Graduate Student Handbook and Curriculum Guide
2019 – 2020

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This handbook is designed to serve as a guide to student life, both on and off campus. On its pages, you will find descriptions of many of the opportunities Tufts offers and the policies, rules and regulations governing all aspects of your status as a student and as a member and representative of the Tufts Community.

The University reserves the right to make changes, without notice, of any course offering, requirement, policy, regulation, date, and financial or other information contained in the handbook. We reserve the right to correct any clerical errors that may appear in this handbook.

NON-DISCRIMINATION POLICY

The Office of Equal Opportunity (OEO) exists to ensure that the University’s commitment and goals toward equal opportunity are integral components of Tufts’ policies.

We further this mission by ensuring that the University maintains compliance with all federal, state, and local laws pertaining to anti-discrimination, the Americans with Disabilities Act, and Title IX, through complaint resolution, programming and outreach. OEO cooperates with members of the Tufts community to resolve complaints of discrimination, sexual harassment, and sexual misconduct, and set forth University policies and guidelines that pertain to these areas of conflict. We also ensure that the University maintains compliance with all federal, state, and local laws pertaining to affirmative action. OEO is guided by the University’s commitment to and desire for a truly integrated, interactive, productive, successful, and diverse body of students, faculty, staff, and community members.

HTTP://OEO.TUFTS.EDU
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This handbook is designed to serve as a guide to the graduate programs curricula and to graduate student life on campus. This handbook contains descriptions of the many opportunities Tufts offers and the policies, rules and regulations that govern all aspects of being a student, a member, and a representative of the Tufts community. Cummings School of Veterinary Medicine at Tufts University offers seven graduate degree programs, three of which are combined with the Doctor of Veterinary Medicine (DVM) program: Doctor of Veterinary Medicine/Master of Science in Comparative Biomedical Sciences (DVM/MS-CBS); Doctor of Veterinary Medicine/Master of Science in Laboratory Animal Medicine (DVM/MS-LAM), and Doctor of Veterinary Medicine/Master of Public Health (DVM/MPH) which is offered in conjunction with the Tufts Medical School. The stand-alone programs are Doctor of Philosophy in Biomedical Sciences (PhD) with five tracks: 1) Infectious Disease, 2) Digestive Disease, 3) Neuroscience, 4) Pathology, and 5) Clinical Sciences; Master of Science in Animals and Public Policy (MAPP); Master of Science in Conservation Medicine (MCM), and Master of Science in Infectious Disease and Global Health (MS-IDGH). The policies and procedures addressed in this handbook generally apply to all graduate degree programs. Variations may be listed in the program sections of this handbook (DVM students see the Cummings School of Veterinary Medicine Student Handbook and Curriculum Handbook for information regarding the DVM program). Some of these policies and procedures may not apply to the DVM/MPH program, as the MPH portion of the program is subject to the rules and regulations of Tufts Medical School. A section of this handbook has been devoted to the DVM/MPH program; however, it is recommended that students in the DVM/MPH program also consult the MPH Handbook.

Because each of these programs is unique, degree requirements, course credits, and length of time to completion vary. To account for this, the unique aspects of each program are addressed in the “Graduate Degree Programs” section of the handbook. For additional information regarding the MAPP, MCM, MS-LAM, MPH, PhD and MS-IDGH programs, see the MAPP website at http://vet.tufts.edu/education/graduate-programs/degrees-offered/mapp/, the MCM website at: http://vet.tufts.edu/education/graduate-programs/degrees-offered/mcm/, the MS-LAM website at: http://vet.tufts.edu/education/combined-dvm-programs/dvmm-s-in-lab-animal-medicine-2/, the MPH website at: http://vet.tufts.edu/education/combined-dvm-programs/dvmmaster-of-public-health-program/, the PhD website at: https://grad.vet.tufts.edu/phd/ and the MS-IDGH website at: http://vet.tufts.edu/education/graduate-programs/degrees-offered/m-s-in-infectious- disease-and-global-health/. 
The following are program descriptions for each of the graduate degree programs offered at Tufts Cummings School of Veterinary Medicine:

**PhD in Biomedical Sciences (PhD)**

The doctoral (Ph.D.) graduate program in Biomedical Sciences provides in depth education and research experiences for students within the selected areas of biomedical science for which our Program faculty have expertise. The Ph.D. Program at Cummings puts emphasis on attracting DVMs that seek advanced research experience and training, although non-DVMs continue to be welcome. The Program currently trains students within five tracks: Infectious Diseases; Digestive Diseases; Neuroscience and Reproductive Biology; Pathology; and Clinical Sciences. Students acquire a blend of scientific knowledge and technical skills in a focused area of research in which the student's interest can be matched to an appropriate and adequately funded faculty mentor. Graduates are trained to become leaders in veterinary and human health research and education within academic, government and private sector organizations.

**DVM/MS in Comparative Biomedical Sciences (DVM/MS-CBS)**

This program is part of a combined DVM/MS offered by the Department of Biomedical Sciences at Cummings to provide rigorous research training for veterinary students interested in pursuing biomedical research as a career pathway. The program is designed to allow research program faculty to train veterinary students over a 15-month leave period after their 1st or 2nd year of veterinary school upon successful completion of a set of basic core science courses during their first year of veterinary school. The program. Students are required to write and defend their thesis research and are encouraged to publish findings in peer-reviewed journals. The program is directed by a faculty member and administered through departmental and school admissions and graduate program committees.

The program faculty provides master’s degree training across a number of research disciplines and serves as mentors for matriculated students. The master’s degree program is designed to facilitate research training in the following research areas: infectious diseases, digestive diseases, reproductive biology, nutrition, oncology, neuroscience, and respiratory physiology.

The program can also accommodate individuals who are pursuing a Residency and also wish to obtain the MS degree. The program requirements are the same, but the flow of the curriculum has been expanded to three years to align with the residency time requirements.

**DVM/MS in Laboratory Animal Medicine (DVM/MS-LAM)**

This program is designed to provide veterinary students with basic training in laboratory animal medicine and animal resource management in conjunction with their DVM training at Tufts Cummings School of Veterinary Medicine. Students in the combined degree program earn an MS in Laboratory Animal Medicine in the same four years they earn a DVM. Our objective is to provide the biomedical research community with skilled veterinarians who can fulfill needed
positions in research facilities immediately upon graduation. We recognize that graduates of this program may later wish to pursue residency training in the same field to become board-eligible. This program may provide some of the requirements for board eligibility, thus shortening the length of residency training required.

**DVM/Master of Public Health (DVM/MPH)**

The DVM/MPH program's public health curriculum was developed especially for the combined degree, and is tightly integrated with medical and/or veterinary medical coursework. This careful integration allows students in the DVM/MPH program to earn a Master of Public Health (MPH) in the same four years they earn a DVM. This program provides the basics for understanding and practicing population health. The MPH curriculum prepares generalists with a sound foundation in population health disciplines, including epidemiology, biostatistics, planning and management, international health, bioethics, public health law, environmental and occupational health, and the social and behavioral sciences.

Courses that begin with the prefix begin “CMPH” are part of the MPH program and are taught and managed through Tufts School of Medicine. Most CMPH courses are taught at the Medical School Campus located in Boston; those marked “DMPH: are taught in separate tracks for the veterinary medical students on the Grafton campus. DVM/MPH students may take elective courses on either the Boston or Grafton Campus.

Graduates of this program are equipped to become leaders in public health administration, policy and research, as well as superb clinicians. They are sought out by many domestic and international employers, and many interesting career opportunities are available to them.

**MS in Animals and Public Policy (MAPP)**

The Center for Animals and Public Policy was founded in 1983. Its guiding vision was an institute for higher education and policy reflection that would investigate the ethical, legal, social and scientific dimensions of human-animal relations. The Master of Science in Animals and Public Policy (MAPP) was established in 1995 to further this work. Students in this accelerated, interdisciplinary program are immersed in the history, philosophy, theories, methods, and policy aspects of human-animal studies. After graduation, our students follow a variety of career tracks in the private, public and independent sectors, including graduate school, law school, medical school, non-profit organizations, corporations, and government service.

**MS in Conservation Medicine (MCM)**

Tufts Center for Conservation Medicine is offering the Master of Science in Conservation Medicine program (MCM) to prepare students from varied backgrounds for careers in conservation medicine, including; veterinarians, natural and social scientists, engineers, public health and medical professionals, lawyers, policy and wildlife professionals, and others interested in applying their expertise to conservation medicine issues. The MCM is an intensive 12-month professional master's degree, which is designed to build upon the expertise each student brings to the program, and will provide graduates with foundational knowledge in the various contributing fields of conservation medicine, and the skills necessary for successful implementation of real world conservation efforts.
MS in Infectious Disease and Global Health (MS-IDGH)

The Master of Science in Infectious Disease and Global Health (MS-IDGH) degree program is a one-year degree program designed to provide comprehensive knowledge and skills to graduate students that are interested in pursuing a career in infectious disease, and related areas of disease management, transmission, prevention and treatment. This degree is intended to prepare students to join the workforce that requires substantial knowledge and training in laboratory and field research environment or in settings where specialized skills in infectious diseases are required. The didactic courses and practical training will be administered primarily by faculty of the Department of Infectious Disease and Global Health (DIDGH), and the MS degree will be awarded through Cummings School of Veterinary Medicine at Tufts University. Faculty from the Medford Campus and from the Sackler School, and the Tufts Medical School, will deliver lectures in their area of expertise. Outside experts and guest lecturers will also deliver lectures.
POLICIES AND PROCEDURES
ACADEMIC AFFAIRS POLICIES AND PROCEDURES

CURRICULUM MISSION STATEMENT

The Cummings graduate curricula are designed to challenge and nurture students to become leaders in developing the science, technology, policy, and ethics that will shape veterinary practice, medical practice, animal laws and policies, public health, and biomedical research, as well as to foster life-long learning.

ACADEMIC STANDARDS

The graduate program faculty of Cummings School of Veterinary Medicine, Tufts University, expect students to earn course grades of B- or above to demonstrate satisfactory comprehension of course material taught in the graduate programs curricula. Students must always maintain a cumulative grade point average of 3.0 or greater to be eligible for continuation in the program and graduate with a degree. Students who struggle with a course or courses are encouraged to seek help early to avoid the consequences of poor academic performance.

The graduate programs at Cummings School use an A-F +/- grading scale and Pass/Fail. The following standards for academic progression apply to courses using the A-F grading scale.

COURSE GRADING POLICIES

The Course Director includes the course grading policy in the course syllabus and announces that policy during the first-class meeting. This includes:

1. Course Grading Policies Identified in the Syllabus

   - *Number and Types of Examinations or Other Means of Evaluation* - The number and types of examinations (whether multiple choice, fill-in, essay, some combination thereof, etc.) will be described. The percentage of the final grade resulting from each evaluation component in the course, such as examinations, term papers, oral presentations, etc., will be stated as well.

   - *How Raw Numerical Scores on Examinations are Converted to Letter Grades* - There will be an explanation on how examinations and the course will be graded on the basis of some pre-established benchmarks (at least 80% will be required for a "B", etc.), or by some other method, such as using a "curve".

   - *Expectation that the Policy will be implemented as Written and Stated* - Throughout the course, the Course Director is expected to adhere to the grading policy stated in the syllabus and at the beginning of the course. The policy should not change, unless there are extraordinary reasons, in which case the Course Director can seek a waiver of this rule from the Associate Dean for Academic Affairs.
2. Submission of Final Grades

Final grades are to be submitted by the Course Director to the Graduate Program Manager within ten (10) working days following the final examination/end of the course. Course Directors employing an essay-based final examination may petition the Graduate Program Manager for an extension of the time of submission of the course report form. Up to seven (7) additional working days may be allowed for turning in course grades, but there will not be an extension beyond seven (7) working days after the last final examination scheduled during finals week.

3. Academic Progress and Grading System

The graduate program faculty of Cummings School of Veterinary Medicine, Tufts University, expect students to earn course grades of B- or above to demonstrate satisfactory comprehension of course material taught in the graduate programs curricula. Students must always maintain a cumulative grade point average of 3.0 or greater to be eligible for continuation in the program and graduate with a degree. Students who struggle with a course or courses are encouraged to seek help early to avoid the consequences of poor academic performance.

The graduate programs at Cummings School use an A-F +/- grading scale and Pass/Fail. The following standards for academic progression apply to courses using the A-F grading scale.

Standards for Academic Progression:
Section 1 pertains to the Academic Program and Section 2 to the Course

I. The Academic Program

The Office of Academic Affairs reviews the scholastic records of all students at the end of each semester and reports any academic concerns to the respective Program Directors. The Program Directors will consult with their respective Program Committees regarding the disposition of the student. **Any actions will be carried out by the Program Directors with the approval of the AEC.** Students will be placed on Academic Probation or Reviewed for Academic Dismissal under the following circumstances and in consultation with respective Program Directors.

A. Academic Probation
   A. Any student whose cumulative grade point average falls below 3.0 for the semester.

B. Reviewed for Academic Dismissal
   1. Any student who remains on academic probation for more than 2 consecutive semesters or a student that receives a B- or lower grade while on academic probation may be dismissed for academic cause. These students will need to petition the respective Program Committee for continuation in the program.

Students on **Academic Probation** will be required to meet with their respective Program Director to discuss reasons for poor performance and plans including timelines for improvement to avoid dismissal. The progress of students placed on **Academic Probation** will be monitored by the Program Director and Graduate Program Manager.

The student will be removed from Probation status when his/her cumulative GPA is raised to 3.0 or above and does not receive lower than a B- grade.
II. The Course

The consequences for students who receive a grade of C+ or below are as follows:

Graduate students must receive a grade of B- or better to receive credit for the course. Re-examinations or make-up coursework may be authorized according to the process defined by each Program Committee for students receiving a grade of C+ or below in a course. The Program Committee and the Advanced Education Committee (AEC) are notified of any such allowances by the Program Director. After re-examination or make-up coursework, the final official course grade may not exceed the level of “B-.” The makeup grade is recorded on the transcript along with a notation that the new grade was achieved through make-up work. The new grade is used for the GPA calculation and is given program credit. However, the original grade is retained on the transcript. If the final grade is a C+ or below, this is a course failure and the student receives no credit.

A. Course Failure

If a student receives an unacceptable final grade of C+ or below, the Program Committee and AEC may allow the student to remain enrolled, but the student will be required to demonstrate competence in the course to the satisfaction of the Course Director who will report the findings to the Program Director. This condition for continued enrollment must ordinarily be satisfied according to the process defined by each Program Committee.

If the student's record is otherwise satisfactory, failure in one course may result in a recommendation that the course be retaken. Two course failures result in a review of the student’s status by the respective Program Committee with a recommendation to the AEC regarding the student’s academic status.

For students enrolled in research degrees: If a student receives an ‘unsatisfactory’ rating by their mentor in the laboratory research evaluation, this indicates that the student is underperforming in the laboratory. Such a rating will immediately be reported to the student’s Advisory Committee and to the Program Committee. The Advisory Committee will meet with the student as soon as possible and develop a course of action to remedy the situation. Two successive unsatisfactory rating in laboratory research will result in a review of the student’s status by the Program Committee with a recommendation to the AEC regarding the student’s academic status.

B. Grade Changes for Course

If a student believes that she or he has not received an appropriate grade, the following steps may be taken:

1. The student discusses the matter with the Course Director.
2. If the student does not feel that the matter was resolved, the student discusses the matter with the Program Director and/or the Graduate Program Manager.
3. The Program Director and/or Graduate Program Manager will bring the matter to the Program Committee for recommendation to the AEC. The final decision on the grade awarded to the student will be made by the AEC.

Students should be aware that the Course Director has only fourteen (14) working days after announcing the final grades to make a grade change. After this time, any proposed grade
changes must be reviewed and approved by the AEC. The student has the right to petition the
AEC to dispute issues pertaining to course grading policy.

The following scale for assignment of letter grades from the numerical scores is borrowed from
the *DVM Curriculum Handbook* and was approved as a standard scheme for all pre-clinical
courses. It is identified here as a guide which may be used by graduate program course
directors:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Numerical Range</th>
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<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
</tr>
<tr>
<td>A</td>
<td>93-96</td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
</tr>
<tr>
<td>C</td>
<td>73-76</td>
</tr>
<tr>
<td>C-</td>
<td>70-72</td>
</tr>
<tr>
<td>D</td>
<td>65-69</td>
</tr>
<tr>
<td>F</td>
<td>&lt;65%</td>
</tr>
</tbody>
</table>

**Grade Point Average (GPA) Computation**

The value of a student's letter grade in each course (quality points) within a grading period is
multiplied by the number of credits assigned to that course. This figure is then divided by the
total number of course credits within the grading period to compute the corresponding grade
point average (GPA).

The grade values (quality points) are:

<table>
<thead>
<tr>
<th>Letter grade</th>
<th>Quality Pts</th>
</tr>
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<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.67</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
</tr>
<tr>
<td>C-</td>
<td>1.67</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

4. Distribution and Posting of Graded Materials

Returning examinations, papers, and/or assignments to students is left to the discretion of the
course director. If the course director intends to re-use many of the same questions in
subsequent years, these materials usually are not returned or posted. However, if they are not
returned, the course director is expected to provide students with an opportunity to review the
graded materials. Students who wish to review questions from an assignment or examination
should schedule a meeting with the course director.

5. Posting of Grades

Students receive their individual score and/or grade after every major paper, assignment, and/or
examination. When materials are returned to students, the grade is indicated on the material,
but is not visible to other students. If materials are not returned, the course director provides
each student with his or her grade in a manner that ensures privacy.
6. Incomplete Grades

Grades of "Incomplete" are submitted when circumstances out of the student’s control, such as illness or death in the family, make it impossible to complete the course within its designated time limit. The student needs to communicate to the Course Director and the Graduate Program Manager why the course was not able to be completed during the allotted time. Unless, the student is taking a leave of absence for medical reasons, or the Associate Dean for Academic Affairs designates otherwise, the student who does not complete their incomplete work within two months will receive a grade change from an “I” to an “F.” If the student is taking a medical leave of absence, the Advanced Education Committee (AEC) must approve conditions under which the course work will be completed. Upon completion of the course, the new grade submitted replaces the "Incomplete" on the transcript. This policy does not apply to final projects (MAPP program only), theses, or dissertations.

7. Early Intervention for Students with Poor Academic Performance

Faculty may wish to report individual students who, in their judgment, are not meeting course requirements, especially those students attaining a grade of less than “B-” in the middle of a semester. The course director is urged to submit a written or electronic mail Interim Report to the Graduate Program Manager, identifying the student(s) and the nature of the difficulty. The purpose of these reports is to keep track of how the students are doing academically and are used primarily to identify those students for whom remedial steps should be taken. The possible steps to improve performance include tutoring and organized remediation with the course director. Once students are identified, the options are discussed, and a plan is implemented. The student's advisor may be notified in case of academic difficulties.

SATISFACTORY ACADEMIC PROGRESS

Students in each of the seven graduate degree programs must maintain a “B-” or better or a “Pass” in each course taken for the degree. This includes grades received in cross-registered courses. In addition, students must maintain an overall 3.00 GPA or greater in their graduate coursework.

Promotion

Students’ academic progress is monitored each semester by the Graduate Program Manager. Semester grades and written evaluations (if applicable) are utilized. If a student obtains a failing grade or “Incomplete”, the applicable Program Director is informed. The Program Director will discuss the issue with the Program Committee and inform the Advanced Education Committee of the identified student’s academic status along with the recommendations for resolution of the academic deficiency.

Communication to Students

All communications to students regarding official transcripts, notification of grades, failure to meet academic standards or promotion is made in writing by the Graduate Program Manager in the Research/Graduate Studies Office.
Appeals

Promotion status decisions may be appealed to the Executive Faculty Board (EFB). The student must submit to the Secretary of the EFB his or her written request for a hearing at a regularly scheduled EFB meeting. The request must clearly state the issue to be heard. The presiding officer of the EFB has the power to grant or deny such a request. The petitioner may submit the request for hearing to the full Board for consideration. With the concurrence of one-third of the EFB members present at a meeting, the request for a hearing can be approved.

CUMMINGS SCHOOL COURSE AND INSTRUCTOR EVALUATION SYSTEM

The Curriculum Committee and Executive Faculty Board have determined that a formal and uniform evaluation by students of all didactic courses be conducted annually. These evaluations are administered by the Academic Affairs Office through the TUSK online database and consist of two components. The first includes a number of predetermined multiple-choice questions concerning the overall excellence of the course and instructors. These questions are applicable to all Cummings courses (some course-specific questions may be asked as well). The second consists of a series of open-ended questions. Students are required to complete an online evaluation for the course within seven (7) days after the end of the course.

Summary of the Evaluation System

1. Evaluation forms can be accessed by logging onto the Internet from any computer, via an internet service provider (on or off campus).
2. The TUSK website can be accessed by typing in the following web address:
   http://tusk.tufts.edu/
3. Your Tufts email user name and password must be indicated in the spaces provided on the TUSK home page in order to gain access to online contact the Academic Affairs Staff Assistant
4. Once logged into TUSK, click on the desired course link, and follow the on-screen directions.
5. The evaluation forms for courses include multiple choice questions and room for comments and answers to more open-ended questions. Students are expected to answer the multiple-choice questions for all courses in which they are enrolled, and are encouraged to add comments.
6. Online evaluations are 100% confidential. Students need not identify themselves when filling out the form. TUSK tracks students who have or have not filled out the form, but no comments or multiple-choice answers can be traced back to a specific student. TUSK does not allow students to fill out more than one form for each course.
7. Course evaluation forms are available online for the entire semester in which the course is offered. Evaluation forms are taken off-line and the results, along with a statistical report, are sent to the Course Director, the Program Director, the Graduate Program Manager, and the Department Chair of the Course Director two weeks after the course has ended. Online evaluations should be completed for all courses by seven (7) days after the completion of the course (i.e., after the final examination, or last session if there is no final examination).
8. Course Directors are expected to explain the importance of evaluations to students, and the expectation of the school that every student must evaluate every course. Course Directors also are expected to remind students that they have only seven (7) days after the completion of the course to fill out the online form.
9. Questions about the online system should be directed to the Academic Affairs Staff Assistant
Requirement for Completion of Online Course Evaluations

Completion of online evaluations is required. Students are informed of this requirement at orientation, in August or September of each year. Evaluation forms for each course are available online and must be completed by seven (7) days after the final examination, or in the event of no final examination, after the final course session. The Office of Academic Affairs interacts with students failing to complete the required evaluation and handles administrative aspects of any follow-up. The process is as follows:

1. Seven (7) days after the final course session or final examination, the Academic Affairs Staff Assistant determines from Tufts University Science Knowledgebase (TUSK) records those students have not completed the evaluation.

2. The Academic Affairs Staff Assistant intermittently examines the records of the TUSK evaluation system for the courses in question and notifies the student if he or she is missing the requirement.

CLASS ATTENDANCE

Students are expected to attend all regularly scheduled lectures and laboratory sessions. Course directors may require attendance, and at the beginning of the course will announce their policy for handling absences and the penalties that may be imposed.
ADMINISTRATIVE COMMITTEES

ADVANCED EDUCATION COMMITTEE (AEC)

This Committee is responsible for approving policy and procedures for the post graduate degree and research programs of the School, establishing thesis guidelines and procedures, approving thesis projects, and accepting the final thesis. In addition, they are also responsible for consistency of graduate program policy and implementation across the various graduate degree programs. The Committee has the authority to implement these policies and procedures subject to the review of the Executive Faculty Board.

FINANCIAL AID ADVISORY & APPEALS BOARD

The board is responsible for reviewing and recommending policies for the administration of financial aid programs, establishing Cummings priorities for the distribution of student aid funds, and encouraging support for scholarship funding. The Financial Aid Advisory & Appeals Board serves as the final appeal body for students with grievances related to the awarding of funds, or general administration of the financial aid program.

The board is not a Standing Committee established through Cummings’ Bylaws, Therefore student representation is not determined through the election procedure prescribed by the by- laws.

Please note: The Dean may appoint one non-faculty member to each standing committee who shall have full voting rights in committee deliberation.

ANIMAL WELFARE COMMITTEE

The Animal Welfare Committee is composed of 4 faculty members and 2 students. This Committee reviews and makes recommendations on the use of animals in Cummings’ teaching and research programs. All basic science and clinical projects utilizing animals (other than for the express benefit of the animal) are subject to review for approval by this committee. This committee recommends guidelines and policy to the Dean and the Executive Faculty Board.

GRADUATE PROGRAM COMMITTEES

PhD Program Committee (PPC)

The Biomedical Sciences Graduate Program Committee is composed of 5 faculty members, the Graduate Program Manager, and the Director of Admissions. This committee is responsible for discussing issues such as admissions, curriculum, and general policies and procedures which specifically pertain to students in the PhD program.

Standard Operating Procedures (PhD)

1. Responsibilities of PhD Program Committee (PPC)
   a. Admissions to PhD Program

20
b. PhD degree requirements
c. PhD program curriculum
d. PhD student and faculty issues
e. Maintenance of PhD Program Guidelines and Handbook
f. Maintenance of PhD Program website
g. Grievances of PhD candidates and/or their mentors
h. Reporting of PhD Program matters to the Advanced Education Committee (AEC)
   i. AEC has oversight responsibility of the PPC
   ii. AEC mediates all PPC disputes

2. Number of PPC members (this will increase as new tracks are added; the goal being one invested faculty representative from each track)
   a. Voting members: 9
   b. Non-voting members: 0

3. Composition of PPC
   a. Voting member 1- Program Director, Chair of PPC
      i. Term 5 years
   b. Voting members 2, 3, 4, 5, 6- Five faculty members, preferably current or experienced mentors representing different Tracks
      i. Term 5 years
   c. Voting member 7- Director of Admissions
      i. Term perpetual
   d. Voting member 8- Graduate Programs Manager
      i. Term perpetual
   e. Voting member 9 – Associate Dean for Research
      i. Term perpetual

4. Process for the selection of a PhD Program Director to five-year terms (note: the PhD Program Director is also the Chair of the PPC)
   a. Qualities sought in Director
      i. Cummings School faculty member with PhD or DVM
      ii. Experience as a Principle Investigator
      iii. Experience as a PPC member
      iv. Experience as a PhD student mentor
      v. Balanced representation
         1. Seek to appoint new Directors from different Departments and/or research disciplines than prior Directors
   b. Approximately six months prior to the end of the five-year term of the current Director:
      i. Director notifies PPC of upcoming end of five-year term, and willingness to continue serving for another term
      ii. Current Director can be nominated for reappointment if PPC agrees
         - If Director agrees, the reappointment request is brought forward to the AEC for approval
         - If request is not approved by the AEC, the process for selection of a new PhD program director will proceed as outlined below
   c. Approximately five to six months prior to the end of the five-year term:
      i. The current Director meets with the AEC to request implementation of the search process
ii. The chair of the AEC sends an email to all Cummings voting faculty asking for nominations for the position of PhD Program Director

iii. The email to faculty shall include:

- Statement that the current Director will step down following appointment of the new Director
- Information that the PPC will select their choice for the new Director from faculty candidates that express an interest in the role and will forward their selections for approval by the AEC
- Information as to the preferred qualifications for PhD Program Director (see above)
- A request that interested faculty submit their letter of interest for the PhD Director position with a recent CV to AEC Chair:
- The PPC will deliberate and forward a list of all applicants and their rankings for the top three applicants
- The AEC will deliberate and approve one of the PPC recommendations

iv. If there are no nominations, the PPC will deliberate and work with the Associated Dean for Research until a nominee can be identified and the name will be forwarded to the AEC for approval

v. The current Director will inform the person approved by the AEC of their approval as the new PhD Program Director

vi. The AEC chair will inform the approved faculty member’s department chair of the selection

vii. Outgoing and incoming Directors will work together to smooth transition

viii. Transition occurs at the end of the five-year appointment, at the beginning of a new academic year

5. Process for selection of PPC members to five-year terms

a. Qualities sought in faculty members

i. Cummings School faculty member with PhD or DVM
ii. Experience as a Principle Investigator
iii. Experience mentoring PhD students
iv. Preference to faculty currently mentoring PhD students
v. Balanced representation

1. Seek to maintain a PPC faculty representation that reflects the PhD student population in research discipline and home department
2. Seek representation from all Tracks with current PhD students
3. Seek to maintain diversity of experience and expertise

b. PPC members can be re-appointed to multiple terms although an effort should be made to regularly changing committee membership

c. PPC membership terms are staggered so that one new faculty member (out of five total) is appointed each year to five-year terms

d. Approximately three months prior to end of each faculty member’s term:

i. PPC Chair notifies members of the upcoming vacancy
ii. PPC members are requested to discuss with their Chairs as to qualified faculty members to fill the vacancy and seek Chair recommendation
iii. AEC is informed of the nominated PPC member and may reject the appointment or request PPC to identify additional nominees

e. Transition occurs at the end of the five-year appointment, at the beginning of a new academic year
6. PPC meetings
   a. PPC meetings are scheduled on a monthly basis at a time chosen to best accommodate the membership
   b. The Director serves as PPC chair and runs the meetings
   c. The Director can recommend cancellation of meetings
      i. This decision can be overruled by a majority of members
   d. An agenda is prepared by the Director and distributed to the PPC prior to the meeting
   e. The minutes from the last meeting are also distributed to the PPC prior to the meeting
   f. Attending members may raise additional agenda items
   g. Minutes from the previous meeting are modified and approved at each meeting
   h. A review of the status on each student occurs at each meeting, when possible
   i. Minutes are taken for each meeting

7. Voting/Decision-making by PPC
   a. A quorum of at least 51% members is required for decisions to be made by PPC
   b. Parliamentary rules are not necessary
   c. All decisions require a majority vote of the voting members attending the meeting
   d. Decisions can be made by email polling at the discretion of the Director

8. Process for admissions to the PhD Program
   a. Applications to the PhD Program are received by Cummings School Admissions
   b. Unsolicited applications must be received by February 1 each year
   c. Solicited applications may be received at any time of year
   d. A summary of the applications is provided to PPC members by the Director of Admissions and/or the PhD Program Director
   e. Director seeks to identify possible mentor matches for the qualified applicants with the advice of the PPC
   f. Applicants are not considered for admission unless a match to a strongly supportive mentor is identified, and the mentor can demonstrate near certainty of sufficient funding to support a PhD student for the time required to complete the program
   g. Admission requires a decision by majority vote of the PPC

9. Process for PhD Program reviews and reports
   a. Annual reports as required by AEC
      i. Director prepares with the assistance of the Graduate Program Manager
      ii. A draft of the annual report is submitted to the PPC for input
      iii. Draft is final when approved by PPC
   b. Five-year reports as required by AEC
      i. Director prepares with the assistance of the Graduate Program Manager
      ii. A draft of the annual report is submitted to the PPC for input
      iii. Draft is final when approved by PPC

10. Documentation of PPC meetings
    a. A person is selected for the preparation of meeting minutes
    b. Minutes from each meeting are prepared and provided to the Director
    c. Director edits minutes with the assistance of the Graduate Program Manager
d. Minutes are distributed prior to PPC meetings  

e. Minutes are edited by PPC and then approved  
f. Minutes are maintained by the Graduate Program Manager and available to PPC members, AEC members and Department Chairs

11. Reporting of PhD Program activities  
a. Director is responsible for reporting on PhD Program activities to AEC and providing annual and five-year reports to AEC

Appendix

Current membership:  
1. Chuck Shoemaker- IDGH Current Director and Chair through 10/16/2019  
2. Jon Runstadler - IDGH  
3. Phyllis Mann - DBS  
4. Cyndie Webster - DCS  
5. Allen Rutberg - CAPP (HAI)  
6. Sawkat Anwer - Associate Dean for Research  
7. Rebecca Russo - Director of Admissions  
8. Kate Beckett - Graduate Programs Manager  
9. Angie Warner - DEPH (Retired from committee 9/30/19)

Comparative Biomedical Sciences Program Committee

The Comparative Biomedical Sciences Committee is composed of the faculty, including the director of the program. The committee is responsible for curriculum development, academic affairs issues such as satisfactory academic progress and graduation, as well as general policies and procedures.

Standard Operating Procedures (CBS)

Operational Guidelines for the Master of Science Program in Comparative Biomedical Sciences (MS in CBS)

Number of Committee Members = 5

Composition of Committee – Program Director (Dept. Biomedical Sciences [BMS]) Associate Dean for Research  
Invested Research Faculty – BMS, Clinical Sciences, DEHP

Selection of Members – Director receives input from Chairs and contacts prospective committee members.

Duration of Appointments to Program Committee – Director – 5 years, two term limit Members – 3-year staggered appointments (renewable).

Basis for Selection of Director – recommendation by Dean and Chair of Biomedical Science Department plus input from Program Committee; Training Grant PI preferred.
Documentation of Committee Meetings: Outcomes/actions of committee are communicated to committee members plus sent to the Graduate Program Administrator by the Program Director.

Frequency of Meetings – on an ad hoc need basis, but minimally least once annually, to evaluate candidates for admissions (March).

Responsibilities – Admissions, Curriculum, Student and faculty issues, grievances.

Website – Program Director coordinates website structure though the Graduate Program Manager, Ms. Kate Beckett.

Reporting of Program Activities – via Annual reports to AEC


**Laboratory Animal Medicine Program Committee**

The Lab Animal Medicine Program Committee is composed of 3 program faculty members and 3 members from outside Cummings. This committee is responsible for discussing issues such as curriculum, and general policies and procedures, which specifically pertain to students in the DVM/MS-LAM program. Admission decisions are made by a separate 6-member committee.

**Standard Operating Procedure (MS/LAM)**

1. Responsibilities of the LAM Program Committee
   a. Admissions, including creating and revising the admissions application and evaluating completed applications and making admission decisions.
   b. Degree requirements, including evaluation of summer Applied Learning Experiences, clinical externships, and decisions regarding participation in additional degree programs.
   c. Curriculum, including planning and evaluation of didactic sessions and laboratories,
   d. Student and faculty issues, including grievances
   e. Maintenance of Program Guidelines and Handbook
   f. Maintenance of Program website
   g. Grievances
   h. Reporting Program progress to AEC

2. Number of Committee Members
   a. 5 voting members, no non-voting members

3. Composition of Committee
   a. Voting member 1 - Program
Director Term: 5 years, two term limit
b. Voting member 2- Director, Division of Teaching and Research Resources (DTRR) Term: 3-year staggered appointments (renewable).
c. Voting member 3- Clinical Veterinarian, DTRR
   Term: 3-year staggered appointments (renewable).
d. Voting member 4- Director, Division of Laboratory Animal Medicine (DLAM), TUSM Term: 3-year staggered appointments (renewable).
e. Voting member 5- Clinical Veterinarian DLAM
   Term: 3-year staggered appointments (renewable).

4. Process for selection of Program Director
   a. The Director is appointed by the Dean with input from Program Committee members.
   b. The candidate must be familiar with the program and with laboratory animal medicine as a veterinary career path.

5. Process for selection of members:
   a. Candidates are identified by their respective positions in the DTRR and DLAM programs. They are thus familiar with laboratory animal medicine as a career path and are qualified to teach in the program and mentor students.
   b. Membership replacement decisions are made with other Program Committee members.
   c. Member appointments are staggered by 1 year. Appointments are renewable.

6. Frequency of Program Committee Meetings
   a. Meetings are on an ad hoc need basis, including twice yearly to plan curriculum. The Program Committee meets to evaluate and make decisions on candidates for admission.
   b. Additional meetings may occur if curricular or student issues arise.
   c. Meetings are called by the Program Director or at the request of any committee member.

7. Voting/Decision making
   a. Input from all committee members is required for voting and decision making. Meetings are schedule so that all members can attend in person or by teleconference.
   b. Consensus Approach – Non-parliamentary

8. Process for admissions
   a. Program Committee member determine the composition of the application for and evaluate candidates.
   b. Kate Beckett, Graduate Programs Manager attends admissions meetings as a non-voting member.
   c. There are no student members at admissions meetings

9. Process for program reviews
   a. Annual reviews are prepared by the Program Director with data supplied by the Graduate Program Manager.
b. 5-year reviews are prepared after a meeting including Program Committee and outside reviewers from the laboratory animal medicine community. Review data include an outcome assessment survey of alumni of the program.

c. 5-year reviews are edited and submitted by the Program Director

10. Documentation of Committee Meetings:
   a. Minutes are taken and kept by the Program Director.
   b. Minutes are distributed to members electronically and maintained by the Graduate Program Manager.

11. Reporting of Program Activities
   a. The Program Director reports program activities/successes/problems at AEC meetings
   b. Program Activities are included in the annual reports to AEC.

**Animals and Public Policy Program Committee**

The Animals and Public Policy Program Committee is composed of the faculty, including directors, of the program. The committee is responsible for curriculum development, academic affairs issues such as satisfactory academic progress and graduation, as well as general policies and procedures.

**Standard Operating Procedures (MAPP)**

1. Membership and structure
   The M.S. program in Animals and Public Policy (MAPP) is administered by a program committee consisting of the graduate program manager and at least four faculty members. All faculty members should teach either a core course, core module, or regular elective in the MAPP curriculum. Members serve three-year renewable terms, except for the graduate program advisor and director and assistant director of the Center for Animals and Public Policy (CAPP), who serve *ex officio*. The director and assistant director act as chair and co-chair of the committee, respectively. Each academic department at the Cummings School will provide at least one member of the program committee. Members of the committee are appointed by the CAPP Director with the advice and consent of the CAPP Advisory Board.

2. Meetings
   The program committee will meet at least five times a year, generally at the beginning, middle, and end of each semester. Additional meetings may be scheduled to deal with student academic issues or other matters that may arise. A simple majority of the committee members must be present to achieve quorum. It is expected that most decisions will be reached by discussion and consensus, but if consensus fails decisions will be made by vote following standard parliamentary procedures, with a simple majority of all committee members (present or not) required to pass a motion. If a committee decision must be made when it is not feasible to schedule a meeting in a timely fashion, a vote may be taken by e-mail, with the same rules for passage applying. Minutes of the meeting will be taken by the CAPP staff assistant or, if not available, by the CAPP program assistant, and will be reviewed and approved by a majority of committee members present at the meeting.

3. Responsibilities
   The program committee will bear primary responsibility for oversight of the MAPP
curriculum and staffing and scheduling of classes, as well as admissions, marketing, program & curriculum outcome evaluation, program policies, preparation of the graduate student handbook, student academic issues, and reporting to the AEC and other entities as needed.

Oversight of curriculum includes review and approval of significant revisions of the content or structure of core courses, changes in program or course credit hours, addition, deletion, or replacement of core courses, and proposals for new elective courses. The program committee will also assist the committee chair and the graduate program manager in conducting outcomes assessment and other program evaluation and in preparing materials for accreditation and other formal review procedures.

It will also be the responsibility of the program committee to determine whether MAPP students are making adequate academic progress toward achievement of their degrees, including the determination of academic standing. The committee will make recommendations to the AEC and the Associate Dean for Academic Affairs regarding remedies for academic deficiencies, including imposing additional academic requirements, granting leaves of absence, or administrative termination, as well as recommend students to the AEC for graduation.

All members of the program committee will sit on the MAPP Admissions Committee, which will additionally include the CAPP Advisory Board alumni representative, the Director of Admissions ex officio, and other members as nominated and approved by the program committee.

4. Reporting
The program committee representative to the AEC (generally the CAPP director) will report on program committee activities to the AEC during regularly scheduled meetings. The program committee will also furnish minutes of its meetings to the AEC on request of the Chair. The program committee will assist the director in preparation of reports to the AEC and other oversight boards.

Conservation Medicine Program Committee

The Conservation Medicine Program Committee is composed of the faculty, including the director of the program. The committee is responsible for curriculum development, academic affairs issues such as satisfactory academic progress and graduation, as well as general policies and procedures.

Standard Operating Procedures (MCM)

1. Responsibilities of Program Committee
   a. Admissions
   b. Degree requirements, recommending students for graduation
   c. Curriculum issues as referred by the Curriculum Committee
   d. Student Grievances

2. Number of Committee members
   a. Voting members: # 7
   b. Non-voting members: # 0
3. Composition of Program Committee - This committee will consist of the Program Director and 4 program faculty, including 2 course directors, and 1-2 adjunct faculty members from outside the University. These members will be appointed by the Director and serve renewable 2-year terms.

4. Process for selection of Program Director – at the grace of the Dean

5. Frequency of Program Committee meetings - The committee will meet twice yearly, once for admissions, and once in November/December. Other business will be conducted electronically.

6. Voting/Decision making – Voting will be sought on all major issues with participation of all committee members. Votes may be cast electronically.

7. Process for admissions  
   a. Program Committee + Rebecca Russo, Kate Beckett

8. Process for program reviews – the Director and program staff will prepare the annual reviews and the 5-year review which will be circulated to the committee. Approval will not be sought for the annual reports, but formal input will be sought at the 5 year review.

9. Documentation of Program Committee meetings – minutes will be prepared by the Director or program staff and circulated to the committee members. Copies will be filed electronically on the Q drive.

10. Reporting of Program Activities – the Director, as a standing member of the AEC, will be responsible for reporting program activities and filling annual reports or other information as requested by the committee.

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**MS-IDGH Program Committee**

The MS-IDGH Program Committee is composed of 4 on-campus faculty members, including the Program Director, 1 off-campus faculty member or a member from a biotech company, the Graduate Program Manager, and the Director of Admissions. This committee is responsible for discussing issues such as admissions, curriculum, and general policies and procedures which specifically pertain to students in the MS-IDGH program.

**Standard Operating Procedures**

1. Responsibilities of Program Committee  
   a. Admissions  
   b. MS-IDGH degree requirements and recommending students for graduation  
   c. Curriculum  
   d. Student Grievances and faculty issues  
   e. Maintenance of MS-IDGH Program Guidelines and Handbook  
   f. Maintenance of MS-IDGH Program website
2. Number of Committee members
   a. Voting members: # 7
   b. Non-voting members: # 0

3. Composition of Program Committee
   a. Voting member 1- Program Director, term 5 years (renewable)
   b. Voting member 2- Invested faculty member, 3 years (renewable)
   c. Voting member 3- Invested faculty member, 3 years (renewable)
   d. Voting member 4- Invested faculty member, 3 years (renewable)
   e. Voting member 5- Invested faculty/scientist member, 3 years (renewable)
   f. Voting member 6- Director of Admissions, term perpetual
   g. Voting member 7- Graduate Student Manager, term perpetual

4. Process for selection of Program Director – at the grace of the Dean

5. Program Committee meetings
   a. Once every month
   b. The Director serves as Committee Chairman and runs the meetings
   c. The Director can recommend cancellation of meetings, but this decision can be overruled by a majority of members
   d. An agenda is prepared by the Director and distributed to the members prior to the meeting
   e. The minutes from the last meeting are also distributed to the members prior to the meeting
   f. Attending members may raise additional agenda items
   g. Minutes from the previous meeting are modified and approved at each meeting
   h. A review of the status on each student occurs at each meeting, when possible
   i. Minutes are taken for each meeting

6. Voting/Decision making
   a. A quorum of at least 4 members is required for decisions to be made by the committee
   b. All decisions require a majority vote of the voting members attending the meeting
   c. Decisions can be made by email polling and require approval by a majority of the committee members (four voting members)

7. Process for admissions
   a. Applications received by CSVM Admissions Office
   b. Acceptance of applications begins in October. Applications are considered on a rolling basis. Applications completed by 1st of the months of December, February and April will be evaluated by 15th January 15th March and 30th April, respectively. If openings exist after
May 1, we will consider applications on a rolling basis until the class is full.
c. Program Committee reviews the applications, and each admission requires a decision by majority vote of the committee

8. Process for program reviews
   a. Annual reports as required by AEC
      i. Director prepares with the assistance of the program staff and the Graduate Program Manager
      ii. A draft of the annual report is submitted to the committee for input
      iii. Draft is final when approved by the committee
   b. Five-year reports as required by AEC
      i. Director prepares with the assistance of the program staff and the Graduate Program Manager
      ii. A draft of the five-year report is submitted to the committee for input
      iii. Draft is final when approved by the committee

9. Documentation of Program Committee meetings
   a. Program staff prepares meeting minutes
   b. Minutes from each meeting are prepared and provided to the Director
   c. Director edits minutes with the assistance of the Graduate Program Manager
   d. Minutes are distributed prior to committee meetings
   e. Minutes are edited by the committee and then approved
   f. Minutes are maintained by the Graduate Program Manager and available to committee members, AEC members and the IDGH Department Chair

10. Reporting of Program Activities
    a. The Director, as a standing member of the AEC, is responsible for reporting on MS-IDGH Program activities to AEC and providing annual and five-year reports to AEC.

**DVM/Public Health Program Committee**

The DVM/MPH Committee is responsible for communication with the Public Health Department in the School of Medicine, and is a partner with them regarding academic and student affairs issues. This committee is responsible for discussing issues such as admissions, awarding of fellowships, curriculum, and general policies and procedures as they relate to the DVM/MPH students.
GRADUATE DEGREE PROGRAMS
I. DOCTOR OF PHILOSOPHY IN BIOMEDICAL SCIENCES

OVERVIEW

The PhD Program at Tufts University Cummings School of Veterinary Medicine is committed to training graduates to become skilled scientists and researchers with the ability to function independently to solve problems, think critically, perform hypothesis driven research and mentor the next generation of scientists. In addition, the program aims to generate graduates who are experts in their field with depth and breadth of knowledge, and who possess well developed communication skills and high ethical standards. Graduates will be trained to undertake, and lead investigations aimed at elucidating fundamental mechanisms of infectious diseases, digestive diseases, translational neuroscience, pathology, clinical science, or human-animal interactions, and to translate their findings into applications beneficial to humans, animals, and the environment.

ACADEMIC PROGRAM

This program offers an opportunity for talented students to acquire scientific knowledge, technical and communication skills in one of six focus areas: 1) infectious diseases, 2) digestive diseases, 3) translational neuroscience, 4) pathology, 5) clinical science and 6) human-animal interactions (HAI). Students with interest in infectious disease may have opportunities to perform research in several high security laboratories including a Biosafety Level 3 Regional Biocontainment Laboratory. During the program students are involved in government, foundation and corporate funded research conducted by faculty. In addition to traditional employment opportunities in academic, government, or corporate research, and transactional applications, graduates will be positioned for non-traditional employment in emerging areas of veterinary and human health. Additionally, the NIH now recognizes HAI as a field of study with opportunities for traditional and non-traditional employment is this growing field.

The PhD program is intended for individuals who have already earned a D.V.M., M.D., M.S. or post-graduate level degrees. An applicant with only a science-related bachelor’s degree may be considered for tracks one through three above depending on his/her experience; however, the pathology and clinical sciences tracks are limited to students with a prior DVM or currently in a DVM program, and the HAI track requires a MS in Animals and Public Policy or similar degree program prior to matriculation into the PhD program. The Ph.D. curriculum includes didactic courses, clinical, basic science, field, or social science research. Participation in seminars and journal clubs, and oral presentations is required.

Addition of new program areas: Faculty or a department as a whole may propose additional focus areas. Any such proposal must be submitted to The Advanced Education Committee (AEC) for recommendation for approval by Executive Faculty Board (EFB). The AEC will seek a formal evaluation and recommendation from the PPC before approving such a proposal. The proposal should address the following: 1) need for such a
program; 2) faculty strength and departmental resources to deliver such a program; 3) courses and research requirements; 4) potential candidate pool, and; 5) a plan to assess outcome. Any proposal submitted by faculty should have the approval of their department chair(s) attesting to the resources available from the department(s).

PROGRAM MANAGEMENT

The PhD program is overseen by the PhD Program Committee (PPC) which is responsible for determining the matriculation and degree requirements and for recommending modifications to the PhD program. The PPC serves as a sub-committee of the Advanced Education Committee (AEC), the ‘standing committee’ responsible for all graduate program education at the Cummings School.

A member of the PPC will be assigned to each PhD student as a ‘liaison’ upon matriculation. The liaison will be responsible for tracking the progress of the student and identifying issues associated with the student’s program and reporting to the PPC. PhD students should consider the liaison to be their rapid conduit to the PPC. Students also should feel free to consult with the PhD Program Director and/or Graduate Program Manager at any time.

ADMISSIONS AND STIPEND SUPPORT

Admission to the PhD program in the infectious diseases, and the translational neuroscience tracks requires a minimum of a science-related bachelor’s degree with research experience, although a graduate or professional degree is preferred. Admission to the HAI track requires a minimum of an approved MS degree, preferably in animals and public policy offered at the Cummings School. Admission to both the pathology and clinical sciences tracks requires either a DVM degree or a DVM degree in progress.

The PPC reviews and evaluates applications for admission and makes admission recommendations to the dean. Criteria for admission include a strong academic background and promise to become a leader in a research career. Admission also requires the matching of applicants with faculty mentors who have positions available in a funded research area. Stipend support for students who do not have independent funding is dependent on the continued availability of funding through their mentors. Generally, faculty selected as PhD mentors should be able to demonstrate probable stipend support for four years. The PhD program, however, cannot guarantee stipend support to a student in a situation where the mentor becomes unable to provide this support.

In rare circumstances, the PPC may decide by majority vote to admit an applicant conditionally. Conditional admission consists of the committee setting specific benchmarks that a student must meet in order to progress to full admission to the program. The PPC has the authority to both set benchmarks and to oversee the student’s progress in meeting these benchmarks. Full admission to the program requires a majority vote by the PPC once the benchmarks are met.
DEGREE REQUIREMENTS

PhD students must complete a combination of didactic coursework, journal club, and research.

Students must complete at least thirty-two (32) total credits for the doctoral degree, of which at least sixteen (16) must be didactic course credits. The actual number of didactic credits required depend on the academic background of the student. Those students enrolling in the program with master’s or professional degrees will be required to successfully complete 16 didactic credits for the PhD degree as they will have completed at least 30 didactic credits during their prior graduate level coursework. Students enrolling with a bachelor’s degree, though, will be required to successfully complete a minimum additional 8 didactic credits to achieve the total of 24 didactic graduate level credits, a minimum level considered sufficient to qualify as an advanced rigorous academic program by the New England Association of Colleges. In addition to satisfactory completion of course work, a Qualifying Examination and a research Dissertation and defense in the student's field of research must be successfully completed. The academic program runs year-round. It is expected that students continue research during the summer.

All students are required to take the following mandatory courses: BMS 653 Fundamentals of Animal Research I: Biostatistics (year 1) and BMS 654 Fundamentals of Animal Research II: Ethics (year 1), and an advanced level biostatistics course to be determined in consultation with the student’s Thesis Advisory Committee (TAC) and the Graduate Program Manager. Students who have already completed an introductory statistics course equivalent to BMS 653 may substitute a second advanced level biostatistics course to be determined in consultation with the student’s TAC. Depending on their background and area of research, and in consultation with their mentor, students may be required to take one or more Veterinary Professional Curriculum core courses, e.g. Physiology, Microbiology, Immunology, or other graduate level courses at Tufts University or other accredited institution. The selection of additional courses is tailored to address gaps in prior training and/or to better prepare the students for their personal PhD research and career goals. Graduate courses taught on the Grafton campus at Cummings School are listed in this handbook.

All PhD students are expected to regularly attend a journal club throughout their program and serve as the presenter at least twice a year. Many students register for BMS 607, a journal club course with an infectious disease focus, although students may choose other journal club options with the guidance of the PhD Program Committee (PPC) track liaison and the approval of their TAC and the PPC. The faculty and scientific staff involved in the program actively contribute to the PhD program by offering seminars and courses and by participating in journal clubs. All students beyond the first year are also expected to present their research ‘work-in-progress’ once each year at a session open to all faculty, staff and students at the school.

To promote the development of teaching skills, students are provided opportunities for didactic training. These may include small group (Problem Based Learning (PBL)), laboratory, and/or lecture and discussion-based instruction modalities within our existing
professional and graduate curricula. See the Graduate Program Manager for more information.

**Year 1:**
During the first year, students take didactic courses and work in the lab learning techniques and other research information. Additionally, a Thesis Advisory Committee (TAC) is created for each student. The TAC (see details below) consists of the mentor and three other faculty members, including at least one from outside Cummings School, selected for their ability to provide guidance on the student's thesis research.

Before the end of year 1, students should meet with their TAC to discuss completion of their didactic course work and, if deficiencies exist, the Committee may require the student to complete additional courses.

**Year 2:** Students continue with didactic coursework and research under the guidance of his/her mentor and the TAC and participate in a journal club. Most students take additional coursework, some of which is mandated by the TAC, towards fulfillment of the didactic credit requirement and to better align their training to their career goals. Student should meet with their TAC according to the requirements outlined in the section titled “Thesis Advisory Committee”.

In addition, students take a written and oral Qualifying Examination set by the Qualifying Examination Committee (QEC) at the end of the second year. For additional information regarding the Qualifying Exam, see the section titled “Qualifying Examination”.

**Years 3+:** Students continue their research and participates in a journal club. Completion of a typical PhD program generally requires four to six years, full-time, culminating in a dissertation. For details regarding the dissertation see the section titled “Dissertation”.

**PROGRAM MILESTONES**

Students in the PhD program pass the following milestones as listed in the Student Information System (SIS) student advisement report:

1. Thesis Advisory Committee, First Meeting (usually by the end of the first year)
2. Thesis Advisory Committee
3. Establish Qualifying Exam (QE) Committee
4. Schedule QE
5. PhD Qualifying Exam (Written and Oral)
6. PhD dissertation “Specific AIMS” approved
7. Thesis Advisory Committee
8. Thesis Advisory Committee
9. Thesis Advisory Committee
10. Schedule Dissertation Defense
11. Pass written and oral defense of PhD dissertation
12. Submit Copies of PhD dissertation for binding
It is anticipated that through the duration of the program students will meet with their TAC at least five times; however, this is an estimate and in many cases students will meet more than five times.

**PROGRAM LEARNING OUTCOMES**

The overall goal of the PhD Program in Biomedical Sciences is to train graduates to be capable of performing independent biomedical research and to effectively mentor the next generation of biomedical scientists. We have identified eight learning outcomes necessary to achieve that goal:

1. A foundation in basic science, ethics, and statistics
2. Deep knowledge and understanding in selected areas of biomedical science specialization as appropriate to prepare students for their specific career goals; examples include immunology, parasitology, pathogenesis, pathology, epidemiology, neuroscience, human-animal interactions and clinical science
3. Ability to solve problems and to think critically in the evaluation and performance of independent, hypothesis-driven, biomedical research.
4. Ability to undertake and lead research investigations aimed at elucidating fundamental mechanisms of infectious diseases, digestive diseases, pathology, neuroscience, human-animal interactions, or clinical sciences.
5. Ability to translate research findings into applications that are beneficial to human and/or veterinary medicine.
6. Ability to find and critically evaluate information in the literature and public databases.
7. Clear knowledge of the basis for, and importance of, maintaining high ethical standards and personal integrity in all aspects of a career in biomedical sciences.
8. Ability to communicate effectively with audiences encountered in a One Health career including students, specialists, policymakers and the public using a variety of media and formats.

**CURRICULUM**

Courses taught on Grafton campus are taught every other year with the exception of mandatory courses which are taught every year. Students are expected to have full command of all the relevant facts and concepts covered by each course. Course work includes discussions, comprehensive literature searches, written exercises, presentations, essays, and exams. Students are required to regularly attend Departmental and/or Campus seminars given by local faculty and staff or by outside invited speakers. They also must regularly participate in a journal club. They are also required to present a Work-in-Progress seminar once annually after the first year.

**Mandatory Courses**

The following courses are offered every year (BMS 653 & BMS 654, every fall):
BMS 603/604/605/616 - Research (mentor) – credits will vary
BMS 607 - Journal Club and Seminar Series – 0.5 credit
BMS 653 - Fundamentals of Animal Research I: Biostatistics – 1.0 credit
BMS 654 - Fundamentals of Animal Research II: Ethics – 0.5 credit

All PhD students must register for BMS 607 every semester when not exempted by their TAC and the Program Director, and regularly attend a journal club that meets regularly to discuss scholarly publications. As part of BMS 607, all students starting in their second year or third year must present an annual Work-in-Progress seminar covering their ongoing Dissertation research at a forum open to all students, staff, and faculty. The weekly journal club option offered by Dr. Shoemaker (BMS 607) has an infectious disease focus. Students with a different scientific focus may choose to attend a different weekly journal club with the approval of the Course Director. However, all students must register for the BMS 607 Journal Club course and present one journal club session each semester.

In addition to the above courses, one advanced level biostatistics course is required for a total of two Biostatistics courses. If the student places out of the Introductory Statistics course, they are required to take two intermediate/advanced-level Statistics courses decided in and is consultation with the student’s TAC and the Graduate Program Manager.

Elective Graduate Courses

Most elective graduate courses are offered every other year. BMS 657 is offered every year.

BMS 652 - Parasite Biology – 1.5 credit
BMS 655 - Epidemiology of Zoonotic Infections – 2.0 credit
BMS 656 - Advanced Molecular Biology – 2 credits
BMS 657 - Introduction to Laboratory Animal Medicine – 1 credit
BMS 659 - Principles of Biodefense – 2.0 credit

Veterinary Professional Courses (Optional)

Students enrolled in the graduate school program may be eligible to take selected courses taught in the veterinary professional curriculum to fulfill prerequisites of the graduate program and/or to supplement their basic scientific knowledge if deemed necessary by the student’s TAC and approved by the Course Director. The course grading policy is similar for graduate and veterinary students. The number of credits awarded to PhD students in these courses is likely to be different from the number awarded to students in the DVM program. PhD credits awarded for these courses are set forth below. These credits are based upon the credit system described in the “Course Credits” section of the handbook:

VET 102 - Veterinary Biochemistry and Metabolism – 3.0 credits
VET 137 – Cell and Tissue Types – 2.5 credits
VET 109 - Immunology – 2.0 credits
VET 112 – Applied Molecular Biology – 1.0 credit
VET 122 - General Pathology – 1.5 credits

VET 135 International Veterinary Medicine – 1.0 credit
VET 201 - Microbial Pathogenesis – 3.5 credits
VET 203 - General Parasitology – 3.0 credits
VET 216 – Applied Epidemiology & Evidence-based Medicine – 1.5 credits

In addition to courses taught at the Cummings School, students may also register for courses through three venues: 1) other schools at Tufts including the Sackler School, the Fletcher School, the School of Arts, Science & Engineering, the Medical School, the Friedman School of Nutrition; 2) the Medford Consortium consisting of Tufts, Boston University, Boston College, and Brandeis University; and 3) University of Massachusetts Medical School in nearby Worcester. Please see the Graduate Program Manager for information and forms regarding these opportunities.

COURSE DESCRIPTIONS

BMS 603/604/605/616 – Research – 3, 4, 5, and 6 credits respectively
Guided research on a topic suitable for a doctoral Dissertation.
Offered every semester.

BMS 607 – Journal Club and Seminar Series – 0.5 credits (Fall and Spring)
Students, post-doctoral fellows, scientific staff, and faculty members participate in this weekly Journal Club, or its equivalent, and regular scientific seminars. This journal club has an infectious disease focus although other areas of biomedical science are covered. PhD students should register for this course every semester unless their TAC and the PPC have approved an alternative. The emphasis in Journal Club is on critical analysis of the data and how the research extends current knowledge. Seminars include both campus Work-in-Progress presentations and research presentations given by scientists from the campus or invited from outside. PhD students lead a Journal Club session twice per year and present one Work-in-Progress seminar per year beginning in the second year. As part of this series, students are required to participate in a Pedagogy course offered by Dr. Warner once during their PhD Program. Under special circumstances, students may be given an exemption by the Course Director. Course offered every semester

BMS 652 – Parasite Biology – 1 credit
Parasites are extraordinarily pervasive. This graduate course explores globally important parasites including hookworms, tapeworms, blood flukes, and those that cause malaria, sleeping sickness, and Chagas’ disease. Students examine the morphology, development, and distribution of these pathogens and consider the mechanisms they use to infect their hosts and survive within. Topics include the mechanisms of infection and immunity, intracellular survival strategies, vector biology, drug resistance, vaccines, and
the economics and public health impact of parasitic disease. Each class centers on interactive discussions and an examination of the primary scientific literature. 
*Course offered every other year (Spring 2014)*

**BMS 653 - Fundamentals of Animal Research I: Biostatistics** – 1.0 credit (Fall)  
Basic statistics are taught using an active approach, emphasizing practical applications of statistical concepts such as hypothesis testing, sampling and, statistical inference. Students will gain experience in analyzing data sets and presenting data. In addition, students will become familiar with using Excel for basic statistical analyses and more specialized programs for more advanced statistics (e.g., SPSS). It is the instructor’s objective to familiarize students with central concepts and to save in depth discussion of methodologies for advanced courses, however, when it is practical, students are encouraged to suggest topics for discussion and review. **Laptop computers are required.** *Same as MS-CBS course 570 and MS-LAM course 553. Course offered every Fall*

**BMS 654 - Fundamentals of Animal Research II: Ethics** – 0.5 credits (Fall)  
The aim of the course is to discuss acceptable, unacceptable, and controversial aspects of research ethics and responsibilities of a researcher. Students enrolled in the course participate in the discussions of topics using a case-based approach. The course topics include: (1) experimental techniques and the treatment of data, (2) conflict of interest, (3) publication and openness, (4) allocation of credit and authorship practices, (5) error and negligence in science, (6) misconduct in science, (7) use of animals in research, and (8) responding to violations of ethical standards. The course meets weekly for 2 hours during November-December. *Same as MS-CBS course 571. Course offered every Fall*

**BMS 655 - Epidemiology of Zoonotic Infections** – 2.0 credit  
This course seeks to provide health professionals with the basis for evaluating risks and formulating prevention and intervention strategies for outbreaks or endemic transmission of zoonotic infections. Each session is structured with a “vertical” component comprising general principles, and a “horizontal” component comprising a case study of a specific agent that illustrates the general principles. *Course offered every other year (Spring 2021)*

**BMS 656 - Advanced Molecular Biology** – 2 credits  
This course introduces students to molecular biology of both prokaryotes and eukaryotes including (1) DNA replication, repair, and recombination; (2) bacterial genetics, (3) chromosome structure and function, (4) Protein biosynthesis and transportation, and (5) phages and viruses.  
*Course offered every other year (Spring 2014)*

**BMS 657 - Introduction to Laboratory Animal Medicine** – 1 credit  
This course is an introduction to the use of animals in biomedical research and the role of the laboratory animal veterinarian. In the first half of the course, presentations from experts in the field cover regulatory control of research animal use, the role of the Institutional Animal Care and Use Committee (IACUC), animal models in biomedical research, and ethical use of animals. A laboratory animal anatomy module includes three dissection labs devoted to anatomy of rodents, lagomorphs, hamsters, ferrets, and gerbils. The second half of the course is focused on care of research animals and design
of research animal facilities. Students tour a barrier rodent housing facility, a rodent facility using robotic technology, and a primate facility. Students are expected to attend all classes, labs, and tours. They are required to write one analysis paper on research animal ethical cases and to work in groups to create a design for a multi-species research animal facility. The class holds a mock IACUC meeting. Same basic course as MS-LAM course 551; Course offered every Spring

BMS 659 - Principles of Biodefense – 2.0 credit
The recent increase in terrorist attacks in many parts of the world has focused attention on the possibility that pathogens and toxins may be used as weapons targeting humans or economically important animals and plants. The issues surrounding bioterrorism and its critical complement, biodefense, are complex and require an understanding of sociopolitical factors as well as those of biology. This course seeks to provide the basis for (1) evaluating the risks associated with bioterrorism and (2) developing strategies for defending against as well as responding to the illegitimate use of biological agents. Each of the sessions is structured into a didactic introductory, “horizontal” hour designed to explore general concepts, with the second hour dedicated to a “vertical” participatory discussion: specific case studies or literature review of the biology and other issues related to specific agents that illustrate important aspects of the horizontal topics. The grade for the course is determined by class participation and a term paper. Course offered every other year (Spring 2014)

Course Credits

Courses taken in the veterinary school curriculum or courses for which students cross-register at other schools are converted to credits based on the number of course contact hours and are assessed by the PhD Program Committee (PPC). Evaluated research may count for up to five credits per semester, depending upon the amount of other coursework students are taking. No course credit is given for auditing courses, and audits do not appear on student transcripts.

Didactic credits for lecture courses used for the PhD program are awarded based on the following guidelines:

0.5 credit = 7-8 contact hours
1.0 credit = 15 contact hours
1.5 credits = 22-23 contact hours
2.0 credits = 30 contact hours
2.5 credits = 37-38 contact hours
3.0 credits = 45 contact hours
3.5 credits = 67-68 contact hours
4.0 credits = 60 contact hours

TRANSFER OF CREDITS

Cummings School graduate students may request permission to transfer a maximum of two graduate-level courses to fulfill requirements for the PhD degree, subject to the following conditions. Credits transferred must:
- Maximum of 8.0 credits
- Carry a grade of B- or better (courses taken as pass/fail cannot be transferred)
- Not have been counted toward another degree
- Have been earned in graduate-level courses from a regionally accredited institution of higher education
- Derive from coursework that is highly relevant to their PhD Program Track
- Have been obtained within the past five years

Students are asked to present to their mentor and TAC copies of their transcripts as well as course descriptions and reading lists if requested. If the mentor/TAC recommends the course for transfer credit, the student must submit the completed Transfer Credit Request Form and an official transcript showing the grade(s) received, and credit(s) earned in the course(s), as well as the number of course contact hours and course descriptions to the Graduate Program Manager who will present it to the PPC. The PPC will determine whether the course was of sufficient rigor and quality, and whether it provided training which improved the qualifications of the student for a PhD. Any transfer of credits must be approved prior to taking the Qualifying Examination.

The actual number of credit hours transferred will be determined by converting the contact hours to credit hours as identified above in the “Course Credits” section. Students receiving transfer credit will not be obligated to take redundant courses for the PhD program, but will be required to instead take other courses to fulfill the didactic credit requirements.

**COURSE FAILURE**

The grade of C+ or below is considered a failure. If a student fails a course and the student’s record is otherwise satisfactory, the AEC may allow the student to remain enrolled in the PhD program, but the student will be required to demonstrate competence in the course to the satisfaction of the Course Director and the student’s TAC. This condition for continued enrollment must ordinarily be satisfied prior to the end of the next academic year. Two course failures result in a review of the student’s status by the PPC with a recommendation to the AEC regarding academic dismissal.

If a student earns an ‘unsatisfactory’ grade in the laboratory research component of the PhD program, this indicates that the student is not performing at a satisfactory level in the laboratory. Such a rating will immediately be reported to the student’s TAC and to the PPC. The TAC will meet with the student as soon as possible to develop a course of action to remedy the situation. Two successive unsatisfactory grades in laboratory research will result in a review of the student’s status by the PPC with a recommendation to the AEC regarding academic dismissal.
RE-EXAMINATION GRADE

PhD students must receive a grade of B- or better to receive credit for a course. Re-examinations or make-up coursework may be authorized by the student’s TAC for students receiving a grade of C+ or below in a course. The PPC and the AEC are notified of any such allowances. After re-examination, the final official course grade may not exceed the level of “B.” The makeup grade is recorded on the transcript along with a notation that the new grade was achieved through make-up work. The new grade is used for GPA calculation and is given program credit. However, the original grade is retained on the transcript. If the final grade is a C+ or below, this is a course failure and the student receives no credit.

GRADE APPEAL PROCESS

If a student believes that they have not received an appropriate grade for a course, the following steps may be taken:

1. The student discusses the matter with the Course Director.
2. If the student does not feel that the matter was resolved, the student discusses the matter with the Graduate Program Manager.
3. The Graduate Program Manager will bring the matter to the PPC for discussion and then a recommendation to the AEC. The final decision on the grade awarded to the student will be made by the AEC.

Students should be aware that the Course Director has only fourteen (14) working days after assigning the final grades to make a grade change. After this time, any proposed grade changes must be reviewed and approved by the AEC. Following discussion with the Course Director, the student has the right to petition the AEC to dispute issues pertaining to course grading policy.

TIME TO DEGREE

The minimum requirement for a PhD is three (3) academic years of full-time study and a Dissertation. Most students take between four (4) and six (6) years to complete their degree requirements, but all students are expected to complete their work within seven (7) consecutive years.

If a student expects to take more than the allotted time to fulfill the degree requirements, he or she must submit a completed “Time-to-Degree Extension Form” to the Graduate Program Manager, who notifies the Program Director and the student’s TAC. This request must be made before the expiration of the 7-year time limit and must include a detailed reason for the extension along with a plan for the completion of the degree requirements within the extended time period. The student’s TAC will then forward its recommendation for approval or denial to the PPC for a decision. The AEC will be notified of the decision. In the event of a dispute, AEC may review and make the final decision.
LABORATORY ROTATION POLICY

While most incoming PhD students are matched with mentors at the time of admission, in some cases students are admitted without a mentor. When this happens, first-year PhD students are expected to perform laboratory rotations so that a mutual mentor/mentee relationship can be formed. Students perform the rotations in any lab that has both the funds and the space to train a PhD student.

MENTOR

The mentor is the scientist heading the research lab in which the PhD student’s Dissertation research will be primarily performed, and provides the funding support for the student’s research and stipend. Typically, the mentor is a member of the permanent faculty at the Cummings School. In some cases, the primary mentor may be a scientist at another institution. In these cases, a member of the Cummings School faculty must be identified as a co-mentor. In other situations, a student may have two members of the Cummings School faculty as co-mentors. For all co-mentored students, the details regarding the research and stipend support to the student must be agreed upon by the co-mentors and approved by the PPC prior to student acceptance and matriculation.

ThESIS ADVISORY COMMITTEE (TAC)

Once the student has been matched to a mentor, he/she must propose a Thesis Advisory Committee (TAC). Traditionally, each committee is comprised of the student's mentor and three (3) additional members, which should include at least one member from outside Cummings School. At least two (2) of the proposed members must be Program Faculty members. For a list of Program Faculty and their research areas, please visit the PhD program website at http://www.tufts.edu/vet/phd/. The TAC Membership Form, should be completed and signed by all members, submitted to the Program Director for approval and communicated to the PPC within two months of the selection of a mentor. On request by the Director, the PPC will review the TAC membership and may request changes. Once approved by the PPC (based on a majority vote) the Program Director notifies the mentor and student of the appointment of the TAC. The chairperson of the TAC (who must be a Program Faculty member) is elected (majority vote) by the members of the TAC at its first meeting. The mentor may not serve as the Chair of the TAC. TAC meetings are to be held at a minimum of once per year, with the first meeting no later than the end of year one. Additional TAC meetings are often of value and may be requested at any time by the student, mentor or other TAC members. Once formed, the TAC becomes responsible for evaluating student progress and advising the student on research direction and course selection. Within a week of a meeting, the TAC provides a report to the PPC as to its assessment of the student’s progress and their recommendations to the student. Any disputes within the TAC will be mediated by the PPC with AEC oversight.
QUALIFYING EXAMINATION

The Qualifying Examination is an opportunity for students to demonstrate creativity and innovation through the independent conception and preparation of a research grant proposal. This exercise also provides students with experience in grant proposal preparation and writing, skills that are important to success in a scientific research career. The Exam must take place by the end of the 5th week of the first semester of the 3rd year in order to receive the reduced post-Qualifying Examination tuition rate. In the event of extenuating circumstances, permission for delays in the Qualifying Examination date may be requested of the PPC. Only students completing their second year of study who are in good academic standing are eligible to take the Qualifying Examination.

Qualifying Examination Timeline:

1. 18-20 months
   • Begin to develop possible research proposal topics
2. 20-21 months
   • Prepare one-page summaries of one or two concept proposal topics
   • Submit concepts to TAC
   • Work with TAC until an acceptable concept has been approved
3. 21-22 months
   • TAC identifies one or two additional scientists to form QEC
   • Organize Qualifying Exam (QE) date with QEC
4. 22-23 months
   • Draft QE research proposal
5. 23-24 months
   • Submit proposal to QE at least two weeks prior to examination date
   • QEC determines whether proposal is acceptable or returns for edits
6. 24-25 months
   • Student makes oral presentation to campus
   • Student defends proposal to QEC

Qualifying Exam proposal concepts. At least ten weeks prior to the Qualifying Exam, students should identify a research proposal concept that is acceptable to their TAC. The Qualifying Exam involves the preparation of a research proposal that becomes the “Written Exam”, followed by an “Oral Exam” in which students defend their proposal. To begin the process, the TAC typically requests that students provide one or two proposal concepts in the form of one page summaries. The proposed research must be clearly distinct from research initiated by the mentor and employ at least some technologies and models not in regular use by the mentor. The research proposal may include work the student intends to perform as part of their dissertation under the condition that it is their own concept and employs new approaches in the lab. In this case, the qualifying exam proposal may be submitted to a funding agency for possible support of the student’s PhD research. If the proposal concepts are not acceptable, the TAC may request additional concepts until an acceptable concept is identified.
Qualifying Exam Committee Once an acceptable qualifying exam concept has been identified, the TAC will form a Qualifying Exam Committee (QEC). Establishment of the QEC takes place through the following steps:

1. The QEC will consist of the members of the student’s Thesis Advisory Committee (TAC) with the exception of the mentor
2. The TAC will choose one or two additional scientists, appropriate for the student’s Qualifying Exam proposal plan
3. The QEC Membership Form will be signed by the new members and submitted to the Program Director by the end of the student’s second year
4. The PhD Program Director must approve the new members of the QEC, and may seek PPC consultation
5. The Chairperson of the student’s TAC acts as the QEC Chairperson

Once QEC membership is established, students should also schedule a time and date for their Oral Exam that accommodates the schedules of their QEC.

Qualifying exam proposal. All research grant proposal concepts must be conceived and developed entirely by the student. Although the mentor and QEC should not directly contribute to the generation of the concepts or the drafting of the research proposal, they may highlight potential issues that need to be addressed. The Written Exam research proposal must be drafted like either an NIH R21 or K99 grant proposal with the exception that proposal will have a 12 page limit (not 6 pages). Research proposals should use the latest NIH format as detailed in the SF424 instructions (http://grants.nih.gov/grants/funding/424/SF424_RR_Guide_General_Adobe_Verb.doc). Of particular importance is the “Research Plan Component” (pages I-107 to 120) of the instructions. The research proposals need only include the ‘Specific Aims’ and ‘Research Strategy’ sections requested by NIH. While budget, IACUC, and IRB information are not required, the proposed research should be within reasonable and acceptable limits. The usual NIH research proposal review criteria of impact, innovation, and feasibility will apply. The Graduate Program Manager will provide students with websites which provide specific guidance on the preparation of NIH grant proposals.

The QEC reviews the research proposal, much as NIH grant reviewers review grant submissions, and determines whether the Written Exam is acceptable to all members of the committee. To be acceptable, the Written Exam must comply with the guidelines (above) and propose, in well-organized and clear text, a set of novel, credible and achievable research aims that would have the potential to yield results of significant scientific impact. If the QEC has not given a ‘Pass’ to the Written Exam prior to the Oral Exam date, the QEC must decide whether to reschedule the exam or to ‘Fail’ the student. Prior to the Oral Exam, the Graduate Program Manager will provide a Qualifying Exam report form to the QEC chair. Students who pass the Written Exam must then defend their research proposal at an Oral Exam.

Oral exam. The oral exam includes a presentation open to all campus employees and students and a closed-door session with the QEC. During the Oral Exam, students should be prepared to answer both specific and general questions relating to the grant proposal including the methodology and research plan, and the underpinning hypotheses and science. The QEC determines whether the student receives a ‘Pass’ or ‘Fail’ on the Oral
Exam. To be acceptable, the Oral Exam must demonstrate the student’s ability to successfully present and defend the novelty, credibility and achievability of the proposed research as well as a clear understanding of the underpinning science. The QEC may also determine that a ‘Conditional Pass’ is appropriate and the student must then make amendments to achieve the standard set by the QEC before he/she earns a ‘Pass.’ The QEC submits a recommendation to the PPC, including mention of whether the QEC was unanimous in its recommendation.

To continue in the program, a grade of “Pass” must be recommended by the QEC and accepted by the PPC. If the student fails to successfully pass the Qualifying Exam, he/she may be offered the opportunity to pursue an M.S. degree. (see “Master’s Degree Option” section). Recommendations regarding the student’s status will be made by the PPC (by majority vote) and submitted to the AEC. The AEC will review and make a final decision on the student’s status.

MASTER’S DEGREE (MS) OPTION

Students who matriculate in the PhD program, complete the first two years of the PhD program in good standing and then choose to leave the program will be eligible for the MS degree option. Students who receive a ‘Fail’ for their Qualifying Exam, despite successfully passing their required graduate coursework during the first two years of the program, may be offered the option to pursue an MS degree in Biomedical Sciences subject to the recommendation of the student’s TAC.

Requirements for the MS degree are exactly as for the PhD degree for the first two years up until the Qualifying Exam. For a student to be in good standing after two years, all course requirements will have been successfully fulfilled and significant time will have already been spent performing research in the laboratory of his/her mentor. The MS degree option diverges from the PhD Program only if the student is in good standing after two years and either does not pass the Qualifying Exam or chooses to leave the program. Only in these cases, and with the consent of their TAC and the PPC, the student may choose to continue towards an MS degree. Students who choose to pursue the MS degree must then prepare a “Specific Aims” document in consultation with their mentor (see “Guidelines for Thesis Specific Aims Document”). This Specific Aims is a single page document, modeled on the Specific Aims page of NIH grant applications (SF424 form), and should reflect the content of the proposed MS thesis. Some or even most of the work reflected in the Specific Aims may already be completed. Once the mentor and student are in agreement on this document, it is submitted to the student’s TAC. The TAC will evaluate the Specific Aims to determine whether completion of the Aims will meet MS degree requirements (see below). The TAC will either approve the Specific Aims or work with the student and mentor until they are acceptable, upon which time the document will be forwarded to the Chair of the PPC for final approval. The MS dissertation will follow the guidelines of the PhD dissertation below, with one exception- that the body of the thesis typically contains only one or two chapters which demonstrate achievement of the Specific Aims approved by the TAC.
Students who choose the MS degree option are expected to complete all MS degree requirements within the next year. Stipend support for the student during this period is at the discretion of the student’s mentor. The tuition policy will remain the same as for the PhD Program.

**DISSERTATION RESEARCH PLAN**

Within one month of completion of the Qualifying Examination, students must submit a one page “Specific Aims” document to their TAC for approval. This document must be developed in consultation with the mentor. The Specific Aims should outline the significance of their proposed thesis research and detail at least three research aims that are expected to form chapters in the eventual PhD thesis. The purpose of this exercise is to give the student and mentor an opportunity to develop clear research objectives for the thesis. This document does not, in any way, constrain the student in the performance of thesis research as it is acceptable, even expected, that research aims for the thesis will evolve during the course of research with the approval of the TAC and Chair of the PPC.

Guidelines for the Specific Aims document are as follows. The Specific Aims of the student’s thesis research must be developed in consultation with the mentor and the mentor must be in agreement prior to submission of the document to the TAC. In most cases, at least three Specific Aims are outlined in the document, each that could become a published journal article and constitute a chapter of an eventual PhD Thesis. The Specific Aims document should be limited to a single page and employ the NIH R21 format as used in the Qualifying Exam proposal. In addition to a brief description of the research aims, the document should contain enough information on the background and significance of the research to provide context to these aims and to demonstrate their impact.

**DISSERTATION**

A major portion of work toward the doctoral degree consists of the preparation of a doctoral thesis or Dissertation. The topic of the Dissertation is chosen with the approval of the mentor and the TAC, and the Dissertation is written under the mentor’s supervision. The Dissertation must demonstrate high achievement in a specific branch of knowledge, the original development of an appropriate subject, and independent research. Typically, a Dissertation will contain an Introduction, three chapters which demonstrate achievement of the major Specific Aims, and a Discussion. Where achievement of a Specific Aim by the student has been reported in a publication, the publication may take the place of a chapter in the Dissertation. When completed, the Dissertation is distributed to members of the TAC for its comment/critique. The Dissertation is then sent back to the student to be revised accordingly. The student’s TAC must accept the Dissertation in order to proceed to the examination.
The thesis format should be as follows:

- A **title page** that includes the project title, the student's name, and the name of the mentor with a line for signature,
- A **signature page** that includes a statement that the thesis is submitted in partial fulfillment of the requirement for the degree of PhD (or MS) in the Department of Biomedical Sciences, Infectious Diseases and Global Health, or Clinical Sciences, the month and year of submission, and the names of the mentor and members of the TAC with signature lines. (See the Graduate Program Manager for Title and Signature page formats).
- An **abstract** of the project (one page).
- A general **introduction** to the research problem within the field of study.
- A **body** of the thesis that describes the experimental work. The **methods and results** should be included in this section. Submitted or published work can be included as a component of this section. In some cases, a published work may constitute a chapter in a thesis.
- A general **discussion** that relates the experimental findings to the literature.
- **Acknowledgements (including funding sources).**
- **References.**

The thesis should be double-spaced in 12-size font. Pages should be numbered (bottom center or right), beginning with the abstract page (page 2). The title page should not be numbered.

Drafting of the Dissertation by the student should begin months or even a year or more prior to the completion of the research. Commonly, publications prepared during the research phase will suffice for much of the text in the body of the thesis. Once the TAC has confirmed that the student has achieved an acceptable body of work for a Dissertation, the student should require no more than two months to complete the drafting of the Dissertation and submitting this to the TAC for approval. During this full-time effort, stipend and benefits will continue. If additional time is required, students may request an extension and this request must be reviewed and approved by both the PhD Program Director and the mentor. Neither the mentor nor Tufts is obligated to continue stipend and benefit support to the student more than two months following completion of research and TAC approval to initiate drafting of the Dissertation.

When the Dissertation has been approved by all members of the student’s TAC, the student must give a public seminar on his or her research, lasting approximately one hour. During the seminar, the student defends the Dissertation and answers questions on his/her area of research and then meets the TAC in a closed session. The TAC chairperson oversees the proceedings of the Dissertation defense. After excusing the student, the TAC deliberates until a consensus is reached. Their recommendation (“Pass”, “Conditional Pass”, “Fail”) is communicated to the student orally and later to the Program Director, the PPC, and the AEC in writing. To graduate from the program, a grade of “Pass” must be earned for the Dissertation presentation and oral defense. If the student does not achieve a pass, the TAC submits to the Director their recommendation that the student should either: 1) be given a provisional pass, with detailed conditions...
proposed to improve the student's performance to an acceptable level in areas of deficiency; or 2) that the student should fail and not be awarded the graduate degree. The final decision regarding the student's status will be made by the AEC (majority vote). Any disputes or appeals will be heard by the Cummings School Executive Faculty Board (EFB).

**TIME FROM DISSERTATION DEFENSE TO COMPLETION**

Typically, after a successful defense, a time period of about one month is necessary for edits and completion of the Dissertation. Stipend and benefits continue during this period of full-time effort. Requests for extensions of stipend and benefits beyond the recommended time must be justified, reviewed, and approved by both the PhD Program Director and the mentor. In no case may a student continue to receive a stipend or benefits once he/she has started in another paid position.

**REGISTRATION**

All graduate students must register at the beginning of each term (Fall, Spring and Summer) in which they are actively working toward a degree. Even when all required courses have been completed, degree candidates are still required to register for the Journal Club and Seminar Series, and Research/Dissertation credits. Approximately one month before the registration deadlines of September 15, January 15, and June 15, students must inform the Graduate Program Manager of the courses for which they wish to register. Registration forms will be completed by the Graduate Program Manager and sent to the student and mentor.

**AUDITS**

No course credit is given for auditing courses, and audits do not appear on student transcripts.

**ADD/DROP POLICY**

Students may add or drop courses up until the beginning of the fourth course meeting of the semester. There is no penalty for dropping courses during this period, and no record of enrollment will appear on students’ transcripts.

**COURSE WITHDRAWAL POLICY**

Withdrawal from courses after the Add/Drop deadline requires written permission from the PhD Program Director, in conjunction with the Associate Dean for Academic Affairs, and/or a request for a formal Leave of Absence. For details regarding a Leave of Absence, see the section titled “LEAVE OF ABSENCE/WITHDRAWAL” located in the “General Information” section of this Student Handbook. A grade of W (Withdrawn) or WL (Withdrawn due to leave of absence) will be recorded on student transcripts, as appropriate.
CROSS-REGISTRATION

Students are allowed to take courses through cross-registration agreements with Tufts School of Medicine, the Fletcher School, the Graduate School of Arts, Sciences and Engineering (AS&E), and the Sackler School of Biomedical Sciences. Additionally, students may register for courses at Boston University, Boston College, and Brandeis University through the AS&E Tufts Consortium agreement. Students may also register for classes at University of Massachusetts, School of Medicine, Biomedical Sciences. Cross-registration is subject to the consent of the course instructor, the Program Director and mentor, and all Registrars. Catalogs and schedules of each of the host institutions are available from the respective graduate school offices; however, please consult with the Graduate Program Manager for pertinent information. Cross-registration forms are available from the Graduate Program Manager.

TUITION, FEES, AND FINANCIAL AID

Students are charged tuition each semester. Tuition for the year is payable according to Tufts University guidelines. For a first or second year student enrolled in the program during the academic year 2018-2019, tuition is $28,640 ($13,769/semester). After a student passes his or her Qualifying Exam (a “Provisional Pass” is not acceptable), tuition is reduced to $5,000/year ($2,500/semester) beginning the following semester and for the remaining years in the program. All tuitions are subject to annual increases. Students are always encouraged to look for external sources of funding such as NIH National Research Service Awards.

Students are eligible for a yearly PhD tuition waiver through a Cummings School grant. In addition, incoming students not supported by external Fellowships are generally awarded a stipend funded by their mentor’s research grants to support their pursuit of a PhD. The stipend is dependent on the ability of the mentor to maintain sufficient grant support and is not guaranteed by the school. The stipend amount for the 2019-2020 academic year is $30,000/year. Funds are also generally available to cover health insurance premiums; however, students are required to pay the Health Administration Fee, which is $250 for the 2019-2020 Academic Year. Students who hold a DVM from an AVMA accredited institution are eligible to receive an additional $5,000 stipend with the expectation that they will engage in teaching or other academic work. Students with a M.S. degree or equivalent may also be eligible for a limited number of $4,000 stipends for graduate teaching assistantships.

External Funding

Cummings School reserves the right to decrease or eliminate Tufts stipend awards if students receive external sources of support. At the beginning of each year, students must disclose whether they are receiving outside funds. The student is notified if any funding changes will be made.
Enrollment Status and Loan Deferment

Tufts University provides information regarding student enrollment status to the National Student Loan Clearinghouse, which then provides information to lenders. Enrollment status for the PhD program is either full-time or half-time as follows:

- **Full-time status:** six (6) or more course credits in the fall/spring semesters; four (4) credits in the summer semester
- **Half-time:** less than six (6) course credits and greater than or equal to three (3) credits in the fall/spring semester; less than four (4) and greater than or equal to two (2) credits in the summer semester
- **Less than half-time:** less than three (3) credits in the fall/spring semesters; less than two (2) credits in the summer semester

Federal regulations require that students be enrolled (registered) half-time or full-time to be eligible to receive and/or defer student loans. Enrollment information is transmitted bi-monthly to the Clearinghouse.

ORIENTATION

All incoming PhD students attend an orientation prior to the start of classes. The orientation includes a joint meeting with PhD program faculty and other doctoral students. Students will have their pictures taken, obtain IDs and parking permits, and visit the Cummings School library for training in the use of the Tufts University Sciences Knowledgebase (TUSK) and to set-up personal computers. TUSK is a dynamic, multimedia knowledge management system to support faculty and students in teaching and learning. TUSK provides a portal to an integrated body of knowledge and ways to personally organize the vast array of health information through its online curricular materials and related applications.

VACATION POLICY

Graduate students are excused from laboratory duties for three weeks of vacation during each twelve-month calendar year and for one additional week between December 25 and January 1 of each year. Vacation periods should be scheduled in advance and must be approved by the student’s mentor. Vacation time accrued in one academic year must be used before the end of the following academic year or it is forfeited. The maximum amount of accumulated vacation time that a graduate student may take in one twelve-month period is six weeks. There is no payment for accumulated vacation time which remains unused when the student leaves the program.

SICK LEAVE POLICY

Graduate students who are incapacitated due to illness may be granted an excused absence of up to 12 days during one 12-month period. The Sick Leave benefit does not
accrue, so unused time within the 12-month period will be forfeited. If a student requires additional time beyond the 12 days, either vacation time may be used or a Medical Leave of Absence, which is unpaid, may be requested. For details regarding a Medical Leave of Absence, see the section titled “LEAVE OF ABSENCE/WITHDRAWAL” located in the “General Information” section of this Handbook. Students are expected to notify their mentor when taking sick day(s). They may be required to provide documentation of incapacitation. Cummings School reserves the right to have the student and his or her medical records reviewed by a physician chosen by the School.

PARENTAL LEAVE

The primary caregiver may take parental leave to care for a newborn child or a child placed with the student for adoption or foster care. A student anticipating a parental leave should make an appointment with the Graduate Program Manager to review the leave policy and the options available. A student may be away from the program for a maximum of 12 weeks in a 12-month period. The school will provide for paid time off for up to eight (8) of the 12 weeks (during which time a student receives his/her stipend and health insurance benefits). The remaining four weeks must be used in the following as a combination of sick and vacation time to be used at the student’s discretion.

Any additional time off requested is treated as an unpaid Personal or Medical Leave of Absence. If a student is away from the School beyond the allowable paid time off and fails to request a leave, the student will be placed on an Administrative Leave of Absence by the School.

The student must have been enrolled in the PhD program for at least one year in order to be eligible for Parental Leave benefits. During the first year of enrollment, a student may use unused Sick Leave, unused Vacation Time, and may request an unpaid Personal Leave, but is not eligible for Parental Leave.

LABORATORY INJURIES PROCEDURE

The Tufts Safety and Risk Management Office considers a Cummings School PhD student stipend to be compensation for the purpose of Worker’s Compensation benefits. Therefore, PhD students are eligible to receive Worker’s Compensation in some cases. This does not mean that PhD students are employees; they are considered employees for the purpose of Worker’s Compensation benefits ONLY.

If a student sustains a work-related injury in a laboratory, he/she should follow the procedures outlined below:

1. The student should go to the University of Massachusetts’ (UMass) Medical Center in Worcester (emergency room) or contact his or her primary care physician and have the primary care physician direct him or her to a medical facility.
2. If the injury is minor, the student should request that UMass send the medical bill directly to Campus Police at Tufts University Cummings School of Veterinary Medicine, 200 Westboro Road, North Grafton, Massachusetts, 01536. The student should not give UMass his or her student health insurance information.

3. If the injury is serious, the student should consult with David Slater, Director of Safety and Risk Management (617-627-3981) before asking UMass to send the medical bill to the Campus Police or the Tufts Environmental Health & Safety Office.

4. The student should request the “Employer's First Report of Injury” form and a “Supervisor's Accident Report” by calling Tufts Campus Police (8-4900), located in Building 15, Tufts Police Grafton Station. The supervisor/faculty advisor must complete the “Employer's First Report of Injury” form and return it to Campus Police immediately due to the fact that the Commonwealth of Massachusetts requires submission of the form within seven calendar days of the injury. The supervisor/faculty mentor must also complete the Supervisor's Accident Report, an in-house document, and return it to Campus Police.

5. An initial Worker’s Compensation decision is usually reached within 72 hours of receipt of the claim. If the claim is compensable, the student will receive worker's compensation checks directly from the Massachusetts Division of Unemployment Assistance. Tufts works with a third party administrator for Worker’s Compensation (Curtin, Murphy and O'Reilly) to handle worker’s compensation claims.

For other types of illnesses or injuries not on Tufts property, students should consult their health care providers to find out where to obtain medical care. If students have any questions about which procedures and tests are covered by insurance, they should call their health care provider for clarification. For questions related to benefits provided by the student health insurance plan, call the Student Advisory and Health Administration Office at 6-2700.

GRIEVANCES

All PhD student grievances should initially be brought to the student’s TAC unless the student is uncomfortable reporting the grievance to this committee. If the TAC is unable to resolve the grievance, the student should report the grievance to his/her PPC liaison or the PhD Program Director and the issue will be discussed by PPC. If an acceptable resolution cannot be achieved by the PPC, the PhD Program Director will bring the issue to the AEC for final resolution. The student can appeal the AEC decision to the Executive Faculty Board (EFB).

GRADUATION

When the student has successfully completed all requirements for graduation, the TAC forwards a written recommendation to the PhD Program Director that the student be awarded a PhD. The Program Director sends notification of the student recommended for graduation to the AEC. The recommendation is then forwarded for approval by the Executive Faculty Board (EFB), the Dean, and then the Board of Trustees of the university. With the approval of the Board of Trustees, the student is awarded a Doctor of Philosophy (PhD) degree.
All graduates are invited to participate in the *Graduation Commencement* ceremony which occurs on the Grafton Campus once each year in May, typically on the third Sunday of the month. Students will be contacted in early March with specific information about the activities and ordering caps and gowns.

Participation in commencement is limited to students who have completed all degree requirements prior to commencement. Students who have successfully defended their thesis but are still working on edits to their document may participate in commencement with departmental approval; however, these students will not officially graduate and receive a diploma until all work associated with degree requirements are complete.
I. MASTER OF SCIENCE IN COMPARATIVE BIOMEDICAL SCIENCES

OVERVIEW

There is a need for well-trained veterinarians in biomedical research to participate in academic as well as corporate-based research in the fields of animal and human health. It is crucial for members of the veterinary profession to acquire the scientific skills and technical training together with the conceptual framework to participate both as independent researchers and collaborators to meet the projected research needs in biomedical sciences associated with veterinary medicine. This master’s program is designed to train veterinary students to conduct carefully designed, hypothesis-driven biomedical research in a productive and active research setting that uses a range of animal models. A longer-term objective is to make this training experience (1) a foundation for career involvement in research, and (2) to stimulate intellectual growth and productivity within our academic environment at Tufts Cummings School of Veterinary Medicine.

ACADEMIC PROGRAM

This Master’s Program is part of a combined DVM/MS-CBS offered by the Department of Biomedical Sciences at Cummings and is supported by an NIH training grant to provide rigorous research training for veterinary students interested in pursuing biomedical research as a career pathway. The program is designed to allow research program faculty to train veterinary students over a 15-month period after their 1st or 2nd year of veterinary school upon successful completion of a set of basic core science courses taken during their first year of veterinary school. It also is available for Residents at Cumming School. The program provides financial support and educational costs are met through a combination of stipends and tuition. Students are required to write and defend their thesis research and are strongly encouraged to publish findings in peer-reviewed journals. The program is directed by Dr. Robert Bridges, Professor, Head of the Section of Neuroscience and Reproductive Biology and Director of the Combined DVM/MS Program in Comparative Biomedical Sciences and administered through the DVM/MS Comparative Biomedical Sciences Program Committee, and Academic Affairs. The admissions process is administered through the Office of Admissions.

The program faculty at Tufts Cummings School of Veterinary Medicine provides master’s degree training across a number of research disciplines. All faculty members with active research programs who are members of the program faculty can serve as mentors for matriculated students. The master’s degree program is designed to facilitate research training in the following research areas: digestive diseases, infectious diseases, neuroscience, nutrition, oncology, reproductive biology, and respiratory physiology.

PROGRAM LEARNING OUTCOMES

The overall goal of the DVM/MS-CBS Program in Comparative Biomedical Sciences is to train veterinary students to conduct carefully designed, hypothesis-driven biomedical research in a productive and active research setting that uses a range of animal models. A longer-term objective is to make this training experience (1) a foundation for career involvement in research, and (2) to stimulate intellectual growth and productivity within our academic environment at Tufts Cummings School of Veterinary Medicine.

9. Familiarity with and understanding of the fundamentals of biochemistry, molecular and cellular biology, immunology and biostatistics.
10. Ability to solve problems and to think critically in the evaluation and performance of independent, hypothesis-driven, biomedical research.
11. Ability to find and critically evaluate information available in the literature and public databases for use in research.
12. Clear knowledge of the basis for and importance of maintaining high ethical standards and personal integrity in all aspects of a career in biomedical sciences.
13. Ability to communicate effectively with audiences such as encountered in a biomedical career including students, specialists and the general public using a variety of media and formats.

**DEGREE REQUIREMENTS**

Successful completion of the Master’s Degree is dependent upon meeting the following criteria: (1) successful completion of the 35-credit curriculum, consisting of both core MS courses and several first year veterinary school courses (maintaining good academic standing), (2) active participation in laboratory meetings, (3) attendance at departmental seminars and journal club, (4) conducting hypothesis-driven research in a laboratory, (5) the submission and acceptance of a Master’s level thesis, (6) a successful oral defense of the student’s research. Thesis acceptability is determined by the student’s Thesis Examination Committee (SAC plus one additional faculty member). It is expected that students complete degree requirements within 15 months of enrollment in the DVM/MS program.

It is important to note that the Master of Science program is part of the joint DVM/MS-CBS program; therefore, the MS is only conferred at commencement upon completion of all requirements for both the MS and the DVM at Tufts Cummings School of Veterinary Medicine.

**Curriculum**

The Master of Science program consists of a combination of classroom and laboratory work. The majority of classroom requirements are taken during the student’s first year of veterinary school studies; whereas, the period of laboratory training and research occurs during the student’s 12 month leave from veterinary school. It is expected that students focus their efforts during their leave intensively on training in the laboratory. Overall, this program provides uniformity in backgrounds and the foundation for student involvement in biomedical research.

**Year 1:** August – May of 1st year of veterinary training:
All students applying to the Master’s program are required to have completed veterinary graduate level course work in biochemistry, physiology, immunology, and cell biology. These courses are transferred into the program upon matriculation into the combined DVM/MS-CBS program and constitute 17 out of the total of 35 credit hours required to complete the degree.

VET 102 – Physiological Chemistry (Dr. Schonhoff) - 4 credits
VET 104 – Developmental Biology (Dr. Kumar) - 3 credits
VET 109 – Immunology (Dr. Sheoran) - 3 credits
VET 110 – Physiology (Dr. Heinz) - 7 credits

**Year 2:** (Year 2 can be initiated after the 1st or 2nd year of veterinary school) June 1st – August 31st students begin research work in mentor’s laboratory. Enrollment in DVM/MS-CBS program
begins September 1. In addition to the courses below, students may be required by their Student Advisory Committee (SAC) to audit a course (e.g. parasitology, neuroscience) during the research year depending upon the individual student’s background and training area. Courses CBS 572, 573, and 574 are graded “Pass”/“Fail”. All other courses are graded A-F.

**Fall**

- CBS 570 – Fundamentals of Animal Research I – Biostatistics (Dr. Mann) – 1 credit
- CBS 571 – Fundamentals of Animal Research II – Ethics (Dr. Bridges) – 1 credit
- CBS 572 – Journal Club/Seminars (Dr. Shoemaker or designated faculty) – 1 credit
- CBS 573 – Lab Meetings (mentor) – 1 credit
- CBS 574 – Readings in Special Topics (mentor) – 1 credit
- CBS 575 – Research (mentor) – 4 credits

**Spring**

- CBS 572 – Journal Club/Seminars (Dr. Shoemaker or designated faculty) – 1 credit
- CBS 573 – Lab Meetings (mentor) – 1 credit
- CBS 574 – Special Topics: Readings (mentor) – 1 credit
- CBS 575 – Research (mentor) – 4 credits

**Summer**

- CBS 576 – Thesis Preparation (mentor) – 2 credits

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**COURSE DESCRIPTIONS**

**CBS 570 - Fundamentals of Animal Research I – Biostatistics** - 1 credit; 2-3 hrs/wk; fall

This is an elementary course in statistics, designed to give an overview of the basics of statistical analyses, including probability theory, distributions, and hypothesis testing. It is a core course in the graduate curriculum, and as such the prerequisites are those for entry into the graduate program. Topics to be covered include probability and sampling theory, frequency distributions, and hypothesis testing. Some hands-on exercises using statistical software are also offered, but it is anticipated that more advanced applications will require additional instruction. It is the instructor’s objective to familiarize students with central concepts and to save in depth discussion of methodologies for advanced courses, however when it is practical, students are encouraged to suggest topics for discussion and review. Same as PhD course 653. **Course offered each fall semester**

**CBS 571 - Fundamentals of Animal Research II: Ethics** – 1.0 credit

The objective of this course is to provide an overview of professional standards that are essential for continued scientific progress. This course will introduce ethics, science and society and address key issues affecting responsible conduct of scientific research and is based on NIH guidelines and standards described in “On Being a Scientist- A guide to responsible conduct of in research” by National Academy of Sciences, 2009. A major part of the course will involve group discussions on pre-assigned topics, which will include (1) animal use (ethical treatment of laboratory animals, laboratory animal care training, and IACUC); (2) human subjects (informed consent, IRB, training requirements and resources, clinical research and trials, regulations governing clinical investigation, cultural issues, and research/trials in developing countries); (3) laboratory safety and compliance (basic safety, biohazards, recombinant DNA, hazardous chemicals, transfer of etiologic agents, radioactivity); (4) dealing with scientific misconduct (where to report, who to turn to for support and advice); (5) scientific communication i.e. presentations and publications (seminars and publications, citing the work of others, plagiarism, authorship,
order of authors); (6) results of research and note keeping (verification, repetition, data ownership and legal ramifications); (7) conflict of interest/commitment; intellectual property (protection and rights). This course will utilize case studies and ethics training through various online web portals to enforce deeper understanding of ethical issues in scientific research. Same as PhD course BMS 654.  

Course offered each fall

**CBS 572 – Journal Club/Seminars** – 1 credit/semester; 1-2 hrs/wk; *both semesters*  
The emphasis is on critical analysis, identifying the reasons that the research is significant, and understanding how the findings extend current knowledge. Students take this course both semesters of the MS program and give presentations each semester. In addition, students are required to attend department seminar series. These seminars take place throughout the year and are part of the training experience, providing an opportunity to develop communication skills and present ideas. Same as PhD course 607. “Pass”/”Fail” credit

**CBS 573 - Lab Meetings** – 1 credit/semester; 1 hr/wk; *both semesters*  
All students will attend and participate in weekly laboratory meetings scheduled by their mentor or research groups. Students are expected to present plans or results of projects to laboratory members at these meetings. “Pass”/”Fail” credit

**CBS 574 - Readings in Special Topics** – 1 credit/semester; 1-2 hrs/wk; *Both semesters*  
This course focuses on important topics within the field of research study. Each student meets weekly with their mentor to discuss relevant research papers in their area of study. “Pass”/”Fail” credit

**CBS 575 - Research** – 4 credits/semester; 20-40 hrs/wk; *both semesters*  
Students spend the majority of their training time working in the laboratory, conducting research studies relevant to their research project. Data is analyzed and interpreted in light of the test hypotheses. One objective of the research is to have students present their findings at scientific meetings and prepare their studies for publication.

**CBS 576 - Thesis Preparation** – 2 credits; *summer*  
Students write their thesis during June and July and defend it orally by August 15.

**Thesis**

Students in the DVM/MS-CBS program must complete a thesis. The thesis must contain a title page that includes the project title, the student’s name, the names of the mentor, and members of the advisory committee, a statement that the thesis is submitted in partial fulfillment of the requirement for a Master of Science in Comparative Biomedical Sciences, and the month and year of submission. The thesis itself must consist of an abstract of the project (one page), a general introduction to the research problem within the field of study (current and pertinent references should be included in this section), and a body of the thesis that consists of specific experiments, methods, results; a general discussion that relates the experimental finding to existing literature and the state of the field, references, and acknowledgement. Submitted or published work can be included as a component of the body of the thesis.

The thesis should be submitted in final form to the thesis examination committee a minimum of 2 weeks prior to the thesis defense. The Thesis Examination Committee consists of the student’s SAC plus one outside examiner (Tufts program faculty or faculty from another academic institution). The name of the outside examiner is submitted to the program director for approval at least one month prior to the scheduled thesis defense. The thesis defense should occur in July or
early August in time to permit any final revisions. The Thesis Examination Committee can approve the thesis as is, approve it with revisions, or reject the thesis. It must then be approved by the Advanced Education Committee (AEC). Two copies of the final version of the approved thesis are submitted to the program director by August 15.

TRANSFER OF CREDITS

Credits from the required first-year veterinary school courses are transferred into the program upon matriculation into the combined DVM/MS-CBS program. No other coursework can be transferred. However, students wishing to take a course offered at another Tufts school may cross-register for it as long as they are granted approval from the Program Director.

RE-EXAMINATION GRADES

Re-examinations or make-up coursework may be authorized by the student’s Student Advisory Committee (SAC). The Advanced Education Committee and the Advanced Education Committee (AEC) are notified of any such allowances. After re-examination, the final course grade may not exceed the level of “B.” If the course is retaken in its entirety, then the grade equals the grade earned in the course. In either case, the makeup grade is recorded on the transcript along with a notation that the new grade was achieved through make-up work. The new grade is used for the GPA calculation and is given program credit. However, the original grade is retained on the transcript.

FAILING GRADES

When a student receives a failing grade (C+ or below) AND re-examination has been authorized by the student’s SAC, the final course grade may not exceed the level of “B.” The make-up grade is recorded on the transcript and computed in the GPA calculation. The original grade is retained on the transcript but is not computed in the GPA. If the course is retaken in its entirety, then the new grade will become the actual grade earned in the course.

GRADE CHANGES AND COURSE FAILURE

The Advanced Education Committee (AEC) may allow students who have failed a course (with a grade of “C+” or below) to continue to be enrolled, but such students are required to demonstrate competence in the course to the satisfaction of the Course Director and the student’s SAC. This condition for continued enrollment ordinarily must be satisfied prior to the end of the next academic year. However, under extraordinary circumstances, the AEC may exercise its discretion and allow a student to continue in attendance under stipulated conditions. If the student’s record is otherwise satisfactory, failure in one course usually results in retaking the course or a re-examination of the course. Two failures results in review of the student’s status by the AEC regarding academic dismissal. The opportunity to re-examine, retake, or otherwise satisfactorily complete a course, is determined by a SAC (after notification to the Individual Program Committee and the AEC) and a review of the student’s entire academic record. If a student believes that she or he has not received an appropriate grade, the following steps may be taken:

- The student discusses the matter with the Course Director.
• If the student does not feel as though the matter was resolved, the student discusses the matter with the Graduate Program Manager.

• The Graduate Program Manager will bring the matter to the Graduate Program Committee for recommendation to the AEC. The final decision will be made by the Advanced Education Committee (AEC).

Students should be aware that the Course Director has only fourteen (14) working days after announcing the final grades to make a grade change. After this time, any proposed grade changes must be reviewed and approved by the AEC. The student has the right to petition the AEC to dispute issues pertaining to course grading policy.

TIME TO DEGREE
It is expected that students complete all necessary master’s degree requirements by August 15 at the end of the MS program. Requests for extensions to this time limit due to extenuating circumstances are considered on a case by case basis by the student’s SAC and the Biomedical Sciences Graduate Program Committee.

STUDENT ADVISORY COMMITTEE
The student’s SAC is formed for each student upon his or her matriculation into the program. The composition of the SAC includes the thesis advisor (primary mentor) who must be a program member and two other faculty members. SAC committee members are approved by the Program Director and the AEC. Each SAC meets with its advisee every 4 months to evaluate the student’s progress. The SAC plus one additional faculty member will comprise the Thesis Examination Committee.

REGISTRATION
Students receive registration forms from the Graduate Program Manager at the beginning of each semester during the training program. Program mentors are required to sign these forms. Students are then responsible for getting them to the Program Director. Registration forms are due by September 15 for the fall semester and January 15 for the spring semester. Students should include the summer course, CBS 576, Thesis Preparation, on their spring registration forms.

TUITION, FEES, AND FINANCIAL AID
All students are charged tuition each semester of the program as well as the summer session while writing their thesis. Tuition for the year is payable according to Tufts University guidelines. Tuition for the 2018-2019 academic year is $9,338 ($4,669/semester). Please note that students who require an extension in order to complete their Master’s requirements are charged a $500 fee each semester until degree completion. All tuitions are subject to yearly increases.

ENROLLMENT STATUS AND LOAN DEFERMENT
Tufts University provides information regarding student enrollment status to the National Student Loan Clearinghouse. Federal regulations require that students be enrolled full-time to receive and defer student loans. Full-time enrollment status for the MS-CBS program is seven (7) or more
course credits per semester, and, therefore, qualifies for continuation of loan deferments.

**ORIENTATION**

Students entering the combined DVM/MS program meet with the Program Director, mentors, and the Graduate Program Manager in early September in order to address programmatic questions and meet one another.

**VACATION POLICY**

MS students are expected to arrange vacation schedules with their mentors. Over the course of the training, students are entitled to 4 weeks of vacation. No compensation is provided for unused vacation days.

**LABORATORY INJURIES PROCEDURE**

The Cummings School MS-CBS student stipend may be considered compensation for purposes of Worker’s Compensation. Therefore, MS-CBS students are eligible to receive Worker’s Compensation in some cases. This does not mean that MS-CBS students are employees; they are considered employees for purposes of Worker’s Compensation ONLY.

If a student sustains a work-related injury in a laboratory, please follow the procedures outlined below:

1. For emergencies situations, the student should always seek immediate assistance from the nearest medical provider.
2. For non-emergency situations, the student should contact his or her primary care physician and have the primary care physician direct him or her to a medical facility that will treat work related injuries.
3. The student and/or student’s supervisor will need to complete two forms to file a work related claim: the state “Employer’s First Report of Injury” form and the Tufts “Accident/Incident Form”. These forms can be attained by visiting the Risk Management website (http://finance.tufts.edu/risk-ins/workers-compensation-program/). Please complete these documents to the best of your ability, leaving any missing or unknown information blank, and return the forms to Risk Management as soon as possible. It is more important that Tufts and our Workers’ Compensation carrier be made aware of any work-related claim than receive a completed form.
4. Tufts works with a third party (PMA Companies) to administer our work-related claims. An adjuster from PMA will contact the student within two business days after filing a claim. If the student does not hear from a PMA adjuster within two business days, please contact Risk Management at 617-627-3981.

For other types of illnesses or injuries not sustained in a work-related incident, students can consult their health care providers to find out where to obtain medical care. If students have any questions about what procedures and tests are covered by insurance, they should call their health care provider for clarification. For questions related to benefits provided by the student health insurance plan, call the Student Advisory and Health Administration Office at 6-2700.
GRADUATION

Students meeting the requirements for the Master of Science in Comparative Biomedical Sciences are recommended for degree status to the Advanced Education Committee (AEC). The recommendation for approval is forward to the Executive Faculty Board (EFB) for action. The EFB and the Dean submit approved degree candidate names to the Provost, President, and the Board of Trustees for final approval. Degrees are awarded at veterinary student commencement upon completion of the degree requirements for both the DVM and MS-CBS.

APPEALS

Any policy appeals are to be made to the Program Director who will take any appeal under consideration with the program advisory committee.
III. MASTER OF SCIENCE IN LABORATORY ANIMAL MEDICINE

OVERVIEW

There is a need for veterinarians with clinical training and management skills to provide high quality veterinary care for research animals, to organize disease control programs for biomedical research facilities, and to provide guidance in overall management of such facilities. Veterinary input and technical support is often required in design of research projects with regard to choice of species, choice of drugs, and training in surgical procedures. As the value of transgenic and disease model research animals continues to increase, both academic and commercial research facilities require expertise in these areas to manage laboratory animal colonies of varied species types to provide disease free animals for research.

ACADEMIC PROGRAM

This program is designed to provide highly motivated veterinary students with basic training in laboratory animal medicine and animal resource management in conjunction with their professional DVM training at the Cummings School of Veterinary Medicine at Tufts University. Students in the combined degree program earn an MS in Laboratory Animal Medicine in the same four years they earn a DVM. Our objective is to provide the biomedical research community with skilled veterinarians who can fulfill needed positions in research facilities immediately upon graduation or be highly qualified for acceptance to excellent postgraduate residency or fellowship opportunities.

MISSION

Our objective is to provide the biomedical research community with skilled laboratory animal veterinarians who can fulfill needed positions in academic or biomedical research facilities in academia or industry immediately upon graduation. Graduates of this program should also be highly qualified candidates for laboratory animal residency programs and future ACLAM board certification.

PROGRAM LEARNING GOALS

The goal of the MS in Laboratory Animal Medicine is to provide DVM students considering the specialty of laboratory animal medicine with a comprehensive background in the regulatory and ethical issues associated with use of animals in research, and specialized knowledge and skills in management, diagnosis and treatment of disease, anesthesia, experimental surgery, and pain management for research animals.

Specific learning objectives for graduates of the program are:
1. Thorough understanding of the regulations that govern animal use in research and their impact on humane and ethical use of animals, including an understanding of the IACUC review process and IACUC function.
2. Practical experience in basic procedures involving research animal species, including handling and restraint, husbandry, dosing, sample collection, and surgery, including anesthesia, common surgical procedures, post-operative care, and pain management.
3. Thorough understanding of basic principles for colony animal health, including identification and exclusion of infectious disease, and protection of staff and the public from experimentally induced or zoonotic infectious disease.
4. Understanding of the requirements to protect research workers and the public from experimental hazards.
5. Understanding of the requirements for design of housing and surgical facilities for animals used in research.
6. Experience in laboratory animal research facilities, both from the animal care and the investigator perspectives at a diverse array of corporate and academic institutions.

DEGREE REQUIREMENTS

The Laboratory Animal Medicine program requires a total of 33 credits divided as follows: 23 didactic credits are offered during selective time during the second semester of the first year, the entire second year, and the portion of third year leading up to clinical rotations. There are also 10 credits of summer applied learning experience required during the first 2 summers. Students are required to spend 9 weeks of clinical year elective time in laboratory animal medicine facilities. This program was developed especially for the combined degree, and the curriculum is tightly integrated with veterinary coursework.

Didactic courses are taught by Cummings School faculty, program alumni, and by research animal facility veterinary and scientific staff from Charles River Laboratories, AbbVie Laboratories, Novartis, Sanofi, Mass. General Hospital, Mass. Institute of Technology, University of Massachusetts Medical School, and Tufts Medical Center (TMC). Most of our adjunct veterinary faculty are diplomates of the American College of Laboratory Animal Medicine (ACLAM).

The academic program is closely integrated with the DVM curriculum, and there may be interest in selected topics from veterinary students who have not been formally enrolled in the DVM/MS-LAM program. Such students may audit one semester of the didactic program at no cost at any point in their veterinary program, schedule permitting.
Curriculum

All courses, except for the elective rotations and ALE summer experiences, are graded A-F (+/-). Elective rotations are graded Honors/Pass/Fail and both of the summer experiences are graded Pass/Fail.

The following curriculum applies to V’16 students forward:

**Year 1: (10 credits)**

**Spring (5 credits)**
LAM 551 - Introduction to Laboratory Animal Medicine 5 credits

**Summer: (5 credits)**
LAM 558/559 - Applied Learning Experience 5 credits

**Year 2: (15.5 credits)**

**Fall: (5.5 credits)**
LAM 553 - Preventive Medicine in Research Animal Facilities 4 credits
VET 592 – Journal Club/Seminar (credit awarded in spring)

**Spring: (5 credits)**
LAM 557 - Specialized Research Environments 5 credits
VET 592 – Journal Club/Seminar 1.5 credits

**Summer: (5 credits)**
LAM 558/559 - Applied Learning Experience 5 credits

**Year 3: (7.5 credits)**

**Fall: (4.0 credits)**
LAM 556 - Surgery and Anesthesiology in Research Facilities 4 credits
VET 592 – Journal Club/Seminar (credit awarded in spring)

**Spring (3.5 credits)**
LAM 555 - Laboratory Animal Medicine and Pathology 2 credits
LAM 592 – Journal Club/Seminar 1.5 credits

**Years 3 and 4: (no credits for clinical electives)**
Clinical Electives – Students must take 9 weeks of LAM-focussed clinical electives in the DVM program. The program director must approve the LAM-focussed electives in advance.

**COURSE DESCRIPTIONS**

*Applied Learning Experiences (ALE)* (See extended information below)

LAM 558 - Applied Learning Experience: Animal Facility Experience – 5 credits; 8 weeks (approximately 280 hours); summer
The summer Animal Facility Experience consists of 8 weeks in-depth training experiences at industry or academic laboratory animal facilities during the first or second summer after
matriculation into the program. The focus of this experience should be on clinical laboratory animal medicine, husbandry, regulatory compliance or facility management. 

*With advance approval of the program director, equivalent full time work experience acquired before matriculation may substitute for LAM 558 or 559, but not both. Work undertaken to satisfy undergraduate course requirements will typically not qualify for exemption.*

**LAM 559 - Applied Learning Experience: Research Experience** – 5 credits; 8 weeks; *summer*

The summer Research Experience consists of an 8-week research experience involving animals. The focus of this experience should be significant participation in a research project using laboratory animals, including exposure to experimental design, collection of data and interpretation of results. 

*With advance approval of the program director, equivalent full-time work experience acquired before matriculation may substitute for LAM 558 or 559, but not both. Work undertaken to satisfy undergraduate course requirements will typically not qualify for exemption.*

**First Year**

**LAM 551 - Introduction to Laboratory Animal Medicine** – 5 credits; *spring*

This course is an introduction to the use of animals in biomedical research and the role of the laboratory animal veterinarian. In the first half of the course, presentations from experts in the field cover regulatory control of research animal use, the role of the Institutional Animal Care and Use Committee (IACUC), animal models in biomedical research, and ethical use of animals. A laboratory animal anatomy module includes a dissection lab devoted to anatomy of chickens and frogs. The second half of the course covers the biology and care of research animals and design of research animal facilities. The class tours several rodent housing and mixed species research facilities in the area.

Students are expected to attend all classes, labs, and tours. They are required to write one analysis paper on research animal ethical cases and to work in groups to create a design for a multi-species research animal facility. Two written assignments are required. Same basic PhD course as BMS 657.

**Second Year**

**LAM 553 - Preventive Medicine in Research Animal Facilities** - 4 credits; *fall*

This course complements the second year of the veterinary curriculum which is mainly concerned with the pathophysiology of disease. The course begins with a series of classes in the application of medical statistics to animal research. The class supplements the introductory exposure to statistics and epidemiology in the professional DVM program with specific emphasis on the design and interpretation of research studies using animals. The second half of the courses focuses on viral, bacterial and parasitic pathogens of concern in rodents used in research. The course provides instruction in the diagnosis, treatment, control and prevention of disease in the laboratory animal facility. The development and implementation of health surveillance and preventative health programs in a laboratory animal setting is discussed. This course consists of didactic lectures and tutorial sessions with assigned readings, case studies and interactive discussions.
LAM 557 - Specialized Research Environments - 5 credits; spring
This course provides advanced instruction in topics relating to specialized environments which are of particular concern to the laboratory animal veterinarian. The course primarily consists of didactic presentations and discussions led by specialists in the field on a broad variety of topics including zoonotic diseases, occupational health and safety programs, and biocontainment facility design and disaster planning. Other subjects include transgenic technology, behavioral studies and imaging technologies such as ultrasound, magnetic resonance imaging (MRI) and computed tomography (CT). The course consists of didactic lectures, case studies, and facility tours which are designed to integrate the material discussed in lectures.

LAM 592 – Journal Club/Seminar – 1.5 credits each 2nd and 3rd year
Students, along with faculty members, participate in journal club sessions for discussion of current literature in the field. The emphasis is on critical analysis, identifying significance of the research, and understanding how the findings extend current knowledge.

Third Year
LAM 556 - Surgery and Anesthesiology in Research Facilities - 4 credits; fall
This course provides students with additional training in anesthesia and surgery methods relevant to the laboratory animal setting. The first portion of the course focuses on principles of anesthesia in laboratory animals and common procedures in rodents. Practical laboratories provide an opportunity for the students to gain hands-on experience in appropriate restraint and handling techniques as well as practice common procedures such as injections, oral administration of compounds, catheter placement and blood collection in rodents. Pain assessment, analgesic management, determination of humane endpoints and methods of euthanasia are also covered. Principles of aseptic surgery in research facilities and post-operative care are emphasized. Students also have an opportunity to practice routine dentistry in Cummings School teaching dogs.

LAM 555 - Laboratory Animal Medicine and Pathology - 2 credits; spring
This course complements the third year of the veterinary curriculum which integrates the pathophysiological aspects of disease with a comprehensive discussion of the presenting clinical signs, diagnostic criteria, and the treatment of these entities. The lectures provided in this course are designed to provide students with a sound basis in clinical laboratory animal medicine with emphasis on diagnosis, prognosis, and management. Experimental surgery laboratories allow students to gain practical experience in swine and rabbit surgical methods by performing common procedures such as jugular vein cannulation.

LAM 592 – Journal Club/Seminar – 1.5 credits each 2nd and 3rd year
Students, along with faculty members, participate in journal club sessions for discussion of current literature in the field. The emphasis is on critical analysis, identifying significance of the research, and understanding how the findings extend current knowledge.
CLINICAL ELECTIVES – 9 WEEKS

Nine (9) weeks of lab animal medicine rotations are required during the 4th year of DVM training. Elective time may be scheduled throughout the clinical year, including the last seven weeks prior to graduation. DVM/MS-LAM students should meet with MS program faculty and their mentors to plan their clinical year required electives for the combined degree.

Clinical electives can be done at laboratory animal facilities at any location the student chooses. There are multiple opportunities in the greater Boston and Worcester areas, and students have arranged elective experiences at several distant locations. The following types of experience are encouraged:

1. Rodent barrier facilities
2. Biocontainment facilities
3. Primate or multi-species research facilities
4. Surgical programs
5. Transgenic facilities
6. Research Pathology Experience
7. Academic, pharmaceutical or industry biomedical research facilities

APPLIED LEARNING EXPERIENCES (ALE)

Charles River Labs, Wyeth Laboratories, Tufts Medical Center, U. of Massachusetts Medical Center, Sanofi, CBSET, and Massachusetts General Hospital agreed to accept students in their facilities during summers for either Animal Facility or Research Experiences, as well as their clinical electives. Options are also available at other facilities.

ALE: Animal Facility Experience

The summer Animal Facility Experience consists of 8 weeks in-depth training experiences at industry or academic laboratory animal facilities during the first or second summer after matriculation into the program. Students can apply to take the laboratory animal experience part of the program at any institution with an AAALAC- accredited laboratory animal program. New sites must be approved by the Laboratory Animal Medicine Program Director. The ALE may occur all at the same institution or divided between two 4-week programs at two separate institutions the first summer.

During the summer, students work closely with veterinary staff and animal care staff for hands on experience with the animal care, enrichment and veterinary programs and are required to write a paper on ethical use of animals in research or environmental enrichment programs based on their didactic training and summer experience. Students are evaluated by the veterinary staff at the training institutions.
ALE: Research Experience

The summer Research Experience consists of an 8-week research experience involving
animals. This research experience must take place during the first or second summer of
the program and be an 8-week in depth laboratory research experience, preferably an
independent hypothesis-driven project in an established research laboratory.

Students are required to work with an established biomedical research investigator and
write a research report on the summer project or present at Research Day the following
fall. They are evaluated by the principle investigator of the laboratory.

RE-EXAMINATION GRADES

Re-evaluation or make-up coursework may be authorized by the LAM Program
Committee, and the Advanced Education Committee (AEC) is notified of any such
allowances. After re-evaluation, the final course grade may not exceed the level of “B.”
The makeup grade is recorded on the transcript along with a notation that the new grade
was achieved through make-up work. The new grade is used for the GPA calculation and
is given program credit. However, the original grade is retained on the transcript.

GRADE CHANGES AND COURSE FAILURES

The Advanced Education Committee may allow a student who has failed a graduate
course (with a grade of “C+” or below) to continue to be enrolled, but such students are
required to demonstrate competence in the course to the satisfaction of the Course
Director and the LAM Program Committee. This condition for continued enrollment must
be satisfied prior to the end of the next academic year. However, under extraordinary
circumstances, the AEC may exercise its discretion and allow a student to continue in the
MS program under stipulated conditions including remediation.

The opportunity for re-evaluation, or to otherwise satisfactorily complete a course is
determined by the LAM Program Committee after notification to the AEC and a review of
the student's entire academic record. If a student believes that she or he has not received
an appropriate grade, the following steps may be taken:

1. The student discusses the matter with the Course Director.
2. If the student does not feel as though the matter was resolved, the student
discusses the matter with the Graduate Program Manager.
3. The Graduate Program Manager will bring the matter to the LAM Program
Committee for recommendation to the AEC. The final decision will be made in
consultation with the Advanced Education Committee.

Students should be aware that the Course Director has only fourteen (14) working days
after announcing the final grades to make a grade change. After this time, any proposed
grade changes must be reviewed and approved by the AEC. The student has the right to
petition the AEC to dispute issues pertaining to course grading policy.
Students are expected to remain in good academic standing in the DVM professional curriculum. Students who do not maintain a minimum GPA of 2.5 in the DVM program, may be required to withdraw from the MS/LAM program.

TRANSFER OF CREDIT

No didactic coursework is transferable to the MS in Lab Animal Medicine program. In order to enable students to complete these two degrees within the 4-year time frame, DVM selective requirements are waived.

TIME TO DEGREE

It is expected that students complete degree requirements within the four years of their DVM program. Requests for extensions to this time limit due to extenuating circumstances are considered on a case by case basis by the MS-LAM Program Committee and Advanced Education Committee. The Advanced Education Committee (AEC) makes a recommendation to the Student Promotions Committee (SPC) for final approval.

REGISTRATION

All LAM students will be registered for their LAM courses by the Graduate Program Manager. Students will receive a “Summer ALE Reporting Form”, which must be completed and returned by September.

TUITION, FEES, AND FINANCIAL AID

All students are charged MS-LAM tuition each semester for the last three years of the program. Tuition for the year is payable according to Tufts University guidelines. Tuition for the 2019 -2020 academic year is $9,704 ($4,852/semester). Please note that students who require an extension in order to complete their Master’s requirements are charged a $500 fee each semester until degree completion. All tuitions are subject to yearly increases.

ORIENTATION

Students entering the combined DVM/MS-LAM program meet with the Program Director and the Graduate Program Manager at the beginning of the academic year in order to address programmatic questions and meet one another. Each student is paired with a mentor who is a laboratory animal veterinarian in the area.
VACATION POLICY

Vacation periods for this program coincide with those in the regular DVM program. However, students must remember that the majority of the pre-clinical summers are committed to the Laboratory Animal Medicine ALE requirement except for exemptions approved in advance.

GRADUATION

Students meeting the requirements for a Master of Science in Laboratory Animal Medicine are recommended to the AEC. This recommendation is then forwarded through the Executive Faculty Board (EFB). Final approval comes from the Dean and the Board of Trustees. Degrees are awarded at veterinary student commencement upon successful completion of the combined degree program. The Master of Science in Laboratory Animal Medicine is only awarded in conjunction with the Doctor of Veterinary Medicine degree.
IV.  MASTER OF PUBLIC HEALTH

DVM-MPH

The DVM-MPH program’s public health curriculum was developed especially for the combined degree and is tightly integrated with veterinary medical coursework. This careful integration allows students in the DVM-MPH program to earn a Master of Public Health (MPH) degree in the same four years required to complete the DVM degree. The program provides the basics for understanding and practicing population health. The MPH curriculum prepares generalists with a sound foundation in population health disciplines, including epidemiology, biostatistics, planning and management, international health, bioethics, public health law, environmental and occupational health, and the social and behavioral sciences.

Graduates of this program are equipped to become leaders in population health, including public health administration, policy and research, as well as superb veterinary medical clinicians.

OVERVIEW

The Master of Public Health (MPH) degree complements a student’s clinical understanding of the individual with a population health-based perspective. Upon completion of the program, students are better able to understand the roles of the biological sciences and health care services in improving the health of populations and linking to population health practice. The program helps graduates identify the population health implications of clinical work and research and communicates these to other clinicians and population health professionals. Graduates of the program are able to apply population-based methods and perspectives to the design and practice of clinical services, describe the diverse roles that veterinarians, physicians and other population health professionals play in population health practice and research, and demonstrate the ability to participate effectively on a population health team.

ACADEMIC PROGRAM

The program provides students with the basics for understanding and practicing public and population health while they complete the DVM program. Courses that begin with the “CMPH” prefix are administered through Tufts University School of Medicine; veterinary medical students take some of these with their medical school counterparts. Some courses are offered in conjunction with MPH alone students and have the prefix “PH.” Please note that some CMPH courses are offered on the Grafton campus, as indicated in the table below.
### CURRICULUM
The following chart outlines the degree requirements:
https://publichealth.tufts.edu/sites/default/files/DVMMPH2023_0.pdf

<table>
<thead>
<tr>
<th>Course Numbers &amp; Names</th>
<th>Course Type</th>
<th>Credit</th>
<th>Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH 201: Introduction to Epidemiology</td>
<td>CEPH Core Course</td>
<td>3</td>
<td>1st Year Summer or Fall</td>
</tr>
<tr>
<td>CMPH 118: Social &amp; Behavioral Sciences</td>
<td>CEPH Core Course</td>
<td>3</td>
<td>1st Year Fall</td>
</tr>
<tr>
<td>CMPH 170: Global Population Health</td>
<td>Required Course</td>
<td>1.5</td>
<td>1st Year Fall &amp; 1st Year Spring</td>
</tr>
<tr>
<td>CMPH 136: Health Care Organization: Budgeting and Management</td>
<td>Required Course</td>
<td>3</td>
<td>1st Year Spring</td>
</tr>
<tr>
<td>PH 205: Biostatistics</td>
<td>CEPH Core Course</td>
<td>3</td>
<td>2nd Year Summer</td>
</tr>
<tr>
<td>PH 215: Health Care: Politics, Policies and Programs</td>
<td>CEPH Core Requirement</td>
<td>3</td>
<td>2nd Year Summer</td>
</tr>
<tr>
<td>CMPH 208: Public Health Field Experience</td>
<td>Required Course</td>
<td>3</td>
<td>2nd Year Summer</td>
</tr>
<tr>
<td>CMPH 253: ALE Planning Seminar</td>
<td>CEPH Core Course</td>
<td>0</td>
<td>2nd Year Fall</td>
</tr>
<tr>
<td>CMPH 288: Research Methods</td>
<td>Required Course</td>
<td>3</td>
<td>2nd Year Fall</td>
</tr>
<tr>
<td>CMPH 360: Emerging and Exotic Diseases of Animals (EEDA) &amp; Initial Accreditation</td>
<td>Track Offering*</td>
<td>1.5</td>
<td>2nd Year Fall</td>
</tr>
<tr>
<td>PH 204: Introduction to Occupational &amp; Environmental Health</td>
<td>CEPH Core Course</td>
<td>3</td>
<td>2nd Year Spring</td>
</tr>
<tr>
<td>CMPH 207: Legal Basis of Public Health Veterinary Medicine (course in Grafton)</td>
<td>Required Course</td>
<td>1.5</td>
<td>2nd Year Spring</td>
</tr>
<tr>
<td>CMPH 253: ALE Planning Seminar</td>
<td>CEPH Core Course</td>
<td>0</td>
<td>2nd Year Spring</td>
</tr>
<tr>
<td>CMPH 453: ALE Implementation Seminar</td>
<td>CEPH Core Course</td>
<td>0</td>
<td>3rd Year Summer</td>
</tr>
<tr>
<td>CMPH 453: ALE Implementation Seminar</td>
<td>CEPH Core Course</td>
<td>3</td>
<td>3rd Year Fall</td>
</tr>
<tr>
<td>Public Health Biology</td>
<td>MPH Requirement</td>
<td>0</td>
<td>Earning of DVM Degree</td>
</tr>
</tbody>
</table>
Elective Courses

Several elective offerings are made available on the Grafton Campus specifically for DVM-MPH students. Elective courses on the Boston campus are also available for third and fourth year students during a four-week period in March/April, or as evening classes or summer classes during your first 2.5 years of veterinary school. Individual elective courses that are offered in Grafton usually run once every two years. With approval from the Program Director, students may take electives offered elsewhere in the MPH program, at Tufts University, or at other institutions. Students may also pursue an independent directed study for elective credit. The following are examples of courses taught in Grafton in recent years that have been taken by DVM/MPH students for elective credit. Please refer to the PHPD course schedules which can be found at [http://publichealth.tufts.edu/Student-Services/Academic-Calendars-and-Course-Schedules](http://publichealth.tufts.edu/Student-Services/Academic-Calendars-and-Course-Schedules) for a list of courses that are offered each semester.

- Epidemiology of Zoonotic Diseases (Grafton)
- Gender and One Health (Grafton)
- Principles of Biodefence (Grafton)
- Participatory and Community-Based Approaches to Epidemiological Research, Disease Surveillance, and Health Service Delivery (Grafton)
- Introduction to Veterinary Forensics (Grafton)
- Disaster Medicine (Grafton)

Generally, one to two veterinary medical-related MPH elective courses are offered each year on the Grafton campus.

**DEGREE REQUIREMENTS**

Students must complete 42 credits of public health course work prior to graduation. With the program director’s permission, Tufts’ MPH courses offered outside the combined-degree track may be substituted for elective course credits.

In the first two years of the curriculum students take public health core courses on Tuesday afternoons in place of the weekly, pre-clinical field or research selectives pursued by other veterinary medical students. Some classes are also taken during the summer before first year and during the summer before 2nd year.

In addition, students participate in a 6-week summer field experience in the summer between their first and second years, and an in-depth practicum in public health (Applied Learning Experience, ALE) in the summer between their second and third years.
COURSE DESCRIPTIONS

Please visit the Medical School website detailing the course descriptions at:
http://publichealth.tufts.edu/Academics/Public-Health-Program/MPH-and-Combined-Degree-Programs/Our-Degrees-and-Accreditation/DVM-MPH

Fourth year students are required to set aside one evening (2 hours) in January of their final year to present clinical cases with population health dimensions to first, second and third year DVM-MPH students. Students are responsible for contacting clinical rotation directors well ahead of time to inform them of this requirement.

Please contact the Program Director Dr. Anthony Schlaff at Anthony.Schlaff@tufts.edu or the DVM-MPH Track Director Dr. Marieke Rosenbaum at marieke.rosenbaum@tufts.edu for any questions regarding the courses.

All DVM students are required to undergo a lottery selection process with their DVM classmates to select their end-of-third year and fourth year core and elective rotations. DVM-MPH students may dedicate up to 8 weeks of elective rotation time to MPH-related coursework, such as electives and ALEs. Most combined degree students, however, complete all the MPH course work prior to the start of clinics. Navigating the lottery process while trying to reserve time for MPH course work can be tricky, and students who wish to do this should meet with the Cummings School Clinical Coordinator well in advance of their clinical years. Questions related to the Lottery should be directed to the Cummings School Clinical Coordinator, Nancy Horniak, at 8-4772.

TIME TO DEGREE

Students are expected to complete all MPH requirements within the four years of their DVM program. Requests for extensions to this time limit due to extenuating circumstances will be considered on a case-by-case basis by the Program Director.

REGISTRATION

Since most of the MPH courses are required courses, the MPH Registrar takes care of registration for these courses. In order to make the combined degree coursework more manageable, DVM-MPH students are generally encouraged to take the first year Epidemiology course during the summer 2 semester (Mid July-August) through the Tufts Boston Campus prior to fall matriculation in the DVM program.

TUITION, FEES, AND FINANCIAL AID

All students are charged MPH tuition for each semester of the four-year program. Tuition for the year is payable according to Tufts University guidelines. Tuition for the 2019-20 academic year is $7,656 ($3,828/semester). Tuition is subject to yearly increases.
ORIENTATION

Students entering the combined DVM-MPH program will meet with the Program Directors at the orientation in Boston in the third week of August. Additional information on CMPH orientations are sent to students during the summer prior to their matriculation.

VACATION POLICY

Traditional academic vacation periods exist for the MPH program; however, the vacation periods for this program do not necessarily coincide with those in the DVM program. In addition, students must remember that a portion of their summers will be taken up by either MPH or traditional DVM program requirements.

GRADUATION

Students should view their SIS records in their fourth year to ensure that all requirements for both the DVM and MPH degrees will have been met by May of their anticipated graduation year. If there are any questions, please contact the MPH Program Director regarding MPH requirements and courses, and the Cummings School DVM Registrar regarding DVM requirements and courses. Upon successful completion of the programs, the DVM and MPH degrees will both be awarded at the veterinary medical student commencement in Grafton. The degrees may not be awarded separately.
V. MASTER OF SCIENCE IN ANIMALS AND PUBLIC POLICY

OVERVIEW

The Center for Animals and Public Policy was founded in 1983. Our mission is “to conduct and encourage the study of complex issues surrounding the changing role and impact of animals in society. The Center supports the development and dissemination of research driven policies, programs and practices that benefit both people and animals. Work conducted by the Center is based on the tenets that animal well-being matters, that animal and human well-being are linked, and that both are enhanced through improved understanding of human-animal relationships.”

In pursuit of this mission, the Center conducts research, education and analysis on the ethical, scientific, social and legal dimensions of human-animal relationships, and how those relationships are reflected in policy, programs, and practice.

The Master of Science in Animals and Public Policy (MAPP) was established in 1995. Students in this interdisciplinary program are immersed in the topics, concepts, theories, methods and research of human-animal relationships and the public policies and community norms that guide them. After graduation, our students follow a variety of career tracks in the private, public and non-profit sectors. These include graduate study in the natural sciences, social sciences and humanities, veterinary and human medicine, and law, and employment with non-profit organizations, corporations, and government.

ACADEMIC PROGRAM

The MAPP program allows students to pursue one of two alternative tracks: 1) Applied, and 2) Research. The two tracks share important core elements that retain the MAPP program’s traditional emphasis on the elements influencing human-animal relationships and the manifestation of those relationships in public policy. Applied track students gain additional opportunities to explore content areas such as animal behavior, animal welfare, and human-animal interactions (HAI), and to develop communication and other skills that will enhance their marketability for jobs in non-governmental organizations, government, and the private sector. These skills are further developed in a three-month mentored summer externship at an organization that engages in advocacy, research, regulation, policy formation, public education or other activities linked to the human-animal relationship. Research track students receive additional training in qualitative and quantitative research methods and apply that training in a focused manner to develop and carry out an original research project.

The MAPP program consists of a minimum of three semesters of study, beginning in the fall and running through the following summer. Research track students should expect to spend a fourth semester completing their capstone projects but
may complete in three semesters. We seek to provide a rigorous curriculum that balances theory, methodology, substantive content, independent research, and practical application. The idea behind our multi-faceted approach is that we cannot understand or influence animal policy and the place of animals in society without knowledge and experience of the varied contexts in which people and animals interact.

Through its core courses, the MAPP program provides all students with a foundational understanding of animal issues and research methods. Through electives and the independent research project or externship, students also have an opportunity to deepen their understanding of areas of special interest to them. Our courses, which are characterized by active learning and substantial interaction between faculty and students, are of four kinds.

- Survey – Lectures with discussion covering a wide range of substantive issues
- Methods – Lectures, discussions, and practical exercises exploring research and analytical techniques
- Special topic – small group discussions centered around student presentations exploring specific issues of interest
- Independent learning & research – student-driven individual learning experiences and research projects carried out under supervision of faculty mentors

During fall and spring semesters classes are typically scheduled during business hours Monday through Friday, although electives, field trips, and other special events may be scheduled outside those hours. Students are expected to be available for all classes, colloquia, field trips and special events.

Because the curriculum is rigorous and accelerated, successful students typically limit involvement in extracurricular activities, including employment. Adherence to deadlines in all courses is essential for successful completion of the program.

While all this makes for an intensive year-long experience, it is both time- and cost-efficient. We also strive to make it enjoyable, too!

**MAPP PROGRAM OUTCOMES**

The overall goal of the M.S. in Animals and Public Policy (MAPP) program is to train graduate students to make productive contributions to the fields of animal health and welfare, human-animal relationships, human-animal studies, and animal policy in academic, policymaking, and community settings. We have identified six learning outcomes necessary to achieve that goal.
1. Familiarity with a wide range of views on animals and their relationships with humans, as well as the historical, cultural, scientific, economic, and ethical considerations that have contributed to the formation of those views.

2. Ability to critically evaluate diverse expressions of policy views, to understand and distinguish between empirically and value-based arguments, and to be able to fairly investigate and understand the historical, cultural, scientific, economic, and ethical foundations of those views.

3. Ability to critically evaluate empirical and theoretical research in the fields of animal health and welfare, human-animal relationships, human-animal studies, and animal policy, conducted using diverse theoretical perspectives and a variety of quantitative and qualitative methodologies. This ability is informed by an understanding of how personal, professional, political, historical, cultural, economic, and ethical factors influence every phase of the research process.

4. Ability to conduct original research under faculty supervision, in fields related to animal health and welfare, human-animal relationships, human-animal studies, and animal policy.

5. Understanding of how policies and practices associated with human-animal relationships are formed and implemented in real-world settings, including a knowledge of how political, historical, cultural, scientific, economic, and ethical considerations constrain and direct policy formation and implementation.

6. Ability to communicate effectively with a wide variety of audiences, including specialists, stakeholders, and the general public, using a variety of media and formats.

DEGREE REQUIREMENTS

Students must complete a minimum of 32 credits of program work as outlined in the chart below. All courses are graded on an A-F (+/-) basis.

Students must maintain a 3.0 (B) average in the program to remain in good standing. Students may receive a grade of B- in a course, including graded electives; however, a program cumulative average of 3.0 must be maintained.

A final grade of "C+" or lower in a course constitutes a failure for that course.

For additional information, refer to Academic Standards for Graduate Programs in the Policies and Procedures section of the Graduate Student Handbook.

The curriculum is comprised of the following courses:

Core Courses (12.0 credits – Applied Track; 9.0 credits – Research Track)
- Animals & Society I & II (Applied and Research Tracks)
- Public Policy Analysis (Applied and Research Tracks)
- Communicating Policy Positions (Applied Track; Elective for Research Track)
Research Methods Courses (6.0 credits – Applied Track; 10.0 credits - Research Track)
- Research Methods I (Applied and Research Tracks)
- Research Methods II (Research Track; Elective for Applied Track)
- Statistics I (Applied and Research Tracks)
- Statistics II (Research Track; Elective for Applied Track)

Capstone Activities (9.0 credits for each track)
- Independent Research I & II (Research Track)
- Mentored Externship (Applied Track)

Electives (5.0 credits – Applied Track; 3.0 credits – Research Track)
- Animal Law
- Introduction to Animal Welfare Science
- Principles of Animal Behavior and Human Activity
- Applied Animal Behavior
- Wildlife in Captivity
- Service: Animals in the Community
- Issues in Animal Ethics

Overview of MAPP Courses

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
<th>SUMMER</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Applied Track</td>
<td>Research Track</td>
<td>Applied Track</td>
</tr>
<tr>
<td>APP 501</td>
<td>Animals in Society I</td>
<td>4 credits</td>
<td>APP 502</td>
</tr>
<tr>
<td>APP 518</td>
<td>Research Methods I</td>
<td>3.0 credits</td>
<td>APP 509</td>
</tr>
<tr>
<td>APP 516</td>
<td>Statistics I or place out</td>
<td>3.0 credits</td>
<td>APP 524</td>
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<tr>
<td></td>
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<td>APP 526</td>
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Total Credits
**APP 519**
Research Methods II
2.0 credits

<table>
<thead>
<tr>
<th>Electives</th>
<th>Electives</th>
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<th>Electives</th>
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<tbody>
<tr>
<td>11.0 Credits</td>
<td>11.0 credits</td>
<td>12.0 credits</td>
<td>12.0 credits</td>
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<tr>
<td>9.0 credits</td>
<td>9.0 credits</td>
<td>32 credits</td>
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*Course may also be taken in the fall 2020 semester which would increase program time to 4 semesters.

**COURSE DESCRIPTIONS**

**APP 501 – Animals in Society I** – 4.0 credits
Animals in Society uses lectures, discussions and assignments to survey contemporary issues regarding animals and how those issues play out in public policy and community practices toward animals. This is done through a series of modules that examine the historical, social, ethical, political, legal, legislative and economic aspects of society’s relationship to recognized categories of animals. The first module of Animals & Society I comprises an introduction to ethics, law, science, the history of the animal movement, and policymaking. The second module focuses on companion animal issues, including elements of human-animal interactions such as animal-assisted activities and therapy, the effects of animals on human health, development, and family dynamics, and the reciprocal effects of such interactions on the health and well-being of animals.

**APP 502 – Animals in Society II** – 3.0 credits
Animals in Society II draws on knowledge and approaches developed in Animals in Society I but is centered around modules on animals used in research, farm animals, and wildlife.

**APP 509 – Public Policy** – 3.0 credits
This course focuses on the theories, analytical approaches and techniques of public policy analysis and provides students with an opportunity to critically examine theoretical frameworks in the context of animal policy. The course will explore policy process, elements of policy design, and the relationship between social movements and political institutions. Through in-depth research in animal policy areas of interest to them, students will gain skills in policy analysis and familiarity with research resources, including laws, regulations, legislation, lobbying reports, and campaign finance records. For the course, students will write a policy analysis case study and policy memos among other assignments.

**APP 516 – Statistics I** – 3.0 credits
This course introduces students to the basics of statistical methods and research design. Students learn to state hypotheses, evaluate sampling procedures, create and manage data sets, carry out basic statistical testing using SPSS, and critically
evaluate quantitative literature. Examples are drawn from research in veterinary medicine, animal science, human-animal relationships, and animal ecology.

**APP 517 – Statistics II: Intermediate** – 2.0 credits
Intended for advanced research track students and tailored to their interests, this course will focus on experimental design and analysis of survey data, exploring the use of analysis of variance (ANOVA) and regression models, factor analysis, and other advanced techniques using SPSS.

**APP 518 – Research Methods I** – 3.0 credits
This course will focus on exploring the academic research process and some of the most common research methodologies. Through this course, students will gain familiarity with the scope and limitations of various methods for gathering both quantitative and qualitative data. Students will develop the skills to design and carry out their own research as well as evaluate research carried out by others. Students will learn how to think critically about the research objective, select appropriate methodologies, and design and conduct thoughtful and useful analysis plans. We will also discuss many of the issues that surround science, including the bias and vantage point of the researcher and the role of ethics in science, as well as how to communicate about research.

**APP 519 – Research Methods II** – 2.0 credits
This course provides more in-depth exploration of survey design, content analysis, and qualitative techniques such as interviews, ethnography, and focus groups. All students will produce a research proposal, which for research track students will lead directly to their capstone research project.

**APP 524 – Communicating Policy Positions** – 2.0 credits
The course requires students to draft and revise documents targeted at diverse audiences, including letters to the editor, blogs, op-eds, fact sheets, legislative testimony, and formal comments on draft regulations and other proposals for government actions, and to develop skills in making presentations to the public, legislators, legislative hearings, and other forums.

**APP 526 – Independent Research I** – 3.0 credits
**APP 527 – Independent Research II** – 6.0 credits
For their capstone activity, students in the research track work independently with individual mentors to complete their research projects, with the expected outcome being an article that is potentially publishable in a peer-reviewed journal, or other scholarly product the dissemination of which will advance and inform animal policy or practice.

**APP 532 – Mentored Externship** – 9.0 credits
Students in the applied track complete their program by working at a government agency, legislative office, non-profit organization, or other entity that influences, makes, or implements animal policy or advances human-animal relationships. The students will analyze and synthesize their experiences in a substantial research paper and an oral report to classmates and Center faculty.
Electives

**Service: Animals in the Community**

- APP 1002 – Shelter Visitations 2.0 credits
- APP 1005 – Community Cat Clinics 0.5-3.0 credits
- APP 1009 – Pet Loss Hotline 0.5-3.0 credits
- APP 1010 – Veterinary Outreach Clinic 0.5-3.0 credits
- APP 1013 – Paws for People 0.5-3.0 credits

Students may receive elective credit for participating in a variety of community-service oriented activities, including animal shelter visitation, community cat clinics, support for the Tufts at Tech Community Veterinary Clinic, Tufts Paws for People, and the Tufts Pet Loss Hotline. Academic exercises matched to the service activities help illuminate the policy and practice context of the students’ work.

**APP 1001 – Animal Law – 1.0 credit**

Until recently, animals were treated as nothing more than property in courts of law. In this course, students explore how the changing status of animals is (or might be) reflected in case law, as well as the implications of specific state and federal laws (such as animal cruelty laws, the Animal Welfare Act, and the Endangered Species Act) for the legal status of animals.

**APP 1007 – Wildlife in Captivity – 3.0 credits**

This lecture/discussion class examines the ethical, welfare, health, conservation, and policy issues surrounding the keeping of wildlife in captivity. Particular attention is paid to wildlife in zoos and aquariums, but wild animals in trade, sanctuaries, backyards, research facilities, circuses, and other forms of entertainment also receive attention. The course features outside speakers, faculty- and student-run discussions, and weekend field trips to zoos and other facilities.

**APP 1008 – Introduction to Animal Welfare Science – 3.0 credits**

This course blends readings, lectures, practical experience, discussion, and student projects to develop student understanding of various perspectives and definitions of animal welfare, methods for scientific study and evaluation of animal welfare, the effect of policy and markets on shaping of practices, and current welfare issues in areas such as animal agriculture, sport, science, and education. Students will consider aspects of assessing welfare, including stress, physical health, mental states, and quality of life and will be introduced to methods of conducting welfare assessments.

**APP 1011 – Principles of Animal Behavior and Human Activity – 3.0 credits**

In this course, we will explore how human-directed activities have impacted animal behavior in both positive and negative ways. Core principles of animal behavior will be reviewed in light of anthropogenic effects on animal behavior, adaptations, evolution, and survivability. We will review scientific methods for studying animal behavior and critically examine scientific studies. Students will develop an ethogram for a species of their choice, explore the impact of anthropogenic
activities in a sourced research paper, and design a research project to investigate some aspect of human-influenced animal behavior. This course is suitable for students new to the study of animal behavior as well as those who have taken prior coursework related to animal behavior. The course will feature outside speakers as well as faculty- and student-led discussions.

**APP 1012 – Introduction to Policy** – 3.0 credits
This lecture-discussion class is a quick introduction to the mechanisms of government with an emphasis on animal and environmental policy. Also examined are how history, culture, ethics, and the media influence the making and implementation of animal and environmental policy. (For non-MAPP students)

**APP 1014 – Applied Animal Behavior** – 3.0 credits
This course will focus on applied behavior topics of common companion, farm, and zoo animals. We will discuss animal body language and typical behavior and compare that to people’s perceptions of that behavior. Assessment of behavior and common problem behaviors will be reviewed along with effective management and modification techniques of those problems. Force-free handling and positive reinforcement training will be emphasized. We will examine abnormal behavior particularly as it relates to stress and poor welfare and design remediation, management, and modification programs to mitigate that behavior, with the goal of improving welfare. This course builds on topics covered in APP 1011 Principles of Animal Behavior and APP 1007 Wildlife in Captivity and relates to APP 1008 Introduction to Animal Welfare, but it is not necessary to have taken any of those courses nor is this a repeat of those courses. This course will be a mix of lecture, discussion, and hands-on work with animals. Students will design their own assessment and training programs, implement them, and record their progress and outcome. There will be several smaller research and writing assignments as well. Students will gain an understanding of the typical behavior of select animals, assessment techniques and indicators of poor welfare, and effective strategies for working with those animals in a variety of settings as well as appreciate the role of human companions and caretakers in the expression and perception of animal behavior.

**Topics in Animal Ethics** – 1.0 credit
This course will use a series of student exercises, presentations, and discussions to explore the application of theories of ethics and cultural construction to issues surrounding human treatment of animals. Topics will include current theories of animal ethics, cross-cultural construction and categorization of animals, the ethics of pet-keeping, the relationship of animal mind to ethical standing, breeding and genetic manipulation of domestic animals, ethical paths toward humane treatment of wildlife, and others. Assignments will include essays, visual analyses, and student presentations.

**TRANSFER OF CREDITS**
Coursework from other institutions cannot substitute for core courses in the MAPP program except for Statistics I – APP 516; students may place out if they have taken a full year of statistics. To request an exemption, submit a letter of request to the Program Director along with the course descriptions from the college or university. If exempted, students must complete 3.0 credits from another course(s).

Students wishing to take a course offered in another program, college or university may be able to register and get elective credit for the course. Permission to use such coursework in the MAPP program is granted by the MAPP Program Committee.

TIME TO DEGREE

MAPP is an accelerated, one-year (September to August) program. It is expected that students in the applied track will complete all requirements within that time. Students in the research track may complete the requirements in that time, but should expect to spend the second fall semester after enrollment completing their capstone research projects.

Students taking longer than one academic year to finish their degree pay a continuation fee at the beginning of each subsequent semester, except that research track students do not pay a continuation fee for the second fall semester following enrollment. All students have until August 15th of the second academic year to successfully complete all requirements for their degree. For applied track students, the fees assessed will be as follows: $500 for fall of the second year, $1,500 for spring of the second year, and $1,500 for summer of the second year. For research track students, the fees assessed will be $500 for spring semester of the second year and $1,500 for summer semester of the second year.

If a student cannot complete the program in the time allotted, a request may be submitted to the MAPP program committee for an extension of time; otherwise, an administrative withdrawal from the program will be processed, and the student must apply for readmission. Permission for time extensions and re-acceptance into the program after administrative withdrawal are not automatic, and a negative decision on a request may affect the student’s eligibility to receive their degree.

PROGRAM DIRECTOR, SECTION LEADERS, & MAPP PROGRAM COMMITTEE

The Program Director is the main point-of-contact for information on the policies and procedures of the program, serves as the primary academic advisor to all students in the program, and monitors student progress in conjunction with the MAPP Program Committee and the school’s Graduate Program Manager. The Program Director during 2019-20 is the CAPP Director.

MAPP students will also be assigned academic mentors at the beginning of fall semester. These mentors will provide individualized guidance throughout the
student’s academic career at CAPP. However, students are also expected to consult with other CAPP faculty for guidance in their areas of interest. The academic mentor may or may not serve as the mentor for the student’s capstone project or externship. Other Cummings faculty will also advise, mentor, and supervise students as appropriate.

The Program Director and selected other faculty who teach either a core course, core module, or regular elective in the MAPP curriculum constitute the MAPP Program Committee. The MAPP Program Committee is responsible for oversight of the MAPP curriculum and staffing and scheduling of classes, and for addressing student academic issues, including setting academic standards, evaluating student academic standing, and taking actions in response to student academic deficiencies. **It is the student’s responsibility to ensure he or she is fulfilling all academic requirements, complying with ethical standards of academic conduct, and communicating with course directors and mentors in a timely fashion.**

REGISTRATION

Students will be automatically registered each semester for their core courses by the Graduate Program Manager. For electives, each instructor establishes the enrollment for his or her course and submits class lists to the MAPP Program Coordinator in late September, who will compile the enrollments. After review by the Program Director to assure that all students have at least the minimum number of credits, the Program Coordinator will forward the compiled enrollments to the Graduate Program Manager, who will then register students in their elective courses. Students who wish to drop an elective course after enrollment are required to e-mail their instructors and copy the Program Director.

TUITION, FEES, AND FINANCIAL AID

All students are charged tuition at the beginning of Fall and Spring semesters, respectively. Tuition for the year is payable according to Tufts University guidelines. For the 2019-2020 academic year, tuition is $42,650. Tuition is subject to yearly increases. Additional student expenses include Health Insurance, which is $4,968 (billed semi-annually at $2,484) for an individual and is underwritten by HPHC Insurance Company, and the Health Administration fee, which is $250 for the 2019-2020 Academic Year.

ENROLLMENT STATUS AND LOAN DEFERMENT

Tufts University provides information regarding student enrollment status to the National Student Loan Clearinghouse, which then provides information to lenders. Federal regulations require that students be enrolled (registered) half-time or full-
time to receive and defer student loans. Information is transmitted bi-monthly to the Clearinghouse.

**ORIENTATION**

All incoming students attend a mandatory MAPP Orientation prior to the start of classes. The orientation includes obtaining ID cards, information on public safety, a campus tour, an introduction to library services, configuration of laptop computers, and a discussion of graduate life at the Center.

**VACATION POLICY AND CLASS ATTENDANCE**

The program observes all University holidays, with a winter break between fall and spring semesters, a spring mid-semester break, and a summer break between spring and summer semesters. Students should understand, however, that because much of the required work for the program is carried out independently, the absence of scheduled classes does not free them from the responsibility for working on required assignments. Any absences from class that can be reasonably anticipated require prior approval from the class instructor; it is expected that any work missed due to a class absence will be made up by the student. Students should consult course syllabi and instructors for the details of how this policy is implemented in each class.

**GRADUATION**

Students meeting the requirements for the Master of Science in Animal and Public Policy are recommended for degree status by the MAPP Program Committee to the Advanced Education Committee (AEC). The recommendation is forwarded for approval through the Executive Faculty Board (EFB). The EFB and the Dean submit the approved names to the Provost, President, and the Board of Trustees for approval. The Dean and the Board of Trustees have final approval. Diplomas are awarded on a rolling basis, typically in September, November, February, or May after students have successfully completed their academic program and been cleared by the Dean and Trustees. Commencement ceremonies are held each year.
OVERVIEW

Conservation medicine incorporates the tools and perspectives of many different scientific and medical professions to solve complex health problems such as controlling disease in wildlife populations to help protect human and animal health, and to preserve species biodiversity. Tufts Center for Conservation Medicine (TCCM) is based at the Cummings School of Veterinary Medicine at Tufts University. The Center utilizes the wealth and breadth of expertise throughout Tufts University and beyond to address complex global, regional and local health issues. Our work is designed with the ultimate goal of reaching a fuller understanding of and finding more balanced solutions for challenging complex health issues in order to ensure a more sustainable long-term future for all life on earth.

Tufts Center for Conservation Medicine offers the Master of Science in Conservation Medicine (MCM) Program to prepare students from varied backgrounds including natural and social scientists, conservationists, engineers, public health and medical professionals, veterinarians, lawyers, policy and wildlife professionals, and others for careers in conservation medicine. The MCM Program is an intensive 12-month professional master’s degree that is designed to build upon the expertise each student brings to the Program, and to provide graduates with foundational knowledge in the various contributing fields of conservation medicine, and the skills necessary for successful implementation of real world conservation efforts.

For more information about Tufts Center for Conservation Medicine, and the MS in Conservation Medicine Program please visit: http://vet.tufts.edu/ccm/ and http://vet.tufts.edu/mcm/

ACADEMIC PROGRAM

The MCM Program is administered by the Tufts Center for Conservation Medicine and the Department of Infectious Disease and Global Health in conjunction with Academic and Student Affairs, and degrees are granted by Cummings School. Course content is delivered by Tufts faculty and guest lecturers comprising prominent authorities and experts in their fields, allowing MCM students to learn, network and develop working relationships with a wide variety of conservation medicine leaders and their allies.

The core curriculum consists of seminar style and hands-on laboratory or field-based courses developed specifically for the Program, along with a Journal Club and an individual Case Study. In addition, students must choose at least two credits of elective courses from the wide variety of course options offered across
the University and complete a four-week (minimum) Externship in a conservation medicine related setting. Elective choice, the Externship and the independent Case Study provide students with the opportunity to customize the Program to their individual educational and professional goals, deepen their knowledge in areas of special interest, and gain real world contextual experience. No thesis is required.

During Fall and Spring semesters classes are typically scheduled during business hours Monday through Friday, although electives, field trips, and other special events may be scheduled outside those hours, including occasional Saturdays. Students are expected to attend all MCM classes, colloquia, fieldtrips, and special events (see Attendance policy below). The curriculum is rigorous and accelerated, and students are advised to carefully manage their time and involvement in extracurricular activities, including employment.

Graduates of this program will be uniquely prepared to enter a wide variety of health and policy careers in the private, public, and non-profit sectors that, increasingly, are being filled by individuals with the broad perspective and interdisciplinary skills that training in conservation medicine provides. Conservation medicine career counseling and opportunities for networking and building career relations are part of the MCM Program.
MEETING THE MASTERS IN CONSERVATION MEDICINE OVERARCHING PROGRAM GOALS AND OBJECTIVES

D = Directly meets learning objective; P = Partially meeting learning objective; I = Indirectly meets learning objective; * Coverage depends on topic or experience selected

<table>
<thead>
<tr>
<th>Overarching Program Goals and Learning Objectives</th>
<th>Course</th>
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<tbody>
<tr>
<td>A. Principles of Conservation Medicine</td>
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</tr>
<tr>
<td>1. Students will gain a comprehensive understanding of conservation medicine in a one health context and be able to articulate its value in tackling global health issues.</td>
<td>P</td>
</tr>
<tr>
<td>2. Students will be able to articulate the value of protecting biodiversity as an essential element of global one health.</td>
<td>D</td>
</tr>
<tr>
<td>3. Students will be able to identify the critical components or inputs from human, animal and ecosystem health perspectives toward a given issue.</td>
<td>D</td>
</tr>
<tr>
<td>4. Students will become familiar with the the language, tools and approaches of the various contributing disciplines and will be able to apply this knowledge in formulating a team approach to conservation medicine problems.</td>
<td>D</td>
</tr>
<tr>
<td>5. Students will gain a working knowledge of current conservation medicine challenges and will be able to use this knowledge in approaching new and evolving issues.</td>
<td>D</td>
</tr>
<tr>
<td>6. Students will learn to balance the need for evidence with the need to incorporate the political process in the practice of conservation medicine.</td>
<td>P</td>
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B. Applying Conservation Medicine

Students will become familiar with the process of developing and using public policy as part of the practice of conservation medicine (applying conservation medicine in a real world context)

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>1. Students will gain knowledge and skills in techniques for effecting change, including the role of advocacy, science informing policy, working within various decision making systems and incorporating behavior change in their work.</td>
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<tr>
<td>2. Students will gain knowledge in existing frameworks for constructing and implementing wildlife policy and conservation medicine principles in both national and international settings.</td>
</tr>
<tr>
<td>3. Students will gain knowledge in existing frameworks for constructing and implementing agricultural and public health policy on a local (community), national and international level.</td>
</tr>
<tr>
<td>4. Students will develop skills necessary for working effectively with agencies, governments, non-governmental partners and grass-roots community organizations as part of their work in conservation medicine.</td>
</tr>
<tr>
<td>Overarching Goals and Learning Objectives</td>
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</table>

### C. Interdisciplinary work/communication skills

Students will develop strong leadership and interdisciplinary teamwork skills and will be able to communicate their work to a variety of audiences.

1. Students will model and develop competency in interdisciplinary teamwork skills
2. Students will model and develop competency in a variety of communication skills through various media and to a broad range of audiences.
3. Students will model and develop competency in networking skills to facilitate their own development in keeping up with new knowledge/events, and identifying and engaging collaborators.
4. Students will model and develop competency in conflict negotiation skills as applied to a variety of settings.
5. Students will model and develop leadership skills required for a successful career in conservation medicine.
6. Students will understand the importance of professional ethics in their work and future career in conservation medicine.

### D. Fundamental themes in Conservation Medicine

Students will have a working knowledge of the following topics in conservation medicine:

1. Emerging Diseases
2. Globalization
3. Climate change
4. Energy
5. Water
6. Environmental degradation/contamination
7. Antibiotic resistance
8. Encroachment into wildlife habitat.
9. Vector Borne Diseases
10. Zoonoses and anthrozoonoses
11. Biodiversity and relationship to disease
12. Human/Wildlife/Environmental Conflict
13. Cultural attitudes towards animals & health
14. Ethics
15. Human, animal and environmental determinants/indicators of health
16. Economics and politics
17. Agricultural systems and impacts on health
18. Trade
19. Development
20. Sustainability
21. Animal Welfare
22. Emergency/Disaster planning and response
DEGREE REQUIREMENTS

Required Core Course Policy

There are nine core courses in the MCM curriculum, and students must take each required course together as a cohort to meet the requirements for graduation from the MCM Program. Each core course has been specifically designed to cover Conservation Medicine content and builds upon content provided in previous courses. Students who have a strong background in one or more courses are encouraged to take a leadership position by providing support and advice to their classmates and share knowledge gained from previous experience with the material.

<table>
<thead>
<tr>
<th>Fall (14.5 credits)</th>
<th>Spring (11.5 credits)</th>
</tr>
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<tbody>
<tr>
<td>MCM 580 Ecology and Conservation Biology (Q1)</td>
<td>MCM 586 Human Dimensions of Conservation Medicine (Q3)</td>
</tr>
<tr>
<td>3 credits</td>
<td>3 credits</td>
</tr>
<tr>
<td>MCM 581 Health, Disease and the Environment (Q2)</td>
<td>MCM 587 Engineered Solutions (Q4)</td>
</tr>
<tr>
<td>3 credits</td>
<td>2 credits</td>
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<tr>
<td>MCM 592 Fundamentals of Biostatistics (Q1)</td>
<td>MCM 588 Research Skills II – Epidemiology and Surveillance Methods (Q3)</td>
</tr>
<tr>
<td>1.5 credits</td>
<td>2 credits</td>
</tr>
<tr>
<td>MCM 582 Research Skills I - Systematic Review &amp; Analysis (Q1)</td>
<td>MCM 589 Project Management and Communication (Q4)</td>
</tr>
<tr>
<td>2 credits</td>
<td>2 credits</td>
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<tr>
<td>MCM 583 Field and Laboratory Techniques (Q2)</td>
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<td>2 credits</td>
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<td>MCM 591 GIS for Cons Med (fall)</td>
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<td>2 credits</td>
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<tr>
<td>MCM 584 Journal Club (fall)</td>
<td>MCM 584 Journal Club (spring)</td>
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<tr>
<td>0.5 credit</td>
<td>0.5 credit</td>
</tr>
<tr>
<td>MCM 585 Case Study (fall)</td>
<td>MCM 585 Case Study (spring)</td>
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<tr>
<td>0.5 credits</td>
<td>2 credits</td>
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<tr>
<td>Fall or Spring (2 credits)</td>
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<tr>
<td>Elective Course(s)</td>
<td></td>
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<tr>
<td>2 credits required*</td>
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<table>
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<tr>
<th>Winter – January midterm and Summer Semesters (5 credits)</th>
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<tbody>
<tr>
<td>MCM 590 Externship (Jan or summer)</td>
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<tr>
<td>3 credits</td>
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</table>

*Additional elective credits may be taken with permission.

Students must complete 33 credits of Program work as outlined in the chart above. All core MCM courses are required (no exceptions) and are graded on an A-F (+/-) basis;
the Externship, Case Study and Journal Club are graded pass/fail. The 3.0 credit Externship is ideally completed during the January break though completion during the Summer semester can be individually approved as necessary. The Case Study is 0.5 credits in fall and 2.0 credits per semester for Spring and Summer terms for a total of 4.5 credits. **Students who do not make sufficient Case Study progress during the summer are subject to course failure and will be required to retake that course and pay additional course fees and continuation fees for subsequent semester(s).** In addition to the core curriculum, each student will be expected to take at least one elective to meet the required Program total of 2.0 elective credits (approximately 30-60 contact hours total). Options to meet these 2.0 credits at other times will be considered if appropriate. Electives are graded as required by the particular course and school at which the course is offered. Elective course choices and Externship selections must be approved by the MCM Program Director or the Assistant Director.

**Students must maintain a cumulative grade point average of 3.0 or greater** to be eligible for continuation in the program and graduate with a degree. Students must earn course grades of B- or above to demonstrate satisfactory comprehension of course material taught in the Graduate Programs curricula, including graded electives. **A final grade of “C+” or lower in a course constitutes a failure for that course.** For additional information, refer to Academic Standards for Graduate Programs in this handbook and the MCM Grading Policy outlined below. Students who struggle with a course or courses are encouraged to seek help early to avoid the consequences of poor academic performance.

**BRIEF COURSE DESCRIPTIONS**

**MCM 580 Ecology and Conservation Biology** – 3.0 credits, first quarter
The concept that the health of the environment influences the health of humans and animals means that all students must understand fundamental principles of ecology and conservation biology. We review the foundational knowledge of how biodiversity and ecosystems foster healthy human and animal populations, through an understanding of population, community, and landscape ecology, and ecosystem resilience and stability. The conservation biology themes of rarity, demography, conservation genetics, and methods of conserving small populations are presented with the focus on sustaining long-term population viability. Students explore these concepts and apply knowledge through class discussion and presentations of case studies of current issues in the field.

**MCM 581 Health, Disease and the Environment** – 3.0 credits, second quarter
A basic and broad understanding of and fluency with human, animal and environmental health and disease is critical in conservation medicine. This class will review disease drivers and mechanisms, host defenses against disease, the role of vectors in spreading and maintaining disease, and basic principles of disease ecology. This class will review some current diseases of major concern for conservation medicine and ecosystem health. Emphasis will be placed on the integration of animal, human, and environmental health, and the environmental, economic, and anthropogenic factors promoting the emergence or persistence of infectious diseases and other major health threats.

**MCM 582 Research Skills I - Systematic Review and Analysis** – 2.0 credits, first quarter
In this course students will learn how to access, organize, analyze, interpret, and communicate data from existing sources of published primary research. Students will learn the process of conducting and writing a literature review on a conservation medicine topic.
MCM 592 Fundamentals of Biostatistics – 1.5 credits, first quarter
This course provides an efficient overview of the fundamental principles of biostatistics. In this course we will explore topics related to experimental design, sampling, descriptive statistics, hypothesis testing and statistical inference. We will cover contingency table analysis, t-tests, analysis of variance, correlation, linear regression, as well as nonparametric statistical methods. Throughout the course we will emphasize the application and interpretation of statistics within a biological context, with a specific effort to use data and examples that focus on topics relative to the other coursework. Students will gain a working understanding of statistical analyses through use of the software SPSS to work through problem sets and assignments.

MCM 583 Field and Laboratory Techniques – 2.0 credits, second quarter
Conservation medicine practice requires empirical health assessments of individuals and populations. Through this course students will become familiar with commonly used field and laboratory methods used to study populations and to assess health. Through field experiences students will be introduced to methods for estimating the size, distributions, and movements of populations for a range of taxa including mammals, birds and aquatic vertebrates. Animal handling and safety, sample collection and analysis, permitting, and field project planning are covered through both practical experience and lecture material. Students will participate in practical laboratory sessions using common research and diagnostics techniques including pathology, immunology, microbiology, molecular genetics, and parasitology.

MCM 584 Journal Club - 0.5 credits per semester (1 credit total, pass/fail grading)
Journal Club will familiarize students with topical scientific articles relevant to conservation medicine, help students become conversant in the language of different contributing disciplines and enhance analytical reading and critique skills. Journal articles will be coordinated with course material. Students take Journal Club in both the Fall and Spring semesters.

MCM 585 Case Study – 0.5 - 2 credits per semester, including Summer (4.5 credits total, pass/fail grading)
Each student will undertake an intensive, year-long Case Study project to comprehensively analyze a challenging conservation medicine problem. The Case Study will culminate in a capstone project presentation and written report assessing the problem and recommending strategies to address identified challenges. Based on their own knowledge, skills and interests, each student will identify a relevant issue and be charged with synthesizing information and ideas from their coursework throughout the year and from a collaborative team involving appropriate faculty both within the University and through our network of conservation medicine partners. Completed Case Study reports will be evaluated by project partners and Tufts mentors. Students register for the Case Study each semester (Fall, Spring and Summer), complete their comprehensive written report during the summer, and present their Case Study in a special campus seminar in September of their graduating year.

MCM 586 Human Dimensions of Conservation Medicine – 3.0 credits, third quarter
Human political, economic, and cultural considerations help create the conditions that govern animal, human, and environmental health, and establish the context in which conservation medicine solutions are implemented. This course will examine the roles of economics, local, national and international governmental regulations, treaties and policies. It will also explore the influences that communities and local culture have on agriculture, trade, conservation, environment, land use, and public health.
MCM 587 Engineered Solutions – 2.0 credits, fourth quarter
Innovation and applied technology will play an increasingly significant role in developing sustainable solutions for many conservation medicine issues. Conservation professionals need to understand the options and potential of engineered solutions in both natural and built environments. In this course students will work within the context of systems engineering as a basis for problem solving. Applied topics will include: ecological engineering, hydrology, remote sensing (satellite, biological and chemical), engineered natural systems and environmental impact assessment methodologies.

MCM 588 Research Skills II – Epidemiology & Surveillance Methods – 2.0 credits, third quarter
An understanding of epidemiology and surveillance methods is integral for collecting, analyzing, and presenting health and disease data. Fundamental concepts of epidemiology will be presented including study design, disease outbreak investigation, and sources of error. Surveillance methods and systems will be discussed with opportunities for students to practice the design, evaluation, analysis, and integration of surveillance systems in a conservation medicine context. This course will highlight and develop student skills in various web-based technologies for data capture, analysis, and visualization.

MCM 589 Project Management and Communication – 2.0 credits, fourth quarter
This course will cover important communication skills that will enhance collaboration and dissemination of information to stakeholders (scientific community, public and government agencies) as well as the practical skills needed to initiate, fund, and manage research projects. Style and strategies for publication in scientific and lay journals, delivery of legislative briefings, and use of other media will be explored. Project development topics will include team building, seeking funders, grant writing, project development and management, and program and policy evaluation. Sessions on collaborative writing, data visualization, team management and leadership will be included.

MCM 590 Externship – 3.0 credits (pass/fail grading), winter break or summer
Students will have the opportunity to immerse themselves in conservation medicine work in their choice of a wide variety of settings for four weeks during the program year. Externships will provide students with insight into how conservation medicine issues are addressed and how interdisciplinary approaches can be applied in a real-world setting. Students can participate in field, clinical, analytical, laboratory, project management, policy or other experiences of their choosing that meet elective requirement and are approved by the Program Director or Assistant Director. Externships will be completed preferably during the winter break, though completion during the summer can be accommodated with permission, depending upon the opportunity.

MCM 591 GIS for Conservation Medicine – 2.0 credits, fall semester
This course will introduce students to the fundamental concepts of the Geographic Information Systems (GIS) as it relates to the one health paradigm and veterinary health. This course is designed for novice GIS students with specific focus on mapping and spatial analysis for human, animal, and environmental health applications. Examples include vulnerability analyses of animal habitats, monitoring disease outbreaks for public health, calculating deforestation and land cover change, site analysis for alternative energy sources, and many more. Technical topics to be covered include GIS data discovery; GPS field data collection; data structure and management; principles of cartographic visualization and design; and basic overlay tools, analysis and modeling. Classes will consist of both a lecture segment and an in-class activity/demonstration.
Students will complete weekly tutorials or project assignments and conclude the semester with a final mapping/analysis project of their choosing.

**MCM 517 Elective Courses – 2.0 credits**
Students are required to select one or more elective courses to augment the core curriculum and fulfill their own educational and professional goals. Students may choose from a wide variety of courses offered across the University, including the Graduate School of Arts and Sciences, School of Engineering, Fletcher School, Medical School, Sackler School of Graduate Biomedical Sciences, Friedman School of Nutrition Science and Policy, and the Cummings School of Veterinary Medicine including the Center for Animals and Public Policy. With proper arrangements and limitations courses can also be taken from the Boston area consortium schools - Boston University, Boston College, and Brandeis. Selections must fit within the scheduled time allotted to complete these electives. Courses available for electives vary by semester and year.

**TRANSFER OF CREDITS**

Prior coursework from other institutions is generally not transferable into the MCM Program. However, students wishing to take a course offered in another program, college or university may be able to register and get elective credit for the course. Permission to use such coursework in the MCM Program is granted by the MCM Program Director in consultation with the Graduate Program Manager.

**TIME TO DEGREE**

The MCM Program is an accelerated, 12-month (September to August) program. All degree requirements must be completed within the twelve-month academic year.

If a student cannot complete the Program in the time allotted, a formal request may be submitted for an extension to the Graduate Programs office (see related section of this handbook); otherwise, an administrative withdrawal from the Program will be processed, and the student must apply for readmission and pay a readmission fee ($500). Permission for extensions, leave, or withdrawal is not automatic, and decisions may affect the student’s eligibility to receive their degree.

Students taking longer than one academic year to finish their degree pay a continuation fee at the beginning of each semester. Students have until mid-August of the year following program enrollment to successfully complete all requirements for their degree. The continuation fee(s) will be assessed as follows: $500 for Fall of the second year, $1,500 for Spring of the second year, and $1,500 for Summer of the second year. Additional Case Study course fees ($1500) may apply to any students who do not make sufficient progress on their Case Study project during the summer semester.

**PROGRAM DIRECTOR, ASSISTANT DIRECTOR, FACULTY, & STUDENT MENTORSHIP**

The MCM Program Director, Assistant Director and Staff Assistant are the main points-of-contact for information on the policies and procedures of the Program. The Director and Assistant Director (together = ‘Program Directors’) serve as the primary
academic advisors to all students in the Program, monitor student progress in conjunction with the School’s Graduate Program Manager, and must approve all elective course selections, Externship, and independent Case Study proposals. The Program Director for 2019-2020 is Dr. Chris Whittier; the Assistant Director is Dr. Alison Robbins, and Tracey Glover the MCM Staff Assistant.

During the first weeks of the Program each student will be assigned an **MCM faculty mentor** who is a Tufts MCM Program faculty member and may be the MCM Director or Assistant Director. Efforts will be made to match student focus and interest with a complimentary mentor. Faculty mentors assist students with their individual goals and help identify potential peer contributors to the student’s program and Case Study including their **Case Study mentor**. Case Study mentors have the significant responsibility of guiding students through completion of their Case Studies including reading and accepting their written Case Study reports. A student may have the same person serve as both their faculty and Case Study mentor, and either or both of those mentors may be the MCM Director or Assistant Director.

The Program Director and Assistant Director and the faculty mentors constitute the Student Advisory Committee (SAC). The SAC monitors student progress and consults with other contributing faculty and Case Study mentor as necessary. **It is the student’s responsibility to ensure they are meeting with their mentor(s) on a regular basis and to track their own elective credits to ensure they complete the requirements.**

**REGISTRATION**

Students will be registered for their core MCM classes, including Journal Club and Externship, by the MCM Program Assistant at the beginning of each semester. Each student will be required to complete an elective registration form for each elective in which they wish to be registered and obtain the required signatures. Completed elective registration forms must be submitted to the MCM Program Assistant within 3 weeks of the course start. Students will be automatically registered for their core courses by the Graduate Program Manager. Elective selections must fit within the scheduled time allotted to complete these electives and be pre-approved by the Program Directors. Courses available for electives vary by semester and year.

**TUITION, FEES, AND FINANCIAL AID**

All students are charged tuition at the beginning of Fall and Spring semesters, respectively. Tuition for the year is payable according to Tufts University guidelines. For the 2019-2020 academic year, tuition is $42,650. Tuition is subject to yearly increases. Additional student expenses include Health Insurance, which is $4,968 (billed semi-annually at $2,484 for an individual and is underwritten by HPHC Insurance Company, and the Health Administration fee, which is $250 for the 2019-2020 Academic Year.

Information on the cost of education as well as the Cummings School refund policy can be found on the Tuition and Fees webpage at [http://vet.tufts.edu/admissions/financial-aid/tuition-and-fees/](http://vet.tufts.edu/admissions/financial-aid/tuition-and-fees/)
ENROLLMENT STATUS AND LOAN DEFERMENT

Tufts University provides information regarding student enrollment status to the National Student Loan Clearinghouse, which then provides information to lenders. Federal regulations require that students be enrolled (registered) half-time or full-time to receive and defer student loans. This applies equally during MCM continuation so that students are expected to be working at least half-time on any remaining MCM work (i.e. Case Studies) if they want to remain in loan deferment status. Information is transmitted bi-monthly to the Clearinghouse.

ORIENTATION

All incoming students attend a mandatory MCM General Orientation prior to the start of classes. This orientation includes obtaining ID cards, information on public safety, a campus tour, an introduction to library services, configuration of laptop computers, and a discussion of graduate life at Tufts. Following this general orientation there will also be a mandatory two-day MCM Program Orientation prior to the start of classes; this orientation covers information specific to the MCM Program and includes a leadership workshops and discussion sessions on basic concepts in conservation medicine.

VACATION POLICY

The Program observes all University holidays, with a winter break between Fall and Spring semesters, a spring mid-semester break, and a summer break between Spring and Summer semesters. Students should understand, however, that because much of the required work for the Program is carried out independently, the absence of scheduled classes does not free them from working on their Case Study or other required assignments or completing their externship requirement.

ATTENDANCE POLICY

Students are required to attend all lecture and laboratory sessions in the MCM Program, and grade penalties may be imposed for unexcused absences. Students are expected to attend all scheduled classes as published in the MCM Program year calendar from August through May. Additional required class dates and times may be added over the year to accommodate weather cancellations, faculty availability, or other events that cannot be controlled.

Weather Cancellation
The MCM Program follows the Tufts University policy on weather cancellation or snow days. On days with poor weather, students are expected to attend class unless the campus where the class meets has been closed. For weather closing information: https://emergency.tufts.edu/weather/closing/.

Leave/Absence
Personal days—with prior permission from the MCM Program Directors and any relevant Course Directors, students may be allowed to schedule medical appointments, job, and academic interviews that cannot be scheduled outside of class time. These appointments
must not coincide with exams, final presentations, group presentations, field trips or other special opportunities within the schedule. Students should plan on attending partial days of class when possible.

1. **Sick days** - students may miss class when sick but are still responsible for all materials presented in any missed class. Students should contact the relevant Course Director(s) and Program Directors to let them know of the absence beforehand. When feasible, ill students may attend class remotely. Absences longer than 3 consecutive class days require a request in writing and may be considered a leave as described below. Doctor’s notes may be required at the discretion of the Program Directors.

2. **Emergency Leave** – students may request short duration emergency leave only for illness, death in the family or other similar unexpected circumstances. Emergency leave is granted at the discretion of the Program Directors subject to the ability of the student to continue the on-going curriculum upon return.

3. **Medical Leave** - students may request a leave for medical reasons and must submit a letter from his/her physician attesting to the validity of the leave request. Before approval is granted the Dean may consult with University and/or outside experts, as deemed necessary.

4. **School Initiated Leave** - In special situations, where a student’s behavior presents a risk of harm to the community or them self or where the student fails to meet the minimum requirements of the MCM Program, the Dean may place the student on a school-initiated leave of absence, medical or otherwise. The decision to readmit a student after a leave will be based on evidence of the student’s recovery and/or demonstrated ability to resume studies at Cummings School. The Dean may consult with University and/or outside experts, as they deem necessary in order to evaluate the students’ readiness to return to Cummings School.

**GRADING POLICY**

*Please refer to the Academic Standards document found under the Policies and Procedures section of the Graduate Student Handbook and in your orientation folder for complete details.*

**Grading**

*Students must maintain a cumulative grade point average of 3.0 or greater* to be eligible for continuation in the program and graduate with a degree. Students must earn course grades of B- or above to demonstrate satisfactory comprehension of course material taught in the graduate programs curricula, including graded electives. *A final grade of “C+” or lower in a course constitutes a failure for that course.* For additional information, refer to Academic Standards for Graduate Programs in this handbook and the MCM Grading Policy outlined below. Students who struggle with a course or courses are encouraged to seek help early to avoid the consequences of poor academic performance.

Grades are reported on the letter system, A+ through F. Generally, grades are calculated numerically as per the chart below, and converted to letter grades for entry into the transcript record system (SIS).
**Instructor grading and feedback**

Course Directors in the MCM Program set their own grading policy and provide course grades, within University guidelines (which allow for grade scaling). Students receive variable feedback on assignments from instructors in a variety of ways including corrections on tests and written work, oral and/or written comments on presentations, grading rubrics, and detailed written comments on assignments. MCM students are expected to read course syllabi for descriptions of the assignments and due dates, grading policies, and work expectations. Students are also responsible for incorporating the feedback into revisions of work handed in for grading. Active class participation is expected in all MCM courses and many courses include participation as part of the course grade. Students are required to attend all lecture and laboratory sessions in the MCM Program, and grade penalties may be imposed for unexcused absences. Course Director expectations and grades for class participation may vary and should be outlined in course syllabi and communicated by Course Directors at the beginning of the course.

**Grade Changes for Course**

Course Directors in the MCM Program set their own grading policy and provide course grades, within University guidelines (which allow for grade scaling). If a student believes that they have not received an appropriate grade for a course, the following steps may be taken:

If a student believes that she or he has not received an appropriate grade, the following steps may be taken:

1. The student discusses the matter with the Course Director.
2. If the student does not feel that the matter was resolved, the student discusses the matter with the Program Director and/or the Graduate Program Manager.
3. The Program Director and/or Graduate Program Manager will bring the matter to the Program Committee for recommendation to the AEC. The final decision on the grade awarded to the student will be made by the AEC.

Students should be aware that the Course Director has only fourteen (14) working days after announcing the final grades to make a grade change. After this time, any proposed grade changes must be reviewed and approved by the AEC. The student has the right to petition the AEC to dispute issues pertaining to course grading policy.

**Re-examination Grade**

MCM students must receive a grade of B- or better to receive credit for a course. For students receiving a grade of C+ or below in a course, re-examinations or make-up coursework may be authorized by a consensus of the Course Director, student’s advisor, and MCM Program. The MCM Program Committee and the AEC are notified of any such allowances. After re-examination, the final official course grade may not exceed the level of “B.” The makeup grade is recorded on the transcript along with a notation that the new grade was achieved through make-up work. The new grade is used for GPA calculation and the student is given course credit. However, the original grade is retained on the transcript. If the final grade is a C+ or below, this is a course failure and the student receives no credit.
Course Failure
If the student's record is otherwise satisfactory, failure in one course (C+ or below) would normally result in a MCM Program Committee recommendation that the course be retaken (which could be the next time offered in the following academic year). If a student fails a course, the AEC may allow the student to remain enrolled in the MCM Program, but the student would be required to demonstrate competence in the course to the satisfaction of the Course Director and the MCM Program Director. This condition for continued enrollment must ordinarily be satisfied prior to the end of the academic year (August). Two course failures result in a review of the student's status by the MCM Program Committee with a recommendation to the AEC regarding academic dismissal.

Appeals
Promotion status decisions may be appealed to the Executive Faculty Board (EFB). The student must submit to the Secretary of the EFB his or her written request for a hearing at a regularly scheduled EFB meeting. The request must clearly state the issue to be heard. The presiding officer of the EFB has the power to grant or deny such a request. The petitioner may submit the request for hearing to the full Board for consideration. With the concurrence of one-third of the EFB members present at a meeting, the request for a hearing can be approved.

GRADUATION
Students meeting the requirements for the Master of Science in Conservation Medicine are recommended for degree status to the Advanced Education Committee (AEC). The recommendation is forwarded for approval through the Executive Faculty Board (EFB). The EFB and the Dean submit the approved names to the Provost, President, and the Board of Trustees for approval. The Dean and the Board of Trustees have final approval. Diplomas are awarded on a rolling basis, typically in August, November, February, or May after students have successfully completed their academic program and been cleared by the Dean and Trustees. Because of the nature of the 12-month MCM program, students complete the degree in August (at the earliest) and are eligible to participate in the following May graduation ceremony.
VI. MASTER OF SCIENCE IN INFECTIOUS DISEASE AND GLOBAL HEALTH

OVERVIEW

The Department of Infectious Disease and Global Health (DIDGH) at Cummings School of Veterinary Medicine houses an established and productive research program on various infectious agents and their vectors. The research at DIDGH is focused on host-pathogen interaction, development of immune-based and molecular therapies against pathogens and toxin-mediated diseases, development of vaccines, genomics, diagnostics, and epidemiology. The types of infectious agents investigated include enteric, respiratory, zoonotic, vector-borne and parasitic pathogens.

The Master of Science in Infectious Disease and Global Health (MS-IDGH) degree program is a one-year degree program designed to provide comprehensive knowledge and skills to graduate students that are interested in pursuing a career in infectious disease, and related areas of disease management, transmission, prevention and treatment. This degree is intended to prepare students to join the workforce that requires substantial knowledge and training in laboratory and field research environment or in settings where specialized skills in infectious diseases are required. The didactic courses and practical training will be administered primarily by faculty of the Department of Infectious Disease and Global Health (DIDGH), and the MS degree will be awarded through Cummings School of Veterinary Medicine at Tufts University. Faculty from the Medford Campus and from the Sackler School, and the Tufts Medical School, will deliver lectures in their area of expertise. Outside experts and guest lecturers will also deliver lectures.

ACADEMIC PROGRAM

The MS-IDGH requires three semesters of core coursework in residence consecutively taught in the fall, spring and summer semesters. The holistic curriculum provides comprehensive understanding of fundamental aspects of major domestic and global infectious diseases of humans and animals, and other related fields, including immunology, vaccinology, molecular biology and epidemiology. The coursework also develops your skills in leadership, critical analysis of scientific literature, writing lab reports, biosafety, food safety and other associated areas. The program provides strong training in laboratory techniques used in immunology, diagnostics, immunotherapeutics, molecular biology, epidemiology and microbiology. A unique course on animal models will provide hands-on experience with studying infections and evaluating immunotherapies in vivo.

As part of the course work, each student will also develop, write and present a research assignment related to infectious diseases. The student will investigate and understand in depth a particular pathogen, identifying gaps in knowledge, and outline an experimental plan to address one of the unanswered questions surrounding that pathogen. Students will get the opportunity to work in their mentors’ laboratories, think independently, read and critically analyze scientific literature, develop oral and written communication skills, and appreciate the research process.

Each student will be assigned a mentor who is a Tufts MS-IDGH program faculty member. Efforts will be made to match student focus with appropriate faculty expertise, but this is contingent upon mentor availability. Faculty mentors will meet regularly with their mentees to monitor their academic progress. Mentors will assist students with their individual goals, and
selection of journal club papers and presentations. Mentors will also advise students with selecting, developing and writing the research assignment during the summer semester, and assist them in finding post graduate opportunities. Mentors will regularly update the Program Director and the Graduate Program Manager regarding the performance and academic progress of their mentees who will then update the MS-IDGH Program Committee.

**MS-IDGH PROGRAM OUTCOMES**

The overarching goal of the MS Program in Infectious Disease and Global Health (MS IDGH) is to provide graduates with the foundational knowledge and tangible skills needed to contribute to advancing knowledge and research in infectious agents and the diseases they cause on a global scale. Graduates achieve this goal by either entering the biomedical and health sciences workforce upon graduation from the program, or by continuing to doctoral level training in research, medicine, and/or public health.

We have identified seven competencies necessary to achieve that goal.


2. Graduates exhibit familiarity with and understanding of the essentials of food safety, biotechnology, biosafety and regulatory compliance, laboratory management, and Good Laboratory Practice (GLP).

3. Graduates develop a deep understanding of and robust practical experience in basic molecular, microbiology and immunology techniques used in infectious disease research, diagnostics and epidemiology.

4. Graduates develop competency in the safe handling of infectious agents and toxins, and in the safe and humane use of animal models for infectious disease research.

5. Graduates understand the importance of maintaining high ethical standards and personal integrity in all aspects of an advanced degree or career in infectious disease research and the related health sciences.

6. Graduates are able to find and critically evaluate information in the scientific literature and public databases, integrate concepts derived from these sources to identify a research problem and develop an experimental approach to address the problem, and write a research assignment.

7. Graduates can communicate scientific information effectively to diverse audiences including students, scientific specialists and the general public, using a variety of media and formats.

Goals and objectives were determined by program development faculty as being key for MS IDGH graduates who routinely enter the biomedical and health sciences workforce upon graduation, or who continue to doctoral level training in research, human or veterinary medicine, and/or public health. the MS IDGH Program Committee and additional faculty will be working with CELT to flesh out these outcomes and develop metrics for their assessment and use.
DEGREE REQUIREMENTS

Students must complete a minimum of 34 credits of program work as outlined in the chart below. The following courses are graded on a Pass/Fail basis: 1) IDGH 542 Research Training with Lab Rotation, 2) IDGH 546 Journal Club, and IDGH 561 Food Safety. All other courses are graded on an A-F (+/-) basis.

Students must maintain a 3.0 (B) average in the program to remain in good standing. Students may receive a grade of B- in a course; however, a program cumulative average of 3.0 must be maintained.

A final grade of C+ or lower in a course constitutes a failure for that course.

For additional information please refer to Academic Standards for Graduate Programs in this Graduate Student Handbook.

Overview of Courses in the MS-IDGH Program

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<th>Fall</th>
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<td>IDGH 540 Infectious Diseases of Humans and Animals I 4.5 credits</td>
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<td>IDGH 541 Applied Immunology and Vaccinology 3 credits</td>
<td>IDGH 548 Microbial Molecular Biology 1.5 credits</td>
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<td>IDGH 544 Fundamentals of Biostatistics 1.5 credits</td>
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<td>IDGH 572 Introduction to Global Health 1.0 credits</td>
<td>IDGH 565 Global Health and Threats of Emerging Pandemics 1.0 credit</td>
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<td>IDGH 568 Principles of Laboratory Management and Biosafety 0.5 credit</td>
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<td>IDGH 571 Bioterrorism: Risks and Defense Strategies 0.5 credits</td>
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<tr>
<td>Electives</td>
<td>IDGH 1001 Bioinformatics 0.5 credit OR IDGH 1002 Applications of Biotechnology 0.5 credit</td>
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<td>13.5 credits</td>
<td>13.5 credits</td>
<td>7 credits</td>
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COURSE DESCRIPTIONS

IDGH 540 – Infectious Diseases of Humans and Animals I – 4.5 credits
Infectious Diseases of Humans and Animals I covers important infectious disease in humans and animals. Part I includes five topically related Units: 1) Introduction; 2) Respiratory Tract Unit; 3) Gastrointestinal Tract Unit; 4) Urogenital Tract Unit; and 5) Disease Ecology Unit. For each body systems-focused unit, normal anatomy and physiology are first reviewed. Additional lectures focus on cellular and molecular targets of infection, host immune and inflammatory responses, and disease-related lesions. The Disease Ecology Unit focuses on species and population interactions and environmental aspects that influence the patterns of disease. Reading from texts, published research papers, homework, student presentations and projects round out the material.

IDGH 541 – Applied Immunology and Vaccinology – 3.0 credits
This course will teach the principles of immunology and comparative immunology and then apply them to understand immune responses against intracellular and extracellular infectious agents, immunotherapies, immunodiagnostics, and immune reactions and disorders. In addition, the course will examine (a) how the immune system can be manipulated in order to benefit the animal, (b) how knowledge of the immune response against an infectious agent is applied to designing and developing effective vaccines, and (c) what are the vaccine delivery strategies, and challenge and obstacles in developing effective vaccines. Problem-based sessions are incorporated for discussing and understanding of basic and applied aspects of immunology and enhancing group collaboration and communication.

IDGH 543 – Microbiology and Immunology Techniques – 2.5 credits
Students will learn theoretical basis and practical application of a variety of immunological and microbiological techniques commonly used in research, clinical diagnosis of diseases, epidemiology, and development of diagnostics, therapy and vaccine. Specifically, students will learn how to utilize ELISA to determine antibody responses or concentration of a target molecule in a biological sample, immunofluorescence to identify a pathogen, flow cytometry to characterize lymphocyte subset responses, gel electrophoresis to determine purity of a protein, cell culture to test toxin-neutralizing ability of an antibody, etc. They will also learn to identify bacteria, fungi and parasites. In addition, students will learn sterile technique, including sterile tissue culture work and sterile preparation of glassware & reagents, and how to handle biomedical waste. A few of the techniques are organized to give students a research-like experience (on a small scale) on how to test and evaluate an antibody molecule with the aim of developing a human monoclonal antibody (HuMAb) based prophylaxis or therapy against a toxin-mediated disease.

IDGH 544 – Fundamentals of Biostatics – 1.5 credits
Introductory statistics will be learned using an active approach, emphasizing practical applications of statistical concepts. Students will gain experience in analyzing data sets and presenting data. In addition, students will become familiar with using specialized programs for more advanced statistics, such as SPSS. Laptop computers are required.

IDGH 545 – Research Ethics – 0.5 credit
This course introduces students to the ethical issues, professional standards, and norms of ethical infectious disease research, from laboratory research to research out in communities. Students will learn the historical origin of current ethical standards and norms in biomedical research, institutional procedures and policies governing research with animal and human subjects, standards of practices for designing ethical research studies outside the US, and ethical
issues in infectious disease control, including ethical issues that arise from public health emergencies. This class is designed as a 10 hour, ½ credit course.

**IDGH 546 – Journal Club – 0.5 credit**
Students will present peer-reviewed research papers (not review articles) relevant to infectious disease. All students will be required to thoroughly study the article before the Journal Club. Papers will cover diverse aspects of infectious diseases and be chosen via consultation with students' individual faculty mentors and the Course Director. The presentations will be PowerPoint-based focused on critical analysis of the results/data and evaluation of the scientific merit of the paper and stimulating discussion of the paper and related literature. Students will be required to discuss strengths and weaknesses of the papers they present. Students will take Journal Club in both the Fall and Spring semesters.

**IDGH 547 – Infectious Diseases of Humans and Animals II – 3.0 credits**
A systems-based approach will be utilized to understand infectious agents that primarily infect the nervous system, skin, and blood (including the reticuloendothelial system) of humans and animals. The introductory lecture for each unit will describe anatomical and physiological features of relevant organs and infectious agents. Selected bacterial, viral, fungal and parasitic pathogens will be covered in-depth. The etiology, pathogenesis, immunology, epidemiology, diagnosis, prevention and control of selected pathogens will be discussed. Reading of pertinent scientific literature will complement the lectures and facilitate deeper understanding.

**IDGH 548 – Microbial Molecular Biology – 1.5 credits**
This course will cover basic topics of molecular biology relevant to the understanding of viral, bacterial and protozoal microorganisms. Following an overview of the structure and function of nucleic acids, prokaryotic and eukaryotic gene expression and regulation will be discussed. The second part of the course will be devoted to applied topics in molecular biology, including medical molecular biology, recombinant DNA technology and new genome editing tools and their therapeutic potential.

**IDGH 549 – Animal models of Infectious Diseases – 3.5 credits**
Students will learn the rigors of animal model work in research, which requires taking care of animals on weekends and holidays. They will use mouse model to (a) study *Cryptosporidium parvum* infection in immunocompetent and immunodeficient hosts, and (b) investigate immunoprophylactic potential of Shiga toxin 2 (Stx2)-specific human monoclonal antibody (HuMAb) 5C12 against a challenge with Stx2. Students will learn to perform mouse handling, oral inoculations, intraperitoneal injections, sample collections (mostly blood and fecal collections), and humane euthanasia of mice and disposal of carcass. They will learn to work in Animal Biosafety Level 2 environment, monitor animals as per animal protocol approved by the IACUC (Institutional Animal Care and Use Committee) and observe and record clinical signs of the disease, analyze samples with immunological and molecular assays, interpret data/results, prepare graphs/tables and write a manuscript-style report. Students will also learn basics of good laboratory practice.

**IDGH 561 – Food Safety – 0.5 credit**
Students will be introduced to a variety of local, state and federal regulatory agencies, regulations, and surveillance systems important in ensuring food safety from the farm through food processing, retail distribution, food service stores to the serving plate at home. Microbiological transmission and disease concepts will be presented in relation to food safety, risk assessments of potentially hazardous foods and processes. They will become familiar with the more common foodborne illnesses and the risks of transmission from meat, poultry, dairy,
eggs, produce and other foods. Students will also learn about new challenges in food safety and security including, trade, climate change, development of antimicrobial resistance, antimicrobials in food producing animals and development of antibiotic resistance and the new FDA, Food Safety Modernization Act (FSMA) regulations. Foodborne disease outbreak case study will be used in the final lecture to tie together and give context to the various topics covered in this course.

IDGH 563 – Molecular Biology Techniques – 2.0 credits
This course is designed to provide students with hands-on experience in molecular biology procedures. In this course, the students will conduct a complete research project from A to Z which involves several molecular and biochemical techniques. Reagents generated in each lab will be utilized in subsequent labs. Having first established good laboratory technique (to encompass safety and regulatory issues), students will have the opportunity to learn a variety of molecular methods including DNA and RNA isolation, Polymerase Chain Reaction (PCR), cloning, bacterial transformation, evaluation of recombinant clones and plasmid DNA isolation. In addition, students will learn and perform DNA gel electrophoresis, quantitative real time PCR and sequence analysis and annotation. Basic bioinformatics skills will be explored. Recombinant protein expression systems will be studied, and students will use prokaryotic expression system to produce recombinant proteins. Students will also learn how to purify and characterize recombinant proteins. Enzyme characterization will also be introduced. Keeping scientific notebooks and science writing skills (in the form of lab reports) that focus upon clarity, precision and comprehension of experimental results and conclusions will be emphasized. Students will gain a firm understanding of how the molecular biology techniques learned in this class are used to diagnose, identify, control, and study infectious diseases.

IDGH 565 – Global Health and Threats of Emerging Pandemics – 1.0 credit
This course will focus on infectious diseases that threaten global health and insecurity, their relation to poverty and development and how economic level, inequity, and policies of nations determines the health of its citizens. Using the lens of infectious diseases covered in previous courses, we will underscore the historical milestones, actors, assumptions, context and theories driving selected infectious diseases and their global health priorities in policy, programs and research. A recurring theme throughout the course is that there are common global drivers of infectious disease emergence and re-emergence influencing the health of populations in high, middle and low-income countries, that cross-cutting issues of inequality and systems transcend settings. The course will also examine the outcomes resulting from the ways in which new global health policies change patterns of health practice and Infectious disease intervention globally. That students will come out with an understanding of major challenges and solutions to infectious diseases of global health significance, programs and policies and be able address global health issues from an inter-disciplinary perspective, examine strategies and solutions for combating emergence and re-emergence of pandemics and promoting Global Health threats. This course is a reminder that no one person, agency or organization holds absolute knowledge on how best to address Infectious disease and Global Health challenges and that it has to be a multidisciplinary effort.

IDGH 568 – Principles of Laboratory Management and Biosafety – 0.5 credit
The course will provide basic understanding of biosafety and regulatory compliance, and laboratory management. The course will mostly cover biosafety considerations of the biosafety level 2 (BSL-2) and BSL-3 laboratories, risk assessment and hazard identification of infectious agents, biosafety design criteria for facility design, regulations/guidelines and regulatory compliance with federal/state and local laws, biosafety audit of work practices and procedures, and management principles and managing a laboratory.
IDGH 569 – Research Assignment – 4.0 credits
This course has three major components. Working with their mentors, students will (1) develop and write a research assignment, (2) prepare and present a poster on the written assignment, and (3) gain experience working in their mentor’s laboratory. Each student will investigate and understand in depth a particular pathogen. The assignment includes a comprehensive literature survey on different aspects of the pathogen, identifying a total of at least 3-5 needs, gaps in knowledge and/or questions that need to be answered, and outlining an experimental plan to address one of the needs/knowledge gaps/unanswered questions surrounding that pathogen. Students will get the opportunity to work and think independently, read and critically analyze scientific literature, develop oral and written communication skills, and appreciate the research process. Students will write their research assignments and submit them for evaluation. Each written assignment will be of 5-6 pages. Students will also present their research assignments as posters on MS-IDGH Research Day (campus-wide). Mentors of each student will provide guidance as needed. Students will devote 8 weeks to preparing and writing their assignments and preparing posters. Students will also work in their mentor’s lab for 105 hours.

IDGH 570 – Principles of Epidemiology – 2.0 credits
Students will learn and apply basic concepts of Epidemiology. Epidemiology is the lynchpin science of public health. In combination with biostatistics, it is used to examine disease patterns and infer causes of diseases at population level, and many other types of issues such as whether a new drug is more effective than an old one, what the risk factors are for a given outcome, whether a new screening test is likely to be useful and, if so, in which population, what levels and types of air and water pollution should be of most concern, etc. To accomplish its varied objectives, epidemiology uses many different kinds of measures, study designs, and data analytic techniques. Students will be: (1) Understand the basic structure of public health, its goals, and where epidemiology fits into the structure; (2) Know how to calculate and interpret important rates and measures used in epidemiology and public health and how to interpret confidence intervals around certain of these rates and measures; (3) Interpret basic epidemic curves; (4) Understand in general the design, strengths, weaknesses and ethical issues of the major types of epidemiologic studies; (5) Identify the three major causes of erroneous conclusions in epidemiologic research and how each one can be adjusted for or avoided; (6) Recognize effect modification (also called interaction) in data; (7) Learn how screening is employed in public health, including the basic measurements used to evaluate screening tests and the biases that can affect the accuracy of reported screening efficacy.

IDGH 571 – Bioterrorism: Risks and Defense Strategies – 0.5 credits
The recent increase in terrorist attacks in many parts of the world has focused attention on the possibility that pathogens and toxins may be used as weapons targeting humans or economically important animals and plants. The issues surrounding bioterrorism and its critical complement, biodefense, are complex and require an understanding of sociopolitical factors as well as those of biology. This course seeks to provide the basis for (1) critically evaluating the risks associated with bioterrorism and (2) developing strategies for defending against as well as responding to the illegitimate use of biological agents.

IDGH 572 – Introduction to Global Health – 1.0 credit
While debates abound on the definition – and utility – of this rapidly emerging field, it is fundamentally a multidisciplinary approach to understanding health and disease in populations, drawing on epidemiology, sociology, anthropology, political science, social sciences, clinical medicine, history, the list goes on. Global health as a field reflects the need for increasingly complex and multidisciplinary approaches to understanding health and disease in populations, brought on by an increasingly interconnected and changing world. Global health not only
considers the epidemiological and transmission dynamics of disease, but the social and political dynamics as well. This course is designed to provide students with an overview of global health and equip students with the proper framework, context, and terminology to understand the social, political, and economic aspects of health and disease on a global scale. The learning objectives of this course include being able to (1) Describe the global burden of disease and define the measures used to assess and describe disease in large populations; (2) Use examples to examine and analyze the relationship between health and education, poverty, and the economy of developing and developed nations; (3) Evaluate the importance of politics, culture, belief, and behavior to health; (4) Compare and contrast health issues faced by specific populations of people, such as children, women, or adolescents; (5) Understand the non-communicable global health concerns; (6) Critically analyze global health efforts in the historical context of major health inequities.

IDGH 573 – Case Studies in Global Health – 1.0 credit
This 15-hour course will illuminate the complexity and multi-dimensionality of the evolving infectious disease pandemics, as illustration of the relationships between disease biology, society, and public policy. We will explore the history, changing trends, recent advances, and multidisciplinary strategies for addressing three independent and interacting infectious diseases: HIV, Ebola, and Tuberculosis. We will examine gender relations; poverty; stigma and discrimination; vulnerable populations; as well as global responses, from patient activism to ‘global health’ interventions. This course will build upon the introductory course in Global Health and course on Infectious Diseases in Global Health, but with a greater focus on social issues surrounding the pandemics, lived experiences of disease, the interactions between biology and social factors, and the political architectures of responses. The course will include lectures and documentaries, interactive classroom activities and discussions, and group projects and presentations.

Elective Courses

IDGH 1001 Bioinformatics - 0.5 Credits
The course focuses on computational methods to analyze DNA and amino acid sequences. Four hours will be devoted to lectures. Each lecture will introduce a topic. Following each lecture, students will be guided through a computational analysis which students will run on their laptop. Students will learn to recognize different file formats, query and compare sequences and apply programs to extract biological information from complex sequence data. The exercises will emphasize the analysis of pathogenic microorganisms and their interaction with the host. Assessment will be based on three take-home exercises and a final 1 h in-class problem solving session. The goal: whether studying complex microbial populations or sequencing a plasmids, DNA and protein sequences are ubiquitous in biomedical research. The goal of the course is to demystify the analysis of sequence data and to provide basic familiarity with a few bioinformatics tools commonly used in this field. Students will be able to: 1) Recognize the most common sequences formats used to represent DNA sequence data: FASTA, FASTQ, BAM, SAM, BIOM, 2) Employ program BioEdit to explore and manipulation DNA and amino acid sequence. Example of sequence manipulations include, aligning, trimming, translating, defining consensus sequence, 3) Demonstrate ability to perform and interpret BLAST queries, 4) Describe the relevance of length polymorphisms (microsatellites), and demonstrate the use of program GenAlEx to explore a microsatellite dataset, 5) Apply program Mega to generate sequence distance matrices and phylogenetic trees; apply this program to construct a phylogenetic tree and discuss the information gained from this analysis, 6) Demonstrate the use of programs found in galaxy to analyze transcriptomics (RNA-Seq) data, interpret the results of programs used to map sequence reads, assemble transcripts and perform differential expression analysis, 7) Differentiate between
FPKM and TPM metrics, 8) Apply statistical tests for analyzing sequence data, 9) Recognize the versatility of EupathDB databases to perform advanced search strategies, and interpret search results using functional enrichment analysis, and 10) Apply common 16S amplicon sequence workflows used to explore complex microbial populations.

**IDGH 1002 – Applications of Biotechnology** – 0.5 credit
Biotechnology is “the application of biological organisms, systems, or processes by various industries to learning about the science of life and the improvement of the value of materials and organisms such as pharmaceuticals, crops, and livestock” (ACS). Classes will explore different biotechnology applications, particularly those technologies of relevance to infectious disease. Students will learn how the technologies were developed, how they are being applied to global health issues, and how they are likely to evolve in the future. As part of the course, students will be asked to select biotechnologies they feel will be important to their personal career objectives, investigate these in depth and present their findings and views to the class followed by general discussion. After completion of the course, students will be able to: (1) improve their appreciation of the biotech industry; (2) provide basic knowledge of the technologies underpinning biotech; (3) provide insight into what is involved in starting and building a successful biotech company; (4) provide a detailed knowledge in at least one aspect of biotech that is particularly relevant to one’s career goals.

**INCOMPLETE GRADES AND THE ON-LINE EVALUATION SYSTEM**
An incomplete grade will be given if a student does not fill out and submit an on-line evaluation within 7 days after the end of the course.

**RE-EXAMINATION GRADES AND COURSE FAILURE**
Re-examinations or make-up coursework must be approved by the MS-IDGH Program Committee, and the Advanced Education Committee (AEC) must be notified of any such allowances. After re-examination, the final course grade may not exceed the level of “B-.” If the course is retaken in its entirety, then the grade equals the grade earned in the course. In either case, the makeup grade is recorded on the transcript along with a notation that the new grade was achieved through make-up work. The new grade is used for the GPA calculation and is given program credit. However, the original grade is retained on the transcript.

The Advanced Education Committee (AEC) may allow students who have failed a course (with a grade of “C+” or below) to continue to be enrolled, but such students are required to demonstrate competence in the course to the satisfaction of the Course Director and the MS-IDGH Program Committee. This condition for continued enrollment ordinarily must be satisfied prior to the end of the next academic year. However, under extraordinary circumstances, the AEC may exercise its discretion and allow a student to continue in attendance under stipulated conditions. If the student's record is otherwise satisfactory, failure in one course usually results in retaking the course or a re-examination of the course. Two failures results in review of the student’s status by the AEC regarding academic dismissal.
GRADE APPEAL PROCESS

If a student believes that she or he has not received an appropriate grade for a course, the following steps may be taken:

4. The student discusses the matter with the Course Director.
5. If the student does not feel that the matter was resolved, the student discusses the matter with the Program Director and Graduate Program Manager.
6. The Program Director will bring the matter to the MS-IDGH Program Committee for discussion and then a recommendation to the AEC. The final decision on the grade awarded to the student will be made by the AEC.

Students should be aware that the Course Director has only fourteen (14) working days after assigning the final grades to make a grade change. After this time, any proposed grade changes must be reviewed and approved by the AEC. Following discussion with the Course Director, the student has the right to petition the AEC to dispute issues pertaining to course grading policy.

TRANSFER OF CREDITS

Coursework from other institutions cannot substitute for core courses in the MS-IDGH program. However, students wishing to take a course offered in another program, college or university may be able to register and get elective credit for the course. Permission to use such coursework in the MS-IDGH program is granted by the MS-IDGH Program Committee.

TIME TO DEGREE

MS-IDGH is an accelerated, one-year (September to August) program. It is expected that students will complete all requirements within that time.

Students taking longer than one academic year to finish their degree pay a continuation fee at the beginning of each semester. Students have until August 31st of the second academic year to successfully complete all requirements for their degree. The fee will be assessed as follows: $500 for fall of the second year, $1,500 for spring of the second year, and $1,500 for summer of the second year.

If a student cannot complete the program in the time allotted, a request may be submitted for an extension of time; otherwise, an administrative withdrawal from the program will be processed, and the student must apply for readmission. Permission for time extensions and re-acceptance into the program after administrative withdrawal are not automatic, and a negative decision on a request may affect the student’s eligibility to receive their degree.

PROGRAM DIRECTOR & MS-IDGH PROGRAM COMMITTEE

The Program Director is the main point-of-contact for information on the policies and procedures of the program, serves as the primary academic advisor to all students in the program, and monitors student progress in conjunction with the MS-IDGH Program Committee and the school’s Graduate Program Manager. The Program Director during 2019-2020 is Dr. Abhineet Sheoran.
The Program Director, four selected mentors and faculty who teach in the MS-IDGH curriculum, the Graduate Program Manager, and the Director of Admissions constitute the MS-IDGH Program Committee. The MS-IDGH Program Committee is responsible for oversight of the MS-IDGH curriculum and staffing and scheduling of classes, and for addressing student academic issues, including setting academic standards, evaluating student academic standing, and taking actions in response to student academic deficiencies. It is the student's responsibility to ensure he or she is fulfilling all academic requirements, complying with ethical standards of academic conduct, and communicating with professors and mentors in a timely fashion.

REGISTRATION

Students will be automatically registered each semester for their courses by the MS-IDGH Staff Assistant, Christine Curran. Please contact the Program Director and the Graduate Program Manager (GPM) if you’re interested in registering for an elective.

TUITION, FEES, AND FINANCIAL AID

All students are charged tuition at the beginning of Fall and Spring semesters, respectively. Tuition and lab fees for the year are payable according to Tufts University guidelines. For the 2019-20 academic year, tuition is $42,650 and a lab fee is $1,500. Tuition is subject to yearly increases. Additional student expenses include Health Insurance, which is $4,968 (billed semi-annually at $2,484) for an individual and is underwritten by HPHC Insurance Company, and the Health Administration fee, which is $250 for the 2019-2020 Academic Year.

ENROLLMENT STATUS AND LOAN DEFERMENT

Tufts University provides information regarding student enrollment status to the National Student Loan Clearinghouse, which then provides information to lenders. Federal regulations require that students be enrolled (registered) half-time or full-time to receive and defer student loans. Information is transmitted bi-monthly to the Clearinghouse.

ORIENTATION

All incoming students attend a mandatory MS-IDGH Orientation prior to the start of classes. The orientation includes obtaining ID cards, information on public safety, a campus tour, an introduction to library services, configuration of laptop computers, and a discussion of graduate life.

VACATION POLICY

The program observes all University holidays, with a winter break between fall and spring semesters, and a spring mid-semester break. Students should understand, however, that because much of the required work for the program is carried out independently, the absence of scheduled classes does not free them from the responsibility for working on required
assignments. Due to the nature of animal model work, students are required to work on some weekend days during the “IDGH 549 Animal Models of Infectious Diseases” course.

LABORATORY INJURIES PROCEDURE

If a student sustains a work-related injury in a laboratory, please follow the procedures outlined below:

4. For emergencies situations, the student should always seek immediate assistance from the nearest medical provider.
5. For non-emergency situations, the student should contact his or her primary care physician and have the primary care physician direct him or her to a medical facility that will treat work related injuries.

Please consult the Tufts Safety and Risk Management Office website for detailed information regarding:
2. Laboratory Health and Safety at: http://publicsafety.tufts.edu/ehs/laboratory-safety/

GRADUATION

Students meeting the requirements for the Master of Science in Infectious Disease and Global Health are recommended for degree status to the Advanced Education Committee (AEC). The recommendation is forwarded for approval to the Executive Faculty Board (EFB). The EFB and the Dean submit the approved names to the Provost, President, and the Board of Trustees for approval. The Dean and the Board of Trustees have final approval. Diplomas are awarded on a rolling basis, typically in August, November, February, or May after students have successfully completed their academic program and have been cleared by the Dean and Trustees. Commencement ceremonies are held each year during the month of May.
I. Student Wellness & Diversity

A. Student Wellness as a School Priority
   Cummings School is committed to maintaining a well curriculum and supporting students as they conduct their studies, and support services are available through the Cummings Support Center (CSC) located at 6 Captain O'Brien Road.

i. Support from the Administration
   All members of the Administration, including the Dean, Associate and Assistant Deans, Department Chairs, Graduate Program Directors and their staff, and the staff of the Research & Graduate Programs Office support our students and the important educational mission of the Cummings School.

   Students are encouraged to contact Graduate Programs Manager, Kate Beckett (kate.beckett@tufts.edu) or the Associate Dean for Research & Graduate Studies, Dr. Sawkat Anwer (Sawkat.anwer@tufts.edu) for support and guidance, or if any help is required with identifying resources. The Student Affairs Office can be reached on extension 88733.

   Reasons for contacting Kate Beckett or Dr. Anwer relating to wellness include:
   - Occurrence of personal events that affect attendance
   - Leave of Absence requests
   - Academic difficulties
   - Requests for accommodations
   - Advice on connecting with counselors at the school or in the region
   - Feedback on educational programs or student support services
   - Mentoring on handling interpersonal issues
   - Concerns regarding diversity
   - Information on managing professional conduct violations (e.g. exam cheating)

ii. Counseling Services
   Our two counselors are Meg Campbell and Robert (Bob) Lenhardt and their email addresses are Megan.Campbell@tufts.edu and Robert.Lenhardt@tufts.edu, respectively. Bob is available for appointments on Tuesdays from 12:00 to 8:00 PM and Meg is available on Wednesdays from 11:00 AM to 7:00 PM. Students can request appointments by emailing the counselors directly or by calling 1-800-756-3124 and this number can be used by students to reach a licensed counselor 24 hours/day, 7 days/week. Students are also encouraged to make appointments with Meg and Bob to simply have conversations about their lives and experiences in veterinary school. We would like students to seek support from the counselors even when everything is going well.

iii. Wellness Advisor
   Dr. Lynn Roy serves as the part-time wellness advisor for the Cummings School and she develops and implements wellness programming on campus. Email: Lynn.Roy@tufts.edu.

iv. SAVMA Wellness Committee
   Students are encouraged to join this committee and it plans seminars, workshops, and other events relating to wellness. The committee contributes to
the wellness web site and meets with members of the Administration to bring forward initiatives or raise concerns.

v. Wellness Web Site
More information on wellness can be found at [http://vetsites.tufts.edu/wellness/](http://vetsites.tufts.edu/wellness/).

B. Diversity as a School Priority
The Cummings School maintains a policy of non-discrimination and equal opportunity in fulfillment of federal requirements. Tufts does not discriminate in its educational programs or activities on the basis of race, color, national or ethnic origin, ancestry, age, religion or religious creed, disability or handicap, sex or gender, gender identity and/or expression, sexual orientation, military or veteran status, genetic information, or any other characteristic protected under applicable federal, state, or local law. Cummings School believes that diversity goes beyond race and is committed to maintaining a campus that is tolerant and inclusive.

i. Tufts Veterinary Council on Diversity (TVCD)
This was initially a DVM student-only group and has now expanded to include graduate students, faculty, and staff. Programming includes Diversity Month (e.g., seminars, community-building activities such as Story Night, international bake sales); civic engagement with national groups promoting diversity and inclusion; a campus-wide campaign to encourage peer-to-peer “listening” and support; celebrations of cultural diversity around holiday traditions; and strategic planning on a national level for enhancing diversity and inclusion in the veterinary profession, including sexual orientation and gender identity.

ii. Cummings Hosts International (CHI)
This group was established in 2014 and it meets the unique needs of international visitors by providing information and resources to both the department facilitating the international visit and to the international visitor. CHI is committed to enhancing opportunities to explore diversity through organizing campus-wide events that encourage communication and learning and celebrate cultural traditions.

iii. Diversity Web Site
Additional Information related to diversity initiatives at Cummings School can be found on the diversity website: [https://vetsites.tufts.edu/diversity/](https://vetsites.tufts.edu/diversity/).
II. CUMMINGS SCHOOL/TUFTS SERVICES AND FACILITIES

ATHLETIC FACILITIES

Grafton Campus

The Grafton Campus has basketball, volleyball, and tennis courts, a baseball diamond, a horseshoe pit, and soccer goals. These facilities are available for use by TCSVM students, faculty, and staff. Reservations for playing time in any of these areas can be made by calling Campus Police at x84392.

Medford Campus

All athletic facilities on the Medford campus are free when you present your Tufts ID. Facilities include playing fields, a 25-yard swimming pool, four indoor tennis courts, two basketball courts, a 400-meter indoor track, fitness center, five squash courts, and a sauna. Reservations are required for authorized use of all playing fields and may be made by contacting Matt Malone (matt.malone@tufts.edu). Cummings School students can participate in the intramural sports program. Teams compete in the following areas: flag football, basketball, floor hockey, tennis, badminton, and soccer. For more information call (617) 628-5000, ext. 73232 or visit http://www.gotuftsjumbos.com/information/intramurals.

Tufts Mountain Club

The Tufts Mountain Club one of the largest student organizations at Tufts University. Based out of the Medford/Somerville campus, they run daily activities both locally and outside the Boston area that provide students the opportunity to get outdoors and/or enjoy some adventure activities. TMC posts all their upcoming trips on their “Trips Board” which can be found on their website http://www.tuftsmountainclub.org. TMC also maintains a lodge (referred to as “the Loj”) 125 miles from Boston in Woodstock, New Hampshire at the foothills of the White Mountains. The Loj sits on 18 acres of land and is convenient to downhill skiing, cross-country skiing, snow shoeing, canoeing, rock-climbing, and hiking. Heating is sufficient - there is a wood stove, but you are warned to bring warm clothes in the winter; there is cold and hot water, two bathrooms, electricity, and a kitchen with a large gas stove and oven. Beds are double and triple-decker bunks and you should bring a sleeping bag and foam pad. Staying in the lodge is a cooperative venture, and you should expect to help out with cooking, washing up or other chores. The Loj is open to TMC member and non-members, through a reservation is required, which can be done through the website. You can join the club by paying $15* for membership by going to their web page.

*Subject to change.
CUMMINGS SUPPORT CENTER

The Cummings Support Center, located on Capt. O'Brien Road next to the Center for Animals and Public Policy, assists with career counseling for the graduate programs, but must be scheduled through the program director. The Cummings Support Center also houses our behavioral health program, which provides on-site assessment, counseling, and referral (up to 6 sessions) with Master’s prepared clinicians. Counseling appointments are available 2 days each week.

FISCAL SERVICES

The Bursar's Office bills and collects student tuition and fees. The office is open Monday, Wednesday and Thursday 9am to 2pm and is located in the campus police building. Semester statements are due the first week of August for the fall term and the first week of December for the spring term. You will receive your statement electronically through Tufts eBill. Payments can be made directly at the Grafton Bursar’s office, online through Tufts eBill, or mailed to Tufts University, Bursar’s Office, P O Box 414090, Boston MA 02241-4090.

All students must receive financial clearance from the Bursar's office in order to register for classes. Accounts not paid or settled by the due date may be subject to a late fine. If you have questions about your bill, please contact the Bursar/Cashier's Office at (617) 636-6551/6553. Bursar services are also available on a part-time basis on the Grafton campus in the Central Services Building. More information about fiscal services can be found on the Bursar's website: http://finance.tufts.edu/controller/bursar/generalinfo/

LIBRARY

The Webster Family Veterinary Library is located in the Franklin M. Loew Veterinary Medical Education Center on the Grafton campus, and is open Monday through Thursday, 8:00 a.m. - 11:00 p.m., Friday, 8:00 a.m. – 8:00 p.m., Saturday, 9:00 a.m. - 5:00 p.m., and Sunday 12:00 p.m. - 11:00 p.m. Holiday and summer hours are posted on the website: http://www.library.tufts.edu/vet/about/hours.php

Library services include assistance in bibliographic searching on a wide variety of health sciences and agricultural databases, interlibrary loan, and online and computer software training. Access to the Tufts Libraries online catalog, electronic journals, and databases is available on and off-campus 24/7. Interlibrary loan services extend borrowing privileges to most other major biomedical and academic libraries. Printing is available for students with a JumboCash account using the Tufts ID. See http://dining.tufts.edu/?pid=71&c=9 to set up an account.

The library’s collection of print journals is arranged alphabetically on the second floor. Other in-house library materials -- books, reserve readings, reference, audiovisuals, and laptops -- are located on the main level. The library also holds the 6000-volume John A. Seaverns Equine Collection.

To borrow books or laptops, students must present their Tufts IDs at the Circulation Desk. The wireless network provides additional flexibility for laptop users.
CUMMINGS SCHOOL CAMPUS CENTER GUIDELINES

General

Cummings School students and employees can access the campus center 24 hours/day, 7 days/week. After 7 p.m. and before 6:00 a.m., building access will only be available at the front porch door; entrance can be gained using your ID at the card reader.

Fitness room

1. Prior to using any fitness equipment you should consult your physician to be sure you are in good health.

2. There is no attendant on duty; users must take responsibility for their own safety. We recommend that you do not use the facility alone.

3. Immediately stop using and report any defective equipment or other concerns to Susan Brogan at X84723.

4. The fitness center is restricted to Cummings staff, faculty, and students only.

5. In the event of an emergency please push the panic button, and/or contact TUPD at X66911.

6. Equipment is reserved for student use between the hours of 12:00 – 1:00 p.m. during the academic year. At other times of the day, any member of the Cummings School community may use equipment on a first-come-first-served basis.

7. When others are waiting, 30 minutes is the maximum length of time permitted for fitness equipment use. A sign-up sheet is available for individuals waiting for equipment.

8. Between the hours of 7:00 p.m. and 6:00 a.m., individuals who wish to use the fitness room must notify campus police at ext. 84900 when they arrive and when they leave.

9. Equipment must be wiped-down after each use. Spray cleaner and paper towels are provided for this purpose.

10. Lockers are provided for individual fitness room users. Locks must be removed when the individual leaves the fitness room/locker room area so that others may use the lockers.

Student Office

A sign-up sheet will be posted outside of the office for student groups to reserve office time.
A computer will be available for organization/club use, or for individual students to conduct school-related business (such as checking Cummings School email). University Responsible Use Policies will apply to the student office computer and other equipment.

File cabinet space and mailboxes will be provided for student organizations upon request. SCAVMA will have oversight of space and mailbox assignments.

**Student Lounges**

The lounge on the south side of the building has been designated as a “quiet space” for study and quiet small group discussion. While a second television is available in this lounge, it should only be turned on if others in the room agree.

The lounge on the north side of the building (with television and game tables) is for socializing and relaxing.

Students are responsible for overall cleanliness of the lounges. This includes removing trash and food, cleaning the refrigerator, wiping-down tabletops so they are free of crumbs, cups, food wrappers, etc.

Problems with equipment/games (TV, game tables) should be reported to campus center manager Susan Brogan at X84723.

Students’ personal belongings may not be left in lounges.

**LOCAL EVENTS**

The **Tufts Observer**, an undergraduate newspaper, is available at the Health Sciences Library. This paper contains listings of events on campus, including films which can be seen for a general admission fee and a Tufts ID, theater, guest speakers, concerts, etc., as well as a calendar of Boston entertainment. This listing of Boston happenings can be supplemented by the "Calendar" section of Thursday's **Boston Globe** as well as the **Boston Phoenix**. The **Observer** will tell you about issues and news of the Medford campus, and the **Worcester Telegram & Gazette** has information about events in the Central Massachusetts area.

**PARKING**

There are selected areas on the Grafton campus designated for student parking. Authorized vehicles can be identified by a parking decal which you may obtain from the Police Station. The charge for student decals is $10.00. When you purchase your decal, you will receive a list of those areas in which students are permitted to park. You may obtain your Grafton decal by registering at the Campus Police Headquarters, Central Services Building, Monday through Friday, 9:00 am - 3:00 pm. This must be done annually. Also, at this time, out of state or country vehicles may be registered for student exemption stickers by filling out the required Commonwealth of Massachusetts forms.
CAMPUS POLICE

The Tufts University Police are responsible for safety and security on the Grafton campus and are on duty 24 hours a day, 7 days a week. The University Police Station is located in the Central Services Building, Grafton campus. You should phone the police at 508-839-5303 (x66911 on campus) in any emergency or to report all suspicious activities. Please call (508) 887-4900 (x84900) for non-emergency matters, such as lockouts, safety escorts, past reports of a crime, information requests, or after-hours facility requests. For Public Safety/Administrative Services please call 508-887-4392 (x84392). Public Safety/Administrative Services include parking issues, ID cards, key requests, or card access requests/problems.

The Tufts University Police derive their police authority from the Commonwealth of Massachusetts. This authority enables the police to make arrests for any criminal offenses committed in or upon lands or structures owned, used, or occupied by Tufts University. All Tufts University Police Officers are armed.

All Tufts Police Officers must attend a police academy that is certified by the Massachusetts Criminal Justice Training Council. Candidates must pass a psychological test and complete physical exam.

The Tufts Police maintain a lost and found department. They also have engravers which are available to you at no charge for marking your property. In addition, there is a crime prevention officer on the Grafton campus who provides literature and gives talks on various crime prevention topics. The crime prevention unit advocates awareness as the first step in making the Tufts community a safe one.

Students are required to report all injuries, accidents, or other police or medical related incidents, regardless of how minor. Students may, at any time, also request assistance in matters of room lockouts, lost or found property, maintenance problems occurring after 5:00 pm and on the weekends, and campus-wide escorts. The police department recommends that you travel in pairs, especially after dark, and be aware of what is going on around you.

For lockout requests you will be required to produce your university ID card to the responding officer. ID cards are issued by the police department upon your initial employment or enrollment at the Cummings School.

Escort Service – “Go Safe Rides”

Escort service to the parking lots is provided 24/7. Call 8-4900 to make arrangements when you are ready to leave. Try to travel in groups, especially at night, and be aware of what’s going on around you. Solicitors are not allowed in school buildings.

VOTER REGISTRATION FORMS

Massachusetts voter registration forms are available in the Student Affairs Office. These are to be used for Massachusetts residents to register to vote and/or change their name or address for voter registration.
PHONE INFORMATION

Outside Calls

When dialing the Grafton campus from outside the University, dial (508) 839-5302 and enter the 5-digit extension, when prompted to do so. Calls related to hospital business or clinical matters should be directed to (508) 839-5395.

LIST OF FREQUENTLY USED NUMBERS

**Grafton Campus**
Academic Affairs ................................................................. 84200
Admissions ........................................................................... 87920
Anesthesiology ...................................................................... 84605
Bursar .................................................................................. 84932
Center for Animals ................................................................ 87991
Clinical Coordinator ............................................................... 84772
Clinical Sciences .................................................................. 87960
Deans Office .......................................................................... 84700
Diagnostic Laboratory ............................................................ 84669
Financial Aid Office ............................................................... 88733
International Programs .......................................................... 87949
Library .................................................................................. 87957
Pharmacy (FHSA) ................................................................. 84697
Pharmacy (LAH) .................................................................... 84870
Police .................................................................................... 84900
Radiology ............................................................................... 87941
Registrar ................................................................................. 84602
Student Affairs ...................................................................... 88733
Wildlife Clinic ......................................................................... 84918

**Other**
Tufts Ambulatory Clinic (Woodstock, CT) ............................... (860) 974-2780
Police Emergency ................................................................... 66911
III. ADMINISTRATIVE POLICIES, PROCEDURES, AND SERVICES

REGISTRATION & STUDENT ACCOUNTS

No student may begin a new academic period unless tuition and fees have been paid, or arrangements are in place to finance an upcoming period of enrollment (e.g. pending loan applications). In addition, School services (such as issuing of grades or processing loan deferments or certain transcript requests) may not be provided to students with overdue accounts. Students who find it impossible to clear tuition balance by the payment date must, prior to the payment deadline, contact the Bursar to discuss their circumstances. Students who borrow from banks to cover tuition expenses must submit their loan application(s) well in advance of the deadline. For example, a Direct Loan should be borrowed 6-8 weeks prior to the tuition deadline.

ATTENDANCE

Students are expected to attend all regularly scheduled lectures and laboratory sessions. Course directors may require attendance, and at the beginning of the course will announce their policy for handling absences and the penalties that may be imposed.

Attendance at Scheduled Examinations

As a general rule, students are expected to take examinations at the scheduled exam times. However, an absence from an examination or request for delay may be authorized for illness, reasonable accommodation, family emergency (e.g., death or serious illness of family member), or for the observance of a religious holy day. If a student cannot take an exam at the scheduled exam time, she/he must notify the Program Director and/or the Graduate Program Manager as soon as possible. Written documentation from the student's health care provider may be required before a make-up examination can be authorized. A make-up exam will not be arranged until the course director and the Graduate Program Manager have discussed the situation and agreed upon an alternative test date/time. Please note that individual course directors may choose to deduct points on exams take late for reasons outside of the standard excused absences. If this is the case, the course director will so indicate in his/her syllabus.

STUDENTS WITH DISABILITIES

Cummings School is committed to providing support services and reasonable accommodations to students with disabilities to ensure a comprehensively accessible experience. We engage in a interactive process with each student and review requests for accommodation on a case-by-case basis. In determining reasonable accommodation, we consider each student's condition(s), history, experience and request. Those students requesting accommodations may be required to provide current documentation, including test results, from a qualified professional. Documentation will generally be considered current if it is no more than five years old. It should be submitted as soon as possible prior to an academic term, as it may take several weeks for a request to be considered and the parties to engage in an interactive process.
What Type of Documentation is Required?

A neuropsychological or psycho-educational assessment is required to evaluate students with learning disabilities and Attention Deficit Hyperactivity Disorder (ADHD). These batteries should include aptitude and achievement tests. Students with documented visual, hearing or other disabilities are required to submit the most current evaluation from their medical provider.

The documentation should be current and include the following:

1. A clear statement of the disability including prognosis.
2. History, including the length of time practitioner has known you.
3. A summary of evaluation procedures, as well as diagnostic tests/evaluation results used to make the diagnosis.
4. A statement of the functional impact or limitations the disability has on learning.
5. Recommended accommodation(s), accompanied by an explanation of its relevance to the disability as well as supporting data from the evaluation.

In addition, students should provide an explanation of prior accommodations if applicable. While receipt of prior accommodations in high school, college or in other academic settings will inform the process of determining appropriate accommodations (if any), they do not guarantee receipt of accommodations at Cummings.

Professionals conducting assessment, rendering diagnosis of specific conditions and making recommendation for appropriate accommodations must be qualified to do so. Diagnoses histories and recommendations must be made on professional letterhead, dated and signed.

At the time documentation is submitted the student should make an appointment to see the Graduate Program Manager (508-887-4376 X84376) or the Assistant Dean of Student Affairs (508 839-8733) to initiate the accommodation request process.

Please note that in some cases updated documentation will be required in order to continue accommodations into a new academic period.

For more information please visit: [http://oeo.tufts.edu/requesting-an-ada-acommodation/](http://oeo.tufts.edu/requesting-an-ada-acommodation/)

STUDENTS/SEVIS

In accordance with the Patriot Act of 2001, Tufts University is required to comply with SEVIS (Student and Exchange Visitor Information System), and the immigration and naturalization student/scholar tracking system. This program went into effect on January 30, 2003. Requirements for international students (studying in the U.S. on a non-immigrant visa) are as follows:

- Students must be registered for a full-time load of courses each term. For graduate-level students at Tufts this requires 9.0 credits or 6.0 credits and an RA/TA. Consult with your department and the I-Center if there are special circumstances around being administratively full time.
• Students must update their address and change of addresses on a regular and timely basis by informing the Tufts International Center of any change within 10 days of the change. This can be done in SIS via the local address fields.
• Students will have to be aware of the end date of their legal status on their visa document. Students must extend or shorten their document before this end date.
• Students will have to ensure that all legal requirements have been met when transferring from one school to another in the U.S.
• Students must notify the International Center prior to taking a Leave of Absence, Medical Leave, withdrawal, or dropping below full-time registration. Students must have a valid travel signature before temporarily departing the US.
• Students will face penalties and potentially be prohibited from continuing their studies in the U.S. if they do not comply with the policies and requirements of their visa status.
• Students may consult the International Center about any questions or concerns regarding their visa status.
• The International Center can be reached by calling 617-627-3458, emailing internationalcenter@tufts.edu, or visiting the office at 20 Sawyer Avenue on the Medford campus to schedule an appointment.

**LEAVE OF ABSENCE**

A leave of absence is granted solely by the Dean. The student must present a letter to the Dean requesting leave, state specific reason(s) for the request, and indicate the departure date and anticipated date of return.

Several types of leaves are granted:

1. **Emergency Leave** - Short duration; requested only for illness, death in the family or other similar circumstances. Emergency leave is granted subject to the ability of the student to continue the on-going curriculum upon return.

2. **Personal Leave** - In special situations the Dean may grant a personal leave. Please note: student financial difficulty is not normally considered a basis for leave of absence.

3. **Medical Leave** - A student requesting a leave for medical reasons must submit a letter from his/her physician attesting to the validity of the leave request. Before approval is granted the Dean may consult with University and/or outside experts, as she deems necessary.

4. **School Initiated Leave** - In special situations, where a student’s behavior presents a risk of harm to the community or where the student fails to meet the minimum requirements of the program, the Dean may place the students on a school-initiated leave of absence, medical or otherwise. The decision to readmit a student after a leave will be based on evidence of the student's recovery and/or demonstrated ability to resume studies at Cummings School. The Dean may consult with University and/or outside experts, as she deems necessary in order to evaluate the students’ readiness to return to Cummings School.
Students on Leaves of Absence are considered members of the Tufts community, and therefore are expected to adhere to the same standards of conduct as enrolled students both on and off campus. The Student Code of Ethical Practices and Professional Conduct, printed in Section III of this handbook and in TUSK applies, in its entirety, to students on LOA.

Return from Leave of Absence

If a student’s request for LOA is granted he/she will be notified in writing, and any requirements for re-entry will be specified. Specifications will include a date by which a tuition deposit will be due, a description of any necessary documentation, coursework that may need to be completed, or other relevant conditions for demonstrating the student’s readiness to return. Note that “clearance” from the student’s health care provider will be required for students wishing to return from a Medical Leave and in some cases from a School Initiated Leave. In some cases, the school may require a second opinion from a Tufts-affiliated health care provider or other “expert” before re-entry may be permitted.

Graduation after Leave of Absence

Students who were on approved leaves of absence(s) and are reasonably expected to complete their degree requirements within 12 weeks of their class’s graduation date will be permitted to participate in all commencement activities. However, students who do not complete their degree requirements within 6 weeks of the class’s graduation date may not be granted their degree and diploma until the next Tufts University degree date. A student’s ability to receive his/her degree will depending on the date of successful completion of all requirements and after approvals by the Student Promotions Committee and the Executive Faculty Board. Degrees are conferred by the University trustees in February, May, September, and November each year.

WITHDRAWAL

A student who wishes to withdraw from the program must notify the Dean in writing. The official date of withdrawal will determine the computation of costs and refunds.

Clearance Upon Departure from Cummings School

Every student leaving Cummings School is required to complete an administrative clearance procedure to satisfy University officers that s/he has met all obligations. Clearance forms are provided to those students approved for leave of absence, those who are withdrawing from the program, and those who complete their degrees. Specific departments requesting clearance include the Physical Plant office, residence dormitory, the Bursar, and Student Affairs. Students completing the administrative clearance procedure prior to the end of their scheduled program are required to surrender their Tufts ID card at the Student Affairs Office for final clearance.
REFUND/REPAYMENT POLICIES

CUMMINGS SCHOOL’s general refund policy to be applied in the event a student withdraws from school after beginning a term is as follows:

Attendance of two (2) weeks or less ................................................................. refund 80%
Attendance of two (2) to three (3) weeks .......................................................... refund 60%
Attendance of three (3) to four (4) weeks......................................................... refund 40%
Attendance of four (4) to five (5) weeks ......................................................... refund 20%
Thereafter ............................................................................................................. no refund

Other charges for the term (e.g., health insurance, activity fee, microscope fee) and other similar assessments are not pro-rated upon withdrawal during a term.

The Federal Refund Policy

When a student who has received federal student aid withdraws during a semester in which the student began attendance, but before 60% of the semester has passed, the school will determine the amount of federal aid the student has earned at the time of withdrawal. The amount earned is calculated by multiplying the total amount of federal aid by the percentage of the term for which the student was enrolled before withdrawing. If the amount of aid already disbursed to the student is more than the amount earned, then a return of funds to the lender may be required. If the aid disbursed was used to pay institutional charges, the unearned funds are returned to the appropriate SFA program by the school. If the student has received funds for living expenses, the student will be required to return the unearned portion of those funds to the appropriate SFA program. Loans may be repaid in accordance with the terms of the promissory note.

One-hundred percent (100%) of FSA are earned if a student withdraws after the 60% point of the semester and no repayment of those funds to the lender is generally required.

Although the federal refund process requires the return of unearned FSA funds to the lender, a student's tuition liability is based on the University tuition refund policy as described above. Any balance due on the student's tuition account after federal funds are returned to the lender is the student's responsibility.

Distributing Refunds and Repayments

Return of funds on behalf of financial aid recipients must be returned by CUMMINGS SCHOOL in the following order:

1. Unsubsidized FFEL/Direct Stafford Loan 5. Pell Grant
2. Subsidized FFEL/Direct Stafford Loan 6. FSEOG
3. Perkins Loan 7. Other Title IV programs
4. FFEL/Direct PLUS

Return of funds by aid recipients must be returned as follows:

1. Unsubsidized FFEL/Direct Stafford Loan 5. Pell Grant
2. Subsidized FFEL/Direct Stafford Loan FSEOG

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3. Perkins Loan
4. FFEL/Direct PLUS

CUMMINGS SCHOOL does not participate in all programs listed; skip and proceed down to applicable programs.

Please speak with someone in the Financial Aid Office for more information regarding these policies.

**Leave of Absence**

The above Cummings School Medical Leave of Absence Refund policy may or may not apply to Federal Student Aid recipients depending on the time of withdrawal and the duration of the leave. The Federal Refund Policy will apply when required depending on those two factors. Students on medical leave of absence enter loan repayment and must attend a financial aid exit interview if the leave exceeds 180 days or if the student fails to return from an approved leave of absence that is less than 180 days. Students considering a leave of absence must contact the Financial Aid Office to review the refund policy.

**Medical Leave of Absence Refunds**

If a student receives approval for a medical leave of absence, has paid all tuition charges for the semester, and is currently in good standing, including good academic standing, the student will be credited for a comparable semester upon return to full-time status. Any increase in tuition during the interim period will be charged to the student. Students will be responsible for paying all fees. Students who return but were not in good standing at the time of their leave of absence will be charged tuition. Please note: Graduate students are advised to speak with the Graduate Program Manager regarding tuition policies for specific graduate programs.

If a medical LOA exceeds 180 days, a federal student aid recipient must be treated as having withdrawn, and the federal refund process will apply.

**FEE WAIVERS**

Each student is automatically assessed for health insurance and health administration fees. Students who carry equivalent comprehensive coverage may apply to the Student Affairs Office for a waiver of the health insurance fee only. The health admin fee is mandatory for all students. Students who plan to waive the health insurance fee must contact the Student Advisory and Health Administration Office directly, prior to 8/31/17, as waivers must be received no later 9/1/17. Refer to page 21 for more information on health insurance.
COMMUNICATIONS - MAIL & EMAIL

Students are assigned mailboxes at the home location for each program. It is the student’s responsibility to check his/her mailbox regularly. The school will take personal messages for students in the event of an emergency only.

In addition, each student will be subscribed to a class email list service. Students are responsible for checking their email regularly.

CHANGE OF ADDRESS/EMERGENCY CONTACT INFORMATION

It is imperative that students go to their accounts in the Student Information System (SIS) http://go.tufts.edu/SIS to note address or telephone number changes for themselves or their emergency contacts, or to designate a new emergency contact person.

LEGAL NAME CHANGE REQUESTS

The Graduate and Student Affairs Offices are responsible for maintaining a student’s or former student’s legal name in official school records. Academic records that contain the legal name of the student or former student include transcripts, a diploma and/or certificate. Currently enrolled students, former students and graduates can request that their official school records be updated to reflect a new name provided they submit proof of their legal name change. In order to request a name change on your official school records, please submit at least one of the following items to the Student Affairs Office:

- Signed copy of Social Security Card that reflects legal name; or
- Copy of biography page of passport; or
- Copy of court issued document showing the new and old names; or
- MA-issued driver’s license

PREFERRED NAME CHANGE REQUESTS

If you have a first name that differs from your legal name, you have the ability to update it for general communications. For more information about how to implement a preferred named change, go to https://it.tufts.edu/namechangepreferred

TUFTS EMERGENCY RAPID NOTIFICATION SYSTEM

This system is designed to alert all members of the Tufts community of an emergency situation by contacting them via telephone, email, or text messaging. New students will be contacted by system staff requesting participation by providing relevant information.
POLICY ON PETS

Pets are not permitted in classrooms, hallways, laboratories, or elsewhere on the Grafton campus. For more information on the University-wide policy regarding service and assistance animals and for information about the presence of pets on other campuses, please see: http://oeo.tufts.edu/policies-procedures/pet-policy/

STUDENT ORGANIZATIONS

Student organizations at Cummings School are established and run by students. Most groups are active from year to year, while others come and go according to student interest. Students who wish to start a new organization must submit a mission statement along with a general overview of proposed activities associated with the organization, to the SAO for approval. Student organizations are encouraged, but not required to select a faculty advisor who will provide guidance, assistance, and support to the group.

Student organizations are required to abide by the business policies in place at the university, and at least one officer from each organization must attend the annual "Doing Business at Tufts" seminar, typically offered during the early part of each academic year.

Organizations planning transportation to off-campus events, events for which contracts with outside venues and services are involved, events where alcohol will be served, and fund-raising activities must notify the SAO to be sure that all university policies are being met. Student organizations will be responsible for adhering to all room request procedures, special event setup requests, and any other paperwork required for on and off-campus events.

Student organizations must contact the Cummings School Associate Director of Communications for approval before producing merchandise (including tee shirts, hats, water bottles, etc.) bearing the Cummings School or Tufts University names or logos. The Associate Director of Communications should be contacted for assistance when student organizations wish to advertise an event to the public.

SCAVMA is considered the umbrella organization for student organizations, and is the major source of funding for all recognized student organizations on campus. Organization officers must work with SCAVMA leaders to apply for funding.

ON-CAMPUS MOVIE/FILM SCREENING

There are laws governing the screening of copyrighted videos, DVDs and even streaming websites. The penalties for breaking these laws include fines and imprisonment. Individual students or student groups wishing to show films/movies on campus should contact the SAO in advance to be sure their plans are in compliance with laws and policies.
POLICY ON ALCOHOL

Alcohol may be permitted on campus with prior notification to and approval from the Assistant Dean of Student Affairs. The group hosting the event will be required to hire a TIPS-certified, insured bartender when alcohol will be served on campus. In addition, a one-day permit for the Town of Grafton and a Campus Police detail officer must be secured for the duration of the event. The Student Affairs Office will assist student groups with these requirements and must receive three weeks’ notice of such events.

TRANSCRIPTS AND RELATED CERTIFICATIONS

Official and unofficial transcripts are available to students by request.

Students may view and print their unofficial transcripts and request an official transcript via the SIS student portal at [http://go.tufts.edu/SIS](http://go.tufts.edu/SIS). Select the “Request” menu and then choose an option. Transcripts are free of charge. Please allow three to five working days for processing.

Official transcripts requested for a third party are issued directly to the third party and not given to the student. Official transcripts are imprinted with a Tufts University seal.

Current and former students with overdue or otherwise unpaid accounts and students who are not “administratively cleared” may not be entitled to receive official transcripts for themselves or for a third party. The latter category (not “administratively cleared”) might include, but not be limited to students who have not fulfilled their vaccine documentation requirements.

Transcripts on file from previously attended colleges cannot be duplicated. Students and graduates must contact those colleges directly for copies of such transcripts.

NOTIFICATION OF RIGHTS UNDER THE FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

The Family Educational Rights and Privacy Act of 1974 ("FERPA") provides students certain rights with respect to their educational records. In general, these rights include:

1) The right to inspect and review education records (with certain limited exceptions) within 45 days of the day Tufts receives a student’s request for access. A student should submit any such request to the Registrar’s Office in writing, identifying the specific records that the student wishes to inspect. The Registrar’s Office will make arrangements for access and notify the student of the time and place where the records may be inspected.

2) The right to request the amendment of education records if the student believes they are inaccurate. Students should submit any such request to the Student Affairs Office in writing, clearly identifying the records that the student wants to have amended and specifying the reasons the student believes those records to be inaccurate. The Student Affairs Office will notify the student of the University’s decision whether to amend the
student’s records. If the University decides not to amend the student’s records, the Student Affairs Office will inform the student of the right to a hearing regarding the student’s request for amendment.

3) The right to require Tufts to obtain the student’s written consent before releasing personally identifiable information from the student’s education records unless an exception applies.

Definitions
For purposes of this policy a student is defined as someone who is (or someone who has) officially matriculated at the University, and who attends (or has attended) classes at Tufts. This definition does not include prospective students or applicants.

Education records are records relating to a student that are maintained by the University or by a party acting on its behalf, with some exceptions.

The following records are not considered education records:
- Records created by a school official as a personal memory aid (such as notes of a private telephone conversation).
- Records of the Tufts University Police Department which are maintained separately and solely for law enforcement purposes.
- Most records created and maintained by a physician, psychiatrist, psychologist or other treatment purposes. Even though these records are not considered education records under FERPA, they may still be made available to students following completion of a HIPAA release form.
- Records pertaining to a former student other than those generated when that person was a student, such as alumni records.

Personally identifiable information includes information that would allow a student to be identified. FERPA generally prohibits the University from disclosing personally identifiable information from a student’s education record without the student’s consent unless the information has been designated as directory information or another exception applies.

Directory information consists of the following:
- Student’s name
- Address (both local and permanent)
- Telephone number (local, cell and permanent)
- Date and place of birth
- Academic program (school, degree, major, minor)
- Enrollment status (dates of attendance, full-time/part-time status)
- Degrees, honors and awards received
- Participation in athletics and student activities
- Most recent educational institution attended
- E-mail address
- Photo

Privacy Blocks are available to students who wish to prevent the University from disclosing their directory information (in student directories and commencement programs, for example) except to
school officials with legitimate education interests and to others as permitted by law by selecting the appropriate privacy settings through SIS AND by making a written request and submitting it to the Student Affairs Office, 200 Westboro Road, N. Grafton, MA 01536.
For additional information about privacy blocks, please contact the Student Affairs Office.

**Release of Your Records to Third Parties**
Personally identifiable information in your records, except for directory information as discussed above, may not be given to third parties without your written consent, with the following exceptions:

- To Tufts or other school officials such as employees and members of faculty and trustee committees and certain contractors who have a need to know or who are required to work with your records to carry out their duties.
- To officials of another education institution in which you seek to enroll. If your record is transferred, however, you will be entitled, upon request, to a copy of such records. This applies to other schools and colleges within the University and to institutions in which you may be cross-registered or enrolled at the University.
- To authorized representatives of the U.S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or state and local authorities responsible in connection with an audit or evaluation of federal or state supported education programs.
- To an individual or organization required to be informed in connection with your application or receipt of financial aid.
- To state and local officials to whom information is specifically required to be reported by state laws enacted prior to November 19, 1974.
- To appropriate parties in a health or safety emergency if necessary to protect your health or safety or that of another.
- In compliance with a subpoena, or in response to other legal action involving the student and the University.
- When the information is a record of a campus disciplinary proceeding. For students under the age of 21, the University may also inform parents about violations of any federal, state, or local law, or any University rule or policy that governs the use or possession of alcohol or a controlled substance.

Any request or authorization to allow material from your files to be shown to third parties should include: (1) a specification of the records to be disclosed; (2) the purpose of the disclosure; and (3) the party or class of parties to whom disclosure may be made. For additional information about authorizing disclosures from your education records, please contact the Registrar’s Office.

Please note that the University does not preserve students’ education records in perpetuity. In fact, most records are not maintained for more than 7 years after a student’s expected date of graduation.

**Complaint Procedure**
A student has the right to file a complaint with the U.S. Department of Education concerning alleged failures by Tufts to comply with the requirements of FERPA. A complaint must be submitted to the Department within 180 days of the date of the alleged violation or of the date that the student knew or reasonably should have known of the alleged violation. The name and address of the office that administers FERPA and accepts such complaints is: Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202-4605.
FINANCIAL AID

General Information

The Financial Aid Office helps students and their families locate the funds necessary to attend the Cummings School. Financial aid funds are available from federal, state, institutional, and private sources, and are administered in adherence with very specific regulations. With few exceptions, Cummings School's aid is administered on the basis of demonstrated need.

Applications for financial assistance generally must be filed by continuing students in April each year, and in March for incoming students. Specific dates will be determined and announced each year. Application materials are made available to all students and applicants in January. Notifications of awards are generally made in June and July. Financial aid awards may vary from year to year, depending upon available funding and individual circumstances.

Consideration for federal aid is given only to those students who are U.S. citizens or permanent residents. Students must be in good academic standing to be considered for federal aid.

Philosophy

The cost of a veterinary medical education is high, and financial aid resources are limited. It is the philosophy of the School that students and their families must bear the primary responsibility for financing the educational costs. Cummings School aid is made available only to students whose family resources are insufficient to cover attendance costs. The School utilizes a variety of need-analysis forms to measure family resources and compute financial need.

*For more detailed information about the financial aid process and the available resources, refer to the 2017-2018 Financial Aid Handbook.

STUDENT HEALTH ADMINISTRATION SERVICES

The Student Advisory & Health Administration Office (SAHA) is located at 200 Harrison Avenue on the fourth floor of Posner Hall on the Boston Campus.

Office hours are Monday - Friday, 9:00 a.m. - 5:00 p.m. Phone: 617-636-2700 – Fax: 617-636-2708

The office provides:

- Oversight of the student health insurance required by the Commonwealth of Massachusetts and disability insurance programs.

- Collection and screening of all immunization documentation required by the Commonwealth of Massachusetts and Tufts University and those recommended for healthcare workers by the Centers for Disease Control and Prevention (CDC).
This office does not provide health care. **There is no university-affiliated health center available to Tufts University Grafton Campus students.**

**HEALTH INSURANCE**

The Commonwealth of Massachusetts and Tufts University Health Sciences Schools require all matriculated students of higher education to obtain health insurance. Tufts University offers a comprehensive student health insurance plan that meets the State and University requirements. The student health insurance plan, underwritten by HPHC Insurance Company, an affiliate of Harvard Pilgrim Health Care (HPHC), and administered by United Health Care Student Resources (UHCSR), includes primary and emergency care, major medical coverage, a prescription plan, eye care, mental health benefits, and many other services. When making decisions regarding health insurance, students should be aware there is no health service clinic available to Tufts University Grafton and Boston Campus students.

The plan is available to all matriculated health sciences students and their eligible dependents. Eligible dependents include: spouse, domestic partner, or dependent(s) under the age of 26.

Each semester, students are charged one-half of the annual insurance cost at the individual rate. Two-person or family health insurance coverage is available at an additional cost. Depending on the date of enrollment, full payment for two-person or family coverage is required at the time of enrollment. To add a dependent contact the Student Advisory & Health Administration (SAHA) Office.

Open Enrollment for the student plan occurs every summer with coverage starting on September 1<sup>st</sup>. This provides a once-a-year opportunity for students to apply for enrollment or add dependents without a qualifying event. To apply for coverage during Open Enrollment students must complete an online enrollment form at: [https://studentcenter.uhcsr.com/tuftshealthsciences](https://studentcenter.uhcsr.com/tuftshealthsciences) The online enrollment option is not available after August 31<sup>st</sup>.

Students are not eligible to apply for coverage or to add a dependent(s) at any other time of the academic year, unless there is a qualifying event. Qualifying events include: change in marital status; birth or adoption of a child; or loss of alternate insurance through no fault of the student or dependent. Application must be submitted within sixty (60) days of the qualifying event. Students should contact the SAHA Office at 617-636-2700 for information on applying for coverage and the prorated payment amount.

Students must reapply for the student health insurance coverage each academic year. Unless there is a change of status, the insurance coverage continues through August 31<sup>st</sup> of the current academic year. The effective date of enrollment for new students is the first day of orientation, not the date of application.

**WAIVING THE STUDENT HEALTH INSURANCE**

Per the Commonwealth of Massachusetts and Tufts University’s Health Sciences Schools’ policy, all matriculated students of higher education are required to obtain health insurance. The student health insurance plan is not intended to replace the student’s current coverage. Students are not required to enroll in the HPHC/UHCSR plan and may waive the student plan by completing a waiver form. To determine if your coverage meets the minimum
state requirements visit the Student Health Insurance page at http://medicine.tufts.edu/saha or at Mass.gov. Students must waive the student health insurance coverage each academic year. Completion of a waiver certifies participation in a health insurance plan that meets or exceeds the coverage required by the Commonwealth of Massachusetts and Tufts University.

To waive the student plan during Open Enrollment, complete the online waiver at: http://go.tufts.edu/sis. Use your insurance card to answer all the questions on the waiver. Students who submit an approved Waiver Form will have a credit for this charge posted to their account.

Students who do not take action to either waive or enroll by August 31st, or whose waiver has been denied, will be automatically enrolled in the HPHC/UHCSR insurance plan. The online waiver option is not available after August 31st. Students are able to waive the school health insurance plan at any time during the academic year; please contact the SAHA Office for waiver instructions.

**Student Health Insurance Policy for Students on Leave of Absence**

Students who have been granted a leave of absence and who are enrolled in the student health insurance plan, have the option of either cancelling their health insurance or continuing enrollment in the plan for up to one (1) year from the effective date on which the leave begins. The student has fifteen (15) calendar days from the effective date of his/her leave of absence to notify the SAHA Office of his/her intent by submitting a Leave of Absence Health Insurance Form. Students electing to continue insurance coverage, must be paid in full within the fifteen (15) day period and must adhere to payment deadlines for subsequent semesters. Students cancelling insurance coverage will receive a prorated credit based on the date of cancellation, if applicable.

Students who previously waived the student health insurance but experience a qualifying event while on a leave of absence may enroll for coverage by submitting an enrollment form, qualifying letter, and payment within sixty (60) days of their qualifying event.

Health insurance enrollment will be cancelled if the student fails to pay the premium or if the student does not return at the end of one year’s leave of absence. Fall semester premiums are due by August 15th and spring semester premiums are due by February 15th.

Failure to notify the SAHA Office by submitting one of the required Leave of Absence Health Insurance Forms within fifteen (15) calendar days will result in continued coverage through the end of the current insurance semester. The fall term ends on February 28th/29th and the spring term ends on August 31st.

**Student Health Insurance Policy for Withdrawn or Dismissed Students**

Boston and Grafton Health Sciences students, who are withdrawn or dismissed and who are enrolled in the student health insurance plan, have the option of either cancelling their health insurance or continuing enrollment in the plan for up to sixty (60) calendar days following their withdrawal or dismissal date. To continue enrollment the student must be a matriculated student for at least 31 days prior to the withdrawal or dismissal. The student has fifteen (15) calendar days from his/her withdrawal or dismissal date to notify the SAHA Office of his/her intent by completing a Withdrawal or Dismissal Health Insurance Cancellation Form and by ensuring that full payment has been made. Students cancelling insurance coverage earlier than the end of the current insurance semester will receive a prorated credit based on the date of cancellation, if applicable.

Failure to notify the SAHA Office by submitting the required form and by paying in full within the
fifteen (15) day period will result in the student’s health insurance policy being cancelled on the date of withdrawal or dismissal from Tufts University.

**Student Health Insurance Policy for Graduating Students**
Students who are graduating and are enrolled in the student health insurance plan, have the option of either cancelling their health insurance on the date of graduation or continuing enrollment in the plan until the end of the paid insurance semester. The fall term ends on February 28\(^{th}\)/29\(^{th}\) and the spring term ends on August 31\(^{st}\).

The student must notify the SAHA Office of his/her intent by completing a Graduating & Cancelling Health Insurance Form. Cancellation must be requested within sixty (60) calendar days before or after the effective date of cancellation but no later than February 15\(^{th}\) for the fall term or August 15\(^{th}\) for the spring term. Students cancelling insurance coverage earlier than the end of the current insurance semester will receive a prorated credit based on the date of cancellation, if applicable.

Failure to notify the SAHA Office by submitting the required form will result in the student’s health insurance policy being cancelled at the end of the current insurance semester.

**Insurance Conversion Policy for Graduated or Withdrawn Students**
Students who leave the University are not eligible to continue membership in the student health insurance plan under the federal law known as COBRA, the Consolidated Omnibus Budget Reconciliation Act, as this law does not apply to student plans.

Health insurance coverage in the Commonwealth of Massachusetts is available through the Commonwealth Connector. More information can be found at: [www.mahealthconnector.org](http://www.mahealthconnector.org).

**IMMUNIZATIONS**

Per the Commonwealth of Massachusetts and Tufts University’s Health Sciences Schools’ policy, all matriculated students of higher education are required to obtain health insurance. The student health insurance plan is not intended to replace the student’s current coverage. Students are not required to enroll in the HPHC/UHCSR plan and may waive the student plan by completing a waiver form. To determine if your coverage meets the minimum state requirements visit the Student Health Insurance page at [http://medicine.tufts.edu/saha](http://medicine.tufts.edu/saha) or at [Mass.gov](https://mass.gov). Students must waive the student health insurance coverage each academic year. Completion of a waiver certifies participation in a health insurance plan that meets or exceeds the coverage required by the Commonwealth of Massachusetts and Tufts University.

To waive the student plan during Open Enrollment, complete the online waiver at: [http://go.tufts.edu/sis](http://go.tufts.edu/sis). Use your insurance card to answer all the questions on the waiver. Students who submit an approved Waiver Form will have a credit for this charge posted to their account.

Students who do not take action to either waive or enroll by August 31\(^{st}\), or whose waiver has been denied, will be automatically enrolled in the HPHC/UHCSR insurance plan. The online waiver option is not available after August 31\(^{st}\). Students are able to waive the school health insurance plan at any time during the academic year; please contact the SAHA Office for waiver instructions.
REQUIRED

Veterinary students are required to provide documentation for the following immunizations prior to their start date (with the exception for new students regarding the rabies vaccine, see below):

**Rabies:** Three doses of pre-exposure vaccination or positive antibody titer are required. If vaccination, booster dose, or antibody titer is two years old or older, a new rabies antibody titer is required. If titer level is insufficient for immunity, a booster dose is required.

**Note:** New students who have either fulfilled the rabies requirement or who have registered to participate in the on-campus rabies vaccine clinic will be considered to be in compliance.

**Students who are not in compliance will not be allowed to participate in clinical activities or coursework—including electives and selectives—on or off campus.**

**Tetanus Diphtheria Acellular Pertussis (Tdap):** One dose of the adult Tdap vaccine is required, if current Tetanus Diphtheria (Td) booster is two years old or older. If Tdap vaccine is older than ten years a Td booster is required.

**Measles, Mumps, and Rubella (MMR):** Two doses of the measles, mumps, and rubella vaccine or positive antibody titers.

**Varicella (Chicken Pox):** Physician verification of year of disease, positive antibody titer, or two doses of varicella vaccine.

**Hepatitis B:** Three doses of hepatitis B vaccine or a positive antibody titer.

**Meningococcal:** One dose of vaccine within five years prior to start date or a signed State Waiver Form.

RECOMMENDED

**Influenza:** Annual seasonal influenza vaccine recommended for all students.

OTHER

**Note: Tuberculosis Test:** Tuberculosis skin test is required for students in the combined DVM/MPH Program.

**Special Safety Considerations (Pregnancy and Other Medical Conditions which may Require Special Care)**

Students who are pregnant, or are considering becoming pregnant or who have other medical conditions which may require special care around animals are encouraged to speak with the Associate Dean for Academic Affairs or the Assistant Dean for Student Affairs to discuss program options, accommodations and important safety considerations.
DENTAL HEALTH SERVICE

Limited free dental health services are available through the Tufts University Undergraduate Dental School Clinic and include: oral examinations, emergency services (diagnostic only), radiographs, and prophylaxis. The Veterinary School also pays 50% of the cost for other dental services (not including gold, lab fees, and implant teeth and materials). The fees for the free services are paid by Tufts University’s Cummings School of Veterinary Medicine. Appointments are available by calling 617-636-6828. You must present your student I.D. to receive the free services.

Dental Insurance: A voluntary dental insurance plan is offered through Delta Dental. Questions regarding benefits and providers, call Delta Dental at 800-872-0500. Questions about enrollment, call Employee Benefit Plan Administration EBPA at 1-888-232-3203. More information can be found on the following website, http://medicine.tufts.edu/saha.

The University shall not be liable directly or indirectly for loss and/or damages to personal property due to fire, theft, or any other cause. You are encouraged to review your personal property insurance to ascertain that your property and belongings are covered for theft and loss while away at school.

SAFETY AND INSURANCE

All Tufts Veterinary students are insured for professional liability through the University's professional liability policy. This policy provides coverage during your activities at Tufts and at approved extern sites.

The Departments of Environmental Health and Safety and Risk Management are responsible for all aspects of safety and insurance. Please contact Tufts University Environmental Health and Safety at Grafton: 508-887-4556 (x84556) or Risk Management at Medford: 617-627-3981 (x73981).

Students who participate in courses away from Tufts should familiarize themselves with the host institutions guidelines regarding accidents upon or prior to arrival at the site. All accidents that require medical attention should be reported within two days, to the Environmental Health and Safety and Risk Management.

All accidents and/or injuries involving students, even those that seem minor, must be reported to the Campus Police, Environmental Health and Safety and to the faculty supervisor.

RELIGIOUS HOLIDAYS

Cummings School Policy on class and examination scheduling on religious holidays:

Students are encouraged to participate in their religious holiday observances.

Wherever possible, Cummings will try to avoid scheduling mandatory work on religious holy days. This includes examinations and class sessions that are difficult to make up, such as laboratories.
However, there may be times when such conflicts are unavoidable. Because there are many diverse religions represented at the School, it will not always be feasible to develop a schedule that avoids all conflicts with all students’ religious observances.

In the unfortunate event that such a conflict arises, students should consult with the Student Affairs Office as soon as possible. The Student Affairs Office will attempt to schedule classes and examinations while considering recognized holy days.

**SNOW DAYS**

Listen to any of the following radio stations to learn whether classes will be canceled due to storm conditions:

**Worcester Stations:**
- WCRB 102.5
- WMJX 106.7
- WROR 105.7
- WXKS 107.9
- WORC 13.10
- WTAG 58.0

An announcement that "Tufts University is closed" applies to classes on **ALL campuses**. If Tufts University is not included on the cancellation list, you should assume that classes will be held. If any one of Tufts campuses is closed, the announcement will specify which campus will be closed.

Grafton campus students are encouraged to call the "snow line" to determine whether the campus is closed due to a weather emergency. The number is (508) 839-6124, and is usually activated by 6:00 a.m. when classes will be cancelled. Please note that fourth year students and third year students in the clinical phase of the program are considered "essential personnel" and may be required to be on clinics as scheduled. Specific instructions regarding weather emergencies will be given out by rotation directors.

**ALCOHOL AND OTHER DRUGS**

*Tufts University Drug-Free Campus Program*

The Drug-Free School and Communities Act Amendments of 1989 require that Tufts have a program to prevent the unlawful possession, use and or distribution of illicit drugs and alcohol by students and employees.

The illicit use of drugs and alcohol can seriously impair health and safety. The University is committed to addressing and preventing illicit drug use and alcohol abuse within the community. All students are urged to familiarize themselves with our Drug-Free Campus Program which is sent to Tufts students annually.

**Students may not serve alcohol at functions on Tufts property without prior notification to the Assistant Dean for Student Affairs.**
TUFTS UNIVERSITY DRUG-FREE CAMPUS PROGRAM

The Drug-Free Schools and Communities Act Amendments of 1989 require that colleges and universities, as a condition of receiving federal funds or any other form of financial assistance under any federal program, certify that they have adopted and implemented a program to prevent the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees. Federal regulations implementing this statute require that Tufts University provide the enclosed information to its students and employees.

The illicit use of drugs and alcohol can seriously impair the health and safety of members of the Tufts community and their families. The University is committed to addressing and preventing illicit use and alcohol abuse within the University community. There are substantial health risks and legal consequences that stem from alcohol and drug abuse. All students and employees are urged to read the information enclosed.

I. Health Risks
Alcohol and substance abuse are a national public health concern. The health risks associated with the illicit use of drugs and alcohol abuse are described in the enclosed chart on CONTROLLED SUBSTANCES – USES AND EFFECTS and in the enclosed STATEMENT ON ALCOHOL EFFECTS.

II. Counseling and Treatment for Alcohol and Other Drug Abuse
The University encourages Tufts students and employees with alcohol and other substance abuse problems to seek assistance and treatment. At Tufts, a variety of resources exist where additional information can be obtained about alcohol and other substance abuse and forms of treatment.

Students/Student Assistance Program (SAP)
For students on the Medford/Somerville campus, confidential counseling is available from the following:
- Alcohol and Health Education 627-3861
- Tufts Health Service 627-3350
- Tufts Counseling Center 627-3360
- Psychiatrist, University Health Service 627-3350
For students on the Boston/Grafton campuses, confidential counseling is available from the following:
- Student Advisory and Health Adm. Office (All Schools) 636-2700
- Resource for Impaired Students Committee (Medical) 636-6534
- Massachusetts Dental Society (Dental) (508) 651-7511

In addition, the Student Affairs offices within each of the schools and the University Chaplain’s office are available for referrals to the other resources in the community.

III. Standards of Conduct
The unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees on Tufts University property or as part of University activities is prohibited.

IV. Disciplinary Sanctions
The University will impose disciplinary sanctions on students and employees who violate the
standards of conduct described above. Among the sanctions that may be imposed are the following: warning, probation, suspension, dismissal, and/or referral to appropriate governmental authorities for civil and criminal prosecution. The University may also require completion of a professional assessment as part of the Tufts Student Assistance Program in connection with a disciplinary matter.

V. Local, State, and Federal Sanctions Concerning Alcohol and Drugs

Local, state, and federal laws make the illegal use of drugs and alcohol a criminal offense. Conviction can lead to imprisonment, fines, and other penalties.

Cities and towns in Massachusetts prohibit public consumption of alcohol and impose fines for violation. The Department of Conservation and Recreation also prohibits public consumption of alcohol in its parks and public recreational areas. Boston and other cities and towns surrounding the various Tufts campuses have ordinances forbidding the possession of an open container of alcohol on any public street by a person of any age. Anyone choosing to violate such ordinances can be subject to arrest.

Massachusetts’s law prohibits the sale or delivery of alcoholic beverages to persons under age 21 with a fine of up to $2,000 or twelve months’ imprisonment, or both. Misrepresenting one’s age or falsifying an identification to obtain alcoholic beverages is punishable by fine. Included among the penalties for the first conviction of driving under the influence of alcohol under Massachusetts law are a $5,000 fine, a one-year revocation of drivers’ license, up to two and one half (2 ½) years in prison, and mandatory alcohol rehabilitation.

Massachusetts imposes criminal penalties for the possession and/or distribution of controlled substances, or drugs, without valid authorization, with penalties varying as to the type of drug. Sale and possession of “drug paraphernalia” is illegal in Massachusetts.

Under both Massachusetts and federal law, penalties for possession, manufacture, and distribution are greater for subsequent convictions, including mandatory prison terms and the full minimum term must be served.

Massachusetts makes it illegal to be in a place where heroin is kept and to be “in the company” of a person known to possess heroin.

Persons convicted of drug possession under state and federal law are ineligible for federal student grants and loans for up to one year after the first conviction and up to five years after the second.

The penalty for unlawful distribution of drugs is loss of benefits for five years after the first conviction and for a longer period after the second.

Under federal law, penalties may be doubled when a person at least 18 years old distributes drugs within 1,000 feet of a public or private elementary or secondary school, or a public or private college to persons under age 21 and include a mandatory one-year prison term.

See the enclosed chart on FEDERAL TRAFFICKING PENALTIES and the description of FEDERAL PENALTIES AND SANCTIONS FOR ILLEGAL POSSESSION OF A CONTROLLED SUBSTANCE for additional information.
Alcohol Effects
Alcohol consumption causes a number of marked changes in behavior. Even low doses significantly impair the judgment and coordination required to drive a car safely, increasing the likelihood that the driver will be involved in an accident. Low to moderate doses of alcohol also increase the incidence of a variety of aggressive acts, including spouse and child abuse. Moderate to high doses of alcohol cause marked impairments in higher mental functions, severely altering a person’s ability to learn and remember information. Very high doses cause respiratory depression and death. If combined with other depressants of the central nervous system, much lower doses of alcohol will produce the effects just described.

Repeated use of alcohol can lead to dependence. Sudden cessation of alcohol intake is likely to produce withdrawal symptoms, including severe anxiety, tremors, hallucinations, and convulsions. Alcohol withdrawal can be life threatening. Long-term consumption of large quantities of alcohol, particularly when combined with poor nutrition, can also lead to permanent damage to vital organs such as the brain and the liver.

Mothers who drink alcohol during pregnancy may give birth to infants with fetal alcohol syndrome. These infants have irreversible physical abnormalities and mental retardation. In addition, research indicates that the children of alcoholic parents are at greater risk than other youngsters of becoming alcoholics.

Federal Penalties and Sanctions for Illegal Possession of a Controlled Substance
21 U.S.C. 844(a)
1st conviction: Up to 1 year imprisonment and a fine of at least $1,000, or both.
After 1 prior drug conviction: At least 15 days in prison, not to exceed 2 years and a fine of at least $2,500, or both.

After 2 or more prior drug convictions: At least 90 days in prison, not to exceed 3 years and a fine of at least $5,000, or both.

21 U.S.C. 853(a)(2) and 881(a)(7)
Forfeiture of personal and real property used to possess or to facilitate possession of a controlled substance if that offense is punishable by more than 1- year imprisonment. (See special sentencing provisions re: (crack).

21 U.S.C. 881(a)(4)
Forfeiture of vehicles, boats, aircraft or any other conveyance used to transport or conceal a controlled substance.

21 U.S.C. 884a
Civil fine of up to $10,000 (pending adoption of final regulations).

21 U.S.C. 853a
Denial of Federal benefits, such as student loans, grants, contracts, and professional, and commercial licenses, up to 1 year for first offense, up to 5 years for second and subsequent offenses.

18 U.S.C. 922(g)
Ineligible to receive or purchase a firearm.
<table>
<thead>
<tr>
<th>POSSIBLE EFFECTS</th>
<th>EFFECTS OF OVERDOSE</th>
<th>WITHDRAWAL SYNDROME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narcotics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphoria, drowsiness, respiratory depression, constricted pupils, nausea</td>
<td>Slow and shallow breathing, clammy skin, convulsions, coma, possible death</td>
<td>Watery eyes, runny nose, yawning, loss of appetite, irritability, tremors, panic, cramps, nausea, chills and sweating</td>
</tr>
<tr>
<td>Slurred speech, Disorientation, drunken behavior without odor of alcohol</td>
<td>Shallow respiration, clammy skin, dilated pupils, weak and rapid pulse, coma, possible death</td>
<td>Anxiety, insomnia, tremors, convulsions, possible death</td>
</tr>
<tr>
<td>Depressants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased alertness, excitation, euphoria, increased pulse rate and blood pressure, insomnia, loss of appetite</td>
<td>Agitation, increase in body temperature, hallucinations, convulsions, possible death</td>
<td>Apathy, long periods of sleep, irritability, depression, disorientation</td>
</tr>
<tr>
<td>Stimulants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illusions and hallucinations, poor perception of time and distance</td>
<td>Longer, more intense “trip” episodes, psychosis, possible death</td>
<td>Withdrawal syndrome not reported</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Euphoria, relaxed inhibitions, increased appetite, disoriented behavior</td>
<td>Fatigue, paranoia, possible psychosis</td>
<td>Insomnia, hyperactivity, and decreased appetite occasionally reported</td>
</tr>
</tbody>
</table>

**Miscellaneous**

Revocation of certain Federal licenses and benefits, e.g. pilot licenses, public housing tenancy, etc., are vested within the authorities of individual Federal agencies.
### Federal Trafficking Penalties – Marijuana

<table>
<thead>
<tr>
<th>DRUG</th>
<th>QUANTITY</th>
<th>1st OFFENSE</th>
<th>2nd OFFENSE</th>
</tr>
</thead>
</table>
| Marijuana     | 1,000 kg or more mixture; or 1,000 or more plants | • Not less than 10 years, not more than life  
• If death or serious injury, not less than 20 years, not more than life  
• Fine not more than $4 million if an individual, $10 million if other than an individual | • Not less than 20 years, not more than life  
• If death or serious injury, mandatory life  
• Fine not more than $8 million if an individual, $20 million if other than an individual |
| Marijuana     | 100 kg to 999 kg mixture; or 100 to 999 plants | • Not less than 5 years, not more than 40 years  
• If death or serious injury, not less than 20 years, not more than life  
• Fine not more than $2 million if an individual, $5 million if other than an individual | • Not less than 10 years, not more than life  
• If death or serious injury, mandatory life  
• Fine not more than $4 million if an individual, $10 million if other than an individual |
| Marijuana     | more than 10 kgs hashish; 50 to 99 kg mixture  
more than 1 kg of hashish oil; 50 to 99 plants | • Not more than 20 years  
• If death or serious injury, not less than 20 years, not more than life  
• Fine $1 million if an individual, $5 million if other than an individual | • Not more than 30 years  
• If death or serious injury, mandatory life  
• Fine $2 million if an individual, $10 million if other than an individual |
| Marijuana     | 1 to 49 plants; less than 50 kg mixture       | • Not more than 5 years  
• Fine not more than $250,000, $1 million other than individual | • Not more than 10 years  
• Fine $500,000 if an individual, $2 million if other than individual |
| Hashish       | 10 kg or less                                |                                                                                                   |                                                                                                   |
| Hashish Oil   | 1 kg or less                                 |                                                                                                   |                                                                                                   |
Medical and Recreational Marijuana Policy

Although Massachusetts state law permits the possession and consumption of limited quantities of marijuana in certain circumstances, under federal law, marijuana is still considered an “illegal” Schedule I drug pursuant to the Controlled Substances Act and is prohibited under the Drug Free Communities and Schools Act as well as the Drug Free Workplace Act. Thus, federal law prohibits the possession or use of marijuana on Tufts University property and at University sponsored events—whether on or off campus or for medical or recreational use.

OFFICE OF EQUAL OPPORTUNITY

The Office of Equal Opportunity (OEO) exists to ensure that the University’s commitment and goals toward equal opportunity are integral components of Tufts’ policies.

We further this mission by ensuring that the University maintains compliance with all federal, state, and local laws pertaining to anti-discrimination, the Americans with Disabilities Act, and
Title IX, through complaint resolution, programming and outreach. OEO cooperates with members of the Tufts community to resolve complaints of discrimination, sexual harassment, and sexual misconduct, and set forth University policies and guidelines that pertain to these areas of conflict. We also ensure that the University maintains compliance with all federal, state, and local laws pertaining to affirmative action.

OEO is guided by the University’s commitment to and desire for a truly integrated, interactive, productive, successful, diverse student, faculty, staff body, and community members.

The OEO website contains policies and procedures related to Non-Discrimination, Americans with Disabilities Act, Sexual Harassment, and Sexual Misconduct, and includes lists of resources on all Tufts campuses, as well as guidance on reporting incidents of misconduct.

The OEO website can be accessed via this link: http://oeo.tufts.edu/

VIOLENCE FREE UNIVERSITY POLICY STATEMENT

Tufts University is committed to maintaining an environment where individuals are safe to learn, work, and live. In support of this commitment, Tufts will not tolerate violence or threats of violence anywhere on its campuses or in connection with university-sponsored programs. The university has established threat assessment and management teams to evaluate and address violence and threats of violence made towards members of the Tufts University community. Please follow link for details of the complete policy.

http://sites.tufts.edu/ttam/policy-statement/

TUFTS WEAPONS POLICY

Policy Statement

Tufts University is committed to maintaining a safe and secure environment where students, faculty, staff, visitors, and contractors can live, work, and learn. In support of this commitment, Tufts University expressly prohibits the possession, manufacture, transfer, sale, or use of weapons by anyone on university property or at any university-sponsored event, except as authorized by this policy.

Scope

This policy applies to all university students, faculty, staff, visitors, and contractors on all campuses and on all property owned, leased, and/or controlled by Tufts University, including but not limited to buildings, grounds, parking lots/garages, roadways, and vehicles, and at any university-sponsored event.
Policy

Tufts University strives to comply with all relevant and applicable federal, state, and local laws and ordinances. In relation to firearms on Tufts campuses, Massachusetts General Law prohibits carrying a firearm on the grounds or any elementary or secondary school, college, or university without the written authorization of the board or officer in charge of such elementary or secondary school, college, or university, under Chapter 269, Section 10, Paragraph (j).

Tufts University further regulates firearms and other weapons. Except as expressly authorized within this policy, no individual may manufacture, sell, possess, carry, store, use, or have in his or her custody and/or control, a firearm or other weapon defined within this policy anywhere on any Tufts University campus, grounds, in any university facility, or at any university-sponsored event.

This prohibition exists whether or not a federal or state license to possess the weapon has been issued to the possessor. Prohibited weapons include, but are not limited to: firearms of any nature, including shotguns, rifles, pistols, and revolvers; paint ball guns; BB/pellet guns; firearm replicas; ammunition; components of ammunition including bullets, cartridges, shell casings, primers, igniters, and gun powder; martial arts-type weapons such as nunchaku, zoobow, also known as klackers or kung fu sticks; or any similar weapon consisting of wood, plastic, or metal connected at one end by a length of rope, chain, wire, or leather; a shuriken or any similar pointed star-like object intended to injure a person when thrown; or any armband, made with leather, which has metallic spikes or points or any similar device made from any other substance; or a cestus or similar material weighted with metal or other substance and worn on the hand; or a manrikigusari or similar length of chain having weighted ends; explosives, including fireworks; spears; bows; crossbows; arrows; slingshots; blowguns; blackjacks; metallic knuckles or knuckles of any substance which could be put to the same use with the same or similar effect as metallic knuckles; stiletto; dagger or a devices or case which enables life with a locking blade to be drawn at a locked position; any ballistic knife; or any knife with a detachable blade capable of being propelled by any mechanism; dirk knife; any knife having a double-edged blade; or a switch knife; or any knife having an automatic spring release device by which the blade is released from the handle; a folding knife having a blade of over three inches in length; double-edged knives; hunting (fixed-blade)-style knives of any length; throwing knives; swords; axes; mace; pepper gas/spray; and other dangerous chemicals; or any other destructive device or instrument that may be used to do bodily harm or to damage property.

Nothing in this policy shall be construed to create regulation that is less restrictive than any applicable code, statute, law, regulation, or ordinance. When a conflict arises, determination of an object or article as a weapon is subject to the sole discretion of the Director of Public and Environmental Safety or his/her designee.

University departments, units, or schools may promulgate standards governing weapons that are more restrictive than those contained within this policy, but not less restrictive.

Authorized Activities

Exceptions to this policy are:

Authorized law enforcement officers or military personnel, in performance of their official duties, and to the extent that they are legally permitted to possess weapons in
Weapons on display as objects of artistic, decorative, historical or cultural value, provided that such weapons are secured in such a way as to prevent access to the weapon or removal of the weapon by unauthorized persons, and in the case of mechanical, electronic, or chemical weapons, rendered inert and inoperable. The Director of Public and Environmental Safety must approve such use in writing.

University-sanctioned employee groups or events where a weapon is required as a part of the curriculum or activity, including dramatic performances, sanctioned athletic competitions such as fencing, and official military ceremonies. Such weapons must be inert replicas, working weapons rendered inert, or military ceremonial swords carried in conformance with applicable branch of service regulations. Such use must be approved by the Director of Public and Environmental Safety at least two weeks before the event is to take place, and authorization must be in writing from the Director or designee.

**Obligation to Report**

Any member of the university community who observes an individual possessing, manufacturing, transferring, selling, or using a weapon and who reasonably believes that the individual is doing so without the consent of the university as set forth in this policy, should immediately report this activity to the Tufts University Police Department.

Likewise, any member of the university community who observes unattended items that they reasonably believe to be weapons should immediately notify the Tufts University Police Department and provide the location and description of the item, remaining with the item until the police arrive.

**Requests for Exceptions**

Exceptions to this policy will be rare, and granted only under extraordinary or unusual circumstances. Exception requests must be made in writing to the Director of Public and Environmental Safety or his/her designee. The Director or his/her designee will review the request in consultation with appropriate university officials and will respond with his/her decision.

Exceptions cannot be lawfully granted for those weapons described as dangerous weapons unlawfully carried under Massachusetts General Law (MGL) Chapter 269, Section 10.

**Sanctions**

University Police will confiscate weapons and violators may be subject to criminal prosecution and/or referral for university disciplinary actions, up to and including suspension, termination, or expulsion.

**Questions about the Applicability of this Policy**

Questions about the applicability of this policy should be directed to the Director of Public and Environmental Safety, or his/her designee; or to the department/division’s Human Resources business partner. This action must take place before the item in question is brought onto university property or to a must take place before the item in
question is brought onto university property or to a university sponsored event. Tufts University reserves the right to modify this policy in whole or in part, at any time, at its sole discretion.

UNIVERSITY POLICY ON CAMPUS GATHERINGS, DEMONSTRATION, AND DISTURBANCES

These guidelines clarify the University policy on "Gatherings, Demonstrations, and Disturbances," a copy of which may be obtained from the Dean of Students Office.

Tufts University believes free inquiry and expression are indispensable in attaining the goals of the University, encourages members of the University community to develop the ability to exercise critical judgment and supports the rights of the individual to express their views and opinions.

The University has a concurrent obligation to develop policies and procedures that safeguard this freedom of expression, yet maintain an atmosphere conducive to the functioning of the University. The University expects its members to be respectful of the corollary rights of fellow students, faculty, staff, and others to perform their duties and participate in the life of the community free from disruption, interference, or harassment.

The University respects the rights of members of the Tufts community to peaceful and non-obstructive demonstration for the purpose of expressing and discussing ideas and opinions and seeks to ensure reasonable time, place, and manner for such expression. Examples of behavior that violate university rules include the following:

1. Interference with students, faculty, staff, or visitors to the campus who are seeking to perform their various duties. Blocking, directly or by crowding, an entry to a university building and/or creating excessive noise which interferes with sanctioned activities constitute disruption.

2. Intimidation of students, faculty, staff, or visitors to the campus. Examples of intimidation include the following:
   a. Causing or attempting to cause physical injury
   b. Physically preventing or attempting to prevent use of a university facility
   c. Threatening by words or actions, either of the above

3. Destruction of, damage to, or unauthorized access to property, records, documents, files, etc., of the university or of members of the university community.

4. Unauthorized entry to a non-public area, a private office, or to a university facility declared closed by the university and/or refusal to leave when asked. Such behavior constitutes trespassing.
5. Failure to identify oneself when asked by a university official or university police officer.

6. Disregarding requests by a university official to disperse or preventing an official from carrying out his/her responsibilities to enforce those rules.

7. Aiding and abetting others in violating these rules.

Being considered in violation of this policy is not contingent upon notification by a university official. Any individual who engages in the conduct described above, fails to obey reasonable orders, or who otherwise interferes with and disrupts the orderly conduct of university affairs will be subject to the normal university disciplinary procedures, which may include suspension or expulsion and when civil or criminal statutes are violated, to civil or criminal prosecution. Depending upon the circumstances, such as the nature of the activity and the location where the activity or behavior took place, the activity or behavior described above may also be the basis of disciplinary action when it occurs off-campus.

POLICY ON THE USE OF TUFTS UNIVERSITY NAME AND INSIGNIAS

The name “Tufts University” and how it is used affects both the institution as a whole and the individual members of the University community. Appropriate use of the name and insignias can benefit all, while inappropriate use may reflect negatively on both the institution and its individual members.

Because of the far-reaching implications, oversight regarding the use of the University’s name and insignias, and the names of individual schools within the University (including web domain names that incorporate “Tufts” or the name of a Tufts school) will be conducted on an institutional level according to the principles and guidelines outlined in this policy. Please refer to the full policy here.

The Office of University Counsel will coordinate all requests for use of the Tufts name and insignias, which are trademarks of the University. The Office of University Counsel is located in Ballou Hall, Third Floor, Medford, MA 02155 and requests for approval can be emailed to https://legal.tufts.edu/nameuse/. The Senior Vice President for University Relations is the individual responsible for making final decisions on use of the Tufts name and insignias, including the names of individual units of the University.

PRESS POLICY FOR GRADUATE AND PROFESSIONAL STUDENTS

Tufts University and Cummings School maintain and foster many relationships with reporters, and other members of the news media, including those in print, broadcast, and online media. We regularly provide experts from within our faculty as sources for the news media, and our most seasoned faculty experts often work directly with the press. As a result, Tufts University and its schools receive positive attention relating to the clinical, research, and professional activities of its faculty and also of its graduate students and post-docs.
To effectively manage these media relationships, we rely on professionals in Tufts University's Office of Public Relations. It is their responsibility to ensure that the interests of the University and its schools, faculty, and students are successfully met when a reporter is gathering information for a story. The public relations team at the University works to ensure that your clinical work, research, or other professional activities relating to Tufts are represented fairly and accurately. In addition, we want to try to ensure that information about Tufts is presented factually (that the School name is given as Cummings School of Veterinary Medicine, for example, or that you are a student at Cummings School). These details may not be foremost on the reporter’s mind, but we care a great deal about these pieces of identifying information.

Many of our students are involved with research or other work that major media wish to highlight: this is often the best type of visibility and promotion for Tufts. Because it is visibility for Tufts, our public relations staff members need to be involved in interaction with news media.

The public relations team is here to help you assess potential media opportunities and work effectively and comfortably with journalists.

Therefore, if you are approached by a media outlet regarding your studies, research or work at Tufts, it is important to contact the Office of Public Relations. Students who are contacted by media outlets regarding their work should also let faculty members with whom they collaborate know about such inquiries.

If you are contacted by a reporter, and before you are interviewed or provide information, please contact Associate Director of Public Relations Tara Pettinato, 508-839-7910, taraneh.pettinato@tufts.edu. If she is unavailable, Deputy Director Patrick Collins (617-627-4173) or another colleague in the Office of Public Relations will be able to assist.

INFORMATION TECHNOLOGY RESPONSIBLE USE POLICY

A University-wide policy governing the use of technology went into effect in the fall of 1998. All students are required to familiarize themselves and comply with policies governing the use of technology at Tufts. The policies can be found at: https://it.tufts.edu/ispol

TUSK - TUFTS UNIVERSITY SCIENCE KNOWLEDGEBASE (TUSK)

Each student has access to the Tufts University Science Knowledgebase (TUSK) for reviewing digital images and other educational materials. The ability to access copyrighted materials on the TUSK must be restricted by password. It is essential to the development of the database that students not share their password with anyone inside or outside of the Tufts University.

RECORDING TEACHING SESSIONS

It is school policy that students generally may not record sounds or images or teaching sessions without the expressed consent of the instructor, and in some
cases, of the Dean’s Office. In addition, it is not permissible to copy and distribute such images, recordings, or transcripts thereof in any form (digital, print, website, etc.) without authorization. To do so results in the unauthorized use of intellectual property and may violate public law.

NEW ENGLAND ASSOCIATION OF SCHOOLS AND COLLEGES

Tufts University has been accredited by the New England Association of Schools and Colleges (NEASC) and Commission on Institutions of Higher Education (CIHE) since 1929 and its accreditation by NEASC encompasses the entire institution. NEASC establishes and maintains high standards of educational excellence through self-evaluation and peer review. Institutions demonstrating they meet these standards are accredited and thus members of NEASC. The CIHE, recognized by the U.S. Department of Education, is one of seven accrediting commissions that provide accreditation regionally.

COUNCIL ON EDUCATION STANDARDS FOR ACCREDITATION

The American Veterinary Medical Association’s Council on Education has provided veterinary schools with a listing of Standards of Accreditation. The Standards listing is posted on student bulletin boards in the Loew Center and by the mailboxes in Varis. A copy of the Standards may also be obtained in the Dean’s office or online at www.avma.org/education. Students may offer suggestions, comments, and complaints for the School related to the Standards for Accreditation. Such comments may be made anonymously by sending them to the Dean’s or Student Affairs offices via U.S. mail or by posting them through the inter-campus mail service.
IV. STUDENT CODE OF ETHICAL PRACTICES AND PROFESSIONAL CONDUCT

Guidelines for Professional Student Conduct
These guidelines are written to promote a sense of intellectual honesty, trust, responsibility, and professionalism among students, faculty, and staff of the Cummings School. It should be understood that these guidelines represent standards for which to strive, and that not every infraction will necessitate formal investigation by the Student Ethics and Grievance Committee. It should also be recognized that these guidelines cannot anticipate every potential offense, and that unethical behavior not specifically mentioned can be investigated. Specific incidents will be considered in the context in which they occur. In addition, the magnitude and repeat nature of infractions will be taken into account.

To demonstrate intellectual integrity and honesty, the student will:

Not receive, give or seek assistance from any student or person during any in-class or take-home examination, quiz, or exercise without the permission of the course director or appropriate instructor. Prohibited activities also include consulting notes or electronic material or use of cellular or wifi enabled devices during exams.

Not take an examination nor complete an assignment for another person

Take all examinations when scheduled, unless appropriately excused. Excused absences include only student illness documented by a physician or serious illness or death in the immediate family. Students may not delay taking examinations for the sole purpose of gaining academic advantage over colleagues. Repeated failure to take examinations or to complete any required exercises for any reason except illness or other extenuating circumstances shall be investigated by the Office of Graduate Programs

Not take possession of, photograph or copy any course-related materials, including examinations, unless specifically provided or approved by the course director

Not present another’s words or ideas as one’s own in any assignment, thesis, paper, report or presentation without proper attribution

Not collaborate with others on work that is claimed to be one’s own. Instructors will make clear when collaboration is permissible, and students should ask for clarification when in doubt. Full and obvious acknowledgement must be given to collaborators when collaboration to produce a project or report is permitted

Not submit work done previously for credit in another course

Respect the intellectual property and learning materials of other students and the Webster Library, understanding that to take, keep, tamper with, or destroy such property may result in unfair academic advantage

Not alter or falsify academic or research documents

Follow prescribed laboratory and field protocols and procedures or instructions intended to
ensure the health and safety of persons or animals involved
Not use fraud, misrepresentation, or deception in the completion of any School or University record, form or inquiry, including those in connection with financial aid including loans, scholarships, grants and work study programs

Report promptly any suspected violations of these guidelines to a member of the Advanced Education Committee, a member of the Student Ethics and Grievance Committee, the Office of Research and Graduate Studies, or Program Director

To demonstrate respect for the rights of others, build trust in professional relationships, and demonstrate professional demeanor, students will:

Not engage in disruptive or disrespectful behavior in the classroom, laboratories, and off-campus externship and field locations

Arrive to classes, and examinations at the scheduled time. Attendance policies are set by individual course directors

Interact with faculty, staff, and other members of the university in a considerate manner and with a spirit of cooperation

Act with an egalitarian spirit toward all persons regardless of race, religion, gender, sexual orientation, disability, or socioeconomic status

Not engage in intentional or negligent mistreatment or neglect of any animal

Be truthful in communications with others, admit errors, and not knowingly mislead others

Maintain his or her composure under pressures of fatigue, academic stress or personal issues

Maintain a neat and clean appearance and dress in attire that is acceptable as a graduate student

**ETHICAL PRACTICES**

The following conduct is prohibited and can result in counseling or disciplinary action by the Committee:

Receiving, or giving to, or seeking assistance from any student or person; notes, or any written, printed, or electronic material during any in-class or take-home examination, quiz, or exercise without the permission of the course director or appropriate instructor. Please note that the use of cellular or wifi enabled devices during exams is strictly prohibited

Taking or attempting to take, removing, stealing, obtaining and/or copying any course related materials, including examinations, in an unauthorized manner. This includes, but is not limited to, exams that clearly state the exam is not to be removed from the Student Affairs Office or classroom, and/or when a course director, faculty member, or proctor indicates either verbally or in a written form that such a policy exists
Presenting another's words or ideas as one's own in any thesis, paper, report or presentation without proper attribution or engaging in other actions of academic dishonesty

Theft or unauthorized use of, or malicious or unwarranted damage to, or destruction of property belonging to Tufts University, a member of the School or University community, or a guest of the School or University or their affiliates

Failure to adhere to regulations of the University, Health Sciences, or Cummings School Libraries, including but not limited to theft, or unauthorized use of books and journals, unauthorized removal of reserved materials or examinations placed in the Library for the use of students
Failure to adhere to regulations governing the use of School or University property, and failure to follow the directions of security officers and/or responsible School and University personnel relating thereto

Taking or attempting to take, steal, or obtain in an unauthorized manner any material pertaining to a class, including but not limited to anatomic specimens and displays, instructional materials, slides, transparencies, and other laboratory equipment

Failing to follow prescribed laboratory or field protocols and procedures or instructions, thereby endangering the health or safety of other persons or of animals

The employment of fraud, misrepresentation, or deception in the completion of any School or University record, form or inquiry

Violence or the threat of violence to any person

Discourteous, disrespectful, or unlawful behavior

The employment of fraud, misrepresentation, or deception in any application for, or in connection with, financial aid (including loans, scholarships, grants and work study programs) from the School or University

Repeated failure to take any examination(s), or to complete any required exercise(s) for any reason except illness, or other extenuating circumstances

PRINCIPLES OF PROFESSIONAL CONDUCT

The following actions can be grounds for disciplinary actions by the Committee:

1. Conviction in any state or federal court of a felony, or of a crime involving moral turpitude.

2. Conviction or violation of any state or federal law regulating the possession, use, or distribution of any narcotic drug or controlled substance.

3. Inebriation during professional activities or use of illegal drugs.
4. Conduct constituting the illegal (unlicensed) practice of veterinary medicine, as defined by the Statutes of the jurisdiction in which such conduct occurs.

5. Conduct constituting cruelty to animals, as defined by the Anti-Cruelty to Animals Statutes of the jurisdiction in which such conduct occurs.

PART I: SUBSTANTIVE PRINCIPLES

GENERAL PRINCIPLES

The Student Ethics and Grievance Committee has formulated this Student Code of Ethical Practices and Professional Conduct. This Code and this Handbook, established by faculty and student representatives, shall serve as a set of ethical and professional standards which all students will be expected to use as a guide for acceptable conduct. This Code shall also serve as the set of substantive and procedural rules which both the Academic Affairs Committee (AEC) and the Student Ethics and Grievance Committee (SEGC) will apply in counseling and disciplining students regarding appropriate ethical and professional conduct.

Attendance at the Cummings School is not a right but a privilege. The School reserves the right to condition attendance upon adherence to this Code in order to protect its ability to maintain its functions as an educational institution. Accordingly, all students who enroll agree thereby to be governed by the provisions of this Code and this Handbook, and to accept all final disciplinary actions taken by the School pursuant to it. All students shall receive a copy of this Code and this Handbook, and are charged with knowledge of it in its entirety.

Neither this Code, nor this Handbook is intended to contain an exclusive or complete list of standards, violations of which could result in discipline. Although they contain those principles, which in the view of the Committee, should be sufficient in the great majority of cases for the great majority of students, no set of standards can anticipate all types of inappropriate or unacceptable conduct. The AEC and SEGC reserve the right to counsel and discipline students regarding conduct in violation of fundamental standards of morality, decency and professionalism even if prohibition of some kind of conduct is not specifically mentioned in this Code.

The AEC and SEGC have no intention of interfering with the private and essentially personal conduct of students. However, this Code and this Handbook are not restricted to behavior occurring on School or University property, or relating immediately and directly to School or University functions or events. The Cummings School must protect its ability to function as a respected educator of students. Accordingly, the substantive principles of the Code are divided into two different parts - "Ethical Practices" which pertain to School and University functions and events, and "Principles of Professional Conduct" which pertain to broader moral and professional standards expected of Cummings School students. The "Principles of Professional Conduct" in this Code are, to a large extent, patterned after rules found in the veterinary practice acts of the various states. A school which is entrusted with the task of training veterinarians must recognize that technical expertise, alone, is not sufficient for the competent veterinarian. An understanding of
ethics forms the foundation for any practitioner's conduct.

The substantive rules contained in this Code of Ethical Practices and Professional Conduct are mandatory; each student will be expected to act in accordance with them. The AEC and the SEGC, however, shall exercise their discretion, based on its evaluation of the facts and needs of each particular case, in determining what, if any, counseling or disciplinary action is appropriate.

The procedures contained within this Code are the only vehicle for the discipline of students. No course instructor shall attempt or threaten to use grades, or any other means suitable to the academic evaluation of students, to discipline or otherwise admonish any student.

Rules and standards of this Code are often phrased in the negative, as prohibitions. This is the nature of a disciplinary code, and does not mean that most students need prohibitions to guide their behavior, or that most of the actions prohibited in the Code are likely to occur. Indeed, it is because students are assumed to act honorably and decently that it is easier to formulate a brief list of prohibitions rather than a long list of the types of honorable conduct. Moreover, although the AEC and the SEGC exist, in part, to impose discipline for inappropriate conduct, the Committees are not an adversary to the student body. Wherever possible, the Committees will seek to counsel students in disciplinary matters, or to refer grievances and complaints from individual students or the student body concerning School matters. It is part of the function of the Committees to keep open avenues of communication among students, faculty, and staff so that the School will be a better place for all to learn, teach, and further the practice of veterinary medicine.

ETHICAL PRACTICES

The following conduct is prohibited and can result in counseling or disciplinary action by the Committee:

1. Receiving, or giving to, or seeking assistance from any student or person; consulting notes, or any written, printed, or electronic material during any in-class or take-home examination, quiz, or exercise without the permission of the course director or appropriate instructor. Please note that the use of cellular or wifi enabled devices during exams is strictly prohibited.

2. Taking or attempting to take, removing, stealing, obtaining and/or copying any course related materials, including examinations, in an unauthorized manner. This includes, but is not limited to, exams that clearly state the exam is not to be removed from the Student Affairs Office or classroom, and/or when a course director, faculty member, or proctor indicates either verbally or in a written form that such a policy exists.

3. Presenting another's words or ideas as one's own in any thesis, paper, report or presentation without proper attribution or engaging in other actions of academic dishonesty.

4. Theft or unauthorized use of, or malicious or unwarranted damage to, or destruction of property belonging to Tufts University, a member of the
School or University community, or a guest or veterinary client of the School or University or their affiliates.

5. Failure to adhere to regulations of the University, Health Sciences, or Cummings School Libraries, including but not limited to theft, or unauthorized use of books and journals, unauthorized removal of reserved materials or examinations placed in the Library for the use of students.

6. Failure to adhere to regulations governing the use of School or University property, and failure to follow the directions of security officers and/or responsible School and University personnel relating thereto.

7. Taking or attempting to take, steal, or obtain in an unauthorized manner any material pertaining to a class, including but not limited to anatomic specimens and displays, instructional materials, slides, transparencies, and other laboratory equipment.

8. Failing to follow prescribed laboratory or clinical protocols and procedures or instructions, thereby endangering the health or safety of other persons or of animals.

9. The employment of fraud, misrepresentation, or deception in the completion of any School or University record, form or inquiry.

10. Violence or the threat of violence to any person.

11. Discourteous, disrespectful, or unlawful behavior.

12. The employment of fraud, misrepresentation, or deception in any application for, or in connection with, financial aid (including loans, scholarships, grants and work study programs) from the School or University.

13. Repeated failure to take any examination(s), or to complete any required exercise(s) for any reason except illness, or other extenuating circumstances.

14. Unexcused failure to appear for, and complete all duties pertaining to, all clinical rotations for any reason except illness or other extenuating circumstances.

PRINCIPLES OF PROFESSIONAL CONDUCT

The following actions can be grounds for disciplinary actions by the Committee:

1. Conviction in any state or federal court of a felony, or of a crime involving moral turpitude.

2. Conviction or violation of any state or federal law regulating the possession, use, or distribution of any narcotic drug or controlled substance.

3. Inebriation during professional activities or use of illegal drugs.
4. Conduct constituting the illegal (unlicensed) practice of veterinary medicine, as defined by the Statutes of the jurisdiction in which such conduct occurs.

5. Conduct constituting cruelty to animals, as defined by the Anti-Cruelty to Animals Statutes of the jurisdiction in which such conduct occurs.

PART II: PROCEDURES AND PENALTIES

GENERAL PRINCIPLES

This part of the Student Code of Ethical Practices and Professional Conduct sets out the rules of procedure which will be followed by the Academic Affairs Committee (AEC) and the Student Ethics and Grievance Committee in deliberations concerning possible violations of the Code.

The Academic Affairs Committee (AEC) serves two major roles. The first is to develop educational policy and evaluate the quality, effectiveness and breadth of the Graduate curriculum and implementing policy and procedures for all the Graduate Programs, and the second is to implement policies and procedures regarding these programs subject to review of the Executive Faculty Board. The AEC also acts as a resource for any questions or concerns regarding professionalism and/or the Code.

The Student Ethics and Grievance Committee (SEGC), whose members include faculty, staff, and one elected student, is also responsible for recommending action in cases of student disciplinary problems other than for academic deficiency. It hears student grievances concerning individual or school-related matters, and makes appropriate recommendations to relevant standing committees, the Executive Faculty Board, or the Dean.

It should be noted that the Cummings School Bylaws assign the task of making the actual decision concerning discipline to the Executive Faculty Board (EFB). The EFB is the senior policy-making body of the School. The Board is made up of elected faculty and appointed administrators within the School. It is the function of the Student Ethics and Grievance Committee to make recommendations concerning discipline to the Board. The Board will reach its own conclusions about whether there has been a violation of this Code, and about any appropriate penalty. It is the decision of the Executive Faculty Board, and not any recommendation of the AEC or the SEGC which constitutes a disciplinary decision. In its deliberations, the Executive Faculty Board is not bound by the rules or procedures of the AEC or the SEGC; the Board will function pursuant to its own procedures.

The Student Ethics and Grievance Committee shall be free to adopt additional procedures not inconsistent with these rules in order to facilitate its consideration of disciplinary matters.
DISCIPLINARY PROCEDURE

The procedure whereby students may be disciplined pursuant to this Code consists of seven steps or stages: Inquiry or Complaint; Investigation; Hearing Procedure; Adjudication; Recommendation; Decision; and Appeal.

1. **Inquiry or Complaint**
   a. A Complaint is a statement made to either the AEC or the SEGC that, in the complainant's opinion, a violation of the Code has occurred, and the Committee should investigate the alleged violation. The AEC should be viewed as the first committee to which a complaint is brought, unless the person bringing the complaint has reason to approach the SEGC instead.
   b. A Complaint may be made by any Cummings School student, faculty member, dean's office administrator, or officer of the University Police. Secretaries, administrative assistants, technicians, and other non-academic employees of the Cummings School, the University, or their affiliates may not make a Complaint, although such persons may report alleged violations to someone qualified to make a Complaint, and the latter may then make a Complaint.
   c. A Complaint may be made in writing to any member of the AEC or the SEGC or may be addressed to the Committee as a whole.
   d. An Inquiry is a request to determine whether an infraction of the Code has occurred. Inquiries may be made in the same manner and by the same persons as Complaints. Inquiries should be made only when the inquirer cannot assert that a violation of the Code has, in fact, occurred; but has a good faith belief that a violation may have occurred, and that further investigation is justified.
   e. A Complaint or Inquiry must be brought within one year of the knowledge of an alleged violation.

2. **Investigation**
   a. Within two (2) weeks of receipt of a Complaint or Inquiry, the Committee shall begin its investigation of the allegations or inquiries therein.
   b. The Committee shall have the authority to ask for written statements from and/or to appear before it any person who may have knowledge of, or who may shed light upon the alleged violation of the Code.
   c. In cases of allegations of academic or ethical misconduct involving one or more students in one of the Graduate Programs (non-DVM) brought to the SEGC for investigation, the SEGC will notify the involved graduate program director(s) and AEC chair, without including student names, that an investigation involving one of their students is in progress. When the SEGC investigates an ethics allegation involving one or more students in a graduate program a faculty and graduate student representative proposed by the AEC chair and mutually agreed upon by the SEGC chair, will join the SEGC as ad hoc non-voting members during the
investigation and deliberation. The faculty representative will also join the SEGC chair when meeting with the EFB to discuss any positive findings or penalty recommendations.

d. The Committee shall not begin a full-scale investigation of any Complaint or Inquiry unless a majority of those members present vote that such an investigation is warranted. If it appears that the allegations of a Complaint or Inquiry are without merit, or cannot be reasonably substantiated, the Committee may, by a majority of those voting members present, dismiss the Complaint or Inquiry and conclude the proceedings in the student's favor.

3. **Hearing Procedure**

a. The student about whom a Complaint or Inquiry is made will be informed in writing of the type of allegation (Complaint or Inquiry) and the substance of each allegation at least seven days before hearing of the Ethics and Grievance Committee.

b. The chairperson of the Committee shall meet before the hearing with the student about whom a Complaint or Inquiry is made to review the procedural rules and the general substance of the allegation.

c. The student about whom the Complaint or Inquiry is made shall be given the opportunity to appear, in person, before the Committee in order to present his/her position.

d. Legal counsel representing the student is not permitted to be present during any of the Committee’s proceedings. However, the student may be accompanied by a fellow student and/or a member of the faculty for the purpose of advice and assistance at the time that s/he appears before the Committee. Such other persons will not be afforded the opportunity to question witnesses or to address the Committee. The student shall be questioned by the Committee, and shall be given full and complete opportunity to make any statement and to provide any evidence to the Committee. The student may also call witnesses or other persons (e.g., character references) before the Committee.

e. The Committee shall not attempt to prove that a violation of the Code occurred but shall impartially evaluate Complaints or Inquiries. Accordingly, no member of the Committee shall present any case against the accused to the Committee. However, all members of the Committee may ask any questions of any witness or pertaining to any evidence.

f. The Committee is not bound by the Rules of Evidence, and may hear any testimony or consider any evidence which it deems relevant or significant.

g. No recording or transcript of the investigatory stage of the proceedings will be made. The Clerk of the Committee shall take routine minutes.
4. **Adjudication**

a) Adjudication is the process by which the Committee determines what, if any, recommendations(s) to make to the appropriate standing committees or to the Executive Faculty Board.

b) Adjudication shall be divided into stages: first, a determination of whether the student has violated the Code; and second, a determination of appropriate action or penalty.

c) The Committee shall vote separately on the questions of whether there has been a violation of the Code, and on an appropriate action or penalty. In order for the Committee to find that there has been a violation of the Code, or for the Committee to recommend an action or penalty to the Executive Faculty Board, three-fourths of the voting members of the Committee who are present must vote that there has been such violation, or in favor of such action or penalty.

d) If the Committee fails to vote that there has been a violation of the Code, or fails to vote for an action or penalty, no action shall be taken and the matter shall be considered closed. Until such time as a recommendation may be made to the Executive Faculty Board or to another standing committee, neither the Committee nor any member thereof shall inform any member of the Executive Faculty Board of the pendency of the disciplinary proceedings. If the Committee cannot reach a three-fourths affirmative vote that there has been a violation, or on an action or penalty, and for this reason fails to make a recommendation to the Executive Faculty Board, there will be no notation in the student's record that disciplinary proceedings have occurred. The fact of such proceedings may not be considered in any subsequent disciplinary proceedings(s) against the student, and the proceedings will remain confidential. If a case is dismissed by the SEGC the accused student and complainant will be notified of the decision within 48 hours. Regardless of the outcome, the SEGC will report the results of their investigation, to the relevant program director(s) at the completion of the case. This includes the Associate Dean for Academic Affairs for the DVM program and the AEC chair for non-DVM student graduate programs.

e) The student will not be present during the Committee's adjudicatory deliberations. In the interest of assuring free and open discussion by the Committee, the student will not be informed about what was stated by members of the Committee during discussion leading up to the vote. Nor shall the Clerk of the Committee take minutes of this discussion, aside from noting how each member of the Committee voted and noting the final directions of the Committee regarding the content of its report to the Executive Faculty Board.

5. **Recommendations**

a. Any determination that, in the Committee's view, a student has violated
the Code and that appropriate action or penalty should be ordered by the Executive Faculty Board shall be transmitted to the Clerk of the Executive Faculty Board within two (2) weeks of the Committee's determination. The Committee's recommendations shall be in writing, shall be signed by the Chairman, and shall contain a report summarizing the Committee's reasons for finding that there has been a violation of the Code, and for recommending an action or penalty. The Committee's report may contain any supporting material that would be useful to the Executive Faculty Board in making its decision.

b. The Committee's report shall include the date of the vote, whether the Code was violated, and the recommended action or penalty.

c. Any member of the Committee, including members who voted against the determination that the Code was violated, or the recommended action or penalty, may submit a statement explaining his/her vote or position, and such statement(s) shall be included in the report transmitted to the Executive Faculty Board.

d. A copy of the Committee's report shall be given to the student.

e. If the Committee finds there is no violation of the Code, it has the authority to advise a student concerning the standards of conduct required by the Code.

6. **Decision**

   a. The Executive Faculty Board shall meet in Executive Session to discuss and render the final decision on whether a violation of the Code has occurred and a decision of the appropriate action or penalty. If the Executive Faculty Board determines that a violation of the Code has not occurred, there shall be no mention in the student's Cummings School record of the disciplinary proceedings.

   b. The Executive Faculty Board may render a decision based on the report of the Ethics and Grievance Committee or may send the matter back to the Ethics and Grievance Committee for further investigation.

7. **Appeal**

   a. The student may appeal any final decision of the Executive Faculty Board to the Dean of the Cummings School.

   b. If the student wishes to appeal, s/he must, within two (2) weeks of receipt of the Executive Faculty Board's final decision, notify the Dean, in writing, that an appeal is to be made.

   c. The Dean shall receive the complete file of the Student Ethics and Grievance Committee on the matter under appeal.

   d. The Dean may request and/or hear and/or review any additional evidence or testimony, which the Dean deems relevant.
e. The Dean may affirm the decision of the Executive Faculty Board, or may make a different determination about whether there has been a violation of the Code, or about the appropriate action or penalty. Any such determinations shall constitute the ultimate disciplinary decision.

f. If the Dean determines that no violation of the Code has occurred, there shall be no mention of the disciplinary proceedings in the student's Cummings School record.

ACTIONS AND PENALTIES

The following are the actions and penalties which the Ethics and Grievance Committee may recommend to the Executive Faculty Board, and which may be imposed by the Board or the Dean for violations of this Code. This is not an exhaustive list; it is only a guide for the Ethics and Grievance Committee, the Executive Faculty Board, and the Dean. Any action or penalty may be imposed if it is deemed appropriate, under the circumstances, by the Ethics and Grievance Committee, the Executive Board and the Dean.

1. **Counseling.** The student will be counseled by the Committee, or by some person(s) appointed or authorized by the Committee. This order by the Executive Faculty Board that a student be counseled will not be noted on the student's Cummings School record.

2. **Oral Reprimand Without Notation in the Student's Record.** The student will be required to appear before the Ethics and Grievance Committee; and will be read, orally, a reprimand. Neither the fact of the reprimand nor its content will be noted in the student's Cummings School record.

3. **Repeat of Examination.** The student will be required to repeat the examination or other course exercise in connection with which the violation of the Code occurred. At the discretion of the Executive Faculty Board, the disciplinary proceedings and action may or may not be noted in the student's Cummings School record.

4. **Written Reprimand.** The student will receive a written reprimand by the Committee, signed by the Chairman. A copy of the written reprimand will be included in the student's Cummings School record.

5. **Repeat Course.** The student will be required to repeat the course in connection with which the violation of the Code occurred.

6. **Permanent Transcript Notation of an Ethics Code violation.** If a permanent notation to the student academic transcript is recommended the standard terminology of “Ethical and Professional Misconduct” is recommended.

7. **Probation.** The student will be placed on probation for a specified period of time. During such time, the student will remain under the continuing observation and supervision of the Ethics and Grievance Committee. The Committee may take appropriate steps, including requiring the student to appear regularly before the Committee or a designated member(s), to assure itself that the student is acting in accordance with the Code. If the student fails to fulfill the directives of the
Committee during this time, the Committee may recommend to the Executive Faculty Board that another action or penalty be imposed.

8. **Restitution.** Where the student has damaged, converted, or otherwise impaired the value of the property of the Cummings School, a Cummings School affiliate, the University, or members or clients thereof, the student may be required to make adequate restitution to the injured party. Restitution may be ordered concurrently with any other action or penalty. At the discretion of the Executive Faculty Board, restitution may be in the form of monetary compensation or service to the injured party. If restitution accompanies an action or penalty, which will not be mentioned in the student's Cummings School record, the fact that restitution was ordered shall not be noted in the record.

9. **Suspension.** The student will not be permitted to continue as a registered student at TCSVIM for a specified period of time. At the expiration of this time period, the student shall be re-enrolled upon his/her request. The student will receive credit only for those courses have been completed and passed prior to suspension. At the discretion of the Executive Faculty Board, the student may be permitted to complete courses in progress, the current semester, or the current academic year before beginning the term of suspension.

10. **Probated Suspension.** The student will be adjudged to be suspended for a specified period of time. However, the student will not, in fact, be suspended and will be permitted to continue the curriculum but will be placed under the supervision of the Ethics and Grievance Committee. If the student violates the Code during the period of probated suspension or fails to fulfill the directives of the Committee during this time, he/she shall then be suspended for the amount of time directed by the original order of suspension.

11. **Expulsion with Possibility of Re-application.** The student will be dismissed from the program. However, the student will be permitted to reapply for admission to Cummings School through, and subject to all the conditions of, the regular admissions process.

12. **Final Expulsion.** The student will be dismissed from the program, and will not be permitted to re-apply or re-enroll.

13. **Probated Expulsion.** The student will be adjudged to be expelled with the possibility of re-application, or to be finally expelled. However, the student will not, in fact, be expelled but will be placed under the supervision of the Ethics and Grievance Committee for a specified period of time and permitted to continue the curriculum. If the student violates the Code during this time, or fails to fulfill the directives of the Committee, the original order of expulsion will be imposed.

All penalties which appear subsequent to "Repeat of Examination" on the above list of actions and penalties, with the exception of Restitution, must be noted in the student's Cummings School record.
V. UNIVERSITY POLICY ON MISCONDUCT IN SCIENTIFIC RESEARCH AND SCHOLARSHIP

Please view the Provost website for the revised Tufts University policy http://viceprovost.tufts.edu/ovpr-policies/scientific-integrity/policy/
VI. SOCIAL MEDIA POLICIES AND GUIDELINES

Overview and Scope

Blogs, social networks and other marketing communications tools such as Facebook, Twitter, Google+, LinkedIn, Blogger, Pinterest and YouTube present new and different ways of communicating with your friends, colleagues and the public at large. As a member of the Cummings School of Veterinary Medicine’s community, you are encouraged to use these tools to share your knowledge, expertise and creativity, as well as connect with others with common interests. This document contains policies and guidelines for responsible use of these new and emerging tools that will help you use them effectively and within university guidelines, as well as protect the clients, research and clinical programs, and the community and educational offerings of the Cummings School of Veterinary Medicine.

The Social Media Policy & Guidelines outlines best practices and rules for use of internet-based social media tools by students, faculty and staff at the Cummings School of Veterinary Medicine. Guidelines for both personal and institutional presences are covered in the Policies and Guidelines section.

Policies and Guidelines for Social Media

General Guidelines

Social networks and other online media are a very popular mode of engagement and two-way communication. Social networks provide great tools that aid communication, outbound marketing, education and collaboration with others. Given the nature of social networking, two-way and real-time communications, these new forums introduce the potential for significant risks associated with inappropriate use. Following guidelines and training, as well as using sound common sense and professionalism, can minimize this risk.

The Cummings School relies on its students, faculty and staff to ensure the trust and support of the communities it serves. While the Cummings School encourages the use of social networking to enhance open communications with several key audiences, we expect these communications will reflect the highest standards of our institution and support the privacy and trust of our students, clients, and research partners.

The Cummings School’s social media policy is aligned with the social media policies of Tufts University (http://communications.tufts.edu/marketing-and-branding/social-media-overview/), which advises social media users/developers to abide by all Tufts University policies governing employees, student privacy and confidentiality.
If there were one rule of thumb governing the use of social media among the Cummings School community, it is this: **think twice, post once.** Although many sites allow an individual to “delete” posts after they are submitted, significant damage to one’s own reputation as well as to the school’s can be done—and, since text, pictures, videos and other user-submitted content can spread rapidly through the internet, one should never assume that content can be permanently retracted. Simply put, if you would not want your parents, clients, classmates or neighbors reading it on the front page of a newspaper, don’t post it.

Adhering to these guidelines will help to ensure that you uphold the reputation of the University, the Cummings School, your colleagues, and yourself.

**Responsibility**

- Follow all applicable University policies. This includes but is not limited to policies regarding maintaining client confidentiality, professionalism, conduct, ethics, sexual harassment, responsible use standards, social networking site guidelines, copyright, and intellectual property.
- There is no such thing as a truly "private" social media site: search engines can turn up posts years after the publication date, comments can be forwarded or copied and archival systems save information even if you delete a post.
- Be respectful and professional to fellow employees, students, competitors and clients. Do not post derogatory comments about any of these groups or anyone else.
- Do not post school-related information that may compromise our organizational practices, client privacy, respect for animals, or security. Take care not to violate intellectual property, copyrighted or trademarked information.
- Remember that once you publish something through social media, you lose a degree of control over your message. Before you post something, be certain that you are prepared to share it with a potential audience of millions.
- You are responsible for what you post both on your own site and on the sites of others. Individual bloggers have been held liable for commentary deemed to be proprietary, copyrighted, defamatory, libelous or obscene (as defined by the courts).
- Make sure that you have all the facts before you post. Cite and link to your sources whenever possible. If you make an error, correct it quickly and visibly; doing so will earn you respect in the online community.
- Use good judgment and strive for accuracy in your communications; errors and omissions reflect poorly on both you and the Cummings School and may result in liability for either/both parties.

**Transparency**

- Use your University affiliation appropriately. Where your connection to the Cummings School of Veterinary Medicine is apparent, make it clear that you are speaking for yourself and not on behalf of the school. If you are communicating institutional information through an official channel of the school (the official Facebook page, facebook.com/tuftsvet, for example),
do so only as approved by the Dean, Marketing Director or Associate Director of Public Relations.

- If you communicate publicly on the internet about Cummings School-related matters, disclose your connection and role.

Protection of Private Information

Posting, releasing, or otherwise disclosing photos, identifiable case descriptions, images, or records on social media of the educational, clinical, or research activities of the Cummings School is strictly prohibited. This includes, but is not limited to:

- Photos or descriptions of client-owned animals seen at the Foster Hospital for Small Animals, Hospital for Large Animals, Tufts VETS, Tufts Ambulatory Service or Tufts at Tech Community Veterinary Clinic without the consent of the animal's owner(s), faculty attending veterinarian, and either the Marketing Director or Associate Director of Public Relations;
- Photos or descriptions of research activities, without the permission of the funding source, Associate Dean for Research, and the Marketing Director or Associate Director of Public Relations;
- Photos or descriptions of animals at the Tufts Wildlife Clinic, without the written consent of the clinic director and Marketing Director or the Associate Director of Public Relations;
- Photos or description of activities within the McGrath Anatomy Lab. Any photos and/or videos taken in class (with advanced permission of faculty) may only be used for personal use to help advance studies.
- On-campus or Tufts-sanctioned event photos without written consent of those depicted;
- Information that would compromise the security or operation of the Cummings School;
- Photos or descriptions of client-donated or other animals in the pathology section or Anatomy Laboratory;
- Disseminating or describing copyrighted intellectual property or trademarked information;
- Descriptions or accounts of student examinations or other academic evaluation tools;
- Description of personal information about students, colleagues, clients, or research partners without their consent.

Material violating these guidelines will be removed by Tufts University. Please notify the Marketing Director (8-4307) right away should you find material that violates these rules.

Personal Accounts

- For any personal online activity, use a personal e-mail address (not your tufts.edu e-mail address) as your primary means of identification. Just as you would not use Tufts University stationery for a letter to the editor with your personal views, do not use your University e-mail address for personal views. Similarly, please
review the Information Stewardship Policy as it pertains to use of Tufts computer and network resources for non-Tufts use.

- Discussions regarding client-owned animals, client-donated cadaver or necropsy subjects, research studies and other protected and proprietary information are prohibited, even if all identifying information is excluded.
- Under no circumstances should photos of client-owned animals or the clients themselves, client-donated cadaver or necropsy subjects, patients, research subjects, volunteers or cadavers, including photos depicting any body parts of these individuals, be displayed unless specific written permission to do so has been obtained and submitted in advance to the Marketing Director or Associate Director of Public Relations.
- If you identify yourself as a member of the Tufts community via your personal social media presence(s), please clarify that you are sharing your views as an individual, not as a formal representative of Tufts. In addition, never conceal your identity for the purpose of promoting Tufts through social media.
- It is strictly forbidden to use the Cummings School and/or Tufts name to promote or endorse any product, cause, political party, or candidate.
- Avoid conflicts of interest and maintain a distinction between your personal identity and the identity you represent on behalf of the university.

Whom to Contact

For questions related to the Social Media Policy and Guidelines please contact:

Lorraine Daignault
Director, Marketing &
Academic Communications
(508) 887-4307 (ext.84307)
Lorraine.daignault@tufts.edu

Karen Bonhomme
Coordinator, Marketing & Academic
Communications (508)887-4676
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Acknowledgement

Thank you and special acknowledgement to the Faculty Council Social Media Subcommittee and the Marketing Advisory Committee for their efforts in researching and providing feedback for the Cummings School Social Media Policy.

Tufts Social Media Guidelines http://webcomm.tufts.edu/socialmedia
Policy on Institutional Name Use and Insignias http://legal.tufts.edu/?pid=12
Bases for this Policy

Information contained within this document is based on best practices among universities, industry and especially other institutions of medical and veterinary education. While more than 40 of these resources were consulted to create this document, the following policies were most helpful.

- Tufts CTSI Social Media Policy and Procedures, 12/13/11
- Tufts University Social Media Best Practices and Guidelines
- Massachusetts General Hospital Social Media Policy
- Mayo Clinic Social Media Guidelines for Employees
- Colorado State University College of Veterinary Medicine & Biomedical Sciences Social Media Policy
- Social Media Policies from Baylor College of Medicine
- University of Colorado at Denver Web 2.0 and Social Media Best Practice Guidelines
- University of Minnesota Medical School Social & Online Participation Guidelines
- United States Marine Corps Online Social Media Guidance for Unofficial Internet Posts
- United States Air Force Public Affairs Agency Blog Assessment Tool
VII. INTRODUCTION TO THE SAFETY PROGRAM AT CUMMINGS SCHOOL

The primary goal of the Safety Program is to provide a safe work and learning environment for all Tufts faculty, staff, students, and our communities. The Safety Program is a series of practices and protocols that, when followed properly, will give members of the Tufts community the skills needed to protect themselves, others, and the environment, as we work and study potentially dangerous organisms and processes. The Safety Program is run by the Office of Environmental Health and Safety (EH&S) which provides training and information on all aspects related to safety.

Basic laboratory safety:
There are four types of laboratories: research, testing, teaching, and clinical. While the facility, materials, equipment, and procedures are often similar, the health hazards vary considerably from minimal to severe. Making new and untested materials or equipment or developing new procedures all with unknown hazard, is common in the research laboratory, while teaching, testing, and clinical laboratories use highly tested and calibrated equipment and procedures whose hazards are documented. Before performing a research experiment or conducting a laboratory exercise, the student plans each step of the procedure, knows the hazard of all equipment and materials, and knows the protective actions (safety goggles, lab coat, protective gloves) to take. The laboratory supervisor or instructor is the primary source for safety information, supported by Tufts Environmental Health and Safety.

For more information on basic laboratory safety, please refer to “Tufts University Research and Laboratory Safety Guide” located at http://publicsafety.tufts.edu/ehs/research-and-laboratory-safety-guide/

Biological safety:
The objective of the Tufts Biological Safety Program is to prevent occupationally-acquired infections by reducing exposure to infectious agents, recombinant DNA organisms, human blood, blood components or potentially infectious materials, and primary and established human and primate cell lines. Due to the nature of the infectious agents that are studied in the laboratory, Tufts University will require that all persons who are in any BL-2 lab follow standard BL-2 safety precautions such as:

Standard Laboratory Practices
• Wash hands after entering and before exiting the laboratory.
• Tie back long hair; do not wear dangling jewelry.
• Do not bring food, gum, drinks (including water), or water bottles into the laboratory.
• Do not touch the face, apply cosmetics, adjust contact lenses, or bite nails.
• Do not handle personal items (cosmetics, cell phones, calculators, pens, pencils, etc.) while in the laboratory.
• Keep door closed while the laboratory is in session.
• Minimize the use of sharps. Use needles and scalpels according to appropriate guidelines and precautions.
• Use proper transport vessels (test tube racks) for moving cultures in the laboratory and store vessels containing cultures in a leak-proof container when work with them is complete.
• Notify your supervisor of all spills or injuries.
• Immune-compromised students (including those who are pregnant or may become pregnant) and students living with or caring for an immune-compromised individual are advised to consult physicians to determine the appropriate level of participation in the laboratory.

**Personal Protection Requirements**
- Wear laboratory coats.
- Wear closed-toe shoes that cover the top of the foot.
- Wear gloves when handling microorganisms or hazardous chemicals.
- Wear safety goggles or safety glasses for normal laboratory procedures involving liquid cultures that do not generate a splash hazard (e.g., proper pipetting, spread plates, etc.). Use safety goggles and face shields or safety goggles and masks when performing procedures that may create a splash hazard. If work is performed in a biological safety cabinet, goggles, and face shields/masks do not need to be worn.


**Radiation Safety:**
Radiation sources such as radioactive materials and radiation producing machines are utilized by veterinarians, students, and staff for the purpose of diagnosing or healing ailments for animal patients in a veterinary health clinic. Often these sources are chosen because of their unique radiation characteristics. Common radiation sources emit ionizing radiation, such as x rays and gamma rays, or non-ionizing radiation such as lasers and MRI machines. However, there are health risks associated with receiving uncontrolled doses of these radiations. Radiation Safety is a discipline that analyzes the effects of radiation and determines acceptable dose and implements effective protective measures as needed. Radiation Safety at Tufts is achieved through the efforts of professional staff including instructors and qualified operators of radiation producing equipment and materials, the Tufts Radiation Safety Committee, and the Tufts Radiation Safety Officer. Consult the Tufts Radiation Safety Manual and Laser Safety Manual for advice and guidance on best practices and procedures to follow when working with and around x-ray machines, irradiation devices, nuclear medicine imaging and lasers. (http://publicsafety.tufts.edu/ehs/files/TULaserSafety2014v3.0.pdf).

**Safe small and large animal handling methods**
Veterinarians and veterinary medicine students are dedicated to the diagnosis, treatment, and rehabilitation of animals-pets, zoo animals, farm animals, and wild animals. Do not rely on the owners’ statements about the aggressiveness of the animal. Crowded, stressed, frightened, injured and sick animals may behave in unpredictable ways and in ways the owner may not have experienced. Animals can bite, scratch, kick, and move without warning. Observe the animal carefully for signs of stress and fear and avoid creating stress and fear by keeping your body out of range of the face and paws of the cat or dog. Crouch but do not sit on the floor to handle the dog or cat because you need to be able to move fast! Verbal, physical, and drug restraints should be avoided if safe; however these are humane and may be necessary for the protection of the patient and the veterinarian and staff. Protective gloves, leathers, and face
shields may be needed when handling animals in a clinic setting. It is an important skill to
diagnose and treat animals and at the same time maintain control of the animal and protect
yourself and others from injury and disease.
VIII. ADMINISTRATIVE STANDING COMMITTEES

The Cummings School recognizes the importance of student representation on the various committees that make decisions which directly affect student life. Student representatives will be nominated through the student government organization and must be in good academic standing. The nominees are then presented to the Dean and Executive Faculty Board for approval. If the Board rejects a nominee, the student government will nominate another student.

Elected student representatives are eligible to vote in committee deliberations. Each class which is not represented by a voting member may designate one student observer for each standing committee on which students are authorized to sit. Observers will have the right to attend all meetings, and to be heard on questions which are before the committee. However, such observers will not have voting privileges, and will not be counted for the purposes of determining the presence of a quorum unless the elected student representative is absent, in which case the student observer will fulfill the duties of the elected student member.

Following is a description of those Standing Committees which include student representatives:

ADVANCED EDUCATION COMMITTEE (1 graduate student representative) (Graduate Programs Only)

This Committee is responsible for developing policy and procedures for the post graduate degree and research programs of the School, establishing thesis guidelines and procedures, approving thesis projects, and accepting the final thesis. The Committee has the authority to implement these policies and procedures subject to the review of the Executive Faculty Board.

STUDENT ETHICS & GRIEVANCE COMMITTEE (1 student representative)

The Student Promotions Committee is composed of 7 faculty members, the Assistant Dean of Student Affairs, the Assistant/Associate Dean for Academic Affairs and 1 student representative. This committee is responsible for developing standards, policies and procedures for student promotion in the DVM program; evaluating all student records to determine conformity to those standards; recommending repetition of course materials, and probationary status or dismissal in cases of academic deficiency; granting or denying re-examinations; and recommending students for academic awards and graduation.

STUDENT PROFESSIONAL CONDUCT COMMITTEE (DVM Program Only)

The SPCC serves two major roles. The first is to actively promote the new student honor code on campus and the second is review cases of alleged professional misconduct. The committee also acts as a resource for any questions or concerns regarding professionalism. Student committee members will be given the opportunity to attend mediation training to help manage any presented cases.
The committee will meet at least twice a semester to review general business and as needed to review cases. The SPCC will have access to a faculty advisor and the support of the faculty Student Ethics and Grievance Committee (SEGC). Two student representatives will be elected per DVM class. The student representative of the SEGC will also have automatic membership to the Student PCC. In addition two committee members “at large” will be selected by the SEGC from those students who expressed an interest in serving, but were not elected as class representatives. A chairperson for the committee will be selected by the SPCC from one of the second-year students.

ANIMAL WELFARE COMMITTEE (2 student representatives)

The Animal Welfare Committee is composed of 5 faculty members and 2 students. This Committee has delegated its responsibility to review and make recommendations on the use of animals in the Cummings School's teaching and research programs to the Institutional Animal Care and Use Committee. All basic science and clinical projects utilizing animals (other than for the express benefit of the animal) are subject to such review. This committee recommends guidelines and policy to the Executive Faculty Board.

OTHER COMMITTEES INVOLVING STUDENT PARTICIPATION

FINANCIAL AID ADVISORY & APPEALS BOARD (2 or 3 student representatives)

The Board is responsible for reviewing and recommending policies for the administration of financial aid programs, establishing Cummings School priorities for the distribution of student aid funds, and encouraging support for scholarship funding. The Financial Aid Advisory & Appeals Board serves as the final appeal body for students with grievances relative to the awarding of funds, or general administration of the financial aid program.

The Board is not a Standing Committee established through Cummings School's Bylaws. Therefore, student representation is not determined through the election procedure prescribed by the by-laws.

Please note: The Dean may appoint one non-faculty member to each standing committee who shall have full voting rights in committee deliberation.
IX. THE USE OF TEACHING AND RESEARCH ANIMALS AT CUMMINGS SCHOOL OF VETERINARY MEDICINE

The humane care and appropriate use of teaching and research animals is a core value of the Cummings School. The use of animals for teaching and research is regulated at the federal, state, local, and institutional level. At Cummings, the Laboratory Animal Medicine Services (LAMS) is responsible for providing animal husbandry and veterinary care services, facilitating teaching and research activities using animals, and maintaining compliance with all government regulations and institutional policies.

At the federal level, the Animal Welfare Act (AWA) enacts regulations administered by the Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture (USDA). Cummings School submits annual animal usage reports to the USDA and receives unannounced inspections of the animal housing facility and program records at least once per year. As an institution receiving federal research funding, Cummings is also subject to the Public Health Service Policy on Humane Care and Use of Laboratory Animals administered by the Office for Laboratory Animal Welfare (OLAW) at the National Institutes of Health (NIH). Cummings School submits reports to OLAW annually. Cummings maintains an assurance status with OLAW and reports annually on the research use of animals.

At the state level, the Massachusetts Department of Public Health (DPH) requires Cummings to obtain a license to use dogs and cats in teaching and research. Cummings School submits annual animal usage reports to the Massachusetts DPH and is subject to unannounced site inspections by the Animal Rescue League (ARL) or the Massachusetts Society for the Prevention of Cruelty to Animals (MSPCA).

Beyond meeting all federal and state requirements, Cummings has attained voluntary accreditation by AAALAC. Only institutions that have achieved the highest standards for their animal care and use programs receive AAALAC accreditation. Initial accreditation requires peer-review of a comprehensive program description and extensive site visit encompassing all animal care and use facilities. Program and facility reports are submitted annually. Re-accreditation, consisting of a complete program review and site inspection, occurs every three years.

Cummings School is a partner in the Tufts Medical School/Tufts Medical Center/Human Nutrition Research Center/Cummings School Animal Care and Use Committee (IACUC) to comply with Animal Welfare Act and Public Health Service regulations. The IACUC oversees the animal care and use program, research and housing facilities, and animal use protocols. The IACUC reports to the Institutional Official of Tufts University. The IACUC reviews protocols at monthly meetings and conducts a program review and facility inspection or all animal care and use areas at least twice a year.

The commitment to provide exemplary care and assure appropriate use of animals in our teaching and research programs is a priority for everyone at Cummings School. We consider the “Three R’s” concept (refinement, reduction, and replacement) for any request to use animals in teaching and research. Our mission to perform biomedical research and train skilled researchers and veterinary practitioners requires the use of live animals for some aspects of the curriculum. Any student, faculty or staff member who has a question or concern regarding the care and use of animals in research and teaching at Cummings is encouraged to contact the Course Director, the Director of LAMS, and/or a member of the IACUC at any time. Anonymous reports may also be filed 24 hours a day on the Research Integrity Hotline.
of the Office of the Vice Provost for Research (617) 636-2492).

Students concerned about other uses of animals on campus should contact the Animal Welfare Committee. The Animal Welfare Committee is a standing committee at Cummings with faculty and student representation which is principally responsible for non-teaching and non-research animal welfare and will direct inquiries to the proper official.