COMPARATIVE MEDICINE

Courses offered by the Department of Comparative Medicine are listed under the subject code COMPMED on the Stanford Bulletin's ExploreCourses web site.

The Department of Comparative Medicine at Stanford is an academic, basic science department, the department is comprised of thirteen faculty, ten of whom are veterinarians. All faculty members are immersed in laboratory animal science and translational research. They teach at the undergraduate, graduate, professional, and postgraduate levels. The department’s clinical and basic science faculty welcome, review, and accept student candidates for participation in research projects. The Department of Comparative Medicine was established at Stanford in 1990.

The department’s faculty is also engaged in collaborative and comparative research, with animal model expertise and programs in veterinary pathology, pain and anesthesia, rodent reproductive biology, infectious disease, cancer, bioengineering, animal welfare, and neuroscience. In addition, the veterinary faculty in the Department of Comparative Medicine has oversight responsibility for the campus-wide animal research program and provides clinical service in the Veterinary Service Center (VSC). The mission of the department is to advance human and animal health through outstanding research, veterinary care and training.

To learn more about the Veterinary Service Center Core and services provided, see the Veterinary Service Center (VSC) (http://med.stanford.edu/vsc.html) web site.

To learn more about Animal Research at Stanford, see the Animal Research at Stanford web site.

Master of Science in Laboratory Animal Science

The Master of Science (M.S.) in Laboratory Animal Science (MLAS) degree program in the Department of Comparative Medicine is a flexible, one- to two-year graduate program designed for students who want to pursue advanced careers in biomedical research, focusing on animal modeling and biomethodology; laboratory animal science, organizational management and facility design, regulatory and compliance issues, and animal welfare. Under the department’s rolling admissions policy, prospective students may submit applications to the department anytime during the academic year.

The program's academic courses are designed to build a solid foundation for a successful career in laboratory animal science and biomedical research. Graduates find employment in pharmaceutical companies and academia, or pursue training in medical or veterinary schools. The program is designed to give students the ability to customize their academic research experience.

The Master of Science (M.S.) in Laboratory Animal Science degree program may also be taken by Stanford undergraduates as a coterminal master’s degree program.

University requirements for the M.S. degree are described in the "Graduate Degrees (http://exploredegrees.stanford.edu/graduatedegrees/#masterstext)" section of this bulletin.

Degree Requirements

1. At least 45 units of academic work, all of which must be in courses at or above the 100 level. 36 of the 45 units must be at or above the 200 level.

2. Students must complete a master's thesis, which may take the following form:
   a. Original analysis of original data
   b. A comprehensive literature review with a meta-analysis of data or a critical reanalysis of data
   c. Evaluation of a methodological problem using real data
   d. A comprehensive literature review with a grant proposal (NIH style format) for a new study to bridge a gap in the existing knowledge.

3. Per University policy (http://exploredegrees.stanford.edu/graduatedegrees/#masterstext), the master’s degree must be completed within three years.

Required Courses

Students are required to enroll in the following courses.

Autumn

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Spring Quarter

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Elective Courses

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How to Apply

External applicants and current Stanford graduate students

Review the information and instructions on the University Graduate Admissions web site (https://gradadmissions.stanford.edu). Submit your application online. The link to the online application is on the University Graduate Admissions web site (https://gradadmissions.stanford.edu/applying).

Admissions Deadline: Applications and admission decisions are reviewed on a rolling deadline. For more information, contact Steve Choy <stevechoy@stanford.edu>, Student Services Officer, at (650) 724-7880.

Items which must be included in the online application:
Graduate Advising Expectations

The Department of Comparative Medicine (DCM) is committed to providing academic advising in support of graduate student scholarly and professional development. When most effective, this advising relationship entails collaborative and sustained engagement by both the adviser and the advisee. As a best practice, advising expectations should be periodically discussed and reviewed to ensure mutual understanding. Both the adviser and the advisee are expected to maintain professionalism and integrity.

How Does a Student Choose an Adviser/Research Mentor?

Students are encouraged to study the DCM web site (http://med.stanford.edu/compmed.html) to identify potential research mentors and areas of research interest. The student services officer arranges for prospective applicants to speak with the faculty member of interest or with one of the program directors. Because the Master of Science in Laboratory Animal Science (MLAS) program timeline is accelerated, it is imperative that newly admitted students identify a research mentor in a timely fashion.

Once the student and the research mentor are matched, an individual development plan (IDP) is prepared, the student and their adviser then meet with the MLAS Faculty Advisory Committee (FAC) to review the proposed program plan.

How Does a Student Change Advisers?

In the event that the student needs to change adviser, they must contact the MLAS co-director(s), either Sherril Green and/or Corinna Darian-Smith, who can assist them with the transition and facilitate the process.

How Does the Program Tailor Advising to Different Stages in the Student’s Career?

This is a 1.5 – 2 year study program. Students entering the program have variable backgrounds in research, STEM courses, and laboratory animal science. The MLAS FAC, along with the research mentor, tailor the program based on the career goals of individual student and the expertise required to successfully complete their thesis research project and achieve their professional goals. The course of study is determined at the start of the student's program, usually by the end of the first quarter of enrollment. The research mentor and the student meet quarterly to review the student’s IDP; reminders are sent by student services officer who tracks each quarter that this meeting has been completed.

Members of the MLAS FAC also meet quarterly with each student and research mentor. This is necessary, given the accelerated time frame most students have chosen to complete the program. Students may desire to tailor course work based on advances in their research project or the need to acquire additional relevant knowledge or technical skill given their career goals.

For a statement of University policy on graduate advising, see the "Graduate Advising (http://exploredegrees.stanford.edu/graduatedegrees/#advisingandcredentialstext)" section of this bulletin.

Chair: Sherril Green

Director of Graduate Studies: Sherrell Green

Co-Director of Graduate Studies: Corinna Darian-Smith

Professors: David Bentzel (Clinical), Donna M. Bouley, Paul Buckmaster, Sherrell Green, Shaul Hestrin

Associate Professors: Megan Albertelli, Corinna Darian-Smith, Stephen Felt, Joseph Garner, Claude Nagamine

Coterminal Applicants

The coterminal degree program allows current Stanford University undergraduates to study for a master’s degree while completing their bachelor’s degree(s) in the same or a different department. See the "Coterminal Degrees (http://exploredegrees.stanford.edu/cotermdegrees)" section of this bulletin for additional information.

• Go to the Stanford Registrar’s Office Applying to Coterm web site (https://registrar.stanford.edu/students/coterminal-degree-programs/applying-coterm).
• Review the eligibility requirements, deadlines, and fees.
• Complete the online Coterm Application at the University Graduate Admissions web site (https://gradadmissions.stanford.edu/applying).
• Submit your completed supplemental application package to Steve Choy <stechoy@stanford.edu>, student services administrator, (650) 724-7880.

University Coterminal Requirements

Coterminal master’s degree candidates are expected to complete all master’s degree requirements as described in this bulletin. University requirements for the coterminal master’s degree are described in the "Coterminal Master’s Program (http://exploredegrees.stanford.edu/cotermdegrees)" section. University requirements for the master’s degree are described in the "Graduate Degrees (http://exploredegrees.stanford.edu/graduatedegrees/#masterstext)" section of this bulletin.

After accepting admission to this coterminal master’s degree program, students may request transfer of courses from the undergraduate to the graduate career to satisfy requirements for the master’s degree. Transfer of courses to the graduate career requires review and approval of both the undergraduate and graduate programs on a case by case basis.

In this master’s program, courses taken three quarters prior to the first graduate quarter, or later, are eligible for consideration for transfer to the graduate career. No courses taken prior to the first quarter of the sophomore year may be used to meet master’s degree requirements.

Course transfers are not possible after the bachelor’s degree has been conferred.

The University requires that the graduate adviser be assigned in the student’s first quarter even though the undergraduate career may still be open. The University also requires that the Master’s Degree Program Proposal be completed by the student and approved by the department by the end of the student’s first graduate quarter.
Assistant Professors: Kerriann Casey (Clinical), Thomas Cherpes, Monika Huss (Clinical), Cholawat Pacharinsak, Jose Vilches-Moure