

# BIOLOGY, PH.D.

Advanced study leading to the Ph.D. in biology is offered in ecology, evolution, and organismal biology and in molecular, cellular, and developmental biology. A B.S. or B.A. degree in biology or appropriate related discipline is required for admission to graduate study in this program. Applicants must also submit official scores from the Graduate Record Examination (GRE) General Test, taken within the last five years, that are predictive of success in this program. Students entering the program with graduate-level course work may petition to apply up to twenty-four semester hours of approved courses toward the Ph.D. Additional hours beyond twenty-four may be considered on a course-by-course basis by the Graduate Committee. Thesis hours are not transferable toward doctoral requirements. All graduate students in Biology are expected to maintain a minimum GPA of 3.0 throughout their program. In accordance with Graduate School policy, any student whose Baylor graduate GPA falls below 3.0 will be placed on probation. The student must restore his/her GPA to 3.0 by the end of the next 9 credit hours of coursework in order to remain in the graduate program.

## Coursework

Code	Title	Hours
BIO 5201	Research Methods in Biology	2
BIO 5202	Res Meth In Bio II	2
STA 5300	Statistical Methods <sup>1</sup>	3
BIO 5101	Graduate Scientific Communications <sup>2</sup>	4
BIO 5100	Seminars in Biology <sup>2</sup>	4
BIO 6101	Research Rotation <sup>3</sup>	3
BIO 6V99	Dissertation	12
Additional Biology Coursework		22
Additional Courses (can be coursework or research)		26
<b>Total Hours</b>		<b>78</b>

<sup>1</sup> Or substitute course such as BIO 5412 Biometrics

<sup>2</sup> 1 credit per semester, taken each of first 4 semesters

<sup>3</sup> CMHD students only

A maximum of eight combined hours of BIO 5100 Seminars in Biology (or other approved seminars) may count toward degree requirements; repeat credit requires change in topic from previous registrations. If the student has successfully completed the equivalents of these courses in a master's program, then the student's advisory committee may petition the Graduate Committee to waive these courses.

The remaining twenty-four semester hours of required course work (including laboratory research) must include a minimum of fourteen semester hours at the 5000/6000 level. A maximum of nine hours of BIO 5V90 Special Problems can be applied toward doctoral degree requirements. Judicious selection of courses, assisted by the faculty mentor, facilitates specialization in ecology and evolutionary biology or in molecular, cellular, health and disease biology. The committee will consist of at least five graduate faculty, including the student's major professor, three graduate faculty members from the Department of Biology, and a graduate faculty member from outside the Department of Biology. Additional members from appropriate disciplines may also serve on dissertation committees. The committee will be chosen by the major

professor and student in consultation with the Graduate Program Director in Biology.

A written Ph.D. comprehensive examination will be prepared by the student's preliminary examination committee. This will be administered during the 4th semester following the student's entry into the program. The oral portion of the examination will encompass a defense of the student's dissertation proposal presented and evaluated by the student's committee. The Biology written exam will cover basic concepts in areas appropriate to the student's background as determined by the preliminary examination committee and will determine the student's readiness to begin dissertation research. Doctoral students must demonstrate familiarity with the scientific literature, and expertise in experimental design, in collection and analysis of data, and in interpretation of results in subject areas pertinent to the student's dissertation research. After completion of a doctoral dissertation, that includes a mandatory publication in a rigorous peer-reviewed academic journal, the candidate has a final oral examination involving defense of the dissertation. Doctoral students present a public exit seminar based on the dissertation.

Doctoral degree program students must fulfill a one-year teaching requirement under the mentorship of a faculty member. This usually involves assisting in undergraduate laboratory course instruction as a graduate teaching assistant or serving as instructor-of-record in a lecture course.

There is no foreign language requirement for the Ph.D. degree in Biology. However, individual advisors and committees may require students to satisfy a language requirement or demonstrate special research skills through formal course work at the graduate level.