Curriculum- Microbiology

Course requirements for Ph.D.:

Students must demonstrate competence in the content of the IGPBS curriculum and in 2 of the following areas:

Immunology,
Virology, and
Bacteriology

Students should also take an advanced course in the student's research area. Students also must present literature seminars and participate in the Research in Progress series.

All students in doctoral programs must meet the research skills and responsible scholarship requirement of the university.

Microbiology Ph.D. students meet these requirements during their IGPBS year of study by taking GSMC 857 Biographics, GSMC 852/GSMC 855 Introduction to Biomedical Research I and II, and GSMC 856 Introduction to Research Ethics.

The student takes an oral comprehensive examination based in part on defense of an original written research proposal. This examination evaluates the student's ability to write and defend an original research proposal, design experiments, and interpret results in a sound and critical manner.

Doctoral candidates are expected to conduct original research, prepare a written dissertation detailing the results, and defend the dissertation in a final oral examination. It is expected that the research will be published in reputable scientific journals.

During the first year, students enroll in the IGPBS curriculum and do rotations. At the end of the first year, students select an advisor and commence thesis research. During the second year, students enroll in the Principles of Microbiology series, take 2 additional courses, participate in literature seminar series, and continue research. At the beginning of the third year, students complete the oral examination and continue to do thesis research.

Required courses:

MICR 801: Principles of Immunology
MICR 802: Principles of Virology
MICR 803: Principles of Bacteriology
MICR 830: Seminar in Microbiology

Two of the following courses:

MICR 808: Immunology
MICR 820: Bacterial Genetics & Pathogenesis
MICR 825: Virology
MICR 855: Host-Pathogen Interactions

Research courses:

MICR 835: Research in Microbiology
MICR 990: Research for PhD in Microbiology

Thesis course:

MICR 999: Thesis for PhD in Microbiology

Course requirements for MA:

Students must demonstrate competence in the content of the IGPBS curriculum and in 2 of the following areas:

Immunology,
Virology, and
Bacteriology

Each degree candidate must submit a written thesis detailing original laboratory research and defend it orally before a thesis committee.

During the first year, students enroll in the IGPBS curriculum and do rotations. At the end of the first year, students select an advisor and begin thesis research. During the second year students, enroll in the Principles of Microbiology series, take 2 additional courses, participate in literature seminar series, and continue research.

Required courses:

MICR 801: Principles of Immunology
MICR 802: Principles of Virology
MICR 803: Principles of Bacteriology
MICR 830: Seminar in Microbiology

Two of the following courses:

MICR 808: Immunology
MICR 820: Bacterial Genetics & Pathogenesis
MICR 825: Virology
MICR 855: Host-Pathogen Interactions

Research courses:

MICR 835: Research in Microbiology
MICR 890: Research for MA in Microbiology

Thesis course:

MICR 899: Thesis for MA in Microbiology