

**Tuskegee University
College of Veterinary Medicine**

Doctoral Degree (PhD) in Interdisciplinary Pathobiology (IDPB)

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Degree Offered: Doctoral Degree (PhD) in Interdisciplinary Pathobiology (IDPB)

The Interdisciplinary Pathobiology graduate program at the College of Veterinary Medicine produces successful academicians and investigators in the areas of cancer cell biology, cancer, reproductive biology, renal development and biology, risk analysis/epidemiology, food safety, nanobiotechnology, infectious diseases, toxicology, and control of food intake.

Admission Requirements:

- Applicants must have completed the M.S. degree or professional degrees (DVM, MD, DDS, MPH, etc.) from an accredited college or university
- Cumulative GPA of 3.0 or better
- Completed Online Application and Application Fee
- Competitive GRE scores
- Personal Statement
- Three (3) Recommendation Letters
- Resume or Curriculum Vitae
- Official Transcripts from all colleges/universities (International Students must have transcripts validated through World Education Services – WES or ETS)
- TOEFL (International students only; waived if the language of instruction is English)
- Affidavit of Support and Bank Statement (International students only)
- Virtual interviews may be conducted before admission decisions are made.

Graduation Requirements:

- Core Courses: 16 credit hours
- Elective Courses: 14 credit hours
- **Total Course Work: 30 credit hours**
- **Total Research/Dissertation: 30 credit hours**
- Admission to Candidacy
- Passing of the Final Oral Examination
- Submission of a **Final Copy of the Dissertation** approved by the major advisor and endorsed by the student Graduate Advisory Committee
- Publication of **at least one first-author peer-reviewed** manuscript

- Presentation of **at least one Abstract or Poster** at a regional or national conference
- Student Advisory Committee determines if a student Dissertation work is **qualitatively and quantitatively satisfactory** enough for the student to schedule final public defense and oral examination

Advisory Committee:

During the second semester of his/her study in the IDPB, PhD program, the student and his/her Major Professor must form an Advisory Committee consisting of a minimum of four members including the Major Professor. The Advisory Committee shall also serve as the Examination Committee.

Admission to Candidacy:

Admission to Candidacy for students who are enrolled in the PhD in Interdisciplinary Pathobiology, include the following:

1. Completion of the minimum course credit hours required for the PhD program (a minimum of 30 credits).
2. Successful public oral defense of the PhD research proposal. The Advisory Committee will meet after the proposal defense presentation to determine if the student may be admitted to the Candidacy or need to defend the proposal again. Students who fail the qualifying examination after two attempts may apply for a master's degree in any of the established programs at Tuskegee University. In such cases, the student will have to meet the admission and other requirements of the master's degree Graduate Program.
3. The PhD research proposal will be written and submitted to the Advisory Committee in the form of a standard Research Grant proposal. This writing exercise will serve students as one way to learn how to write a grant proposal, and critically design experiments. Optionally, the written proposal may be submitted to an external funding opportunity for fellowship.

Seminars:

A student pursuing the PhD in Interdisciplinary Pathobiology (IDPB) must present **at least two seminars**. Seminar courses introduce practical examples of proper conduct of research, issues with copyright 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 required.

Rotations:

IDPB PhD students, in consultation with the major advisor/s, will have the options to rotate among research labs. The options will be:

- Student knows well what to study/research, and elects not to rotate among the labs
- Student has identified their research lab, but elects to rotate in at least one other lab
- Student has not decided what research to pursue, and rotates in 2 or 3 labs before making decision

IDPB students may elect, in consultation with the major advisor/s, to be teaching or laboratory assistants in TUCVM for 1-2 semesters over the period of their graduate studies. Students will not be paid for these assistantships, but the experiences will be valuable for their professional development.

Dissertation:

- The final draft of the dissertation must be filed with the student's Advisory Committee at least 30 days before the date listed in the university calendar for final copies to be submitted during the

semester in which the student expects to graduate. The student must present to the Dean of Graduate Programs a “**TU GRAD-009: [Preliminary Approval of Thesis/Dissertation](#)**” bearing the signature of the Major Professor/Advisor **before** the final oral examination may be scheduled and before copies of the dissertation are distributed to members of the Examining Committee.

- After the “**Preliminary Approval**” form has been signed, it should be submitted to the Dean of Graduate School before the final examination is scheduled and before the final draft of the dissertation is prepared for final approval. Approval of the dissertation in its final form rests with the Examining Committee.
- Acceptable **Dissertation formats** include the compilation of both published and unpublished work in standard sequence of written sections in APA style.
- Final copies of the Dissertation are uploaded to **ProQuest** following instructions by the Graduate School (<https://drive.google.com/file/d/1CN34QF-39CDVQ6gD-ZcM05Q4LyV2Weja/view>)

Courses and Electives for the IDPB PhD Program:

Required Courses

Course	Semester	Course Number	Credit	Coordinator/s
Bio Statistics I	Fall	EVSC-0500	3	Gautam/Chen/multiple
Bio Statistics II	Spring	EVSC-0501	3	Gautam/Chen/multiple
Integrative Biochemistry I	Fall	IBSC-0603	4	Alexander/Jaynes
Molecular and Cell Biology/Integrative Biochem II	Spring/Fall	IBSC-0604 (Spring) or -0605 (Fall)	4	Alexander/Jaynes/Bradford
Graduate Seminar I	Fall	MBIO-0600	1	Heath/Samuel
Graduate Seminar II	Spring	IDPB-0602	1	Heath/Samuel
Ph.D. Research/Dissertation	All Semesters	IDPB-0800	30	Major Advisor/s
<i>Candidate for Degree</i>	<i>After Defense</i>	<i>IBSC-0754</i>	<i>R</i>	

List of Suggested Elective Courses

Course	Semester	Course Number	Credits	Coordinator
Int Mol, Cell, Org Sys Eco Biosc	Fall	IBSC-0605	4	Alexander/Davidson
Int Mol Cell Org Sys Pop Eco	Spring	IBSC-0606	4	Alexander/Bradford
Advanced Epidemiology	Spring	MBIO-0661	3	Dibaba/
Proposal Writing and Grant Management	Fall	MSPH-0700-01	2	J. Heath/
Introduction to Bioinformatics	Fall	IBSC-0540	4	Inquire/Check Catalog
Special Problems in Biomedical Sciences	All Semesters	ANAT-0506	2-6	Puri/Goyal/Sayegh/Wirtu
Special Problems in Toxicology	All Semesters	PHSI-523A	2	Lanell Ogden
Research in Pathology or Parasitology	All Semesters	PATH-0700	1-5	Gilbreath/multiple
Special Problems in Clinical Pathology	All Semesters	PATH-0631	2	Ebony Gilbreath
Integr. Biosc. Lit Review	Fall (inquire)	IBSC-0710	2	Alexander/Martinez
Special Problems in Microbiology	All Semesters	MBIO-0521	2	Woubit/ Teshome/Nashar
Special Problems in Vet. Pathology	All Semesters	PATH-0630	3	Gilbreath/multiple
Special Problems in Epidemiology	All Semesters	MBIO-0666	3	Asseged B Dibaba
Research in Pathobiology/Special Problems	All Semesters	MBIO-0700	1-6	Samuel/multiple
Advanced Immunology	All Semesters	MBIO-0523	2	Nashar/multiple
Special Problems / Topics	All Semesters	IDPB-0603	2-4	Nashar/multiple
Advanced Virology	inquire	IDPB-0601	2	Nashar
Multivariate Methods/Analysis	Fall	MSPH-625	3	Dibaba/Public Health faculty
Risk Analysis and Modeling	inquire	PATH-0669	3	Public Health faculty
Emerging Zoonoses and Foreign Animal Diseases	Spring/inquire	VMED 872	2	Samuel/Abebe

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

**PLEASE CONSULT WITH YOUR ADVISOR AND CONTACT COURSE FACULTY FOR REQUIREMENTS or
PERMISSION TO TAKE ANY ELECTIVE AMONG THE FOLLOWING COURSES**

Year 1: Veterinary Curriculum Fall Semester Courses

Semester 1	FALL	Credit Hours
VMED 803	Veterinary Physiology I	4

Semester 2	SPRING	Credit Hours
VMED 808	Veterinary Physiology II	4
VMED 809	Veterinary Immunology	2
VMED 810	Public Health and Evidence-Based Epidemiology	3

Year 2: Veterinary Curriculum Fall Semester Courses

Semester 3	FALL	Credit Hours
VMED 816	Parasitology	3
VMED 813	Veterinary Pathology I	4
VMED 814	Clinical Pathology	3
VMED 815	Introduction to Pharmacology	3
VMED 817	Clinical Toxicology	2
VMED 818	Veterinary Nutrition	1
VMED 819	Bacteriology, Mycology & Clinical Microbiology	4

Semester 4	SPRING	Credit Hours
VMED 821	Endocrinology	3
VMED 822	Veterinary Pathology II	4
VMED 823	Virology and Clinical Microbiology II	4
VMED 825	Principles of Anesthesia and Surgery	2
VMED 828	Clinical Pharmacology	2