

# PATHOBIOLOGY

## Degree Requirements

### Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<https://gradschool.psu.edu/graduate-education-policies/>)

After a student has been admitted to graduate study in the department, an adviser will be appointed by the program director. This person may be a member of the eventual M.S. committee or someone else assigned the responsibility for directing the student's scheduling of course work.

A minimum of 30 credits of coursework at the 400, 500, 600, and 800 levels is required for the M.S. degree, of which at least 18 credits must be taken in 500- and 600-level courses.

Satisfactory completion of the following courses or their equivalent is required of all M.S. degree candidates:

- Statistics, 3 credits;
- Biochemistry or molecular and cell biology, 3 credits (usually chosen from BMB 400 and BMMB 501)
- VBSC 520

All Pathobiology students are required to complete one semester of VBSC 590 each year as well as 8 elective credits from a list of courses that is maintained by the Pathobiology program office.

Pathobiology requires no program-specific qualifying examinations, and there is no communication/language requirement for the M.S.

A thesis is required of all candidates for the M.S. degree, including 6 credits of VBSC 600.

### Doctor of Philosophy (Ph.D.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<https://gradschool.psu.edu/graduate-education-policies/>)

The Ph.D. program is designed for completion in three to four academic years. Doctoral students usually complete certain required courses and obtain laboratory experience before selecting an area of specialization and completing an original research problem, including the defense of the Ph.D. dissertation.

After a student has been admitted to graduate study in the department, an adviser will be appointed by the program director. The person may be a member of the eventual Ph.D. committee or someone else designated the responsibility for directing the student's scheduling of course work. The adviser is also responsible for initiating the scheduling of the qualifying examination.

The doctor of philosophy degree places a strong emphasis on research. It is conferred in recognition of the capacity to carry out independent research and the attainment of a high level of scholarship. General requirements for the doctorate specify:

- a minimum period of residence (two semesters, excluding summer sessions, within a 12-month period),
- the passing of a qualifying examination,

- comprehensive and final oral examinations, and
- the writing of a satisfactory dissertation.

The particular combination of courses, seminars, individual study, and research that constitutes an individual student's program is arranged by the Ph.D. committee and should include the courses that have been designated in the Pathobiology graduate curriculum.

The Pathobiology graduate program requires a total of 21 credits of course work at the 400, 500, 600, and 800 level for the Ph.D. degree. A minimum grade-point average of 3.00 for work done at the University is required.

There are formal communications requirements for the Ph.D. degree in Pathobiology that are required by Graduate Council. The Ph.D. committee will assess the technical writing and oral communication skills of the candidate and may require that formal course work or other means to improve these skills be undertaken.

The graduate program in Pathobiology requires that each graduate student have 3 credits in statistics. Ph.D. students in Pathobiology additionally are expected to have statistical skills equivalent to those learned in STAT 501 and STAT 502. In addition, the qualifying examination committee and the Ph.D. committee may require that additional course work in statistics be taken if deficiencies are noted.

A qualifying examination is given to students in the Ph.D. program after they complete at least 18 credits of post-baccalaureate course work.

After passing the qualifying examination, each doctoral student is guided by a Ph.D. committee that meets all Graduate Council requirements (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>).