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 deaprtment'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 (http://med.stanford.edu/animalresearch.html) 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 quarterly.

		Units
COMPMED 200	One Health Journal Club	1
COMPMED 260	Masters Laboratory Animal Science Practicum/Laboratory Research	1-15
COMPMED 290	MLAS Career Development	1-6

In addition, students must also complete the following courses prior to graduation.

		Units
COMPMED 202	Research Biomethodology for Laboratory Animal Science	2
COMPMED 209	Laboratory Animal Medicine Seminar	2
COMPMED 210	Introduction to Mouse Histopathology	3
COMPMED 211	Biostatistics for the Life Sciences	2

How to Apply (external applicants and current Stanford graduate students)

1. Review the information and instructions on the University Graduate Admissions web site (https://gradadmissions.stanford.edu).

2. 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 administrator, at (650) 724-7880.

Items which must be included in the online application:

- Completed School of Medicine Graduate Student Online Application Form (https://stanfordmedicine.qualtrics.com/SE/?SID=SV_eIIAYRZnPUqkPGJ)
- Resume or CV
- Transcript (unofficial transcripts are acceptable)
- Statement of Purpose (1-2 pages, 1 inch margins, 12 point font, single-spaced)
  - The statement of purpose should describe succinctly the reasons for applying to the proposed program at Stanford, preparation for this field of study, research interests, future career plans, and other aspects of the student's background and interests which may aid the admissions committee in evaluating aptitude and motivation for graduate study.

- Two letters of recommendation; at least one of the two reference letters should come from a science-related faculty member or professor.
- $125 application fee is assessed by the Registrar at the time of the submission of the application.
- *Recommended:* Valid GRE, MCAT, or GMAT scores

Instructions for Coterminal Applicants

The coterminal degree program allows 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.

Please note: the information listed below is for current undergraduate Stanford students

- 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 as directed on the form.

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 graduate 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.

Graduate Advising Expectations

The Department of Comparative Medicine 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.

Faculty advisers guide students in key areas such as selecting courses, designing and conducting research, developing of teaching pedagogy, navigating policies and degree requirements, and exploring academic opportunities and professional pathways.

Graduate students are active contributors to the advising relationship, proactively seeking academic and professional guidance and taking responsibility for informing themselves of policies and degree requirements for their graduate program.

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

Professors: Donna M. Bouley, Paul Buckmaster, Sherril Green, Shaul Hestrin

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

Assistant Professors: Megan Albertelli, Kerriann Casey, Thomas Cherpes, Monika Huss, Cholawat Pacharinsak, Jose Vilches-Moure