Tuskegee University
College of Veterinary Medicine

Master of Science in Veterinary Science (MSVS), Thesis

Contact Information:

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A. **The Master of Science in Veterinary Science graduate program** currently existing in the College of Veterinary Medicine produces successful academicians and investigators in the areas of cancer cell biology, immunology & vaccine development, infectious diseases, cancer and nano-therapy, reproductive physiology, risk analysis/epidemiology, food safety, toxicology, cystic kidney disease and control of food intake.

Admission Requirements:

- Applicants must have completed the B.S. degree from an accredited college or university.
- Cumulative GPA of 3.0 or better
- Complete Online Application and Application Fee
- Official Transcripts from all colleges/universities (International Students must have their transcripts evaluated through the World Education Services –WES)
- GRE Scores at least 540 (old) or 156 (new), less than 5 years old
- Personal Statement
- Two (2) Recommendation Letters; or referral from Associate Dean for Academic Affairs
- Resume or Curriculum vitae (CV)
- *ETS/WES Scores (for international students only)
- TOEFL (for international students only)
- Affidavit of Support and Bank Statement (for international students only)

Graduation Requirements THESIS OPTION:

- Required Courses: 10
- Elective Courses: 16
- Research/Thesis: 6
- Admission to Candidacy
- Submission of satisfactory research thesis
- Passing of the Final Oral Examination (Thesis Defense)

Advisory Committee:
During the first semester of his/her study in the Master of Science program, the student and his/her Major Professor must recommend to Associate Dean for Research & Advanced

Studies (ADRAS) for approval an Advisory Committee consisting of a minimum of three members including the Major Professor. The Advisory Committee shall also serve as the Examination Committee.

Course	Semester	Course Number	Credit
Biostatistics I (or biomed. stats.)	Fall	EVSC 0500	3
Biostatistics II	Spring	EVSC 0501	3
Biochemistry	Fall	CHEM 0561 or IBSC 0603	3
Seminar I	Fall	MBIO 0600	1
		TOTAL	**10**
Research/Thesis		MBIO 0700 or PHSI 0700	6

Required Courses (10 credits): Required by All Students

Elective Courses (16 credits): Determined by Student's Major Professor & Committee

Elective courses may be any graduate level courses and some of the DVM courses offered in the four departments of the college of veterinary medicine in addition to some other relevant courses offered in other colleges at Tuskegee University (shown below). Courses eligible for graduate credits must be at 500 or higher levels. A course at 400 level may only be considered with adequate justification and the approval of the graduate advisor, the graduate committee, or both. Courses at 300 or lower levels are not eligible for graduate credits.

Transfer Credits:
The student's Advisory Committee may recommend transfer credits for up to 9 hours for graduate courses taken by the student at Tuskegee University as part of another graduate program or at any other institution. Transfer credits may be recommended under both core and elective categories.

Admission to Candidacy:
After completing 15 credits of course work, the student must submit a completed application for the Candidacy to the Dean of Graduate School.

Seminars:
A student pursuing the Master of Science degree in Veterinary Science must present at least one seminar. This course includes practical examples of proper conduct of research, issues with copy right violation, plagiarism, interpretation of published work among other academic requirements including discussions on basic research methods, and a review of current research topics. Oral presentation on a topic approved by the Major Professor is required.

Thesis:
During the final semester, the student prepares a complete **draft thesis** and presents it to the Advisor and Graduate Advisory Committee before requesting permission to take the final oral exam (Thesis Defense) from the Graduate School. Concurrently with the '**Request for Final Oral Exam**,' the student must present to the Graduate School the **draft thesis** and a "**Preliminary Approval of Thesis/Dissertation**" form bearing the signature of the Major Professor. Only then may the final oral examination be scheduled. Oral Defense must take place at least 30 days before the date listed in the Graduate School calendar (https://www.tuskegee.edu/graduate-school/Graduate-School.html) for

submission of the **Final Thesis** during the semester in which the student expects to graduate.

Approval of the **Request for Final Exam** is contingent up on the **Preliminary Approval of Thesis/Dissertation** by the Graduate School. Ultimate approval of the thesis/dissertation in its final form rests with the Examining Committee. Final copies of the Thesis are submitted to the Graduate School and uploaded onto the ProQuest website following schedules set by the Graduate School (https://www.tuskegee.edu/graduate-school/Graduate-School.html).

Please follow carefully the graduate student '**Checklist**', especially during the final semester.

Courses:

	List of Core Courses
EVSC 0500	**BIOSTATISTICS I**. CR. 3. ***(FALL***) Statistical methods in scientific research. An introductory course in statistics dealing with the application of various methods of analyzing research data to include sampling, randomization, the normal distribution, "t" test, linear regression, correlation, Chi-Square, and analysis of variance of random design. Laboratory assignments require the use of pocket calculators and the University's time share computer.
EVSC 0501	**BIOSTATISTICS II**. CR. 3. (***SPRING***) The application of advanced statistical methods in analyzing biological data to include analysis of two-way experiments, factorial experiments, covariance analysis, least-square analysis with unequal subclass numbers and curvilinear regression. Laboratory assignments require the use of the University time share computer and departmental microcomputers. **Prerequisites: EVSC 0500 or Permission of Instructor**
MBIO 0600	**SEMINAR I - MICROBIOLOGY**. CR. 1. ***(SPRING)***This course includes practical examples of proper conduct of research, issues with copy right violation, plagiarism, interpretation of published work among other academic requirements including discussions on basic research methods, and a review of current research topics. Oral presentations are and/or reports are required. **May be substituted by MBIO 0601-01**
IBSC 0603	**BIOCHEMISTRY I**. CR. 4. ***(FALL)*** IBS course development-molecules-cell-organism-development-system-ecological-environmental biosciences (lecture/laboratory-emphases on model systems) under-girded by chemistry that bear on the aforementioned (biochemistry). Biochemical Topics: Context-Living Systems, Protein Structure and Function, Enzymes and Co-Enzymes, Metabolism.
MBIO 0700	**RESEARCH IN PATHOBIOLOGY/THESIS**. CR. 5. This course deals with specific research thesis projects under the supervision of the graduate student's major professor. Master's student is expected to enroll in a total of 6 credit hours, conduct research and defend it.
PHSI 0700	**RESEARCH IN BIOMEDICAL SCIENCES/THESIS.** CR. 5 This is a required course designed to give time for the student to write their thesis work in the format required by the graduate school.
	List of Common Elective Courses
IBSC 0604	**BIOCHEMISTRY II/Mol. Cell. Biol.** CR. 4. ***(SPRING)*** This graduate-level sequence in biochemistry is a continuation of IBSC 603. The course covers topics in carbon flow throughout a living system, energy generation, cell cycle, Mendelian inheritance, and the molecular basis of genetics. Prerequisite: **IBSC 603**

IBSC 0605	**MOLECULAR BIOLOGY I**. (*INTEGRATIVE CELLULAR, MOLECULAR, ORGANISMIC, SYSTEM, POPULATIONAL, AND ECOLOGICAL BIOSCIENCE I*) CR. 4. (***FALL)*** This is a graduate-level, integratively-taught course that explores the origin, modification and interactive properties of living organisms, focusing on nucleic acids. This course is team taught, with different faculty teaching, based on their areas of expertise.
BIOL/APSC 0504	**GENERAL HISTOLOGY**. CR. 4. (***SPRING)*** Consists of a series of lectures and laboratory sessions describing cell structure and function, the organization of cells into tissues, and the organization of tissues into organs. The purpose of this course is to interweave structure and function at the organ level and to lay the foundation of its concepts in medical sciences. This course is ideal for graduate students considering careers in veterinary or human medicine and for students with a particular interest in animal biology. By the end of the course, students will be able to examine images of tissue sections and identify tissue types, their roles, and their relationship between structure and function. Prior completion of a high school biology course is recommended but not required. Students completing this course must complete a Special Topics Lab Assignment, which will differ for graduate and undergraduate students. For the project, graduate students will be required to complete assignment activities in person on the TU campus.
APSC-0500	**Advances in Animal & Human Health** CR. 3. (***SPRING***) The course will focus on Animal and Human Health from a pharmaceutical lens. Students also visit the BI offices in Atlanta and Athens and get priority mentorship from BI employees.

Additional elective course options

Course name	Course number	Credits	Semester
Principles of epidemiology	MSPH-0614 or equiv.	3	Fall
Physiology of Reproduction	APSC 0503	3	Fall
Anatomy of Domestic Animals	APSC 0530	4	Spring
Parasitology	BIOL 0505	4	inquire
Companion Animal Nutrition	APSC 0531	3	Spring
Food Safety	MBIO 0518	3	Spring
Advanced Microbiology	BIOL-0502	3	inquire
Emerging Zoonoses and Foreign Animal Diseases	VMED 872	2	Spring
Environmental Health Sciences	MSPH-0600	3	Spring
Biosciences Research & Ethics	IBSC-0601	3	Fall
Program Planning & Evaluation	MSPH-0630	2	inquire
Health Education & Communication	MSPH-0631	2	inquire
Biomedical Statistics	MBIO 0660	3	Spring

Thesis-option Graduate Students can choose *Electives* from
Doctor of Veterinary Medicine (DVM) Professional Program Curriculum (only Years 1-2 courses)

PLEASE CONTACT COURSE COORDINATOR OR INSTRUCTOR FOR REQUIREMENTS TO TAKE AN ELECTIVE
DO NOT REGISTER WITHOUT APPROVAL FROM COURSE COORDINATOR or ADVISOR

Veterinary Curriculum Courses

	FALL	Credit Hours
VMED 816	Parasitology I	3

	SPRING	Credit Hours
VMED 810	Public Health and Evidence-Based Epidemiology	3

For any DVM / VMED courses of interest not listed above, please contact the faculty directly to get permission.