INTEGRATIVE BIOLOGY PROGRAM

Doctor of Philosophy (Ph.D.) Degree

DEGREE INFORMATION

Program Admission Deadlines:
Domestic Students:

Fall:	January 1
Spring:	August 1
Summer:	No Admission

International Students living outside the U.S.

Fall:	January 1
Spring:	July 1
Summer:	No Admission

Minimum Total Hours: 90
Program Level: Doctoral
CIP Code: 26.1399
Dept Code: BIO
Program (Major/College): to be assigned

Concentrations:
Ecology and Evolution
Environmental and Ecological Microbiology
Physiology and Morphology

CONTACT INFORMATION

College: Arts and Sciences
Departments: Integrated Biology (IB)
Contact Information: www.grad.usf.edu

PROGRAM INFORMATION

Accreditation:
Accredited by the Commission on Colleges of the Southern Association of College and Schools.

Major Research Areas: Ecology and Evolution, Environmental and Ecological, Physiology and Morphology, Applied and General Microbiology, Conservation Biology and Coastal Marine Biology,
Ecology and Evolution, Environment and Ecological Microbiology, Physiology and Morphology[HC1]

ADMISSION INFORMATION[HC2]

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

Program Admission Requirements

- 3.00 GPA last 60 hours of B.S. degree.
- GRE: 70%V, 70%Q, 70% AW
- All international students are required to submit the TOEFL test. Non-native English speaking graduate students must score a minimum of at least 570 on the paper based or a minimum total score of 88on the internet-based test TOEFL and at least 50 on the TSE to be eligible for a teaching assistantship.

- For acceptance into the IB Department, acceptance by a faculty member in IB is MANDATORY. IB encourages applicants to contact faculty via email to indicate an interest in the research being conducted in their laboratory. IB will make every effort to pair potential graduate students with appropriate faculty; however it is recommended that applicants make direct contact with individual faculty.
- On Campus Interview
- Personal Statement
- It is expected that candidates for the PhD degree will have completed courses equivalent to those required for the B.S. in Biology at U.S.F.

DEGREE PROGRAM REQUIREMENTS

Total Minimum Hours	**90 hours post-bacc**
Core Requirements	**10 hours minimum**
BSC 6930 Lectures in Contemporary Biology (1[HC3]) – take 4 times	4
Enrollment in this course is required during four semesters of residency	
Structured Coursework	6 [HC4]

Concentration Requirements **56 hours minimum**

Students select from one of the following Concentrations:

ECOLOGY AND EVOLUTION ( )

Course Requirements	6

A minimum of two courses selected from the list below for a minimum of 6 credit hours.

BSC 5931 – Conservation Biology	3
BOT 5185 – Marine Botany	4
PCB 6455 – Statistical Ecology	3
PCB 6456 – Biometry I	4
PCB 6458 – Biometry II	3
BSC 5931 – Comparative Approaches in Evolution	3
PCB 6426 – Population Ecology	3
ZOO 5463 – Herpetology	4
ZOO 5456 – Ichthyology	4
BSC 6932 – Advances in Population Biology	1
BSC 6932 – Advances in Ichthyology	1
BSC 6932 – Advances in Herpetology	1
BSC 6932 – Advanced in Marine Ecology	1
BSC 6932 – Scientific Writing	2
BSC 6932 – Restoration Ecology	3
BSC 6447 - Community Ecology	3
PCB 6933 – Seminar in Ecology	(variable credit)

Other Course Requirements	50

The graduate student, major professor and graduate committee will establish the specific courses for each graduate student. Other courses, not listed below, can be substituted if approved by the Graduate Committee. Specific course training beyond this point will be determined in each individual case by the special needs of the student as decided by the student's Graduate Committee.

ENVIRONMENTAL AND ECOLOGICAL MICROBIOLOGY ( )

Course Requirements	6

A minimum of two courses selected from the list below for a minimum of 6 credit hours.

MCB 5206 – Public Health and Pathogenic Microbiology	3
MCB 5655 – Applied and Environmental Microbiology	3
PCB 5235 – Principles of Immunology	3
MCB 6930 – Seminar in Applied and Ecological Microbiology	1
PCB 6525 – Molecular Genetics	3
BSC 5931 – Genomics	4
PCB 6456 – Biometry I	4
PCB 6458 – Biometry II	3
BSC 6932 – Scientific Writing	2
BSC 6932 – Advances in Environmental Ecology	1

Other Course Requirements	50

The graduate student, major professor and graduate committee will establish the specific courses for each graduate student. Other courses, not listed below, can be substituted if approved by the Graduate Committee. Specific course training beyond this point will be determined in each individual case by the special needs of the student as decided by the student's Graduate Committee.

PHYSIOLOGY AND MORPHOLOGY ( )

Course Requirements	6

A minimum of two courses selected from the list below for a minimum of 6 credit hours.

PCB 6456 – Biometry I	4
PCB 6458 – Biometry II	3
BSC 6932 – Scientific Writing	2
ZOO 5463 – Herpetology	4
ZOO 5456 – Ichthyology	4
ZOO 54xx – Ornithology	3
PCB 5256 – Developmental Mechanisms	3
BSC 6932 – Physiological Ecology	3
BSC 6932 – Advances in Physiology	1
BSC 6932 – Ecoimmunology	3
BSC 5931 – Comparative Approaches in Evolution	3
BSC 5931 – Ecological and Functional Morphology	3

Other Course Requirements	50

The graduate student, major professor and graduate committee will establish the specific courses for each graduate student. Other courses, not listed below, can be substituted if approved by the Graduate Committee. Specific course training beyond this point will be determined in each individual case by the special needs of the student as decided by the student's Graduate Committee.

Qualifying Exam

All students in the IB PhD degree must complete a qualifying examination. Successful completion of the preliminary doctoral examination by the end of the 4th semester. The exam consists of 3 parts:

1. Dissertation proposal
2. Seminar/presentation of proposal
3. Defense of dissertation proposal

Admission to Candidacy

The doctoral student is eligible for admission to candidacy after completing structured course requirements, passing the qualifying examination and approval by the supervisory committee. Appropriate forms to document promotion to candidacy must be completed and to the Graduate School. Following the semester of admission to candidacy, a student must enroll in BSC 7980 when engaged in research, data collection, or writing activities relevant to the doctoral dissertation. Advisors should assign the number of credits in this course in accordance with policy and appropriate to the demands made on faculty, staff, and University facilities, but in no event will the total number of earned dissertation credits be fewer than 16. Students not admitted to candidacy are not eligible to enroll in BSC 7980.

Dissertation Requirement **24 hours**
BSC 7980 Dissertation (24)

Doctoral Seminar and Defense.

All doctoral students must present a public seminar to the IB Department and must be enrolled in BSC 7980, during the semester in which the seminar is given. The seminar should be a concise summary of the research completed to satisfy the requirements for the Ph.D. The seminar is open to the general public and must be announced two weeks prior to the presentation. Upon completion of the seminar, the general public will be invited to ask questions. At the discretion of the student's graduate committee, members of the committee may continue to question the graduate student after the general public has departed the seminar room. Each student is expected to defend his/her research to the unanimous satisfaction of the graduate committee. Following the defense, students will make any editorial modifications to the dissertation as recommended by the supervisory committee and submit the dissertation to the Graduate School.

Dissertation

Submission of a doctoral proposal and approval by major professor, graduate committee, and graduate director. Successful completion of the dissertation proposal, presentation/seminar and preliminary doctoral examination. Submission of an acceptable dissertation. Presentation of the doctoral seminar (BSC 7936) and successful defense of the dissertation.

Other Requirements

Presentation requirement:

Two presentations, excluding the doctoral seminar and defense. Students are expected to present posters or oral presentations based on their dissertation research at national/regional professional meetings. The graduate committee must approve the presentation.

Publication requirement:

One research paper must be submitted for publication to a refereed scientific journal by the date of the Doctoral Seminar and Defense. The paper may be sole or coauthored, but it must be based on the dissertation research. The student's supervisory committee must approve the paper prior to submission.[HC5]

COURSES

For an updated list of course offerings see: http://www.ugs.usf.edu/sab/sabs.cfm