tools (VMB 671) (3)
This course focuses on the many available tools to study molecular biology and provides the non-specialist with the fundamental principles for understanding various modern day molecular biology techniques. The “nitty gritty” of the techniques are explained by experts in the field, wherein examples of the applications to some biological problems are presented by the students to put these techniques into real life context.
- VMB 669 Introduction to Grant Proposal Writing (2)
This course introduces the fundamentals of writing grant proposals with an emphasis on applications to the National Institute of Health (NIH). The sections of the grant proposal that cover Specific Aims, Innovation, and Significance are reviewed and discussed in detail. Students practice writing these parts and their proposals are submitted for reading and evaluation by both instructors and peers. The final review sessions allow the students to evaluate their revised proposals in a group setting.
- VMB 607 Seminar

Elective courses relevant to the thesis research from the VMB listing or other programs agreed by the thesis committee.

- VMB 521 Animal Models (3)
Selection/use criteria for models describing animal or human diseases or processes with emphasis on experimental design, validation, transgenic technology, population dynamics, husbandry, and ethics.
- VMB 523 Zoonoses (3)
This course will cover the basics of zoonotic diseases, mechanism of transmission, epidemiology of diseases, and will allow for interactive examinations of the molecular basis of diseases that are transmissible between animals to humans. The course will cover bacterial, viral and parasitic pathogens, including the Genomic and Public Health aspects of zoonotic diseases. Students will better understand the diseases in nature and thereby be better able to investigate reported cases and to conduct appropriate disease control and prevention activities.
- BB 485/585 Applied Bioinformatics (3)
This course teaches students how to correctly utilize the specialized language of bioinformatics and computational biology. Data is analyzed using bioinformatics to understand eukaryotic gene regulation. Students will learn how to choose appropriate methods and research questions for bioinformatics investigations, and appropriately use command-line software in a Unix environment to answer specific bioinformatics questions. Biopython modules and methods are used to answer specific bioinformatics.
- VMB 630 Mechanisms of Disease (3)
The course addresses the interactions between the host immune system and pathogens, as well as normal biota. A brief introduction is provided about the known functions of different aspects of the immune response and current or classical papers are discussed about mechanisms used by pathogens to circumvent the host immune response.
- VMB 631 Mathematical Modeling (3)
The course introduces students to mathematical modeling to advance biological sciences. We will examine outstanding examples from the research literature across a broad range of biological disciplines. We will focus both on the contribution the modeling makes to the scientific application and on the modeling methods themselves. Substantial time will

be devoted to implementing the models in the Python programming language. Each student is expected to bring a laptop computer to each class. During the last week of class, each student will give a short presentation of a paper from the literature that illustrates the use of mathematical modeling in biological sciences.

- VMB 651 Cancer Systems Biology (3)
This course provides an overview of systems biology approaches that are being used to study cancer, with an emphasis on omics techniques and fundamental mechanisms in the origination and progression of cancer. The course will be discussion-based, with each class session focused on a contemporary research article in the field of cancer systems biology.
- VMB 673 Comparative Immunology (3)
This course is for students interested in studying immune responses in animals beyond mice and men. A prerequisite in Immunology is not necessary. Most topics in immunology are covered with attention to different strategies used by different animals. Methods of studying the immune status of different animals are also discussed. Students are required to write a review article and construct a grant proposal on a topic of their choice, ideally related to their thesis work.
- VMB 670 Systems Biology & Bioinformatics (1)
The goal of this course is to introduce students to systems biology and bioinformatics, with an emphasis on applications in understanding gene regulatory networks, molecular diagnosis/prognosis, metabolism, immunology, and host/microbe interactions.
- VMB 674 Vaccines and New Therapies (3)
This course is designed to provide students with a cohesive understanding of the basic research behind the discovery of new therapeutic targets and scientific advancements used in development of vaccines and new therapies.

Blanket courses

- VMB 603 Thesis (36)
- VMB 607 Reading & Conference or Seminar/Colloquium (1-16)

Appendix 1

Scoring Guide (Rubric) for Graduate Learning Outcome Assessment

Characteristics desired in a **MS DEFENSE EXAM**

Evaluation/Guidance
1. Problem Definition: Has stated the research problem clearly, providing rationale for undertaking the research.
2. Literature and Previous Work: Demonstrated sound knowledge of literature in the area and of prior work on the specific research problem.
3. Impact of Research: Demonstrated the potential value of solution to the research in advancing knowledge within the area of study.
4. Solution Approach: Has applied sound state-of-the-art research methods/tools to solve the defined problem and has described the methods/tools effectively.
5. Results: Analyzed and interpreted research results/data effectively.
6. Quality of Written Communication: Communicated research results clearly and professionally in written form.
7. Quality of Oral Communication: Communicated research results clearly and professional in oral form.
8. Critical Thinking: Has demonstrated capability for independent research in the area of study and expertise in the area.
9. Broader Impact: Demonstrated awareness of broader implications of the concluded research. Broader implications may include social, economic, technical, ethical, business, etc. aspects.
10. Publications: Journal or conference publications have resulted (or are anticipated) from this research.

Appendix 2

Characteristics desired in **PhD ORAL PRELIMINARY EXAM**

Evaluation/Guidance
1. Problem Definition: Has stated the research problem clearly, providing rationale for undertaking the research.
2. Literature and Previous Work: Demonstrated sound knowledge of literature in the area and of prior work on the specific research problem.
3. Impact of Research: Demonstrated the potential value of solution to the research in advancing knowledge within the area of study.
4. Solution Approach: Has applied sound state-of-the-art research methods/tools to solve the defined problem and has described the methods/tools effectively.
5. Results: Analyzed and interpreted research results/data effectively.
6. Quality of Written Communication: Communicated research results clearly and professionally in written form.
7. Quality of Oral Communication: Communicated research results clearly and professional in oral form.
8. Critical Thinking: Has demonstrated capability for independent research in the area of study and expertise in the area.
9. Broader Impact: Demonstrated awareness of broader implications of the concluded research. Broader implications may include social, economic, technical, ethical, business, etc. aspects.
10. Publications: Journal or conference publications have resulted (or are anticipated) from this research.

Appendix 3

Characteristics desired in PhD DISSERTATION DEFENSE EXAM

Evaluation/Guidance
1. Problem Definition: Has stated the research problem clearly, providing rationale for undertaking the research.
2. Literature and Previous Work: Demonstrated sound knowledge of literature in the area and of prior work on the specific research problem.
3. Impact of Research: Demonstrated the potential value of solution to the research in advancing knowledge within the area of study.
4. Solution Approach: Has applied sound state-of-the-art research methods/tools to solve the defined problem and has described the methods/tools effectively.
5. Results: Analyzed and interpreted research results/data effectively.
6. Quality of Written Communication: Communicated research results clearly and professionally in written form.
7. Quality of Oral Communication: Communicated research results clearly and professional in oral form.
8. Critical Thinking: Has demonstrated capability for independent research in the area of study and expertise in the area.
9. Broader Impact: Demonstrated awareness of broader implications of the concluded research. Broader implications may include social, economic, technical, ethical, business, etc. aspects.
10. Publications: Journal or conference publications have resulted (or are anticipated) from this research.

Appendix 4

To the Committee to fill out

Student: _____

Do you feel that the student was prepared?

Yes _____

No _____

Comments:

Do you feel the committee participated actively in advising the student about her/his research?

Did _____ **Could do better** _____ **Was not very helpful** _____

Comments:

Any suggestion to the program that in the future could improve the student and members of the committees experience?

No _____ **Yes** _____ **Suggestions:**

Master's of Science (Comparative Health Sciences): Quick Reference Guide

Year one:

1. Application to the Graduate School by the student before August 15 for Fall quarter. Acceptance of the student by the CVM Graduate Committee, and notification to the Graduate School.
2. Beginning of coursework in Fall quarter. Selection of major professor and student graduate committee by the end of the second quarter, initiation of thesis research project.
3. Development of Program of Study by major professor and student before completing 18 credits of coursework (before end of second quarter). Student's graduate committee should meet and approve Program of Study (plan for completing degree). Program of Study must be signed by major professor, minor professor (only if taking minor) and Clinical Science Department Head. Submit signed Program of Study to College Graduate Committee for approval.
4. Complete and submit first Self-Evaluation Form (Appendix 6) by July 1 (end of first year). Major Advisor must submit annual review form (Appendix 7) by July 15 (signed by committee members).

Year two and three:

1. Complete approved coursework and continue thesis research.
2. Meet with student's graduate committee for annual progress report. Complete and submit Annual Self-Evaluation Forms each year by July 1. Major Advisor must submit annual review form by July 15 (signed by committee members).

Year three:

1. Finish thesis research and write Thesis/Dissertation (see Thesis Guide--<http://gradschool.oregonstate.edu/success/thesis-guide>).
2. At least 15 weeks before your final oral exam (thesis defense), submit final approved Program of Study to the Graduate School and select Graduate Council Representative if you have not already done this.
3. At least 2 weeks before your oral defense: 1) schedule your final oral exam online, 2) distribute a defensible copy of your thesis to your committee, 3) deliver or email pretext pages of your thesis/dissertation to the Graduate School, and 4) submit a diploma application to Graduate School.
4. Defend Thesis/Dissertation in a public seminar, followed by an oral exam by the student's graduate committee. Schedule thesis defense before end of spring quarter, so additional fees for summer quarter are not incurred.

Submit final revised Thesis/Dissertation to Graduate School for approval within 6 weeks of oral defense.

Appendix 5

Clinical Science option Program Requirements

This option will be available only to dual clinical residents/graduate students of the College of Veterinary Medicine, in conjunction with 2-, 3- or 4-year residencies in a veterinary specialty. These residency programs are structured according to the guidelines defined by the individual Specialty Colleges (e.g. American College of Veterinary Surgeons, etc.). Dual clinical residents/graduate students enrolled in the Clinical Sciences option must fulfill programmatic requirements of their individual specialty college residencies including satisfactory annual performance evaluations, in addition to graduate degree requirements for successful completion of their concurrent MS or PhD degree.

Residency training programs provide in-depth knowledge of veterinary clinical specialties and supporting disciplines under the guidance and supervision of Diplomates of specialty colleges. The objectives of these programs are to promote aptitude and clinical proficiency in the diagnosis, treatment, and management of animals with specific issues (dependent on specialty), as well as to instruct the resident in the science and practice of veterinary specialties, and to provide the resident with the opportunity to pursue career goals in teaching, research, clinical service, and/or specialty practice. Clinical skills and judgment are built through clinical experience, teaching of professional students, and participation in veterinary specialty rounds and seminars.

Dual clinical residents/graduate students on a clinical specialty service shall be responsible for receiving clinic appointments and obtaining history and pertinent information from clients, supervising daily management of hospitalized animals, participating in clinical teaching, and providing optimal clinical service and prompt professional communications. Duties will also include a limited number of didactic lectures and participation in laboratory and continuing education courses. Responsibilities will include night and weekend emergency duty in the hospital. These assignments are rotated among the residents, clinical fellows, and interns. These responsibilities are integral to residency training and required coursework for the Clinical Sciences option, including Postgraduate Medicine, Surgery or other specialty (VMC 632, VMC 634, or similar) and Topics in Medicine, Surgery, or other specialty (VMC 682, VMC 684, or similar courses).

Coursework Requirements for Comparative Health Sciences Major (MS, PhD): Clinical Sciences Option

Students enrolled in the MS degree in Comparative Health Sciences will complete a total of 45 graduate credits, including 12 thesis credits. Students enrolled in the PhD degree will complete a total of 108 graduate credits, including 36 credits of non-blanket coursework. The following tables list the courses required to obtain the Clinical Sciences option in Comparative Health Sciences. Highlighted courses are option-specific, while the remaining courses are required for the major.

Course Title	Course number	Number of credits
Topics in Medicine, Surgery, or other clinical specialty	VMC 682, VMC 684, or similar	6
Postgraduate Medicine, Surgery or other clinical specialty	VMC 632, VMC 634, or similar	6
Research Perspectives	New (PhD only)	3 (1 per quarter) (PhD only)
Methods of Data Analysis	ST 511 or similar	4
Biomedical Ethics	GRAD 520 or equivalent	1
Introduction to Grant Proposal Writing	VMB 669	2
Seminar	VMB 507	1
Thesis	VMC 503(MS), VMC 603 (PhD)	12 (MS), 36 (PhD)
Electives (including required electives chosen below, additional thesis credits (PhD only), and other)	Various	14 (MS), 50 (PhD)

Required Electives - must include at least 2 of the following courses (or similar courses approved by student's graduate committee and College graduate committee):

Course Title	Course number	Number of credits
Biochemistry	BB 550 or similar	3
Molecular and Cellular Biology Techniques	MCB 524 or similar	1
Cancer Systems Biology	VMB 651	3
Systems Biology and Bioinformatics	VMB 670	1
Comparative Immunology	VMB 673	3
Animal Genomics	VMB 769	1
Other elective courses approved by student and college graduate committees		

Research

In addition to coursework required in the student's program of study, MS thesis and PhD students will complete an interdisciplinary research project in comparative health sciences, under the support and direction of their major professor.

Learning Outcomes and Assessment

MS

1. Conduct research with the outcome being an original manuscript.
 - Assessed by the production and evaluation of a written thesis and during oral exam, with Grad Council Rep having specific responsibility for assessment
2. Demonstrate mastery of subject material
 - Assessed by coursework grades and during oral exam
3. Be able to conduct scholarly activities in an ethical manner
 - Documentation of training activities in Program of Study (GRAD 520)
4. Fulfill residency program requirements of veterinary specialty college
 - Assessed by annual evaluations by Resident Advisor and/or specialty section, completion of residency training log (ACVS only) and/or specialty board examination(s)

PhD

1. Produce and defend an original significant contribution to knowledge
 - Assessed by written thesis and during final oral exam with Grad Council Rep having specific responsibility for assessment
2. Demonstrate mastery of subject material
 - Assessed by coursework grades, during oral exam
3. Be able to conduct scholarly activities in an ethical manner
 - Documentation of training activities in Program of Study (GRAD 520)
4. Fulfill residency program requirements of veterinary specialty college
 - Assessed by annual evaluations by Resident Advisor and/or specialty section, completion of residency training log (ACVS only) and/or specialty board examination(s)

Statement Regarding Students with Disabilities

"Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at (541) 737-4098."

Link to Statement of Expectations for Student Conduct, i.e. cheating policies

https://leadership.oregonstate.edu/sites/leadership.oregonstate.edu/files/policies/student_conduct_2-25-15_576-15.pdf

Satisfactory Progress Criteria.

**Criteria to Define Satisfactory Progress in the
Graduate Program
Comparative Health Sciences**

A graduate student will:

1. Maintain good academic performance, GPA of 3.0 or higher.
2. Participate in the academic activities of the Department/College/or important activities as directed by the mentor.
3. Demonstrate interest in the project by keeping abreast of the literature.
4. Communicate data generated in the project, either/or in meetings and publications.
5. Keep a good level of collegiality with peers and faculty.

Enrolled students will undergo annual review by the Graduate Committee, the mentor and the College Graduate Committee. If appropriate progress has not been made, the College Graduate Committee will make recommendations to the mentor and the student.

Two consecutive unsatisfactory reports should trigger a review by the student's Graduate Committee.

Appendix 6: Annual Self-Evaluation Form to be completed by graduate student, due July 1st.

**College of Veterinary Medicine
Graduate Student Annual Self-Evaluation Report**

Fill out this form (items 1-10) and have it evaluated by your Major Advisor. Write the self-evaluation based on the criteria listed in "Criteria to Define Satisfactory Progress" document.

Today's Date: _____ Program & Degree _____

1. Name of student: _____ Year started _____

2. Program start date: _____ Total years in the program: **0.0**

3. Name of Major Advisor: _____ Expected graduation date: _____

4. Names and affiliations of Graduate Committee members: _____

5. Research project: _____

6. Progress to date/self-evaluation: _____

7. Plan for the coming year: _____

8. Publications, presentations, abstracts: _____

9. Additional information (awards, scholarships, etc.): _____

10. Signature of student: _____

11. Signature of Major Advisor: _____

Appendix 7. Annual Review Form to be completed by Major Advisor and Student's Graduate committee. Due July 15th.

Annual Review

Candidate Name:

Year Program Began:

Current Year:

Check list	Does not meet expectations	Meets expectations	Exemplary performance	N/A
1. Problem definition				
2. Literature knowledge				
3. Approach				
4. Results				
5. Quality of written communication				
6. Quality of oral presentation				
7. Critical thinking				
8. Publications				

N/A = Not Applicable

Comments:

Student Signature	Date	Advisor Signature	Date
Committee Member	Date	Committee Member	Date
Committee Member	Date	Committee Member	Date

Appendix 8. OSU University reference guide for MS deadlines.

Before completing 18 credits of coursework:

Develop a [Program of Study](#) *with your program.* This is your plan for completing your degree. Your advisor, department chair, or departmental graduate coordinator will help you. [***This should take place before the end of winter quarter in the FIRST year of the program for CVM Residents]

Before your Final Oral Examination

At least **15 weeks** before your Final Oral Examination:

1. Submit your approved program of study to the Graduate School
2. Select a [Graduate Council Representative](#) (if required) for the Final Oral Examination

At least **2 weeks** before your Final Oral Examination:

1. Submit a [diploma application](#). For Spring term diplomas, submit an application **no later than April 13, 2018**. (see other Spring deadlines [below](#))
2. Use online form to schedule your [final oral examination](#).
3. Distribute a defensible copy of your thesis to your committee.
4. Deliver or email pretext pages of your thesis to the graduate school.

Submit the final copy of your thesis (if required for your degree) to the Graduate School within **6 weeks** after your Exam or **before the first day** of the following term, *whichever comes first*, to avoid having to register for a minimum of three graduate credits the next term.

Scheduling Exams with the Graduate School

Use the [exam scheduling form](#) to schedule examinations. Please submit your exam scheduling form as soon as you schedule your exam but no later than **two weeks** before the exam date.

Thesis Submission Deadline

The final, corrected, and signed copy of your thesis or dissertation must be submitted to the Graduate School within **6 weeks** after your Exam or **before the first day** of the following term, *whichever comes first*, to avoid having to register for a minimum of three graduate credits the next term.

Note: Continuous Enrollment Policy Applies. You must be registered for a minimum of three graduate credits until all degree requirements are completed. To avoid registering for the term following your defense, submit the final corrected and signed thesis or dissertation to the Graduate School **before the first day of the term following the term in which you defend**. For details on this policy see "Continuous Enrollment, I. Minimum Registration" in the Graduate Catalog, <http://catalog.oregonstate.edu/ChapterDetail.aspx?key=38#Section1804>.

Students must register for a minimum of 3 credits and pay fees if they will be using university resources (e.g. facilities, equipment, computing and library services, or faculty or staff time) during any given term, regardless of the student's location. If degree requirements are completed between terms, the student must have been registered during the preceding term.

Graduate students who have successfully completed all course and noncourse requirements in accordance with diploma deadlines (see the [Graduate School website](#)) are not required to register during the subsequent term.