



# The University of Georgia®

University Council  
Athens, Georgia 30602

February 3, 2017

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Dear Colleagues:

The attached proposal from the College of Veterinary Medicine to offer the existing major in Comparative Biomedical Sciences (M.S.) with a Non-Thesis Option will be an agenda item for the February 10, 2017, Full University Curriculum Committee meeting.

Sincerely,

Alison Alexander, Chair  
University Curriculum Committee

cc: Provost Pamela S. Whitten  
Dr. Rahul Shrivastav

# **Proposal to Add a Non-Thesis Option to the M.S. in Comparative Biomedical Sciences**

## **College of Veterinary Medicine**

Submitted to: Dr. Suzanne Barbour  
Dean, Graduate School  
Terrell Hall  
210 S. Jackson St.  
University of Georgia

Submitted by: Dr. Kaori Sakamoto, Director  
Prepared by: Graduate Affairs Committee  
College of Veterinary Medicine  
University of Georgia

### **Basic Information:**

Proposed Change: Non-thesis option for students pursuing a professionally-oriented track.

Start Date: Fall 2017

### **Program Description**

The College of Veterinary Medicine proposes a non-thesis option for the M.S. in Comparative Biomedical Sciences (CBS). This option is intended for students pursuing a non-research, professionally-oriented program of study and is consistent with our long-term goal to enhance and broaden the CBS M.S. degree. The non-thesis M.S. degree will be interdisciplinary and designed as a broad foundation for students who intend to pursue professional careers, such as veterinarian, physician, biomedical engineer, and biomedical or diagnostic technician, and who require knowledge of animal physiology and immunology, microbiology, and biomedical and diagnostic techniques for industry or governmental labs.

The program of study contains all of the courses already required of thesis-track M.S. students. The required courses for the current thesis option include: 12 credits of courses only open to graduate students (not including 7000 and 7300), VETM 8001 (Research Communications), and GRSC 8550 (Responsible Conduct of Research). The remaining minimum of 16 credits must come from courses at the 6000, 7000, or 8000 level (may include 7000 and 7300); however, because CBS is an umbrella program, we allow flexibility in the courses allowed, as long as they are approved by the student's thesis advisory committee. In lieu of the research and thesis credits required for thesis-track students, the non-thesis M.S. would require 6 credits of electives from outside the college (Education, Business, Social Work, Engineering, Communication, etc.) in an area broadly related and relevant to their professional goals. The total credit hours for the non-thesis M.S. would thus be 30, the same as for the thesis M.S. option.

At the time of application, the student must choose via admissions either the non-thesis or thesis M.S. option. If the student is currently enrolled, a degree objective change is required.

The current M.S. thesis option will not change. The following table outlines the program of study that requires a thesis and the proposed non-thesis option.

<b>Current M.S. with Thesis</b>	<b>Proposed M.S. Non-Thesis</b>
Core: (12 credits)	Core: (12 credits)
VETM 8001 – Research Communications	VETM 8001 – Research Communications
GRSC 8550 – Responsible Conduct of Research	GRSC 8550 – Responsible Conduct of Research
10 credits only open to graduate students	10 credits only open to graduate students
Electives: (12 credits)	Concentration: (12 credits)
All 6000-level or higher coursework in the area of thesis research	All 6000-level or higher coursework in the area of study
Thesis: (6 credits)	Electives: (6 credits)
VETM 7000 - Master's Research VETM 7300 - Master's Thesis	Related 6000-level or higher courses outside of the department
Oral Defense of MS Thesis	Oral Exam based on Written Report
Minimum Total Credit Hours: 30	Minimum Total Credit Hours: 30

In lieu of a thesis, the student must write a written report, such as a literature review, based on the material covered in the area of concentration. The oral examination will be based on the material in this report and administered by the student’s committee during the final semester of the student’s program, and the chair will assign a pass/fail grade with input from the committee. Should the student fail the oral exam, he/she will have one more opportunity to pass the exam, but he/she will have to enroll to take the exam the following semester. Any student failing the oral exam twice will not be permitted to obtain a Non-Thesis M.S.

### **Faculty Vote**

The Graduate Affairs Committee of the College of Veterinary Medicine voted yes in favor of the proposed Non-Thesis M.S. option. The faculty vote, taken on 10/10/16, was 9 Yes (in favor), 0 No, and 0 Abstentions.

### **Justification for the Proposed Non-Thesis M.S. Option**

A non-thesis option in our program is needed for several reasons.

- Post-baccalaureate work in biomedical sciences can be beneficial to a student’s goals without the inclusion of a research-specific component. Best examples are students whose long-term goals are broader than the traditional biomedical sciences student, e.g., students whose goals are to work in fields such as clinical medicine (veterinary or human), diagnostics, biomedical engineering, or science education. Other examples include students interested in working in industry or government laboratories in capacities that are science but not research-related. The background coursework in

biomedical sciences and electives in other programs provided by the non-thesis M.S. would be invaluable in successfully integrating multiple disciplines in order to provide innovative new training programs for the jobs of the future. In the cases described above, the research and thesis requirement delays the completion of the student's degree for at least a year and does not necessarily contribute to the work the student will eventually do.

- Post-baccalaureate coursework without a research/thesis component can be very beneficial to students whose primary goals are in secondary school education. It is widely accepted that science education in secondary schools could benefit greatly from improved discipline-specific training of our teachers. This course-based M.S. program described above would provide, in conjunction with Science Education training, a superb background for teaching any of the biological sciences. A thesis requirement does not necessarily prepare the future secondary school teacher as well as additional graduate-level coursework in the subject.
- Some students are not sure they want to invest the 5 years that are typically necessary for obtaining a Ph.D. in the biomedical sciences. These students often come in as M.S. students to "try out" the discipline. This course of action often requires 2-3 years to complete. If a student decides that they would prefer to go to veterinary, medical, or dental school, they will be delayed in their ability to apply or, more typically, quit the M.S. program, which greatly hurts our program. Those who do leave without defending their thesis have no degree to show for their coursework. Furthermore, Ph.D. students who are not making adequate progress in their research, but who have performed adequately in their coursework, also have no option to leave our program with a degree.
- Virtually every single peer and aspirational institution for UGA already has a non-thesis M.S. option. Even within UGA, there is a non-thesis program, Master of Animal and Dairy Science (MADS), which takes many of our pre-veterinary students, as we do not have a similar option in our College. By not having a non-thesis option, we are at a disadvantage both within and outside of our university.

### **Admission Procedure for Domestic Applicants**

The admissions standards are the same for both the thesis or non-thesis options. Admissions are open to all qualified graduates of accredited institutions. Admission materials are available through the Graduate Admissions Office. All prospective students should send to the Graduate School: 1) a completed application, 2) two official transcripts from each institution of higher education attended, 3) Graduate Record Examination (GRE) general scores, and 4) a brief essay describing the applicant's background, interests, goals, aspirations, etc.

### **Admission Procedure for International Applicants**

The admissions standards are the same for both the thesis and non-thesis options. Admissions are open to all qualified graduates of accredited institutions. Admission materials are available through the Graduate Admissions Office. All prospective students should send to the Graduate School: 1) a completed application, 2) two official transcripts from each institution of higher education attended, 3) Graduate Record Examination (GRE) general scores, 4) a brief essay describing the applicant's background, interests, goals, aspirations, etc., and 5) official TOEFL or IELTS scores not more than two years old.

### **Impact on Current Students**

There would be no adverse impact on current M.S. thesis degree students in the College. Students currently enrolled in the M.S. degree would have the option of changing to the non-thesis option or completing their M.S. with thesis. The programs of study of current students selecting the non-thesis M.S. option would have to reflect the new course requirements described above. We anticipate that perhaps 2-3 students currently enrolled as M.S. students will switch to the non-thesis option. These are students who applied with clear intentions to apply to veterinary school. Future students will have the choice of electing either a thesis or non-thesis M.S. degree option.

### **Financial Impact**

No new course, faculty, facilities, or services will be required to implement a non-thesis option for the M.S. degree. Thus, no new funds are required.



# The University of Georgia

College of Veterinary Medicine

Office of the Associate Dean  
Research and Graduate Affairs  
and  
Director, Veterinary Medical  
Experiment Station

Athens, Georgia 30602-7371  
Telephone 706-542-5734  
Fax 706-542-8254  
hwd@uga.edu

October 19, 2016

Office of Curriculum Systems  
319 New College  
The University of Georgia  
Athens, GA 30602  
CAMPUS

**Re: Non-thesis Masters of Science in Comparative Biomedical Sciences**

To whom it may concern:

The Graduate Affairs Committee of the College of Veterinary Medicine has voted in favor of my forwarding this proposal for a new non-thesis option for the Masters in Comparative Biomedical Sciences.

The biomedical sciences incorporate careers that do not necessarily require a traditional thesis degree. Examples include: biomedical technician, scientific writing, research communication, technical and sales support, and science teaching. A non-thesis MS degree will also allow post-baccalaureate students to explore the possibility of graduate/professional school and their ability to undertake the rigorous curriculum without the requirement of a hypothesis-driven research project. Administration of the program will be provided by the Office of Graduate Affairs in the College of Veterinary Medicine. The funds, required courses and space required to start the program are in place.

Sincerely,

Harry W. Dickerson, B.V.Sc., Ph.D.  
Associate Dean for Research and Graduate Affairs

HWD/vte

Enclosures

cc: Dean Sheila Allen



The University of Georgia

Graduate School

January 19, 2017

Dr. Pamela Whitten  
Senior Vice President for Academic  
Affairs and Provost  
Administration Bldg.  
Campus

Dear Dr. Whitten:

On January 18, 2017, the Graduate Council voted to approve the following proposal:

Adding a Non-Thesis Option to the Master of Science in Comparative Biomedical Sciences

The proposal is attached. I am pleased to forward this request to you with my endorsement.  
Please let me know if you have any questions.

Sincerely,

Suzanne Barbour  
Dean

cc: Interim Dean R. Keith Harris  
Dr. Kaori Sakamoto  
Ms. Fiona Liken