

GRADUATE STUDENT HANDBOOK

COMPARATIVE AND EXPERIMENTAL MEDICINE

an intercollegiate graduate program at the University of Tennessee

2012-2013 ACADEMIC YEAR



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TERMS AND ABBREVIATIONS

CEM: Comparative and Experimental Medicine

JGCC: Joint Graduate Coordinating Committee

UT: University of Tennessee

UTHSCK: University of Tennessee Health Science Center Knoxville

UTIA: University of Tennessee Institute of Agriculture

CEM Program: Comparative and Experimental Medicine Graduate Program

CEM Program Director: Dr. Michael McEntee, Associate Dean for Research and Graduate Studies (Interim)

CEM Program Office: Administers the CEM Program. Located in A102 Veterinary Medicine Building

Credit hours: The number of contact hours per week in a given course in a given term

Joint Graduate Coordinating Committee (JGCC): Governing body of the CEM Program

Major professor: The main advising professor/mentor **on the student's** faculty committee

Term: The UT-established period for the duration of a course (normally fall, spring, and summer)

UT Graduate School: The University of Tennessee Graduate School. The CEM Program operates under the umbrella of the UT Graduate School, whose main office is located at 111 Student Services Building, Knoxville, TN 37996-0211, USA.

UT Office of Graduate Admissions: The admissions department of the UT Graduate School. Located at 201 Student Services Building, Knoxville, TN 37996-0230, USA.

UT Registrar's Office: Oversees enrollment services, grades, graduation, transcripts, and student records. Located in 209 Student Services Building, Knoxville, TN 37996-0200, USA.

WELCOME

On behalf of the faculty of the Comparative and Experimental Medicine (CEM) Graduate Program, I welcome you to the CEM Handbook. We are pleased that you are interested in this exciting and unique multi-disciplinary graduate program at the University of Tennessee (UT), Knoxville. The CEM Program prepares students at the MS or PhD levels for teaching and/or research careers in the health sciences. The program is jointly administered by the UT College of Veterinary Medicine **and the UT Graduate School of Medicine and actively promotes the concept of "One Health/One Medicine"** by emphasizing the comparative approach to the study of biomedical science.

The program is open to approved graduate students seeking training in these areas and is especially useful for individuals with (or working toward) professional degrees in the health sciences (DVM, MD, etc.). The CEM Program provides an unusual opportunity to study disease processes common in animals and humans from a multi-disciplinary perspective. The scope of this intercollegiate program, which pools faculty resources from both veterinary and human medicine, is broadened by faculty members representing wide-ranging interests in biomedical disciplines and areas of the life sciences. The interdisciplinary training environment includes such diverse support as facilities and personnel at the Veterinary Medical Center, UT Medical Center at Knoxville, life sciences departments, College of Agricultural Sciences and Natural Resources, College of Engineering, and the Department of Nutrition.

I hope you will find this handbook useful if you are planning to pursue or are pursuing a graduate degree in the CEM Program. It contains basic information about policies and procedures in the graduate program, including curricula and degree completion requirements. Additionally, most faculty members within the program are listed with Web pages that contain phone numbers and E-mail addresses. We update this document periodically in light of changes instituted by the program or other administrative units. For this reason, this handbook supersedes any previous versions and will itself be amended as necessary by later action of which students will be duly notified.



Michael McEntee, DVM

Interim Director, Comparative and Experimental Medicine
Graduate Program

INTRODUCTION

In order to serve the mission and vision of the Graduate School and preserve the integrity of Graduate Programs at the University of Tennessee, Knoxville, information related to the process of graduate education in each department is to be provided for all graduate students.

Based on best practices offered by the Council of Graduate Schools, it is important that detailed articulation of the information specific to the graduate degrees offered in each department/program be disseminated.

The CEM Program Graduate Handbook does not deviate from established [Graduate School policies](#) noted in the Graduate Catalog, but rather provides the specific ways in which those policies are carried out.

Purpose of the Handbook

Graduate students are expected to be aware of and satisfy all regulations governing their work and study at the university. However, since not all aspects of graduate study can be included here, students are urged to consult the following:

[Graduate Catalog](#) • [Hilltopics](#) • [Appeals Procedure](#)

Note: All links in the handbook are underlined in blue font. Although the Web addresses may not be visible when the handbook is read in print, the Web version of this handbook contains clickable links:

<http://www.vet.utk.edu/graduate/pdf/GradHandbook.pdf>.

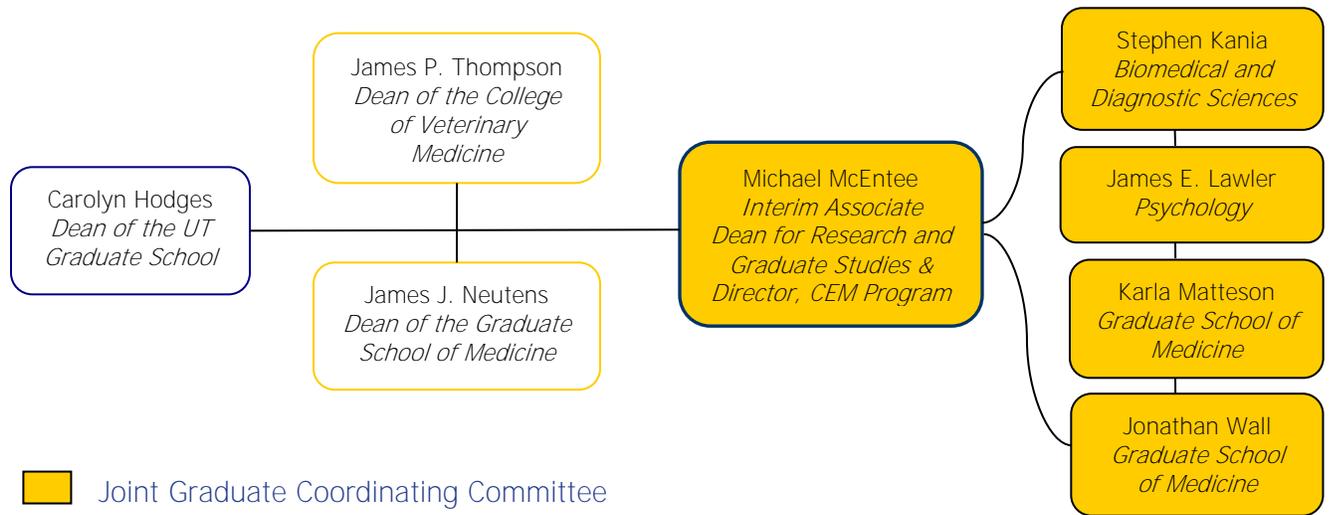
Administration of the Program

The CEM Program is an intercollegiate program administered by the UT Graduate School through the College of Veterinary Medicine. Admission and graduation requirements of the UT Graduate School will pertain. The program will be under the administration of a Joint Graduate Coordinating Committee (JGCC). Members of the JGCC are appointed by the Dean of the College of Veterinary Medicine, in consultation with the CEM Program Director, and by the Dean of the UT Graduate School of Medicine. A minimum of four representatives and a maximum of six representatives will compose the JGCC. Representation from the College of Veterinary Medicine and the UT Graduate School of Medicine is required; however, other university faculty members who have been admitted to the program may also serve.

The JGCC has the following charges:

1. Advise the program director on the composition of all doctoral and masters committees. The director of the Joint Graduate Coordinating Committee nominates doctoral committees for approval by the UT Dean of Graduate Studies.
2. Develop and coordinate the curriculum for the graduate program in consultation with the designated faculty of the program.
3. Recommend admission of applicants.
4. Ensure that appropriate guidelines are in place, approved, and implemented.
5. Be responsible for ensuring that the policies and regulations of the UT Graduate School are fulfilled by all participants in the program.
6. Be responsible for coordination of activities relevant to academic honesty and/or grievances.
7. Recommend the appointment of faculty members to the program.

Structure for Graduate Administration



Graduate Program Director's Responsibilities

Each academic department or program at the University of Tennessee has designated a tenured or tenure-track faculty member who is their director of graduate studies. This individual, with the assistance of the other graduate faculty in the program, is responsible for the administration of the graduate program and also serves as the contact person with the Graduate School.

Within the CEM Program, Dr. Michael McEntee holds these responsibilities:

- Administering the CEM Graduate Program
- Serving as the contact person with the Graduate School
- Monitoring program admission and policies
- Working with program faculty on recruitment efforts
- Creating and updating department Graduate Handbook yearly
- Tracking assistantships (types, amounts, and responsibilities for each position)
- Following up on CEM Program/Graduate School/university awards and fellowships

Contact Information

CEM Program Office: A102 Veterinary Teaching Hospital

Contact: Kim Rutherford
Address: 2407 River Drive
Knoxville, TN 37996-4550

Phone: (865) 974-0227
Fax: (865) 974-4773
E-Mail: kimruth1@utk.edu

Interim Associate Dean for Research and Graduate Studies: Dr. Michael McEntee

Phone: (865) 974-0227

Guidelines for Students

Commitment to Program

Students are expected to fully participate in professional activities related to the program and to the profession, where possible.

Adequate Preparation

With regard to learning in his or her respective courses, the student has the responsibility to seek information as to necessary preparation for participation in classroom activity. The student should accept responsibility for adequate preparation for each class meeting, arriving for class able and willing to interact through classroom participation, testing, writing, in-class exercises, and other methods provided by the teacher. Basic to these activities is the need for the student to employ appropriate resources, as assigned by the instructor, such as textbooks, other supplies, and outside reading materials.

Satisfying University Requirements

It is the student's responsibility to be aware of and follow guidelines, schedules, and deadlines provided by the CEM program, the Graduate School, the university, and instructors. All regulations must be satisfied in a timely fashion.

Guidelines for Faculty

Atmosphere for Teaching and Learning

It is very important that the faculty member create from the beginning, and preserve, an atmosphere conducive to learning. Both teacher and student should feel that they have come together in the common cause of the pursuit of learning. Faculty members should ensure that their students are progressing through their course of study in a timely fashion.

Conducting a Course

It is a responsibility to organize class material as efficiently and effectively as possible at the beginning of each term of instruction. At the beginning of the semester, faculty members will distribute to students a syllabus that makes clear the basis of the final grade with the regard to the value to be placed on each component of the course. The faculty member should set an example for students in being faithful in attendance and punctual in starting and ending classes. Students should be informed of all planned absences as soon as possible.

In presenting course content, the faculty member should endeavor at all times to adhere to his or her subject; the classroom should not be used as a theater for expression of personal views that are not germane to the course.

Guidelines for Major Professor (Primary Mentor)

After accepting this role, the major professor, in conjunction with the graduate committee, is primarily responsible for supervising and guiding the student's graduate program. This includes ensuring adequate funding for their research, stipend, and/or tuition; compliance with Graduate School and CEM requirements and deadlines, timely progress through their graduate program of study, and successful completion of their thesis/dissertation, with publication of the student's work as the first author in peer-reviewed scientific journals before or shortly after graduation. The major advisor will act to best serve the research, education, and career development of the student.

APPLICATION PROCEDURE

Application materials must be submitted to the University of Tennessee. Please send the requested items to the correct places to ensure that your application is given full consideration.

Materials to Submit (<http://graduateadmissions.utk.edu/>)

1. APPLICATION*: Submit this directly to the UT Graduate School: <https://www.applyweb.com/apply/utg/>
 2. OFFICIAL TRANSCRIPTS: One (1) set from ALL former schools
 3. GRE SCORES: Please submit if you do not have a professional degree from a U.S.-accredited institution.
 4. Three (3) letters of recommendation from referees. The referees should fill out the online recommendation form produced when that portion of your online application is completed.
 5. International Students: Include your TOEFL or IELTS score.
 6. APPLICATION FEE: \$60 non-refundable
- *Be sure to select Comparative and Experimental Medicine as your major in the "Major Info" section of the online application.

International Students

- Review the UT Graduate School's Admission Guide for International Students: <http://graduateadmissions.utk.edu/int-adm-guide.shtml>
- Pay particular attention to all deadlines; **there are no extensions:** <http://admissions.utk.edu/graduate/dates.shtml>
- **Official Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) results:** (TOEFL) Minimum 550 for the paper exam, 213 for the computer exam, or 80 for the Internet exam; (IELTS) Minimum 6.5
- International Applicant Financial Statement: <http://international.utk.edu/files/2011/09/Financial-Statement-2011-2012-fillable.pdf> (copy and paste into browser)

ADMISSION REQUIREMENTS

General

Admission requirements of the UT [Graduate School](#) apply to prospective students of the CEM program. Applicants must furnish admission materials via the online application, as indicated on page 3.

Requirements for Admission to the Master of Science Degree Program

Applicants to the MS degree program must have a baccalaureate degree with course work in chemistry through organic, mathematics through calculus, physics, and basic biology. More advanced study in biology, such as biochemistry, mammalian anatomy, histology, cell biology, or other appropriate biomedical courses from an accredited university is recommended.

Applicants (1) whose backgrounds include no formal training in the biomedical field beyond the baccalaureate degree or (2) who do not have a professional degree from a U.S.-accredited institution must score at least 300 (1,000 if test taken before August 1, 2011) on the quantitative and verbal portion of the Graduate Record Examination (GRE).

Requirements for Admission to the Doctor of Philosophy Degree Program

Applicants generally will be expected to have

- a professional degree from a U.S.-accredited institution in one of the medical sciences (e.g., MD, DDS, DVM)

OR

- a master's degree in one of the biomedical sciences and a GRE score of at least 300 (1,000 if test taken before August 1, 2011) on the quantitative and verbal sections.

An individual having a baccalaureate degree with a strong background in the physical and biological sciences may be admitted to the PhD program upon presenting evidence of exemplary performance on the GRE.

Exceptional veterinary students at The University of Tennessee, Knoxville may be admitted to the CEM program but will remain enrolled officially as veterinary students. Such students may register for graduate courses, which may be counted as elective courses in the veterinary program.

Selection of a Major Professor

Students who are notified of having met the minimum requirements for admission to the CEM program should determine a major professor assignment before full admission to the program will be granted. Participating [graduate faculty](#) are listed in this handbook. The major professor advises the student about courses, supervises the student's research, and facilitates communication within the CEM program.

Special Admissions Categories

Non-degree

In special and rare circumstances, non-degree status may be appropriate for applicants who, for example, need additional time to fulfill application requirements for a degree program or do not wish to pursue a degree program. Minimum requirements for the Graduate School must be met for admission to non-degree status, but application to the CEM program is not required at that time. Only 15 course hours may be completed in non-degree status before applying to a program. International students on a student Visa may not enroll on non-degree status.

Readmission

A student who has not registered for graduate courses for one term (other than summer) must apply for readmission. A [readmission application](#) must be submitted to the Office of Graduate Admissions at least two weeks prior to the first day of class of the desired term of reentry. A non-refundable readmission fee of \$30.00 must be submitted when applying for readmission. A student who has attended another institution since enrollment at UT must submit an official transcript showing all coursework and degrees obtained at the other institution.

FINANCIAL SUPPORT

Assistantships and Fellowships

The College of Veterinary Medicine offers a limited number of ongoing graduate research assistantships in the CEM Program. This and other methods of support may be arranged with individual investigators. Successful pairing with a mentor does not guarantee funding support. The following assistantships are awarded as funds become available:

Graduate Research Assistantships and Postgraduate Fellowships

Awarded as funds are available. Applications are reviewed several times per year. Persons with a professional degree in the health sciences (DVM, MD, DDS) who wish to pursue a PhD program are given priority. Awards are renewable up to 4 total years for PhD students and up to 2 total years for MS students. These awards typically include a stipend and/or tuition waiver.

Notification of Award:

Awardees are notified by a letter from the CEM Program Director.

How to Apply:

Requests must come through the major professor addressed to the CEM Program Director.

Five (5) Graduate School of Medicine Graduate Research Assistantships

Awarded (as funds are available) for a 2- to 4-year period. Applications are reviewed several times per year. Persons with a professional degree in the health sciences (MD, DVM, DDS) who wish to pursue a PhD program are given priority. Awards include only a tuition waiver.

Notification of Award:

Awardees are notified by a letter from the Dean of the Graduate School of Medicine.

Address Requests To:

Office of the Dean
Attn: Graduate Research Assistantship Program
Graduate School of Medicine, Box 94
The University of Tennessee Medical Center
1924 Alcoa Highway
Knoxville, TN 37920

Requirements for Maintaining an Assistantship/Fellowship

- Students must be enrolled in at least 6 graduate credit hours per each fall and spring term for a one-half time graduate assistantship, and at least 9 graduate hours for a one-fourth time assistantship.
- **Students must make timely and satisfactory progress as described in the “Degree Requirements” and “Academic Status” sections of this handbook.**
- Assistantships/fellowships are not automatically renewed. Students must submit a progress report each academic year to the CEM Program Director. Funding assistance is dependent on the availability of funds and satisfactory **performance of the student’s assigned duties.**
- Instances in which a graduate assistant/fellow wishes to take a leave of absence will be handled on a case-by-case basis between the student, **the student’s major professor, and the CEM Program Office.** No guarantee can be made that a **student’s position will be available upon his or her return.**

Workload for an Assistantship

As student employees, graduate assistants are balancing professional development through work experience with progress toward their degree in academic experiences, such as courses, theses, or dissertations. To encourage that balance, graduate assistants may not exceed 20 hours of work per week without specific approval of the CEM Program Director. Appointments are normally on a one-fourth (10 hours weekly) or one-half (20 hours weekly) time basis. However, the normal number of hours for conducting an assignment should be mutually understood by the student and the major professor.

The CEM Program strongly discourages outside employment, as it will be very difficult to make adequate and timely progress toward a degree while holding several jobs.

Graduate School Fellowships

The Graduate School administers the Hilton A. Smith Graduate Fellowships, the Herman E. Spivey Graduate Fellowships, and the University of Tennessee Graduate Student Fellowships. Other funding administered by the Graduate School includes J. Wallace and Katie Dean Graduate Fellowships, Yates Dissertation Fellowships, Black Graduate Fellowships, and Lori Mayer Re-**Entry Women’s Fellowships.** [These awards](#) are for full-time study at UT Knoxville, and awardees are selected on the basis of high achievement, broad intellectual ability, and potential for significant career contributions. Requirements for maintaining these fellowships and information about workload may be found at the link in the previous sentence.

Loans

The [UT Financial Aid Office](#) offers information on federal and private student loans.

Employment

For graduate students with assistantships, employment at the university for more than 50% time (20 hours per week) requires special permission from the Graduate School. Other outside employment is strongly discouraged, as it will be very difficult for students to make adequate and timely progress toward a degree while holding several jobs.

Health Insurance

All graduate assistants on at least a one-fourth time appointment and enrolled in at least 3 graduate credit hours per term are automatically enrolled in a health insurance program. To avoid paying the health service fee to use the on-campus clinic, students should enroll in at least 9 hours each term.

Travel Support

The UT Graduate School administers travel support for professional activities based on merit. Awards help defray expenses for transportation, lodging, and registration fees. To request a travel award, students must submit an application to the Graduate School. Applications can be downloaded at <http://web.utk.edu/~gss/travelfund/index.html> or obtained from 413 Student Services Bldg. Applications must be submitted to the Graduate School by the following deadlines:

- Summer term – April 15
- Fall term – September 4
- Spring term – January 14

REGISTRATION AND ADVISING

Registration is required of all graduate students when using university facilities and/or faculty time. The minimum number of credit hours for registration is one (1). Registration allows use of services such as library checkout, laboratories, and recreation facilities not open to the public.

Information concerning registration is available through Self-Service Banner via MyUTK (<http://myutk.utk.edu/>) each term. Registration is accomplished via Web, and *confirmation of attendance must be set in addition to registration.*

Payment of Registration Fees

During priority registration, a bill is mailed to the registrant. Payment is due by the deadline noted on the bill. A graduated late fee is assessed to any student who fails to register during priority registration (except during the first semester). Additional information can be obtained from the Office of the University Registrar at (865) 974-2101 or <http://registrar.utk.edu/> and at the Bursar's Office at (865) 974-4495 or <http://web.utk.edu/~bursar/>.

Failure to pay tuition and fees before the deadline, as noted each term on the bill (VoIXPress statement), will result in cancellation of the schedule. Retroactive registration is not allowed.

Change in Registration

The permanent record will show all courses for which the student has registered except those audited and those from which the student has withdrawn on or before the "Drop Course without W" deadline.

Students who fail to attend the first class meeting without prior arrangement with the program may be dropped from the course to make space available to other students. Students have the responsibility to assure that they have been dropped. Otherwise, they may receive a grade of F in the course.

Type of Change for Full Term Classes Fall/Spring	Deadline (after class begins)
Add or drop a course without a W or change credit/grading	10 days
Between 11 and 42 days with instructor's and advisor's signature	42 days
Drop course with W	84 days

The periods for add, drop, change of credit/grading for sessions within the full term, summer, and mini term are determined based on a percentage of the equivalent deadline within the full term. See the Office of the Registrar's Timetable/Financial Deadlines (http://registrar.tennessee.edu/academic_calendar/index.shtml) each term for exact dates. Deadline dates will be moved to the next business day if the deadline falls on a holiday, weekend day, or fall/spring recess. Within the change of registration period, a student may change registration at MyUTK. If additional permission is necessary, a student must execute a [change of registration](#) at the Office of the University Registrar, with approval of the instructor and the major professor. Total withdrawal from registration for a term must be processed through the Office of the University Registrar.

500- and 600- Level Course Distinction

Graduate courses offered through the Comparative and Experimental Medicine Graduate Program (CEM) provide information and training at both fundamental and advanced levels. Offerings at fundamental levels present information and challenges for which the foundations have been set at the undergraduate level. In the CEM, these courses are listed as 500-level courses. CEM courses listed at the 600-level are advanced presentations based on foundations provided at 500- and lower levels. Guidelines and requirements for 500- and 600-level CEM courses are provided. These guidelines and requirements are primarily for the multi-student courses offered in the program; however, aspects of the guides and requirements are also applicable to the variable credit, special and advanced topics courses offered in the program.

500-level

Course description: Information presented in these courses is foundational for the disciplines represented in Comparative and Experimental Medicine. Courses at this level may be core courses for both MS and PhD programs and may be required by student committees for both MS and PhD curricula.

These courses are typically **lecture-based** with examinations as the grading mechanism; however, grading may also be based on written papers and oral presentations. Other forms of course presentation and grading must be approved by the JGCC.

Credit hours are based on contact hours with students. As examples, a 1-credit-hour course must meet the equivalent of one 50-minute session per week during a semester whereas a 4-credit course must meet the equivalent of 4 sessions per week (2,800 minutes) during a 14-week semester. Credit hours for non-traditional course offerings must be approved by the JGCC.

Faculty: The responsible faculty member must be at least an assistant professor, and all invited lecturers must have at least a **master's degree or professional** medical degree (MD, DVM, DDS, or equivalent). Exceptions for lecturers must be approved by the JGCC.

600-level

Course Description: Information presented in these courses is advanced beyond the fundamental information presented in courses at the 500-level. Courses at this level may not be required as core courses for the CEM MS degree program; however, **600-level courses may be required by MS student committees as part of an individual student's MS curriculum.** Courses at the 600-level may be presented in traditional or non-traditional formats, including interactive and group or individual learning activities. Depending on the course format, grading may be based on examinations, written papers, oral presentations, and defined participation.

Course credit is determined from a combination of lectures, group learning activities, and interactive and individualized learning activities.

Faculty: The responsible faculty member must be approved by the JGCC, and all invited lecturers must have a Ph.D. or professional medical degree (MD, DVM, DDS, or equivalent). Exceptions for lecturers must be approved by the Joint Graduate Coordinating Committee.

Special and Advanced Topics and Variable Credit Courses

The CEM offers four different courses titled as either special or advanced topics. These courses are individualized to meet specific needs of students. Credit hours are variable, and the courses may be repeated with different subject matter. *The JGCC must approve all special and advanced topics CEM course offerings, including credit hours.*

CEM 501 provides opportunities for specialized experiences in comparative and experimental medicine. This course should be used to meet the specialized needs of MS students and for projects appropriate for 500-level credit. Examples include research papers and analytical techniques and instrumentation involving established technologies.

CEM 610 (CVM) and 611 (GSM) are advanced or special topics in comparative and experimental medicine, and medical science, respectively. These courses are intended primarily as specialized experiences for doctoral students in the CEM program and address new and developing topics in research and technology that may be applicable to doctoral level research and/or clinical medicine.

Approval to offer special and advanced topics courses must be requested prior to the semester in which the course is proposed to be offered. CVM faculty should submit requests to the CEM program office using the [Course Request Form](#). GSM faculty should submit requests to the CEM program office at the UT Medical Center, Knoxville (UTMCK).

CEM 602 is a variable credit, surgery pathology course intended primarily for pathology residents pursuing graduate degrees. The JGCC must grant approval to offer these courses for greater than 2 credit hours. The written request should be submitted to the CEM program office prior to the semester the course is to be offered and must justify the proposed credit hours.

Enrollment Hours

Minimum Enrollment

Students with a 50% (1/2 time) assistantship must enroll in at least 6 hours of coursework during the fall and spring semesters to be considered full time. Students with a 25% (1/4 time) assistantship or no assistantship must enroll in at least 9 hours of coursework during the fall and spring semesters to be considered full time. To retain student health insurance, students with an assistantship should enroll in at least 3 hours of coursework during the summer semester.

Maximum Enrollment

The maximum number of course hours for which students may register during spring and fall semesters is 15. During summer, the maximum number of course hours is 12.

Proper Use of Courses 502 and 500/600

Course 502: Use of Facilities is for students who are not taking course work and are not yet eligible to register for thesis or dissertation hours. Registering for this course will permit borrowing privileges in the University Libraries or use of computer labs, other labs, and/or other university resources.

Course 500: Thesis is for master's-level student working on a thesis. Six hours of course 500 must be taken for the degree, and students must register for course 500 each semester during work on the thesis. At least 3 hours of course 500 must be taken during the semester in which the student plans to graduate.

Course 600: Dissertation is for the doctoral-level student working on a dissertation. Twenty-four hours of course 600 must be taken for the degree, and students must register for course 600 when work toward the dissertation begins. Continuous registration of at least 3 hours (including summer term) in course 600 is required thereafter.

Selection of an Advising Committee

Students who are notified of having met the minimum requirements for admission to the CEM program should determine a major professor assignment before full admission to the program will be granted. Participating [graduate faculty](#) are listed in this handbook. The major **professor advises the student about courses, supervises the student's research, and facilitates communication within the CEM program.** After two terms of graduate-level coursework has been completed, the student should work with the major professor to establish the advising committee. The major professor must **approve the student's program each semester**; therefore, the student is expected to maintain close consultation with the major professor and other members of the graduate committee with regard to progress in the program. See Degree Requirements for more information about choosing an advising committee.

DEGREE REQUIREMENTS

Master of Science

- Minimum Coursework: Core 14 hours
- Required (Major): 8 hours
- Thesis: 6 hours
- Electives: 2 hours
- **Total: 30 hours**

Core Courses:

Cellular and Molecular Basis of Disease 541 (2 hours) & 542 (2 hours)
Descriptive and Applied Epidemiology 504 (3 hours)
Journal Clubs 600-level (4 hours)
Statistics 500- or 600-level (3 hours)

- In addition to core courses, students must complete a minimum of 8 credit hours of coursework in a major study area, 2 or more hours of electives, and 6 hours of Thesis 500.
 - Major study area may include epidemiology, imaging, immunology, infectious diseases, medicine, molecular and cellular biology, nutrition and metabolism, oncology, parasitology, pathology, pharmacology, surgery, or toxicology. Exceptions to accommodate students with interests not listed above must be approved by the JGCC after application, in writing, to the director.
- At least two-thirds of coursework numbered 500 or above required for a master's degree, including not more than 6 hours of thesis credit, must be taken at the University of Tennessee, Knoxville.
- Students must complete an approved [responsible conduct of research](#) training program.

A **maximum** of 10 hours may be transferred from institutions outside the University of Tennessee system with approval by the student's master's committee and the UT Graduate School. Graduate courses (500- or 600-level) taken by veterinary, medical, and dental students may, if appropriate, be transferred or credited (maximum of 6 hours) to a student's graduate program in Comparative and Experimental Medicine upon recommendation by the student's master's committee and approval by the Dean of the UT Graduate School (**see [transfer credits](#)**).

Master's Committee

Students must identify and be accepted by a major professor before admission to the CEM program. **After one term** of graduate-level courses, the student should select and consult with the major professor concerning the formation of a master's committee (at least three members at the rank of assistant professor or above). By the **end of the second term**, the **master's** committee must be chosen. **The committee must be** composed of at least one faculty member from the College of Veterinary Medicine and at least one faculty member from the UT Graduate School of Medicine or other appropriate academic unit. The student must file a [Masters Committee Appointment Form](#), and the director must approve the master's committee to ensure that balance exists and that the CEM Program is appropriately represented. If the student opts for a significant amount of coursework in a minor field of study, one member of the committee must be from an appropriate department in the minor discipline. The committee will assist the student in planning a course of study prior to the end of the second term of graduate-level work. The committee may require and/or recommend specific courses (in addition to those required by the program). The committee should aid the student in formulating and completing an appropriate research project and in ensuring the achievement of degree requirements. The student is responsible for coordinating meetings of the master's committee at least twice per year and obtaining and/or preparing required materials such as appropriate UT Graduate School forms, transcripts, yearly progress reports and research proposals for the meetings. Student progress will be monitored by the CEM Program Director. It is incumbent upon students to promptly honor requests for progress reports.

Admission to Candidacy

Admission to candidacy indicates agreement that the student has demonstrated ability to do acceptable graduate work and that satisfactory progress has been made toward a degree. This action usually connotes that all prerequisites to admission have been completed and a program of study has been approved. Application for admission to candidacy for the master's degree may be made after the student has completed required core courses and 9 hours of graduate coursework and has a minimum GPA of 3.0. Students must submit the [Admission to Candidacy form](#), with appropriate signatures, to the UT Registrar's Office no later than commencement day of the term preceding the term in which they plan to graduate.

Thesis Registration

Students must be registered for thesis hours each term work is done on the thesis (continuous registration is not required), including a minimum of 3 credit hours the term in which the thesis is accepted by the Graduate School. Six hours of course number 500 are required. After receiving the master's degree, a student is no longer permitted to register for 500-level thesis hours.

Thesis

The thesis is the culmination of an original research project completed by the student.

- The final draft of the thesis must be distributed to all committee members **at least two weeks prior** to the date of the final examination.
- A draft of the thesis (preferably on CD) should be placed in the CEM Program Office **at least two weeks prior** to the final examination and available to all interested persons at the University of Tennessee. It must be prepared according to the current edition of the [UTK Guide for the Preparation of Theses and Dissertations](#).
- **Thesis preparation is the responsibility of the student** (this includes typing and photocopying).
- Two copies of the thesis must be approved and accepted by the UT Graduate School on or before the deadline specified each term by the UT Graduate School.
- Each copy must include an [approval sheet](#), signed by the members of the master's committee, certifying that they have examined the final copy of the thesis and judged it to be satisfactory.

Final Examination (Defense of Thesis)

Candidates must present a thesis and pass a final oral examination, as determined by the candidate's committee. The examination, which is concerned with both coursework and the thesis, measures the candidate's ability to integrate material in the major study area and related fields. This examination must be scheduled by the student through the CEM Program Office, **at least two weeks prior to the examination**. Unless prior approval from the Graduate School is granted, the examination must be given in university facilities. Final examinations not properly scheduled **MUST** be repeated. This examination must be held at least two weeks before the final date for acceptance and approval of thesis set by the UT Graduate School. Results of the final examination must be submitted by the thesis deadline. In case of failure, the candidate may not apply for re-examination until the following term. The result of the second examination is final. Information about the appeal process may be found in the [Grievances and Appeals section](#).

The final examination should also fulfill the following CEM Program guidelines:

- A seminar should be scheduled and presented by the student. This seminar should be announced through the CEM Program Office and be open to all interested persons at the university. Appropriate seminar announcements should identify this as a thesis defense.

- At the end of the presentation, questions shall be open to the audience and be appropriate to that presentation. This is an official university academic activity; pets and young children are not permitted to attend.
- An oral defense of the thesis, by the student, will be conducted by the Thesis Committee immediately following the seminar. The CEM Program Director is invited to attend.

Transfer Credits

Courses taken at another institution may be considered for transfer into the MS degree program, as determined by the master's committee and by the Dean of the UT Graduate School. Official transcripts from all institutions previously attended must be sent directly to the Office of the University Registrar before any credit will be considered. Courses transferred will not affect the minimum residence requirements for the program, nor will they be counted in determining the student's grade-point average. Credits transferred from universities outside the University of Tennessee system cannot be used to meet thesis or dissertation requirements nor 600-level coursework requirements. Credit for extension courses taken from other institutions is not transferable, nor is credit for any course taken at an unaccredited institution.

Research Symposium Experience

Students are required to present at least once in the CEM Summer Research Symposium, prior to defense of the thesis. In exceptional circumstances, the director may waive this requirement.

Time Limit

Candidates have six (6) calendar years from the time of enrollment in the UT Graduate School to complete the **master's** degree. Students who change degree programs during this 6-year period may be granted an extension after review and approval by the UT Graduate School. In any event, courses used toward a master's degree must have been taken within six calendar years of graduation.

Timetable for Completion of MS Degree

Year	1			2		
Semester*	Fall	Spring	Summer	Fall	Spring	Summer
Establish advising committee						
Submit progress report						
Submit Admission to Candidacy form						
Thesis hours						
Research Symposium experience†						
Final exam						

*Assumes entry to program during fall semester and graduation during summer semester. Semesters should be adjusted according to when individual students entered program.

†Orange arrows indicate option of year in which to complete degree requirement.

Doctor of Philosophy

Core Courses:

Cellular and Molecular Basis of Disease 541 (2 hours) & 542 (2 hours)
Descriptive and Applied Epidemiology 504 (3 hours)
Journal Clubs 600-level (6 hours)
Statistics 500- or 600-level (3 hours)

In addition to core courses, students must complete a minimum of 8 credit hours of coursework in a major study area. Major study area may include epidemiology, imaging, immunology, infectious diseases, parasitology, medicine, molecular and cellular biology, nutrition and metabolism, pathology, pharmacology, toxicology, or surgery. Exceptions to accommodate students with interests not listed above must be approved by the JGCC after application, in writing, to the CEM Program Director.

Minimum Coursework: for students with a professional (i.e., MD, DVM, DDS) or relevant master's degree

Twenty-four (**24**) credit hours of graduate coursework. At least six hours of 600-level courses must be included, exclusive of dissertation hours. In addition, at least twenty-four (**24**) hours of dissertation work in course number 600 are required (forty-eight [**48**] hours total). At least 12 hours of coursework must be graded A-F.

Students without a professional or master's degree must complete a minimum of 48 credit hours of coursework and 24 hours of Dissertation 600. At least 30 hours of coursework must be graded A-F. A minimum of 6 hours of coursework must be taken in UT courses at the 600-level, exclusive of dissertation hours.

All students must complete an approved [responsible conduct of research](#) training program.

Doctoral Committee

Students must have identified a major professor upon entry into the graduate program. During the **first year** of graduate study, the student should work with the major professor to identify a doctoral committee composed of four faculty members holding the rank of assistant professor or above, three of whom, including the major professor, must be approved by the Graduate Council to direct doctoral research. At least one member must be from an academic unit other than that of the student's major field, one member from the College of Veterinary Medicine, and one member from the UT Graduate School of Medicine (or other appropriate academic unit). The director, after consulting with the JGCC, must approve the [doctoral committee](#) to ensure that balance exists and that the CEM program is appropriately represented. Exceptions to these requirements, to accommodate students with specific interests, must be approved by the JGCC after application, in writing, to the CEM Program Director. The doctoral committee has primary responsibility, subject to Graduate Council policies, for the degree work of the student. The doctoral committee should plan (and must approve) all coursework, certify the student's mastery of the subject matter of the field of study by a comprehensive examination, direct the research, and recommend the dissertation for approval and acceptance by the Graduate School. The doctoral committee should meet at least twice a year. Students must **prepare and defend a prospectus** outlining their proposed research projects before the end of their **third year** in the program. Medical residents pursuing a doctoral degree have until the end of their fourth year.

The *student's responsibility is to coordinate the scheduling of the meetings* of the doctoral committee and to obtain and/or prepare the materials required, such as appropriate Graduate School forms, transcripts, progress reports, and research proposals for committee meetings. The student's progress will be monitored by the CEM Program Director. It is incumbent upon students to promptly honor requests for progress reports.

Changes in membership of the doctoral committee MUST be done by submitting to the Graduate School a completed [Doctoral Committee Appointment Form](#), with signatures of the members removed and added to the committee. The signature of the CEM Program Director is also required. The Admission to Candidacy form submitted by the student after completion of the comprehensive examination MUST have the signatures of members of the CURRENT doctoral committee.

Doctoral Comprehensive Examination

This examination should be taken when the student has completed, or nearly completed, all prescribed courses and must be completed before the end of the **third year** of the program. Medical residents pursuing a doctoral degree have until the end of their fourth year. Its successful completion indicates that, in the judgment of the faculty, the doctoral student can think analytically and creatively, has a comprehensive knowledge of the field and the specialty, knows how to use academic resources, and is deemed capable of completing the dissertation. The comprehensive examination must be passed prior to admission to candidacy. In case of failure, the candidate may not apply for re-examination until the following term. The result of the second examination is final. Information about the appeals process may be found in the [Grievances and Appeals section](#). The candidate must adhere to the following guidelines:

1. The student shall declare, with approval of his/her doctoral committee and at the time of the student's first meeting with the committee, a **major study area** from the following list and one to three **minor areas** supported by the expertise of the CEM faculty and agreed upon by the advising committee. These shall be:
 - epidemiology
 - imaging
 - immunology
 - infectious disease
 - medicine
 - molecular and cellular biology
 - nutrition & metabolism
 - oncology
 - parasitology
 - pathology
 - pharmacology
 - surgery
 - toxicology
 - other (must be approved by CEM Program Director)
2. The examination shall be in two parts: a written examination followed by an oral examination. The written examination shall be a closed book examination conducted over two to four days. Questions given to the student on one day shall be completed on that day. The oral examination should be held within three weeks after completion of the written examination, or as soon thereafter as scheduling permits. The oral examination at minimum shall cover the primary and secondary areas appropriately.
3. The program director shall appoint the **comprehensive examination coordinator** for the examination process. The program director shall solicit nominations of at least three faculty members from the student's advisor for consideration. The examination coordinator must be approved by the Graduate School to direct dissertations and **must not be a member of the student's committee**.
4. The comprehensive examination coordinator and the doctoral committee shall be responsible for preparing and administering the examination. The coordinator shall work with the advisor/major professor to set the written examination. All members of the committee are expected to contribute questions for the examination. The coordinator shall ensure that questions reflect a concentration in the declared major and that the minor areas are covered adequately. The written examination shall be administered and proctored by the coordinator. The oral examination shall be administered by the doctoral committee under the direction of the coordinator. The coordinator may participate in the examination and may vote on the outcome of the examination, if he or she chooses to do so.
5. All CEM faculty members, including those not serving on the student's committee, are entitled to submit questions appropriate to the student's educational background. Questions from the student's previous instructors may also be given consideration.

6. The student shall pass the examination provided the coordinator has established that:
 - a. A consensus exists among the examining committee members (at least a 2/3 majority on the committee, including the coordinator).
 - b. An appropriate number of questions dealing with the declared major and minor study areas were administered.
 - c. The examination was fair and rigorous.
7. All members of the JGCC should be invited to attend the oral comprehensive examination. The **student should notify** the CEM Program Office of the time and place of the exam **at least one month in advance**.
8. Following the examination, a copy of the written examination, including corrections, will be maintained in the student's file in the CEM Program Office in the College of Veterinary Medicine.
9. The official results of the comprehensive examination are reported to the Graduate School on the Admission to Candidacy form, and a short report must be submitted to the CEM Program Director by the coordinator.

Admission to Candidacy

A student may be admitted to candidacy for the doctoral degree after passing the comprehensive examination and maintaining at least a B average (minimum grade-point average of 3.0) in all graduate coursework. *Admission to candidacy must be applied for, and approved, at least one full term prior to the date the degree is to be conferred.* Each student is responsible for filing the [Admission to Candidacy form](#), which must be signed by the doctoral committee and the CEM Program Director and approved by the Graduate School.

Dissertation (UT GUIDE TO DISSERTATION: <http://web.utk.edu/~thesis/Guide11.pdf>)

The dissertation represents the culmination of an original research project completed by the student. The organization, method of presentation, and subject matter of the dissertation are important in conveying to others the results of such research. Funding for dissertation research will be identified by the student after consultation with the major professor. The student shall prepare, prior to initiation of the project, a prospectus to include title, hypothesis, rationale, objectives, literature review, and materials and methods. The student's doctoral committee must approve the proposed research project in writing.

A student should be registered for the number of dissertation hours representing the fraction of effort devoted to this phase of the candidate's program. Thus, a student working full-time on the dissertation should register for 9 hours (6 hours for those on a half-time assistantship) of course number 600 per term. *Note: maximum of 99 hours of dissertation.*

The dissertation (prepared according to the regulations in the current edition of the *UTK Guide to the Preparation of Theses and Dissertations*) must be submitted to and accepted by the Graduate School. It must include an [approval sheet](#), signed by all members of the doctoral committee, which certifies to the Graduate School that they have examined the final copy and found that its form and content demonstrate scholarly excellence. All other doctoral forms are also submitted at this time (see [dissertation consultant](#) for details).

Continuous Dissertation Registration

The student must register *continuously* for course number 600 (minimum of 3 credit hours per term) from the time the doctoral research proposal is approved, admission to candidacy is accepted, or registration of course number 600 is begun, whichever comes first. This includes summer terms and the term in which the dissertation is approved and accepted by the Graduate School. *A minimum of 24 credit hours of course number 600 is required before the dissertation will be accepted.*

Final Examination (Defense of Dissertation)

A doctoral candidate must pass an oral defense of the dissertation. The dissertation, in the form approved by the major professor, *MUST be distributed to the committee at least two weeks before the examination.* The examination must be scheduled through the [UT Graduate School](#) at least one week prior to the examination and must be conducted in university facilities. Final examinations not properly scheduled must be repeated. The examination is announced publicly and is open to all faculty members. The defense of the dissertation will be administered by ALL members of the doctoral committee after completion of the dissertation and all course requirements. *This examination must be passed at least two weeks before the date of submission and acceptance of the dissertation by the Graduate School.* Results of the defense must be submitted by the dissertation deadline. Failure to pass the oral defense of dissertation may constitute dismissal from the program. Requests for second attempts must be sent to the CEM Program Director for JGCC review and approval/disapproval. In case of failure, the candidate may not apply for reexamination until the following semester. The result of the second examination is final. **Appeal information may be found under "[Grievances and Appeal Procedures](#)" in the handbook.**

The final examination should also fulfill the following CEM guidelines:

- A draft of the dissertation (preferably on CD) should be placed in the CEM Program Office one week prior to the final examination and be available to all interested persons at The University of Tennessee.
- A seminar should be **scheduled** and presented **by the student**. This seminar should be announced through the CEM Program Office and be open to all interested persons at The University of Tennessee. This is an official university academic activity; pets and young children are not permitted to attend.
- Seminar announcements should identify this as a dissertation defense. The seminar is open to all faculty members.
- At the end of the presentation, questions shall be open to the audience and be appropriate to that presentation.
- An oral defense of the dissertation, by the student, will be conducted by the doctoral committee immediately following the seminar. The CEM Program Director is invited to attend the oral defense.

Transfer Credits

At the doctoral level, courses are not officially transferred although they may be used to meet degree requirements. If a requirement has been met through coursework in another program, the student may petition the JGCC for a waiver of this requirement.

Research Symposium Experience

Students are required to participate at least twice in the CEM Summer Research Symposium, prior to defense of the dissertation. In exceptional circumstances, the director may waive this requirement.

Time Limit

Comprehensive examinations must be successfully completed within 3 years, and all requirements must be completed within 8 years from the time of a student's initial enrollment in the doctoral degree program.

Residence Requirement

For a doctoral degree, a minimum of two consecutive semesters (summer included) of residency is required. Residency is defined as full-time registration for a given semester on the campus where the program is located.

Timetable for Completion of PhD Degree

Year	1			2			3			4		
Semester*	Fall	Spr	Sum									
Establish advising committee		→										
Submit progress report			→			→			→			
Prepare and defend prospectus†								→				
Take comprehensive examination							→					
Submit Admission to Candidacy form										→		
Dissertation hours									→			
Research Symposium experience‡						→			→			→
Schedule and take final exam												→

*Assumes entry to program during fall semester and graduation during summer semester. Semesters should be adjusted according to when individual students entered program.

†Medical/clinical residents pursuing a doctoral degree have until the end of their fourth year and should adjust timetable accordingly.

‡Orange arrows indicate option of which *two* years in which to complete degree requirement.

ACADEMIC STATUS

Full-Time Status

To be considered full-time, students should enroll in at least 9 credit hours, but no more than 15 hours, per term. For the summer term, students may register for a maximum of 12 hours in an entire summer term or 6 hours in a 5-week summer session. Students may enroll in only one course during mini-term.

Students holding a half-time assistantship should enroll for 6 to 11 credit hours. A one-fourth time graduate assistant should take 9 to 13 hours.

If students hold at least a one-fourth time assistantship appointment, they are automatically enrolled in the student health insurance plan. However, students must be enrolled in at least 3 graduate credit hours each term to maintain coverage. If they wish to use the on-campus Student Health Service clinic, students must be enrolled for at least 9 hours per term **or** pay the health service fee if enrolled for less than 9 hours.

Grade-Point Average

Graduate students must maintain a cumulative grade-point average (GPA) of at least 3.0 in all graduate courses taken for a letter grade of A to F. Grades of S/NC, P/NP, and I, which have no numerical equivalent, are excluded from this computation. No student may repeat a course for the purpose of raising a grade already received, with the exception of NC. A graduate student may not do additional work or repeat an examination to raise a final grade.

Terms of Probation

If, upon completion of 9 hours of graduate coursework, a student's GPA falls below 3.0, the student will be placed on academic probation. A student will be allowed to continue graduate study in subsequent terms if each term's GPA is 3.0 or greater. Upon achieving a cumulative GPA of 3.0, the student will be removed from probationary status.

Dismissal

If a student is on academic probation, the degree status will be terminated by the Graduate School if the student's term GPA falls below 3.0 in a subsequent term. When the particular circumstances may be deemed to justify continuation, and upon recommendation by the CEM Program Director and approval of the Graduate School, a student on probation whose term GPA is below 3.0 may be allowed to continue on a term-by-term basis.

Other terms of dismissal are failure to pass the [comprehensive](#) or final examination (requests for second attempts must be sent to the CEM Program Director for JGCC review and approval/disapproval), failure to meet CEM Program time limit requirements, violations of [academic honesty](#), research [misconduct](#), or [unsatisfactory progress](#). Two consecutive terms of "No Progress" (NP) in Thesis 500/Dissertation 600 will result in dismissal from the Graduate School. For the CEM Program, NP grades in Thesis 500/Dissertation 600 in 2 of 3 consecutive terms will result in dismissal from the program.

Termination of a student from the program must be accompanied by written notice to the student with a copy to the Graduate School. The CEM Program Director may evaluate the student's record to determine whether the student is eligible to apply for a change of status and register in another area of study.

Registration for courses in the CEM Program by students dismissed from the program will not be permitted, except by written authorization from the program director.

Incomplete Grades

"I" is a temporary grade indicating that the student has done satisfactorily in the course but, due to unforeseen circumstances, has been unable to complete all the requirements.

All incompletes MUST be removed within one term, excluding the summer term. If a supplementary grade report has not been received in the UT **Registrar's Office** at the end of the appropriate term, the "I" will be changed to an "F." The course will not be counted in the cumulative grade-point average until a final grade is assigned. No student may graduate with an "I" on his/her record.

Method/Time Frame for Notification of "Change of Program"

To change a major program of study or to change from one degree to another within the same program, a student must complete a [Request for Change of Graduate Program](#) form. The form requires the signature of the director/head of the program in which admission was previously granted. Acceptance into a new program is contingent upon a review and recommendation by that program. Students not accepted into the program requested remain in the program to which he/she has been formerly admitted. Results of each request for program change are communicated to the student by mail by the Graduate School. Program changes must be accomplished within one term of the request for change.

Expectations for Good Standing

Students in the CEM Program are expected to maintain a 3.0 cumulative grade-point average on all graduate courses graded A to F. For all other courses, a grade of either P or S must be received. In addition, students are expected to make reasonable progress in their thesis or dissertation research after projects have been approved. It is expected that they will complete research projects within three years. The CEM Program has a formal process for annual evaluation of student progress and performance (<http://online.utk.edu>). The process is designed to optimize the value of individual student programs and to ensure timely progression through degree requirements.

Yearly Progress Report

Following each spring term, **the student's major professor meets with the student to discuss progress and performance and provides a written evaluation describing accomplishments, strengths, and deficiencies and if necessary, suggested corrective actions.** In the event of an anticipated unsatisfactory evaluation, the major **professor consults with the student's** advising committee before preparing the evaluation. The advising professor provides **copies of the evaluation to the members of the student's committee and to the CEM Program Director.**

Following the advising professor's evaluation and prior to the start of the fall term, the student must file an information packet with the CEM Program Director's office. The packet includes a detailed reporting form, a current curriculum vitae (CV), and a copy of the advising professor's evaluation. The [reporting form](#) includes a cumulative listing of courses taken, with grades, and explanations and corrective actions to be taken in response to deficiencies or unsatisfactory progress reported in the major professor's evaluation. The packet will be available to the major professor and to members of the student's advising committee.

If warranted, the director will notify the student, the major professor, and the **student's advising** committee that a report of unsatisfactory performance is being made to the JGCC. The JGCC will review the report and any additional materials provided by committee members and decide if there are grounds for probation or [dismissal](#) from the program.

Should a progress report not be filed by the specified deadline, access to financial support may be jeopardized, and students may be restricted from registering for courses.

Conflict Resolution

If a conflict develops between a student and the student's major professor, both parties should work to correct the interfering issues. Conflicts may include issues of disruptive conduct and insubordination. If the conflict cannot be resolved, the professor or student should request mediation through the CEM Program Director or the Director of the GSM portion of the program. If all efforts fail and the professor decides to stop serving as the **student's major professor**, that professor documents in writing all problems and attempts to make corrections to **the student, the student's committee members, and the director**. Conversely, students may similarly request changes. Under either scenario, to remain in the program, the student must provide to the director a written explanation and request to formally visit with other program faculty (as in laboratory rotations) or to associate formally with another faculty member (who must provide written agreement). The director will notify the student, the major professor, **and the student's advising committee that the student's request and accompanying materials** are being directed to the JGCC for decision. The CEM Program is not responsible for replacing any stipend and tuition support provided by the first faculty mentor, and it is possible that stipend and tuition support for the student may be lost.

ACADEMIC HONESTY

Expectations

Plagiarism or academic cheating of any description (during closed-book examinations, thesis preparation, manuscript preparation, and research) is considered a serious breach in academic honesty, as is falsification of data.

Violations

Violations of academic honesty by a student should be reported in writing to the JGCC. The student will be notified, in writing, of the charge(s) by the JGCC within 7 days of the latter receiving the charge. The JGCC will investigate the circumstances of the alleged offense by meeting with both the accuser and the accused and either impose a penalty or dismiss the charges within 30 working days of student notification of the charge (unless an extension requested by the student is approved).

Penalties

Appropriate penalties for violation of academic honesty are probation, suspension, or dismissal. The exact penalty will depend on the circumstances under which the violation was committed.

Appeal

After a hearing by the JGCC, a student dissatisfied with the decision rendered may [appeal](#) the decision to the Appeals Committee of the [Graduate Council](#) in the manner detailed in *Hilltopics*.

LEGAL REQUIREMENTS FOR RESEARCH

Institutions of higher education have maintained a centuries-old tradition of integrity and objectivity. The University of Tennessee is pleased with the overall support given by its faculty, staff, volunteers, and students in upholding this tradition and wants to ensure that the highest level of integrity in all academic activities is continued. Therefore, any individual who has reason to believe that he or she has knowledge of an act of [research misconduct](#), including fabrication of results, plagiarism, and/or misrepresentation of findings, should communicate this information to a supervisor or appropriate administrator. If an allegation of misconduct is substantiated, the chief administrative officer of the campus shall initiate the applicable disciplinary procedures, and sanctions, if appropriate, will be imposed under those procedures.

Responsible Conduct of Research and Compliance Training

All researchers at the University of Tennessee **are expected to comply with the university's research policies, regulations, and guidelines.** [Information](#) and required forms are available at the Office of Research. Regulations must be followed for all research, especially that involving animal care, biosafety, human subjects, and radiation.

All students in the Comparative and Experimental Medicine Program must complete training in the responsible conduct of research during their first year of study. This training may be acquired by completing any one of the following three options:

1. Satisfactory completion of an approved online training module.
 - a. [Collaborative Institutional Training Initiative](#) (UTIA or UTHSCK; *recommended*)
 - b. [Online@UT \(Blackboard\)](#) training (UT Knoxville)
2. Graduate course
 - a. ANSC 525: Research Ethics for the Life Sciences (*recommended*)
 - b. Others, as they become available and are approved by the JGCC
3. Student-Mentor training plan (see [yearly progress report](#) form for details)

Additional opportunities for responsible conduct of research training may be available through the [UTIA](#) and [UT Knoxville](#) research offices, as well as through periodic training sessions from other campus groups.

Upon satisfactory completion of responsible conduct of research training, students should record the training as part of their [yearly progress report](#). This should document exposure to the topics addressed in the core training provided under the approved options listed above (1a/b or 2a).

CONFLICTS OF INTEREST

1. Students are discouraged from providing food and refreshments for participating faculty during comprehensive examinations and thesis/dissertation defenses. The student being examined is not expected or required to do this, and the action may place examining faculty in an uncomfortable situation. Following a successful examination or thesis/dissertation defense, it is then acceptable for participating faculty to be invited to a celebration.
2. Students are not required to provide food and refreshments at regular committee meetings, and providing anything beyond inexpensive snacks and coffee or soft drinks is strongly discouraged.
3. Students should not give gifts to faculty in the CEM program, including their own major professor, before they have completed all requirements for their degree. Although gift giving is common in other cultures, this practice can be misinterpreted as creating or contributing to a conflict of interest, and is therefore strongly discouraged.

GRIEVANCES AND APPEAL PROCEDURES

A graduate student may appeal two types of academic decisions (in addition to [academic dishonesty](#)):

1. Academic performance evaluations
2. Decisions based on race, gender, religion, national origin, age, or handicap

Graduate students and faculty should first try to resolve the matter through informal discussions. If a satisfactory resolution is not met, the individual should file a grievance in writing to the CEM Program Director and the JGCC. If applicable, the subject of the charge must be notified of the grievance, in writing, by the CEM Program director within 7 days of receiving the written allegation. The student must present details of the grievance in person and provide documentation of the issue. The JGCC shall attempt to render a decision to solve the problem within 30 working days of receiving the grievance, unless an extension requested by any of the parties involved is approved. If any party is not satisfied by the decision of the JGCC, further [appeals may be made to the university's Graduate Council Appeals Committee](#). For all other problems students may encounter related to their graduate studies that they feel cannot be addressed by or to their mentor and committee, students are strongly encouraged to seek guidance/help from CEM Program staff or the Program Director.

DEPARTMENTS OF INSTRUCTION

Several departments participating in the Comparative and Experimental Medicine Graduate Program offer courses approved by the program and by The Graduate School. Faculty participating in the CEM program are also approved by the program. (Codes for course offerings: E, offered every term; F, offered in the fall; Sp, offered in the spring; and A, offered alternate years)

Students not enrolled in a graduate program must obtain approval from the Joint Graduate Coordinating Committee prior to registration in Special and Advanced Topic courses of the CEM program.

College of Veterinary Medicine

Participating departments: Biomedical and Diagnostic Sciences, Microbiology, Nutrition, Large Animal Clinical Sciences, and Small Animal Clinical Sciences. Please check the current Graduate Catalog and term timetable for a listing of microbiology and nutrition courses and times.

500 Thesis (1-15). P/NP only. *E*

501 Special Topics in Comparative and Experimental Medicine (1-6). Specialized experience in comparative and experimental medicine. *Prerequisite: Consent of instructor. May be repeated. Maximum 6 hrs. E*

502 Registration for Use of Facilities (1-15). Required for the graduate student who is not otherwise registered during any term when such a student uses university facilities and/or faculty time before degree is completed. *May not be used toward degree requirements. May be repeated. S/NC only. E*

504 Descriptive and Applied Epidemiology (3). Principles of epidemiology and their historic and modern application to diseases of humans and animals. Host-agent relationships, measurement of disease frequency, disease monitoring and control in human and animal populations, field investigations, and animal health economics and production. *Prerequisite: Consent of instructor. F*

507 Epidemiology of Vector-borne, Bacterial, and Viral Zoonotic Diseases (2). Emphasis is placed on understanding the host, agent, and environmental factors that determine the distribution of selected diseases of importance to both human and animal populations. Selected topics include vector-borne zoonoses, rabies, brucellosis, and psittacosis. *This is an online course. Prerequisite: Consent of instructor. Sum, Odd*

508 Epidemiology of Parasitic, Food-borne, and Bacterial Zoonotic Diseases (2). Emphasis is placed on understanding the host, agent, and environmental factors that determine the distribution of diseases of importance to both human and animal populations. Selected topics include anthrax and leptospirosis, in addition to parasitic and food-borne zoonoses. *This is an online course. Prerequisite: Consent of instructor. Sum, Even*

509 Clinical Epidemiology (3). Theory and practice of design and implementation and analysis of clinical research. Laboratories include appraisal of biomedical literature and design of a proposal for a clinical research project. *Prerequisite: Consent of instructor.*

530 Wildlife Diseases (2). Necropsy of birds and mammals. Recognition of various diseases and methods of preparing pathological materials in field and lab. Investigative procedures concerning wildlife diseases. *(Same as Wildlife and Fisheries Science 530) F*

541 Cellular and Molecular Basis of Disease (2). Disease at molecular level. Changes in molecular events in cells that lead to disease and occur as result of disease. Correlation with clinical and pathological states. Systems covered: neurological, muscular, bone, respiratory, hematology. *Same as Comparative and Experimental Medicine – Graduate School of Medicine 541. F, Even, Thur 8-10*

- 542 Cellular and Molecular Basis of Disease (2).** Disease at molecular level. Changes in molecular events in cells that lead to disease and occur as a result of disease. Correlation with clinical and pathological states. Systems covered: renal, liver/pancreas, metabolism, endocrinology, reproduction, immunology. *Same as Comparative and Experimental Medicine – Graduate School of Medicine 542. Prerequisites: Biochemistry and Cellular and Molecular Biology 401 and 402. Sp, Odd, Thur 8-10*
- 561 Pharmacology (4).** Principles of pharmacokinetic and pharmacodynamic theory and data modeling. The students will learn the physiologic processes that dictate the absorption, distribution, and elimination of drugs. The course includes a hands-on module where the student will learn how to analyze pharmacokinetic data including noncompartmental and compartmental data analysis, population and physiology-based models, as well as principles of pharmacokinetic-pharmacodynamic integration. *This is an online course. Prerequisite: Consent of instructor. Sp, Odd*
- 600 Dissertation (3-15).** P/NP only. *E*
- 601 Advanced Epidemiology (3).** Epidemiological study design, data analysis, and model building. Emphasis placed on using, understanding, and making inferences based on least squares, logistic Poisson, survival, and mixed models. STATA will be used as the basic computing language for all analyses. *Recommended background: Graduate-level epidemiology and statistics courses. Prerequisite: Consent of instructor. Sp, Odd*
- 602 Surgical Pathology (1-2).** Examination of biopsy specimens and interpretation of observations. Preparation of specimens for sectioning. *Prerequisite: Consent of instructor. May be repeated. Maximum 3 hrs. E*
- 607 Diagnosis and Pathogenesis of Virus Diseases of Domestic Animals (3).** Advanced study of virus diseases important to domestic animals: virus biology, pathogenesis, pathology and diagnosis, technical training in virus diseases diagnosis. *2 hrs. and 1 lab. Prerequisite: Consent of instructor. Sp*
- 609 Mechanisms of Disease (3).** Advanced topics in pathobiology and mechanisms of disease: pathophysiology, cellular degeneration, inflammation, immunopathology, hemostasis. Principal biochemical and morphologic responses of various cells, tissues, and organs to injury and other metabolic derangements. Selected contemporary topics from current literature and textbooks. *Prerequisite: Consent of instructor. May be repeated. Maximum 6 hrs. Sp, A*
- 610 Advanced Topics in Comparative and Experimental Medicine (1-3).** Specialized in-depth experience in the various disciplines, current and future research methodology, recent advances in instrumentation in analytical techniques for comparative medicine. *Prerequisite: Consent of instructor. May be repeated. Maximum 12 hrs. E*
- 611 Journal Club in Emerging Infectious Diseases (1).** Readings and discussions based on current literature. *May be repeated. Maximum 12 hrs. S/NC only. F, Sp*
- 612 Journal Club in Biomedical and Diagnostic Sciences (1).** Readings and discussions based on current literature. *May be repeated. Maximum 12 hrs. S/NC only. F, Sp*
- 613 Journal Club in Large Animal Clinical Sciences (1).** Readings and discussions based on current literature. *Prerequisite: DVM or equivalent degree. May be repeated. Maximum 12 hrs. S/NC only. F, Sp*
- 614 Journal Club in Small Animal Clinical Sciences (1).** Readings and discussions based on current literature. *Prerequisite: DVM or equivalent degree. May be repeated. Maximum 12 hrs. S/NC only. F, Sp*

615 GIS and Geographical Epidemiology (3). Principles and applications of Geographical Information Systems (GIS) and geographical epidemiology in human and animal health research and practice. Exposure to a wide range of spatial analysis techniques useful in the investigation of human and animal disease problems as well as vector dynamics. The knowledge gained is useful in guiding disease prevention and control strategies. *Recommended Background: Biological sciences including (but not limited to) veterinary medicine, public health, epidemiology, parasitology, ecology, entomology, and environmental health. Prior introductory statistics and/or epidemiology training. Sp, Odd*

616 Comparative and Experimental Medicine Seminar (1). Research seminars pertinent to disciplines within the program. *May be repeated. Maximum 3 hrs toward degree requirements. S/NC only. F, Sp*

652 Disorders of the Endocrine System (2). Pathological and physiological aspects of diseases involving endocrine glands of various animal species. *Prerequisite: Animal Science 521 (Animal Physiology) or consent of instructor. (Same as An Sci 652) Sp*

UT Graduate School of Medicine

Participating departments include: Anesthesia, Medicine, Medical Genetics, Obstetrics and Gynecology, Pathology, Pediatrics, Radiology, and Surgery.

500 Thesis (1-15). P/NP only. *E*

502 Registration for Use of Facilities (1-15). Required for the student not otherwise registered during any term when student uses University facilities and/or faculty time before degree is completed. *May not be used toward degree requirements. May be repeated. S/NC only. E*

508 Graduate Research Participation (3). Advanced research techniques studied while conducting individual biomedical research projects under supervision of faculty. *Prerequisite: Consent of instructor. Open to all graduate students. May be repeated with consent. Maximum 9 hrs. S/NC only. E*

541 Cellular and Molecular Basis of Disease (2). Disease at molecular level. Changes in molecular events in cells that lead to disease and occur as result of disease. Correlation with clinical and pathological states. Systems covered: neurological, muscular, bone, respiratory, hematology. *Same as Comparative and Experimental Medicine – College of Veterinary Medicine 541. Prerequisites: Biochemistry and Cellular and Molecular Biology 401 and 402 or equivalent. F, Even, Thur 8-10*

542 Cellular and Molecular Basis of Disease (2). Disease at molecular level. Changes in molecular events in cells that lead to disease and occur as a result of disease. Correlation with clinical and pathological states. Systems covered: renal, liver/pancreas, metabolism, endocrinology, reproduction, immunology. *Same as Comparative and Experimental Medicine – College of Veterinary Medicine 542. Sp, Odd, Thur 8-10*

600 Doctoral Research and Dissertation (3-15). P/NP only. *E*

601 Journal Club in Comparative and Experimental Medicine (1). Readings and discussions based on current literature. *May be repeated. Maximum 12 hrs. S/NC only.*

610 Medical Biology Seminar (1). Invited speakers. Topics posted in advance. *May be repeated. Maximum 3 hrs toward degree requirements. S/NC only. F, Sp*

611 Advanced Topics in Medical Science (1-3). New developments in biological research applicable to clinical medicine. Primarily for doctoral candidates in Comparative and Experimental Medicine. *Prerequisite: Consent of instructor. May be repeated. Maximum 12 hrs. F, Sp*

GRADUATE FACULTY

College of Veterinary Medicine

Biomedical and Diagnostic Sciences

Baek, Seung – MS, PhD (Assoc Prof)

http://works.bepress.com/seung_baek/

Approved to Direct Doctoral Research: Y

Research Emphasis: Anti-cancer compounds found in diet, NSAIDs, and anti-oxidants

Bemis, David – PhD (Prof)

<http://www.vet.utk.edu/faculty/bemis.shtml>

Approved to Direct Doctoral Research: Y

Research Emphasis: Diagnostic bacteriology/mycology; bacterial pathogenesis, Bordetella

Brian, David – DVM, PhD (Prof)

http://works.bepress.com/david_brian/

Approved to Direct Doctoral Research: Y

Research Emphasis: Mechanisms of RNA replication and regulation of gene expression from RNA virus genomes

Cox, Sherry – MS, PhD (Assoc Prof)

http://works.bepress.com/sherry_cox/

Approved to Direct Doctoral Research: N

Research Emphasis: Pharmacology

Cui, Mei-Zhen – PhD (Assoc Prof)

www.vet.utk.edu/faculty/cui.shtml

Approved to Direct Doctoral Research: Y

Research Emphasis: Molecular mechanisms of Cardiovascular disease

Donnell, Robert – DVM, PhD (Assoc Prof)

http://works.bepress.com/robert_donnell/

Approved to Direct Doctoral Research: Y

Research Emphasis: Pathogenesis of amyloid formation, deposition and clearance via use of transgenic models, development of antibodies and clinical evaluation of novel approaches

Eiler, Hugo – DVM, MS, PhD (Prof)

http://works.bepress.com/hugo_eiler/

Approved to Direct Doctoral Research: Y

Research Emphasis: Endocrine testing procedures; mechanism and treatment for retained placenta

Fecteau, Kellie – MS, PhD (Asst Prof)

<http://www.vet.utk.edu/faculty/fecteau.shtml>

Approved to Direct Doctoral Research: N

Research Emphasis: Clinical endocrinology

Fry, Michael – MS, DVM (Assoc Prof)

http://works.bepress.com/michael_fry/

Approved to Direct Doctoral Research: N

Research Emphasis: Canine hepcidin, reticulocyte indices as markers of iron deficiency

Kania, Stephen – MS, PhD (Prof)

http://works.bepress.com/stephen_kania/

Approved to Direct Doctoral Research: Y

Research Emphasis: Immunology and diagnosis of infectious diseases, microbial molecular diversity, and mechanisms of bacterial virulence

Kennedy, Melissa – DVM, PhD (Assoc Prof)

http://works.bepress.com/melissa_kennedy/

Approved to Direct Doctoral Research: Y

Research Emphasis: Coronavirus, infections in felidae, viral diseases of non-domestic species

Lanzas, Cristina – DVM, PhD (Asst Prof)

http://works.bepress.com/cristina_lanzas/

Approved to Direct Doctoral Research: N

Research Emphasis: Infectious disease outbreaks and antimicrobial resistance (NIMBios)

Martin-Jimenez, Tomas – DVM, PhD (Assoc Prof)

http://works.bepress.com/tomas_martin-jimenez/

Approved to Direct Doctoral Research: Y

Research Emphasis: Pharmacology

McEntee, Michael – DVM (Prof & Dept Head)

www.vet.utk.edu/faculty/mcentee.shtml

Approved to Direct Doctoral Research: Y

Research Emphasis: Gross, histologic, and ultrastructure and ultrastructural pathology

New, John – DVM, MPH (Prof; Dept Chair)

http://works.bepress.com/john_new1/

Approved to Direct Doctoral Research: N

Research Emphasis: Epidemiology of infectious diseases (especially zoonoses); diseases of wildlife; the human-animal bond; pet overpopulation

Newkirk, Kim – DVM, PhD (Assoc Prof)

http://works.bepress.com/kim_newkirk/

Approved to Direct Doctoral Research: N

Research Emphasis: Mouse models of human disease; mouse phenotyping

Odoi, Agricola – MS, PhD (Assoc Prof)
http://works.bepress.com/agricola_odoi/
Approved to Direct Doctoral Research: Y
Research Emphasis: Applications of GIS & spatial epidemiology in health research & practice; zoonotic infections of public health significance; determinants of population health

Patton, Sharon – MS, PhD (Prof)
www.vet.utk.edu/faculty/patton.shtml
Approved to Direct Doctoral Research: Y
Research Emphasis: Veterinary parasitology; zoonotic parasites; diagnostic procedures; Toxoplasma gondii

Reed, Robert – DVM, PhD (Assoc Prof)
www.vet.utk.edu/faculty/reed.shtml
Approved to Direct Doctoral Research: Y
Research Emphasis: Nutritional regulation of LHRH and LH secretion and effects on the reproductive axis; Macroscopic and applied anatomy of domestic and exotic species

Rouse, Barry – DVM, MSc, PhD (Prof)
www.vet.utk.edu/faculty/rouse.shtml
Approved to Direct Doctoral Research: Y
Research Emphasis: Comparative cellular and molecular immunology; viral infection diseases

Schuller, Hildegard – DVM, PhD (Prof)
http://works.bepress.com/hildegard_schuller/
Approved to Direct Doctoral Research: Y
Research Emphasis: Experimental oncology, chemical carcinogenesis; comparative pathology of lung tumors

Sims, Michael – MS, PhD (Prof)
http://works.bepress.com/michael_sims/
Approved to Direct Doctoral Research: Y
Research Emphasis: Otoacoustic emissions in cats

Souza, Marcy – DVM (Asst Prof)
http://works.bepress.com/marcy_souza/
Approved to Direct Doctoral Research: N
Research Emphasis: Infectious diseases; zoonoses of wildlife and exotic pets

Wang, Hwa-Chain Robert – BVM, PhD (Prof)
http://works.bepress.com/hwa-chain_wang/
Approved to Direct Doctoral Research: Y
Research Emphasis: Anti-cancer molecular oncology

Xu, Xuemin – PhD (Prof)
http://works.bepress.com/xuemin_xu/
Approved to Direct Doctoral Research: Y
Research Emphasis: Molecular mechanisms of Alzheimer's disease

Large Animal Clinical Sciences

Adair, Henry S – DVM, MS (Assoc Prof)

http://works.bepress.com/henry_adairiii/

Approved to Direct Doctoral Research: N

Research Emphasis: Equine laminitis; laser doppler flowmetry; microvascular blood flow and laser surgery

Anderson, David – DVM, MS (Prof)

Approved to Direct Doctoral Research: N

Research Emphasis: Bovine pain and welfare; ruminant surgery; animal models for human research

Dhar, Madhu – PhD (Assoc Prof)

http://works.bepress.com/madhu_dhar/

Approved to Direct Doctoral Research: Y

Research Emphasis: Mouse models of human disease: obesity and diabetes

Seddighi, M. Reza – DVM, PhD (Asst Prof)

http://works.bepress.com/reza_seddighi/

Approved to Direct Doctoral Research: N

Research Emphasis: Pharmacokinetics and dynamics of analgesics and anesthetics

Sommardahl, Carla – DVM, PhD (Clin Assoc Prof)

http://works.bepress.com/carla_sommardahl/

Approved to Direct Doctoral Research: Y

Research Emphasis: Equine medicine, genetic and renal diseases

Whitlock, Brian – DVM (Asst Prof)

http://works.bepress.com/brian_whitlock/

Approved to Direct Doctoral Research: N

Research Emphasis: Reproductive physiology and endocrinology; interaction of metabolic and reproductive systems

Small Animal Clinical Sciences

Bartges, Joseph – DVM, PhD (Prof)

http://works.bepress.com/joe_bartges/

Approved to Direct Doctoral Research: Y

Research Emphasis: Nutrition and renal diseases

Cekanova, Maria – PhD, MS, RNDr (Res Asst Prof)

http://works.bepress.com/maria_cekanova/

Approved to Direct Doctoral Research: N

Research Emphasis: Metabolism, tumorigenesis, adult mesenchymal stem cells, imaging technology

Egger, Christine – DVM (Prof)

http://works.bepress.com/christine_egger/

Approved to Direct Doctoral Research: N

Research Emphasis: Acute and chronic pain; acupuncture in treatment of pain

Frank, Linda – DVM, MS (Prof)

http://works.bepress.com/linda_frank/

Approved to Direct Doctoral Research: N

Research Emphasis: Hypothyroidism in dogs, pathophysiology of atopic dermatitis

Hecht, Silke – DMV (Assoc Prof)

http://works.bepress.com/silke_hecht/

Approved to Direct Doctoral Research: N

Research Emphasis: Small animal ultrasonography; neuroimaging; CT and MRI; excretory renal scintigraphy

Hendrix, Diane – DVM (Prof)

http://works.bepress.com/diane_hendrix/

Approved to Direct Doctoral Research: Y

Research Emphasis: Infectious disease of the equine cornea; raptor ophthalmology

Jones, Michael – DVM (Assoc Prof)

http://works.bepress.com/michael_jones2/

Approved to Direct Doctoral Research: Y

Research Emphasis: Avian medicine

Kirk, Claudia – DVM, PhD (Prof; Dept Chair)

http://works.bepress.com/claudia_kirk/

Approved to Direct Doctoral Research: Y

Research Emphasis: Pet nutrition; feline urinary tract disease; feline diabetes mellitus

LeBlanc, Amy – DVM (Assoc Prof)

http://works.bepress.com/amy_leblanc/

Approved to Direct Doctoral Research: Y

Research Emphasis: Diagnostic and therapeutic techniques for cancer diagnosis and management

Legendre, Alfred – DVM, MS (Prof)

http://works.bepress.com/alfred_legendre/

Approved to Direct Doctoral Research: N

Research Emphasis: Feline viral disease and fungal diseases (blastomycosis)

Mawby, Dianne – DVM (Assoc Prof)

http://works.bepress.com/dianne_mawby/

Approved to Direct Doctoral Research: Y

Research Emphasis: Internal medicine

Millis, Darryl – DVM, MS (Prof)

http://works.bepress.com/darryl_millis/

Approved to Direct Doctoral Research: Y

Research Emphasis: Effects of growth factors on bone healing; canine gait analysis

Morandi, Federica – DVM, MS (Assoc Prof)

http://works.bepress.com/federica_morandi/

Approved to Direct Doctoral Research: N

Research Emphasis: CT; nuclear Medicine; PET

Ramsay, Edward – DVM (Prof)

http://works.bepress.com/edward_ramsay/

Approved to Direct Doctoral Research: Y

Research Emphasis: Novel anesthetic agent delivery; immobilization of wildlife; reptile clinical pathology

Sura, Patricia – DVM (Assoc Prof)

http://works.bepress.com/patricia_sura/

Approved to Direct Doctoral Research: N

Research Emphasis: Portosystemic shunts; tracheal collapse

Weigel, Joseph – DVM, MS (Assoc Prof)

http://works.bepress.com/joseph_weigel/

Approved to Direct Doctoral Research: N

Research Emphasis: Orthopedics

Whittemore, Jacqui – DVM, PhD (Asst Prof)

http://works.bepress.com/jacqueline_c_whittemore/

Approved to Direct Doctoral Research: N

Research Emphasis: Vaccine-associated immune disorders; pancreatic and liver disorders; non-invasive interventional techniques

Witzel, Angela – DVM, PhD (Asst Prof)

http://works.bepress.com/angela_witzel/

Approved to Direct Doctoral Research: N

Research Emphasis: Veterinary nutrition

UT Graduate School of Medicine

Asif, Irfan Mohammed – MD (Asst Prof – Dept of Family Medicine)

http://gsm.utmck.edu/family_medicine/faculty/asif.cfm

Approved to Direct Doctoral Research: N

Research Emphasis: Primary care sports medicine including both musculoskeletal complaints, as well as non-musculoskeletal conditions such as concussions

Berthelie-Jung, Valerie – PhD (Asst Prof – Dept of Medicine)

<http://gsm.utmck.edu/research/CDTR/berthelie.cfm>

Approved to Direct Doctoral Research: N

Research Emphasis: Structural and nanoscale biology. Protein aggregation, amyloid and amyloid-like fibrils, polyglutamine, polyalanine, serpins, high-throughput screening, inhibitors, chemical compounds

Gerard, David – PhD (Assoc Prof – Dept of Oral/Max Surgery)

http://gsm.utmck.edu/oral_surg/faculty/gerard.cfm

Approved to Direct Doctoral Research: N

Research Emphasis: Study of bone activity in response to implanted materials and bone response to growth factors

Goldman, Mitchell – MD (Prof – Dept of Surgery)

<http://gsm.utmck.edu/research/vascular/goldman.cfm>

Approved to Direct Doctoral Research: N

Research Emphasis: Vascular/transplant surgery

Grandas, Oscar – MD (Asst Prof – Dept of Surgery)

<http://www.utmedicalcenter.org/doctor/291/oscar-grandas-md/>

Approved to Direct Doctoral Research: N

Research Emphasis: Pancreas transplantation

Karlstad, Michael D. – PhD (Prof – Dept of Surgery)

https://edtech.uthsc.edu/academicaffairs/faculty/facepage.php?netID=mkarlsta&personnel_id=116789

Approved to Direct Doctoral Research: N

Research Emphasis: The regulation of pulmonary inflammation and protein metabolism by protein and lipid mediators in critical illness and trauma

Kennel, Stephen – PhD (Assoc Prof – Dept of Radiology)

<http://gsm.utmck.edu/radiology/faculty/kennel.cfm>

Approved to Direct Doctoral Research: Y

Research Emphasis: Human immunology & cancer

Kestler, Daniel – PhD (Asst Prof – Dept of Medicine)

https://edtech.uthsc.edu/academicaffairs/faculty/facepage.php?netID=dkestler&personnel_id=130380

Approved to Direct Doctoral Research: N

Research Emphasis: Detection of novel amyloid protein mutants; gene expression and regulation of novel members of the secretory calcium phosphoprotein gene cluster

LeBlanc, Amy – DVM (Assoc Prof)

<http://www.vet.utk.edu/faculty/leblanc.shtml>

Approved to Direct Doctoral Research: N

Research Emphasis: Diagnostic and therapeutic techniques for cancer diagnosis and management

Marks, Murray K – PhD (Assoc Prof – Depts of Oral & Maxillofacial Surgery and Pathology)

<http://gsm.utmck.edu/dentistry/faculty/marks.cfm>

Approved to Direct Doctoral Research: N

Research Emphasis: Mineralized tissue biology and histology; dental enamel histopathology; skeletal trauma histology; fetal dental development, human identification/forensic anthropology

Matteson, Karla J. – PhD (Prof – Dept of Medical Genetics)

<http://gsm.utmck.edu/genetics/matteson.cfm>

Approved to Direct Doctoral Research: Y

Research Emphasis: Molecular analysis for clinical applications

Mountain, Deidra – PhD (Asst Prof)

<http://gsm.utmck.edu/research/vascular/mountain.cfm>

Approved to Direct Doctoral Research: N

Research Emphasis: Vascular/transplant surgery

Stephens, Christopher – PhD (Asst Prof)

<http://gsm.utmck.edu/research/regenmed/stephens.cfm>

Approved to Direct Doctoral Research: N

Research Emphasis: Polymer engineering

Wall, Jonathan S. – PhD (Prof – Dept of Medicine)

<http://gsm.utmck.edu/research/preclinical/wall.cfm>

Approved to Direct Doctoral Research: Y

Research Emphasis: Amyloid and other abnormal protein assemblies

APPENDICES

Pertinent Graduate Student Web Pages

- Best Practices in Teaching
 - <http://gradschool.utk.edu/orientation/teaching.shtml>
- Center for International Education
 - <http://international.utk.edu/index.php>
- Comparative and Experimental Medicine
 - <http://www.vet.utk.edu/graduate/index.php>
- Counseling Center
 - <http://counselingcenter.utk.edu/>
- Funding, Fellowships, Assistantships for Graduate Students
 - <http://gradschool.utk.edu/gradfund.shtml>
- Graduate School
 - <http://gradschool.utk.edu>
- Graduate Catalog
 - <http://catalog.utk.edu/index.php>
- Graduate Student Appeals Procedure
 - <http://gradschool.utk.edu/studappresrce.shtml>
- Graduate Student Senate
 - <http://web.utk.edu/~gss>
- Graduate Admissions
 - <http://graduateadmissions.utk.edu/>
- Housing
 - <http://uthousing.utk.edu/tnliving/future/graduate.shtml>
- International House
 - <http://web.utk.edu/~ihouse>
- Judicial Affairs
 - <http://judicialaffairs.utk.edu/>
- Library Web site for Graduate Students
 - <http://www.lib.utk.edu/refs/gradservices.html>
- Office of Equity and Diversity
 - <http://oed.utk.edu>
- Office of Minority Student Affairs/Black Cultural Center
 - <http://omsa.utk.edu>
- Office of Information Technology (OIT)
 - <http://oit.utk.edu/>
- Research Compliance/Research with Human Subjects
 - <http://research.utk.edu/compliance/>
- Thesis/Dissertation Web site
 - <http://web.utk.edu/~thesis>
- VolAware
 - <http://volaware.utk.edu>

Forms and Additional Resources

College of Veterinary Medicine
The University of Tennessee
2407 River Drive, Room A102 ♦ Knoxville, TN 37996-4550

**APPLICATION FOR ADMISSION TO COMPARATIVE AND
EXPERIMENTAL MEDICINE GRADUATE PROGRAM**

Mail this completed form directly to:

The Office of Research and Graduate Programs
2407 River Drive, Room A102
Knoxville, TN 37996-4550

Three letters of reference from former professors should be mailed to this address as well.

IMPORTANT: Applicants to the Comparative and Experimental Medicine Graduate Program must also apply to the University of Tennessee at Knoxville Graduate School. They require the following:

1. The online Graduate Application for Admission;
2. A \$60.00 non-refundable application fee;
3. One official transcript of all college work;
4. Official results of the Graduate Record Examination (GRE) is required for all students who do not have a professional degree (i.e., MD, DVM, DDS) or who have a degree from a non-U.S. accredited school

Degree applied for MS PhD

Preferred date of admission: _____

Name of at least 2 suggested advisors (a pre-admission match with an advisor is **required** for entry to the CEM Program): _____

Are you interested in a graduate research assistantship (stipend and tuition waiver)? Yes No

PERSONAL DATA

Name: _____
(Last, First Middle)

Mailing Address: _____

Email: _____

Telephone No.: _____
(Home and/or work)

EDUCATION

List all colleges, universities, professional, and graduate schools attended. Please include:

- any official transcripts
- the name and address of school(s)
- dates attended
- major(s)/minor(s)
- degree(s) earned
- date conferred
- class rank
- GPA (cumulative grade point average, if computed on any basis other than A=4.0, so state)
- memberships in scientific societies

Have you ever resigned or been dismissed from any school or college? _____

If yes, explain: _____

List academic honors, scholarships, etc.; give locations and dates

List publications including title of articles, authors, journals, and include pages.

MASTERS COMMITTEE APPOINTMENT FORM

Comparative and Experimental Medicine
University Of Tennessee



Name _____
Last First Middle

E-mail address: _____

COMMITTEE RECOMMENDED:

Name	Department	Signature
_____ (Major professor)	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Change in Previously-Appointed Committee:

Add to the committee:

_____	_____	_____
_____	_____	_____

Remove from the committee:

_____	_____	_____
_____	_____	_____

Reason for changes:

Indicate above the recommended membership of the committee. Signatures are needed for new members and those being removed. Signatures are not required to remove persons whose UT faculty appointments have been terminated or who are absent from the campus for an extended period.

* A statement indicating the reason for the proposed change must be provided.

PROGRAM APPROVAL:

CEM Program Director

Date

Name: _____

Year/Term	Department	Course #	Course Title	Hours	Grade

Minor:

Year/Term	Department	Course #	Course Title	Hours	Grade

Transfer Credit (A majority of the total hours required for a master's degree must be taken at the University of Tennessee, Knoxville.)

Institution Name: _____

Year/Term	Department	Course #	Course Title	Hours	Grade

(Two-thirds of program, including not more than six (6) hours of thesis credit, must be numbered 500 or above, taken at the University of Tennessee.)

Departmental Approval (*To be completed with the assistance of the academic department*)

We certify that the above program, when successfully completed, meets all coursework requirements for this degree. We also certify that all University regulations regarding research compliances (use of human subjects, animal care, radiation, legend drugs, recombinant DNA, or handling of hazardous materials) have been appropriately approved prior to the initiation of the research if approval is relevant to the applicant's research.

Faculty Committee Signatures
(Print Name)

(Department)

(Signature)

_____	_____	X	_____
(Major Professor)			
_____	_____	X	_____
(Minor Professor or Committee Member)			
_____	_____	X	_____
(Committee Member)			

X

Graduate Program Director Signature

Important: This form will not be accepted by the Graduate School without original signatures of the three committee members and the Graduate Program Director in your department. If you have a minor, one of the three professors must be from the minor department.

DOCTORAL COMMITTEE APPOINTMENT FORM

The University of Tennessee
The Graduate School

Submit Form by Deadline to:
The Graduate School
111 Student Services Building
Knoxville, TN 37996-0211

Name: _____
Last First Middle

Student ID #: _____

E-mail address: _____

Street: _____

City State Zip

TO BE COMPLETED BY GRADUATE SCHOOL

Dean of the Graduate School

Date

Committee Recommended:

Type or print name and department. Signature indicates both acknowledgment of request and willingness to serve.

Name (Please print)	Department	Signature
_____ (Major Professor)	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Change in Previously Appointed Committee:

Indicate above the recommended membership of the Committee. Signatures are needed for new members and those being removed.
* A statement indicating the reason for the proposed change must be provided below by the department head.

Add to the Committee:

Remove from the Committee:

Reason for Changes:

* Signatures are not required to remove persons whose UT faculty appointments have been terminated or who are absent from the campus for an extended period.

TO BE COMPLETED BY THE DEPARTMENT:

Department Head (Approval)

Date

SCHEDULING DEFENSE OF DISSERTATION

The University of Tennessee
The Graduate School

Submit completed form to:
Graduation Specialists
The Graduate School
111 Student Services Building
Knoxville, TN 37996-0211
Fax: (865)946-1090

So that arrangements can be made for the defense of dissertation, please submit the completed form to the Graduate School **at least one week** before the date of the defense.

Last Name	First Name	Middle	Student ID Number
Street Address			E-mail Address
City	State	Zip	Phone Number
Major			Term Graduating (Semester / Year)

DEFENSE

_____ Date/Time _____ Building / Room Number

Dissertation Title: _____

List Defense Committee:
(NO SIGNATURES ARE REQUIRED.)

Name (Major Professor)	Department
Name	Department

REQUIREMENTS FOR THE GRADUATE TRAVEL AWARD

IMPORTANT INFORMATION

Deliver Application To:

Office of the Dean of Students, 413 Student Services Building

Application Deadline:

September 1 by 5:00 p.m.

January 15 by 5:00 p.m.

April 15 by 5:00 p.m.

Travel Dates:

Fall: September 1 - January 14

Spring: January 15 – April 14

Summer: April 15 – August 31

OVERVIEW OF GSS TRAVEL AWARDS

Graduate Student Senate (GSS) Travel Fund Awards are announced three times per year, roughly coinciding with the major academic terms. The purpose of these awards is to promote the University of Tennessee by exposing the broader academic community to the quality of students and research conducted at the University. A committee of graduate students, faculty, and university administrators will review all applications and make final award determinations.

Due to the highly competitive applicant pool, Graduate Travel Awards are only granted to graduate students presenting original work at the most prestigious national and international conferences – the level of prestige to be noted by the applicant’s advisor. In order to qualify for funding, applicants must demonstrate that they are a primary author and/or presenter at the conference in question and have personally contributed creative work to that meeting, i.e., personally authored a paper, commented on other scholars’ work, etc. The only recognized exception to this policy is if a local or regional conference is the preeminent scholarly meeting for a specific discipline.

DESCRIPTION OF CRITERIA

Conference Scope is given by one of the following descriptions. By North America, we shall mean the United States, Mexico, or Canada.

- **Regional:** A meeting of a scholarly society at the state or regional level with participants from a small geographic region, e.g., a Southeastern sectional meeting or a state meeting of a scholarly society.
- **National:** A meeting of a scholarly society held within North America with participants largely from North America.
- **International:** An international conference is either a conference that occurs outside of North America or occurs in North America. Such conferences must attract participants that are largely from countries outside of North America.

Prestige Descriptions:

- **Most Prestigious:** “Most Prestigious” conferences are a formal meeting of the governing body or membership of a discipline, broadly recognized as the preeminent forum for presenting scholarly work in the discipline. “Most Prestigious” conferences typically have “closed” or “invitation only” presentation policies and require some peer review before accepting speakers, posters, and panelists.
- **Prestigious:** “Prestigious” conferences are “working” meetings of the governing bodies for a given discipline or other meetings of scholars therein. “Prestigious” conferences typically have “open” or “call” presentation policies and require little, if any, peer review before accepting posters, and some peer review before accepting speakers or panelists.

Use the following definitions as a guide when your Advisor selects “Student’s Role at the Conference”:

- **Paper Presentation:** The student presents his or her original research before a formally assembled audience at a scheduled event.
- **Poster Presentation:** The student presents his or her original research in poster form before a formally assembled audience at a scheduled event.
- **Panelist Participant or Commentator:** The student has been invited to participate on a panel or debate team, or will be delivering prepared commentary on another’s research before a formally assembled audience at a scheduled event.

APPLICATION RULES AND REQUIREMENTS

The following criteria *must* be met for an application to be considered:

- The Applicant must be an enrolled graduate student (master's, specialist's, professional, or doctoral) in good academic standing to be eligible.
- The Applicant must not have received previous Travel Award funding during the current academic year (September 1-August 31).
- The Applicant's travel must be for the documented purpose of delivering a research presentation or participating in comparable activity at a professional meeting, with preference being given to those presenting at national and international meetings.
- Applications must be completely filled out *and received* by the deadline for consideration.
- The Applicant should only submit an application for the next upcoming travel period, i.e., if the Applicant is applying for the Fall travel period, then the Applicant should only submit an application after the Summer application deadline. Graduate students may apply for travel funds each semester, but may receive funding *only once* per academic year (September 1 – August 31).
- All applications *must* bear the signatures of the student's advisor, the head of the student's department, and the Dean of the student's college. Applications missing *any* of these signatures will be automatically rejected.
- All students, except those in the College of Arts and Sciences, *must* submit their application to the Office of the Dean of Students (413 Student Services Building) by the final deadline. Students in the College of Arts and Sciences *must* submit their application to the Office of the Arts and Sciences Dean (24 Alumni Memorial Building) at least *one week prior* to the final deadline. *Applications submitted after the deadline will be rejected.*

The following items *must* be submitted for Award consideration and/or reimbursement:

- A completed application including all signatures (student, advisor, department head, and dean) is required for the application to be processed,
- An abstract (50-100 words) describing the presentation, and
- A copy of a letter of acceptance or conference program with the presentation highlighted. If the Applicant has not been notified of their acceptance prior to the application deadline, please attach a note explaining that the Applicant is awaiting acceptance.
- In order to be reimbursed for expenses, applicants who receive funding will be required to present all receipts from their travels to their department, along with proof of conference attendance and/or presentation, e.g., an abstract, summary, or page from a conference bulletin.

COMMENTS ON APPLICATION AWARD NOTIFICATION PROCEDURES

Due to limited funding, we are unable to award more than \$500 per conference. Since only a small number of applicants are awarded funding in a given cycle, applicants who are authorized funding but do not utilize their award limit the capability of other applicants to receive funding. Therefore if the maximum award in addition to other support will not make a determining difference in your ability to attend your targeted conference, please avoid submitting an application.

After the application deadline has passed and all applicants' eligibility has been checked by the Office of the Dean of Students, the GSS Travel Fund Committee will meet to determine which applications will be funded. After all funding decisions have been made and reviewed by the Dean of Students, you will receive notification indicating your award status. If you have received an award, this notification will also include instructions for submitting proof of travel and expenses. Award notification is typically made about four weeks after the application deadline.

By applying for GSS Travel Funds, a student authorizes the Office of the Dean of Students to release any and all academic and disciplinary records to the membership of the Travel Fund Award Committee for purposes limited to review of the Student's application. Further, an applying student certifies that the information provided on the Application Form is true and accurate to the best of the student's knowledge.

PROOF OF ATTENDANCE

Those selected to receive a travel award must provide proof of attendance at their conference or meeting *prior* to being reimbursed.

Acceptable Proof of Attendance:

- Copy of the travel ticket(s) (airline or other transportation).
- Provide a copy of the conference agenda and registration confirmation.
- Provide acceptable travel receipts, i.e. hotel bill, gas and parking receipts.

GENERAL APPLICATION INSTRUCTIONS

- All fields *must* be typed with the exception of the Advisor Information, Additional Funding Information, and Applicant's Certification sections.
- After typing all information, print, sign, and date the form. Check to make sure that *every* field is filled out; incomplete applications will be rejected.
- Submit the form for review and signature by your advisor, department head, and college dean *in that order*. Be sure to ask your college whether you are expected to submit the form personally; some colleges will do this for you, others will not.
- Make sure the application reaches the Office of the Dean of Students (413 Student Services Building) before the application deadline.

GRADUATE TRAVEL AWARD APPLICATION

Applications must be submitted by the application deadline.

APPLICANT INFORMATION

Family or Last Name: _____ Given or First Name: _____
 NetID: _____ Phone: _____ E-mail Address: _____
 Address: _____ Apt #: _____ City: _____ State: _____ Zip Code: _____
 College: _____ Department: _____

CONFERENCE INFORMATION

Conference Name: _____
 Dates: _____ Location: _____
 Conference Scope: Regional National International
 Are you the primary author? Yes No Are you the primary presenter? Yes No Has the presentation been accepted? Yes No
 Presentation Title: _____
 Co-authors, if applicable: _____

EXPENSE INFORMATION

	TOTAL COST	YOUR SHARE
AIRLINE		
AUTO		
FUEL		
LODGING		
REGISTRATION		
PARKING		
TAXI/OTHER TRANSPORTATION		
TOTAL EXPENSES		

Under the "Total Cost" column, list the total amount that will be spent for each category. Under the "Your Share" column, list the amounts for which you are personally responsible. For example, if you stay in a hotel while traveling and the total cost of the hotel is \$100, record \$100 for Lodging in the Total Cost column. The portion that you will contribute toward the total cost of the hotel will be "Your Share." If you are personally responsible for paying the full cost of the hotel, record \$100 for Lodging in the Your Share column. If you share the hotel room with another person and only personally pay \$50, record \$50 for Lodging in the Your Share column. If you are receiving additional funding that is not allocated toward a specific aspect of your trip, please include that amount in the Additional Funding Information section of the application. Do NOT include general funding in this portion of the form. Additionally, if you receive funding from your College or Department (even if that funding is allocated toward a specific expense, i.e. Registration), please include that amount in the Additional Funding Information section of the application. For example, even if your Department covers the cost of the registration fee, you should list the total cost of the registration fee in the Total Cost and Your Share columns and then include the amount that your department is covering in Department Funding in the Additional Funding Information section of the application.

APPLICANT'S CERTIFICATION

I understand that the total travel funding received from all university sources *may not* exceed my total expenses for this travel event. I also understand that I must report *all* departmental, college, and/or outside funding associated with this travel to the Graduate Student Senate. I further understand that I am required to provide proof of event attendance to the Graduate Student Senate *before* being reimbursed.

Applicant Signature: _____ Date: _____

