

A GUIDE TO ASSIST STUDENTS OBTAINING A DOCTORAL DEGREE IN INTEGRATIVE BIOLOGY

FLORIDA ATLANTIC UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCES

Integrative Biology (IB) is a multidisciplinary doctoral program offered by the Department of Biological Sciences under the Charles E. Schmidt College of Science (CESCOS) with the participation of other CESCOS departments, the College of Medicine (COM) at Florida Atlantic University (FAU), and several local external institutions including the Max Planck Florida Institute for Neuroscience (MPFI) and the Scripps Research Institute Florida (TSRI), among others. The IB program encompasses cross-disciplinary, multilevel approaches to education and research in biology and other science areas. To provide academic leadership and mentor graduate students, the program takes advantage of current faculty strengths in biological sub-disciplines such as [molecular, cellular, and developmental biology; ecology and environmental science; neuroscience; marine science and oceanography; and biomedical science.](#)

THE INTEGRATIVE BIOLOGY GRADUATE POLICIES AND PROCEDURES MANUAL

- I. DEFINITIONS AND KEY TERMS
- II. STUDENT PRIVILEGES AND RESPONSIBILITIES
- III. COURSEWORK REQUIREMENTS
- IV. INTEGRATIVE BIOLOGY CONCENTRATIONS
- V. OTHER PROGRAM REQUIREMENTS

I. DEFINITIONS AND KEY TERMS

Teaching Assistantship (TA) – Within this document, a *TA* refers to a graduate student receiving tuition benefits related to employment as a graduate teaching assistant.

Research Assistantship (RA) – Within this document, an *RA* refers to a graduate student receiving tuition benefits related to employment as a graduate research assistant.

Year – Within this document, a *year* is always defined as a series of three consecutive semesters (which must include one Fall term, one Spring term and one Summer term).

Academic Year – Within this document, an *academic year* is always defined as a series of two semesters that only includes the fall and spring semesters (one fall term and one spring term).

Good Standing – Within this document, *good standing* is always defined as fulfilling all program and university duties and responsibilities as well as maintaining satisfactory performance in all coursework, research, and TA/RA roles and related responsibilities.

Satisfactory Academic Progress – Within this document, *satisfactory academic progress* is always defined as the criteria that a student must satisfy including grade point average, continuous enrollment, pace, timeframe, and all other academic and research standards required by the IB Ph.D. program.

Grade Point Average (GPA) – Within this document, *GPA* is always defined as the total number

of grade points received over a given period divided by the total number of credits awarded.

Pace – Within this document, *pace* is always defined as dividing the total number of credit hours earned by the total number of credit hours attempted. All non-remedial institutional and transfer credits attempted by the student at their current level are included in determining pace. Pace for graduate students is based on FAU credits only.

Proposal (Candidacy Exam) – Within this document, *proposal (candidacy exam)* is always defined as the written and oral examination that occurs by the seventh semester (Year 3, Semester 1) of the program.

Timeline – Within this document, *timeframe* is always defined as the length of time in which students should earn their degree. In the IB Ph.D. program, students are expected to complete their degree within five years.

Personnel Identification:

Ph.D. Supervisor – The faculty member(s) responsible for mentoring and guiding the IB Ph.D. student throughout the program and their dissertation research and serves as the chair(s) of the dissertation committee.

Supervisory Committee – The first-year committee responsible for guiding IB Ph.D. students in their initial course of study.

Dissertation Committee – The committee responsible for mentoring and guiding development of the dissertation research, as well as administering the proposal (candidacy exam) defense and dissertation defense.

IB Program Director – The faculty member responsible for making all IB program-related decisions.

IB Associate Director(s) – The faculty member(s) responsible for assisting the IB program Director and serving as the temporary Ph.D. Supervisor for all laboratory rotation students.

IB Program Coordinator – The faculty member responsible for facilitating IB program-related paperwork and official submission of all departmental and Graduate College forms.

II. STUDENT PRIVILEGES AND RESPONSIBILITIES

The privileges and responsibilities of IB Ph.D. students are described below. Students are responsible for following all IB program and FAU rules and regulations. Students should consult the [**University Catalog**](#) for university-wide policies and procedures and the [**Graduate College**](#) webpage for those policies and procedures prescribed by the Graduate College of FAU. Students should also review the [**Graduate College Tuition Benefits Policy**](#) for details of the Graduate College's graduate assistantships and tuition benefits eligibility requirements. The following are guidelines pertaining specifically to the IB Ph.D. program.

The IB Ph.D. program offers five concentrations. Applicants seeking a doctorate in Integrative Biology may choose to pursue any of the five IB concentrations listed below. These concentrations fall under the umbrella of the Integrative Biology major and all students accepted to these concentrations are responsible for following all Integrative Biology policies, rules and regulations in addition to any concentration-specific requirements outlined under section III of this document.

[Integrative Biology Core \(IBIO\)](#)[Integrative Biology-Neuroscience \(IBNS\)](#)[Integrative Biology-Environmental Science \(IBES\)](#)[Integrative Biology-Biomedical Science \(IBBS\)](#)[Integrative Biology-Marine Science and Oceanography \(IBMO\)](#)

Students are expected to be willing, full-time participants in the program. It is expected that graduate students will forgo full-time employment while enrolled so that they may devote their full attention to the program.

A. Student Responsibilities:

Students must use their FAU email as the primary source for correspondence with the program, as per [FAU email policy](#).

Students themselves are responsible for **meeting deadlines and submitting required forms and documentation** to the IB Ph.D. program and the Graduate College.

Student participation includes attending mandatory meetings and engaging in other activities of the program, such as the annual IB Ph.D. retreat.

Students are expected to maintain satisfactory academic progress for the duration of their enrollment in the IB program. If satisfactory academic progress is not maintained, then the IB Ph.D. program will initiate penalties ranging from ineligibility for departmental scholarships and/or TA support to dismissal from the program.

- Penalties will be determined on a case-by-case basis by the IB Program Director and Associate Director(s) and consultation with the supervisory and/or dissertation committees and will adhere to the university guidelines on the [Academic Dismissal of Students from a Graduate Degree Program](#).

Satisfactory academic progress includes, but is not limited to, the following:

- Complete all coursework requirements and meet all required deadlines for submitting additional required IB program documentation.
- Maintain continuous enrollment and a minimum cumulative GPA of 3.0 in all coursework.
- Receive a grade of Satisfactory (S) in all advanced research, dissertation and laboratory rotation credits.
- Maintain an updated Plan of Study with the IB program and Graduate College.
- Form a Supervisory Committee in the first semester of enrollment (Year 1, Semester 1) and confirm a Ph.D. Supervisor by the end of the second semester (Year 1, Semester 2).
- Maintain active participation within the program (e.g. attend student proposal and defense seminars, invited talks, special lectures, etc) and attend all mandatory meetings (e.g. annual IB retreat, fall IB program meeting, TA meetings, etc).
- Demonstrate satisfactory performance in all TA and/or RA roles and related responsibilities (peer evaluations, coordinator evaluations, annual progress reports, etc) as

assessed by the laboratory and/or RA supervisor.

- Form a Dissertation Committee at **minimum** one semester before candidacy exam or no later than the end of Year 2, Semester 2.
- Defend the dissertation proposal (candidacy exam) no later than the end of the seventh semester (Year 3, Semester 1).
- Present research findings on a continuing basis via poster sessions, presentations, abstracts, journal articles and other forms of publication.

All incoming students are offered support via a TA or RA position. The Department of Biological Sciences provides the majority of the TA positions, whereas RA positions are provided by the Ph.D. Supervisor(s). It is the Ph.D. Supervisor(s) responsibility to ensure that their student(s) are supported each year via a TA or RA position.

TAs are guaranteed the **first two consecutive semesters** to every IB Ph.D. student dependent upon **satisfactory performance in the first semester** of enrollment. Under most circumstances, students receive a tuition waiver with the assistantship. ***Tuition waivers do not cover student fees***. The fee breakdown per graduate credit hour can be viewed under Graduate Resources, [**Tuition and Fees**](#).

- Doctoral students must comply with the policies of the Graduate College regarding their status as full time students in order to be approved for tuition waivers (see section II, items A 1 - 7 and the [**Tuition Benefits Policy for Graduate Students**](#) for details).

Upon completion of the first academic year, students qualify for a TA and/or RA position in subsequent years on a **competitive basis**. TA positions are given with preference to students working with faculty who hold appointments within the department where the TAs are allocated.

Program Faculty with affiliate appointments are expected to have sufficient funding to sponsor students with RA positions. Students with an affiliate faculty member as a Ph.D. Supervisor may only be eligible for a TA position on a competitive basis when available or under special circumstances as approved by the IB Program Director and Associate Director(s).

All students **must** have an identified and approved Ph.D. Supervisor **by the end of their second semester in the program**. Students who do not confirm a Ph.D. Supervisor by the end of their second semester (Year 1, Semester 2) **will be dismissed from the program**.

- Should dismissal proceedings extend past the end of the second semester and into the third semester; ***students will not be eligible for TA support during that third semester.***
- For international students who fall within this category, support in the summer will be consistent with the conditions of their I-20s.

It is expected that students graduate within five years. Students not finished within seven years will have their matriculation in the program re-evaluated and **must** petition for continuance.

Students themselves should be familiar with the [**Policies for All Students**](#) and [**Additional Policies for Graduate Students**](#) within the FAU catalog.

B. Student Leadership:

Students are expected to elect and form the following positions and committees by annual democratic elections:

- **Two Student Leaders:** one from the molecular/medical/neuroscience area and one from the ecological/environmental/marine science area. The student leaders are responsible for holding the annual committee elections for the positions described below and have the right to form *ad hoc* committees as required. The student leaders shall oversee, guide and direct the duties of the committees on a regular basis and communicate with the IB Program Director and Associate Director(s) about any student concerns.
- **One IB Ph.D. Program Committee Student Representative:** The student will participate in all the meetings of the program committee and represent the students' opinions to the best of their knowledge.
- **Recruitment and Alumni Committee:** This committee shall work closely with the IB Program Director and Associate Director(s) in the recruitment of new students and advertisement of the program. This committee should represent the ecological/environmental/marine science and molecular/medical/neuroscience sides of the program.
- **Retreat and Social Committee:** This committee shall work closely with the IB Program Director and Associate Director(s) in the organization of events and activities of the IB Ph.D. program, such as the annual IB Ph.D. retreat. This committee should represent all four campuses and the ecological/environmental/marine science and molecular/medical/neuroscience sides of the program.

III. COURSEWORK REQUIREMENTS

Doctoral degrees at FAU require a minimum of 80 semester credits beyond the baccalaureate degree. Doctoral programs may accept a maximum of 36 credits earned elsewhere in an approved graduate program (a Master's degree is considered equivalent to 30 semester credits). A maximum of 6 graduate credits earned in a non-degree seeking status may be transferred.

- All transfer credits must be approved by the student's Supervisory Committee and FAU's Graduate College.

***Note:** Students may not transfer Directed Independent Study (DIS) credits or credits specific to the completion of a Master's level research (e.g. courses entitled, Thesis Research, Master's Thesis Research, Master's Thesis Proposal Seminar, Master's Thesis Defense Seminar, etc.) into the IB Ph.D. program.

Students wanting to substitute coursework completed elsewhere for core program course requirements must receive approval to do so from both their Supervisory Committee and the program faculty member(s) who teach(es) the course(s) in question.

A. The requirements of the IB program are as follows:

1. Students **must** complete a minimum of eighteen credits of course work with a grade of 'B' or higher in each graduate course taken and **must** maintain a minimum GPA of 3.0 in order to be eligible for tuition waivers and graduate TAs.

- a) If a student receives a score below a ‘B,’ the course cannot be used to fulfill degree requirements. The Graduate College may deny a student subsequent tuition waivers should they fail to achieve a ‘B’ or higher in a graduate level course.

- 2. Of the eighteen required (non-seminar) course credits, nine credits are to be taken in three required core courses and the remaining nine credits shall be fulfilled by completion of at least three elective courses (see below).

- 3. Students must maintain continuous enrollment in order to remain in the IB program. The University defines continuous enrollment as enrollment in at least one credit during at least two semesters (fall, spring, or summer) of every year. Students who fail to maintain continuous enrollment, as defined above, lose their eligibility for the degree and must reapply for admission to the program. Students with exceptional circumstances may petition for a leave of absence for up to one year. ***Failure to maintain continuous enrollment will result in an administrative withdrawal from the University.***

- 4. Students are required to complete a minimum of 25 dissertation credits and may not enroll in dissertation credits until after they attain candidacy.

- 5. Prior to advancement to candidacy (start of term through advancement to candidacy), most students will register full-time (defined as nine credits in the fall and spring) during semesters in which they enroll (summer enrollment is not mandatory). Summer enrollment may be less than full-time for all students (even before advancement to candidacy). Students may petition the Graduate College for full-time status with reduced enrollment under special circumstances. International students with a reduced enrollment should consult with the [**Office for International Students and Scholar Services**](#) and may need to submit a [**Reduced Course Load Form**](#).

- 6. Students must enroll in at least one credit during any semester in which they wish to be eligible for a teaching or research assistantship.

- 7. All students should submit a [**Plan of Study**](#) (POS) online through the MYFAU web portal before the end of their first semester in the program, but ***must complete it before the end of the second semester*** (Year 1, Semester 2). The POS outlines their path through the program, specifying which courses will be taken during each semester from matriculation through graduation. Students who do not have a POS on file with the Graduate College by the end of their second semester ***will become ineligible for further tuition waivers until a POS is submitted.*** Students may revise their POS as necessary in future semesters.

- 8. All students **must** register for advanced research or dissertation credits as well as core coursework credits in Integrative Biology (BSC 6390) and Scientific Communication (BSC 6846) via the IB Program Coordinator. ***Registration requests must be made in writing with signed permission from the student’s Ph.D. Supervisor or the IB Associate Director(s) for students participating in laboratory rotations.*** Requests can be made via the IB Ph.D. Student Registration Form, which can be found within the [**Forms and Policies**](#) section of the Biology Department website. Research credits that fulfill IB Ph.D. degree requirements include the following credit types: BSC 6913 IB Lab Rotation, BSC 7978 Advanced Research in Integrative Biology and BSC 7980 Dissertation.

***Note:** Students who enter the program with a confirmed Ph.D. Supervisor will not enroll in BSC 6913 IB Lab Rotation.

***Note:** *Students are encouraged to self-register for high demand elective courses as soon as possible in order to ensure that they receive a seat.* Students should list those courses for which they have self-registered on their registration form with the notation (self-reg). Students wishing to enroll in elective courses marked “instructor permission required” should contact the listed instructor directly to request permission. Once granted, the student may then self-register in the course through their MyFAU web portal account.

B. Required core courses:

1. Integrative Biology (BSC 6390) (3 Cr): This course presents the concepts inherent in an integrative view of biology. ***The Integrative Biology course is offered only in the Fall semester and must be taken within each student's first year within the program*** (where one year refers to two concurrent fall/spring semesters (e.g. Fall 2015 and Spring 2016 equals one year; Spring 2016 and Fall 2016 equals one year).
2. One course in Biostatistics: A course in statistics appropriate to the area of specialization of the student (minimum 3 credits):
 - Experimental Design and Biometry (PCB 6456) (3-4 Cr), or
 - Experimental Design 1 (PSY 6206) (3 Cr)
3. Scientific Communication (BSC 6846) (3 Cr): This course introduces students to proposal (candidacy exam) writing and presentations for scientists. Scientific Communication should be taken in the ***fifth semester*** (Year 2, Semester 2) in preparation for the dissertation proposal (candidacy exam).

Students must complete the core coursework within the first two years of the program.

Students may not advance to candidacy, even if they have successfully passed the dissertation proposal (candidacy exam), until after the core coursework has been completed.

C. Other course requirements:

1. Research Credits:

- IB Lab Rotation (BSC 6913): **First and second semester**
 - Students who enter the program without having confirmed a Ph.D. Supervisor must participate in laboratory rotations within Year 1. See section V.A.2 for details.
 - Students participating in the IBES and IBMO concentrations must confirm a supervisor as a condition of acceptance and so will not participate in laboratory rotations (see IBES and IBMO admission criteria in the University Catalog).
- Advanced Research in Integrative Biology (BSC 7978): After confirming a Ph.D. supervisor) but **PRIOR** to candidacy
 - Students should enroll in at least one credit of Advanced Research in Integrative Biology each fall and spring semester until they have successfully advanced to candidacy.

- Dissertation (BSC 7980): **After attaining candidacy**
 - Completion of a minimum of 25 credits of dissertation research is required to fulfill degree requirements.

***Note:** There is no minimum required number of IB Lab Rotation or Advanced Research in Integrative Biology credits that a student must take in order to fulfill degree requirements.

***Note:** Directed Independent Study (DIS) credits **may not** be used to fulfill degree requirements.

2. Seminar/Journal Club/Colloquium credits

- Students are **required** to enroll in a minimum of ***three one-credit seminar/journal club/colloquium courses***, that **must** be taken in separate semesters; this requirement can be fulfilled before or after advancement to candidacy.
- Only **one credit** of seminar/journal club/colloquium course per semester counts towards fulfillment of this requirement.
- Students are expected to give **at least one presentation in a graduate-level course**, such as in one of the seminar/journal club/colloquium courses. The seminar/journal club/colloquium is not a requirement for advancement to candidacy but is a ***requirement for graduation***.
- Students are permitted to enroll in the same seminar/journal club course across multiple semesters (e.g. they may take Seminar in Emerging topics in Avian Ecology in Fall 2015, Fall 2016 and then again in the Fall 2017 semester). The speaker rosters within seminar/journal club courses will vary by semester and so attending the same course for more than one semester will not be repetitious.

3. Three electives: Students are required to complete a **minimum** of three elective courses (nine credits minimum). The selection of elective courses to meet degree requirements is determined by consultation between the student, the Ph.D. Supervisor and the student's Ph.D. Supervisory Committee. ***Students must fulfill the elective requirement within the first two years of the program.*** This requirement **must** be completed before a student may advance to candidacy.

*See the University Catalog for descriptions of graduate courses offered by the Charles E. Schmidt Colleges of **Science** and **Medicine**, which may be used to fulfill the IB elective requirement. This list of elective courses is not inclusive. Elective courses other than those listed may be chosen, but must be courses in biology, biomedical science, chemistry, or in other colleges/departments as approved by the student's Supervisory Committee, which are designated 6000 or 7000 level. Courses designated as proficiency or remedial (4,000 level and below) may not be used to satisfy the elective course requirements.*

*See below (section IV) and the **Integrative Biology Ph.D. program catalog entry** for elective restrictions that are specific to program concentrations in Neuroscience, Environmental Science, Biomedical Science, and Marine Science and Oceanography.*

IV. INTEGRATIVE BIOLOGY CONCENTRATION SPECIFIC DEGREE REQUIREMENTS

A. IB-Neuroscience (IBNS)

All IB students are required to complete a minimum of three elective courses (nine credits). Students enrolled in the IBNS concentration must select graduate level elective courses that are **relevant to the field of neuroscience**. Completion of these courses may be used toward fulfillment of the 9-credit Integrative Biology elective requirement. Courses designated as proficiency or remedial (4,000 level or below) **may not** be used to satisfy the Integrative Biology course requirements. The FAU course catalog contains the complete list of [**IBNS prerequisite and elective courses.**](#)

Students who enter the IBNS concentration **without** prior neuroscience coursework **must take two of the IBNS prerequisite courses**. Students entering the program with a strong neuroscience background may choose from the IBNS prerequisite courses or from more advanced elective courses from the approved elective list as approved by the Ph.D. Supervisor and/or the student's Ph.D. Supervisory Committee.

B. IB-Environmental Science (IBES)

All IB students are required to complete a minimum of three elective courses (nine credits). Students enrolled in the IBES concentration **must complete at least one course** from each of the two focal areas: Statistics/Modeling and Ecology/Earth Sciences. Completion of these courses may be used toward fulfillment of the 9-credit Integrative Biology elective requirement. Courses designated as proficiency or remedial (4,000 level or below) **may not** be used to satisfy the Integrative Biology course requirements. The FAU course catalog contains the complete list of [**IBES elective courses.**](#)

C. IB-Biomedical Science (IBBS)

All IB students are required to complete a minimum of three elective courses (nine credits). Completion of these courses may be used toward fulfillment of the 9-credit Integrative Biology elective requirement. Courses designated as proficiency or remedial (4,000 level or below) **may not** be used to satisfy the Integrative Biology course requirements. The FAU course catalog has the complete list of [**IBBS core and elective courses.**](#)

Students who enter the IBBS concentration without a core course or equivalent **must complete one** of the IBBS core courses. Students may elect to complete up to six credits designated Special Topics with the approval of their Ph.D. supervisor and/or the student's Ph.D. Supervisory Committee.

D. IB-Marine Science and Oceanography (IBMO) specific degree requirements

All IB students are required to complete a minimum of three elective courses (nine credits). Completion of these courses may be used toward fulfillment of the 9-credit Integrative Biology elective requirement. Courses designated as proficiency or remedial (4,000 level or below) **may not** be used to satisfy the Integrative Biology course requirements. The FAU course catalog has the complete list of [**IBMO required and elective courses.**](#)

Students who enter the IBMO concentration without the required courses or equivalents **must complete** the required IBMO core courses. Students may elect to complete up to six credits designated Special Topics with the approval of their Ph.D. supervisor and/or the student's Ph.D. Supervisory Committee.

V. OTHER PROGRAM REQUIREMENTS

A. Initial course of study

1. Supervisory Committee (formed in the FIRST semester of Year 1):

- The Supervisory Committee shall consist of at least three members, including the IB Associate Director or designee, the Ph.D. Supervisor, and one other Program Faculty member of the students' choice, whose responsibility is to advise the student on their initial course of study. Student and mentor/supervisor pairing is based on mutual agreement.
- The Supervisory Committee shall be established before the end of the first semester of the program (Year 1, Semester 1).
- The student's Ph.D. Supervisor will be the chair of the student's Supervisory Committee and will consult with the student on the other member(s) of the committee.
- For new students without a confirmed Ph.D. Supervisor (e.g. students participating in laboratory rotations), the IB Program Director or the Associate Director(s) will serve as a temporary supervisor to help identify appropriate courses to be taken. All students who enter the program without a confirmed Ph.D. Supervisor are required to participate in at least two laboratory rotations within the first academic year of the program.
- The Supervisory Committee shall meet at the end of year one and evaluate the student's progress. This meeting will be documented on the Milestones Checklist, which must be submitted before the end of the fourth semester in the program (Year 2, Semester 1). The Milestones Checklist can be found within the Forms and Policies section of the Biology Department website. These documents enable the IB program, the College of Science Dean of Graduate Studies and the FAU Graduate College to monitor students' progress through the program.

***Note:** Updated Milestones Checklists must be completed and submitted prior to the end of each Fall semester. Failure to do so will put the student's standing in the program at risk.

2. Laboratory rotations, identification of Ph.D. Supervisor, and pre-candidacy research credits

- Research conducted prior to candidacy:
 - All new incoming students who do not have a Ph.D. Sponsor Verification form on file are required to register for **IB Lab Rotation (BSC 6913)** in the first semester of year one. In the second semester of the first year in the program students can either continue to do lab rotations until the end of Year 1, Semester 2, or can register for **Advanced Research in Integrative Biology (BSC 7978)** with the signed approval of their identified supervisor.
 - Students are encouraged to select the laboratory in which they will complete their dissertation research by the beginning of Year 1, Semester 2 but may continue to participate in rotations until the end of that semester.
 - All students must have an identified and approved Ph.D. Supervisor by the end of their second semester in the program. Students who do not confirm a Ph.D. Supervisor by the end of their second semester (Year 1, Semester 2) will be

dismissed from the program.

- Should dismissal proceedings extend past the end of the second semester and into the third semester; **students will not be eligible for TA support during that third semester.**
- For international students who fall within this category, support in the summer will be consistent with the conditions of their I-20s.
- Procedure for laboratory rotations and identification of a Ph.D. Supervisor:
 - Participation in ***three to four laboratory rotations***, one-half of a semester each (eight weeks), within Year 1 provides opportunities for faculty and students to meet without making a long-term commitment. Rotations allow the students to be exposed to a broader range of science, to network within the program, and aids the student in making a well-informed choice of laboratory and supervisor for their dissertation research. By trying out several laboratories, students can identify an area of research in which they are particularly interested, and a faculty member with whom they can develop a productive mentor-mentee relationship.
 - During rotations, students should participate in ***ALL*** laboratory activities, like any other lab member, as required by the rotation supervisor (principal investigator): they should join in lab meetings, journal clubs, etc. The rotation supervisor may assign the student to work with another student or postdoctoral fellow in the laboratory, or take on a simple project achievable within the rotation period.
Note:** Students are expected to have secured a minimum of two rotations prior to submitting their application to the IB Ph.D. program. ***The onus is on the student to identify faculty of interest for review with the IB Associate Director(s) and then communicate directly with approved faculty regarding arranging a rotation.
 - All students enrolled in IB Lab Rotation (BSC 6913) are enrolled under the IB Associate Director(s) who is responsible for inputting their rotation grade at end of the term following consultation with the rotation supervisor(s).
 - Rotations are graded “S” or “U” (“Satisfactory” or “Unsatisfactory”).
 - The rotating student is required to complete and submit a **Student Rotation Evaluation Form** for ***each rotation*** in which they have participated. Failure to submit those forms will result in a grade of “I” (“Incomplete”) in IB Lab Rotation credits. University policy states that a student may not graduate from a FAU program with a grade of “I” on their transcript. If a grade of incomplete is not remedied within one year of issue, the “I” grade **automatically** converts to a grade of “U”. ***Receipt of an “Unsatisfactory” will affect a student’s standing in the program.***
 - Each faculty member with whom a given student rotated will also be required to complete and submit a **Faculty Rotation Evaluation Form** to the IB Associate Director(s). These forms are used to assign each rotating student a grade (Satisfactory, Unsatisfactory, or Incomplete) in IB Lab Rotation at the end of each semester during which they have rotated.
 - For rotation students with a confirmed Ph.D. Supervisor at the end of the first semester, each faculty member will be required to complete and submit a **Faculty Rotation Evaluation Form** and each student is required to complete and submit a

Student Rotation Evaluation Form to the IB Associate Director(s). These forms are used for determining a student's satisfactory performance during their first semester of enrollment. Failure to do so may jeopardize a student's eligibility for TA support and standing in the program.

- **Laboratory rotations are limited to the first academic year** in the program to maintain satisfactory academic progress. If satisfactory academic progress is not maintained, then the IB Ph.D. program **will** initiate penalties ranging from ineligibility for departmental scholarships and/or TA support to dismissal from the program.
 - Penalties will be determined on a case-by-case basis by the IB Program Director and Associate Director(s) and consultation with the supervisory and/or dissertation committees and will adhere to the university guidelines on the [**Academic Dismissal of Students from a Graduate Degree Program.**](#)
 - Students may petition for additional laboratory rotations under special circumstances; however, ***no additional laboratory rotations will be granted beyond the fifth semester*** in the program (Year 2, Semester 2). Students who have been granted additional laboratory rotations and remain without a Ph.D. Supervisor beyond their fifth semester **will be dismissed from the program.**

B. Advancing to candidacy

Dissertation Committee: (formed at **minimum** one semester before candidacy exam OR no later than the end of Year 2, Semester 2)

Once students have confirmed a Ph.D. Supervisor they shall continue their courses as well as research by registering for **Advanced Research in Integrative Biology (BSC 7978)**. After a sufficient amount of research has been completed, as approved by their Ph.D. Supervisor and/or Supervisory Committee, the student shall form their Dissertation Committee. The Dissertation Committee is responsible for guiding development of the dissertation research and written proposal as well as administering the proposal (candidacy exam) defense and dissertation defense. Students must consult with their Ph.D. Supervisor in selecting their committee members ***but the final composition of the Dissertation Committee is established by the student.***

Requirements for Composition of the Dissertation Committee:

- The Dissertation Committee shall consist of **at least FOUR** members, including the Ph.D. Supervisor who serves as committee chair.
- All four members of the Dissertation Committee **must** have a Ph.D. or equivalent professional degree. Members without a doctoral degree can serve as consultants or as *ad hoc* (non-voting) members, in addition to the other four members. *Per the FAU Graduate College, *ad hoc* committee members **may not** sign on formal documents related to the candidacy exam or the dissertation defense.
- Three of these members can be the same as those on the Supervisory Committee.
- At least three of these members must be FAU faculty (e.g. may not be an affiliated program participant whose primary faculty/staff appointment is with another institute such

as Max Planck, Florida Fish and Wildlife, Scripps, U.S. Geological Survey, etc.)

All formal members **must** be members of the FAU Graduate Faculty. *Ad hoc* participants need not be Graduate Faculty members; however, as stated above, they **may not** sign on program-related documents.

- At least three members must be Program Faculty of the appropriate concentration within the IB Ph.D. program. See the IB program website for concentration specific faculty lists.
- One member should have expertise outside of the student's immediate area of research.

Students may have additional members beyond the required four. Additional members above the four required may be internal (FAU) or external (affiliates). Additional members need not be members of the Program Faculty. ***However, per the FAU Graduate College, additional committee members who are not FAU Graduate Faculty may only serve in an ad hoc capacity.***

If outside expertise is required or desired, there are procedures are in place to formally grant external faculty FAU Graduate Faculty status so that they may participate as full members of the Dissertation Committee. If this applies, see the [**Affiliate and Graduate Faculty Appointments**](#) section on the Biology Department website for details about the process.

C. Defense of dissertation proposal (candidacy examination)

- **Timing:** It is strongly recommended that the dissertation proposal (candidacy exam) be defended by the end of the sixth semester (Year 2, Semester 3) **but must be defended no later than the end of the seventh semester** (Year 3, Semester 1). ***If the student has not defended by the end of Year 3 Semester 1, they have automatically failed their first opportunity to pass the candidacy exam.*** In accordance with the Graduate College rules, students who fail the candidacy exam shall have one more semester to pass and so must pass before the end of Year 3, Semester 2. ***If a student fails to propose by the end of Year 3, Semester 2 or is unsuccessful on the second attempt, the student will be dismissed from the program.***

***Note:** Students without a defended and approved proposal (candidacy exam) by the end of Year 3, Semester 1 may lose their TA eligibility.

- **Requirements for the dissertation proposal (candidacy exam):** Students must hold **at least** one Dissertation Committee meeting **prior** to submitting the written proposal to the Dissertation Committee. This meeting **must be held at least one month in advance** of the oral proposal defense. The Ph.D. Supervisor and/or Dissertation Committee **MUST** agree that the student is ready to defend their dissertation proposal. The dissertation proposal (candidacy exam) shall consist of two parts, a written proposal and an oral proposal defense. ***However, a student's Dissertation Committee may specify other requirements as part of the candidacy exam.***
 - **Written dissertation proposal:** The student shall submit a written research proposal for review by the student's Dissertation Committee **at least two weeks prior** to the oral defense with a copy to the IB Program Coordinator. ***Failure to do so will result in a delay of the oral defense.*** The proposal shall be written in the format and structure specified in the IB guidelines (see VI. Dissertation Proposal (Candidacy Exam) guidelines as laid out in detail in the BSC 6846 Scientific Communication course) unless the Dissertation Committee **unanimously** decides on another format. Students complete BSC 6846 Scientific Communication in the

spring semester of their second year and this course trains students in the proposal writing process. Finally, the student must seek guidance from their Ph.D.

Supervisor with regard to the content of the written proposal before submitting it to the Dissertation Committee.

- **Oral dissertation proposal defense:** The student will be required to present a proposal seminar that is *open to the public. The presentation should be broadcast so that it may be viewed on other FAU campuses and/or by the public.* This will be followed by a private defense with the Dissertation Committee in which the student's proposed research and relevant scientific background will be explored in a comprehensive oral format. The committee may request modifications of the written proposal with or without a repeat of an oral defense before final approval. Students are expected to attend one another's proposal (candidacy exam) and defense seminars.

It is the student's responsibility to make a room reservation for the defense via the IB Program Coordinator. Room reservation requests must be emailed to the IB Program Coordinator at least two weeks prior to the scheduled defense date.

Requests should include the following information:

- The date, time and campus on which the seminar will be held
- Room capacity needs
- Requests for specific desired locations (e.g. Departmental videoconference rooms SC-141, RE-201, DW421)
- Equipment needs (e.g. Will a laptop be used or the computer present within the seminar room?)
- It is expected that students will ensure that their seminar is accessible (via in-person and virtual) on at least three FAU campuses and to the public.
- Link for virtual broadcast

It is the student's responsibility to ensure that the proposal (candidacy exam) seminar announcement is emailed to all IB faculty and students at least one week prior to the proposal seminar. The announcement should be sent to the IB Program Coordinator who will forward it to the relevant parties. If unforeseen circumstances prevent the proposal defense announcement from being sent out on time, there is a 24 hr grace period. If the announcement is not received by the IB Program Coordinator within the 24 hr grace period, the candidate must re-schedule the proposal (candidacy exam) defense.

The candidate must also post physical fliers within the biology buildings on the campuses to which the seminar will be broadcast. The physical fliers must also be posted one week prior to the proposal (candidacy exam) defense.

- Students who fail the candidacy exam shall have one additional semester to pass. **If unsuccessful the second time, the student shall be dropped from the IB Ph.D. program.**
- Successful defense of the oral and written proposal (candidacy exam) shall qualify the student for candidacy but is *contingent upon satisfactory completion of the core and elective course(s) requirements.* Students may propose and defend before completion of

the course requirements, but **formal advancement** to candidacy will be delayed until core course requirements are satisfied.

- The IB Program Director or designee may serve as an observer at the oral proposal defense.

D. Administrative responsibilities for advancement to candidacy

Students will **NOT** advance to candidacy unless they have fulfilled the following administrative duties:

- The student must email the IB Program Coordinator, with a cc to the Chair of their Dissertation Committee, confirming that they have been approved to schedule the proposal (candidacy exam) defense and provide the defense date.
- Students must complete and submit the following to the IB Program Coordinator:
 - An updated milestone checklist
 - An updated curriculum vitae
 - Form 8 - FAU Admission to Candidacy for the Doctoral Degree (available on the [FAU Graduate College website](#))
 - A copy of the proposal announcement and of the written dissertation proposal
- Students must provide a Proposal Assessment Form to each of their Dissertation Committee members. These forms are to be filled out by each committee member and submitted directly to the IB Program Coordinator. These forms are confidential and should not be returned to the student by members of the committee.
- The IB Program Coordinator will forward the Form 8 to the College of Science Associate Dean for Graduate Studies and then on to the Graduate College. Upon receiving final approval from the Dean of the Graduate College, a student is admitted to candidacy.
- Once admitted to candidacy, students may register for dissertation credits but **this must be done** via the IB Program Coordinator. ***Note:** in order for students to enroll in dissertation credits during the subsequent semester, the Graduate College must receive the signed Form 8 by the appropriate deadline specified on their website for the given semester in which the candidacy exam is taken. Students must also allow at least one week each for processing of the form at the Department level and then at the College level. Therefore, the Form 8 **must** be submitted to the IB Program Coordinator **at least two weeks prior** to the deadline specified by the Graduate College for submission of the Form 8 during a given semester.
- Students should submit their first **Annual Research Progress Report and Curriculum Vitae** within **one month** of admission to candidacy. The progress report and cv are submitted to the IB Program Coordinator annually every FALL semester thereafter.

***Note:** All of these forms are accessible online through the biology website. See the [Forms and Policies](#) section of the webpage.

E. Dissertation research and defense of the dissertation

***Note:** *A minimum of two semesters must elapse between the candidacy exam and the dissertation defense.* This is due to the program requirement that students complete a minimum of 25 dissertation research credits and the limitation that a student can take **no more than 12 dissertation credits per semester.**

- Dissertation research shall be conducted under the guidance of the student's Dissertation Committee. Students shall meet with the Ph.D. Supervisor and other committee members on a regular basis (**at least once a year**) as the dissertation research proceeds.
- After each annual meeting, the student and Ph.D. Supervisor ***shall submit an annual progress report*** (See the [**Forms and Policies**](#) section of the webpage) approved by the Dissertation Committee via the IB Program Coordinator to the IB Program Director and Associate Director(s). In the absence of an annual progress report, a TA contract for the next semester **will not be approved** and students **will not be allowed** to register for future research or dissertation credits.
- The Ph.D. Supervisor and the Dissertation Committee **MUST** agree that a student is ready to defend their dissertation prior to scheduling of the oral defense seminar.
- A written dissertation that follows FAU guidelines for formatting must be submitted for review by the student's Dissertation Committee with a copy to the IB Program Coordinator **at least one month prior** to the oral dissertation defense.
- It is permissible to use the candidate's own published doctoral work as chapters provided their insertion follows FAU formatting guidelines (see the Graduate College website for FAU dissertation formatting guidelines).
- For FAU dissertation formatting guidelines, students must consult the Graduate College [**Graduate Thesis and Dissertation Guideline**](#) requirements. Students are strongly encouraged to attend the Graduate College workshops on Thesis/Dissertation formatting.
- Ph.D. students are expected to publish the results of their research on an ongoing basis. For students participating in the IB-Neuroscience concentration, **at least one peer-reviewed publication with the student as first/main author is required for graduation** (if not published, an acceptance letter from the journal is required).
- The candidate must announce their defense dissertation **at least two weeks** in advance in the form of a flier sent via email through the IB Program Coordinator. The student must also submit the room reservation request for the defense seminar at this time or earlier (providing the same information specified in section C. Defense of dissertation proposal (candidacy examination)).
- The results of the dissertation research must be presented in a public forum to which faculty members, IB students and other interested parties are invited. The dissertation defense seminar must be accessible (via in-person or virtual) on **at least three FAU campuses and to the public**. Following the public seminar, the candidate shall defend the dissertation in a closed meeting with the Dissertation Committee.
- The IB Program Director or designee may serve as an observer at the defense.
- Following the public seminar of the dissertation research, the Dissertation Committee shall vote on approval of the dissertation. All members of the committee must vote in favor of passing the student. ***A single dissenting vote will result in the Graduate College denying the student's application to graduate.*** ***Note:** Ad hoc members do not have a vote on the dissertation defense.
- Successful defense of the proposal (candidacy exam), completion of all other academic requirements, and formal submission of the approved dissertation to the Office of Graduate Studies constitute completion of the requirements for the IB Ph.D.

- Students who have completed all requirements stated above shall inform the IB Program Coordinator and should provide a future contact address.

Students will NOT graduate unless the following administrative duties have been fulfilled:

- Students must inform the IB Program Coordinator of their intention to graduate and submit an [Application for Degree per the Graduate College deadlines](#).
- Students **MUST** have an approved Plan of Study on file with the Graduate College, which must match the courses taken throughout the program. If necessary, students should revise their Plan of Study prior to graduation. *Students who do not update their Plan of Study will not pass the final Graduation Audit conducted by the Graduate College and will not be allowed to graduate. Additionally, students may be deemed ineligible for tuition benefits should their Plan of Study not reflect their course enrollment.*
- Students must consult the [Academic Calendar](#) and the [Graduate College Graduation Deadlines](#) for the dates of the following graduation-related deadlines:
 1. Application for degree
 2. Request for change in Dissertation Committee
 3. Submission of signature page draft and defense announcement
 4. Revision to plan of study
 5. Submission of doctoral dissertation, transmittal memo, and signature page
 6. Submission of final manuscript package
 7. Electronic dissertation upload

APPENDIX A. DISSERTATION PROPOSAL (CANDIDACY EXAM) GUIDELINES

A. Format specifications

Font

- Use *Arial 11pt or Times New Roman 12-point font* (symbol font for Greek letters etc).

Page Margins

- Use *standard size (8 1/2" x 11")* sheets of paper.
- Use 1 inch margins (top, bottom, left) and 1.5-inch margin on the right for all pages.

Page format

- Single-sided pages, one column.
- 1.5-line spacing.
- Consecutively numbered pages throughout the application. Do not use suffixes (e.g., 5a, 5b).
- Do not include unnumbered pages.

Length

- No more than fifteen pages single-spaced text total (not including figures, legends or references) but it should be submitted in a 1.5-line spaced format.

Figures, Graphs, Diagrams, Charts, Tables, Figure Legends, and Footnotes

- A smaller type size (10 or 11 pt) may be used, but it must be in black ink, readily legible, and follow the font typeface requirement.

Reference style

Please refer to the Publication Manual of the American Psychological Association (5th ed.) for all citation and reference instructions. Cite in the text alphabetically by author and date, for example: (Hay, 1985; Shimamura & Jurica, 1994). Reference examples are as follows:

Journal:

Shimamura, A.P., & Jurica, P.J. (1994). Memory interference effects and aging. Findings from a test of frontal lobe function. *Neuropsychology*, 8, 408-412.

Book:

Hay, D. A. (1985). *Essentials of Behavior Genetics*. Melbourne: Blackwell Scientific.

Book Chapter:

Connolly, J.B., & Tully, T. (1998). Behavior, learning and memory. In D.B. Roberts (Ed.), *Drosophila: A Practical Approach* (pp. 265-391). New York: Oxford University Press

B. Layout specifications

Proposal Structure

Each proposal should have the following sections in the order listed below:

1. Face Page
2. Title
3. Abstract
4. Specific Aims

5. Background and Significance Preliminary Data
6. Experimental Design & Methods
Each Research Aim should have a section describing:
 - a. Rationale
 - b. Experimental Design
 - c. Anticipated Results, Pitfalls and Alternatives
7. References
8. Figures & Figure Legends (at the end of the proposal or inserted into the text).