


Doctor of Philosophy - Biological Sciences

2 Graduate Program Change 2021-22

I. General Information

The faculty member originating this proposal is to complete sections I and II.

TURN ON help text before starting this proposal by clicking  in the top right corner of the heading. You will need to turn on help text again after any actions that refresh the page including after saving proposals, importing information, or running impact reports.

IMPORT curriculum data from the Catalog by clicking  in the top left corner.

Do not make any changes to any information until the proposal has been launched in Step 4.

Department (s) (if Dual or Interdisciplinary please add all departments)*

School of Life Sciences

Degree/ Certificate Name*

Doctor of Philosophy - Biological Sciences

Plan Code

Degree Type*

Doctor of Philosophy

Program Type*

Doctoral

II. Program Changes

FILL IN ONLY fields required marked with an * after importing data. You will not be able to launch the proposal without completing required fields. Do not make proposed changes to the information that was imported until after the proposal has been launched in Step 4. Changes will only be tracked after the proposal is launched

Are you changing admission

Yes No

requirements?*

Are you changing course requirements? Yes No

Are you changing degree completion requirements? Yes No

Are you changing the primary instructional mode? Yes No

Are you changing program learning objectives? Yes No

Are you changing the culminating experience? Yes No

If not a Dual itself, is this program also available as part of a Dual-Degree offering? Yes No

Other (e.g. subplan titles,...) Yes No

If yes, describe changes to learning objectives:

Provide a Brief Summary of Proposed Changes

Ecology and Evolutionary (EEB) and Quantitative and Bioinformatic (QBB) concentrations voted to allow some additional courses to serve as hybrid seminars for "graduate seminar course requirements - credits: 6

The same changes are being made for the Post-Master's concentration.




Add Biol 714, Biol 781, Biol 783 & Biol 784 (Topics classes: Pop Genetics, Pop and Evol Ecology, Comm and Ecosystem Ecol, Cons Ecol)

Provide a rationale for each proposed change

Allow the students in QBB and EBB and Post-Master's concentrations to have more flexibility in taking the aforementioned hybrid seminars to satisfy "graduate seminar" course requirements in addition to BIOL 793 and BIOL 796.

Do not make any changes to any information until the proposal has been launched in Step 4.

Follow these steps to change the program curriculum:

1. Click on  "View Curriculum Schema." Edit existing cores or click 'Add Core' and name your core (please use a comparable degree program in the current graduate catalog as a template). Edit or add any descriptive text (do not add courses until Step 2). Descriptive text is generally used in the following cores: Plan Description, Plan Admission Requirements, Plan Requirements, Plan Graduation Requirements.
2. There are two options for adding courses (see Step 3 to remove courses): "Add Course" and "Import Course." For courses already in the catalog, click on "Import Course" and find the courses needed. For new classes going through a Curriculog Approval Process click on "Add Course"-- a box will open asking you for the Prefix, Course Number and Course Title.
3. Click on  "View Curriculum Schema." Click on the area/header of the program where you would like to add courses. When you click on "Add Courses" it will bring up the list of courses available from Step 2. Select the courses you wish to add. For removing courses click on the  and proceed.

After you have launched proposal, update prospective curriculum here*

Plan Description

The School of Life Sciences (SoLS) offers a Ph.D. program in Cell and Molecular Biology, Ecology and Evolutionary Biology, Integrative Physiology, Microbiology and Quantitative Biology and Bioinformatics. This degree is research intensive and is designed to prepare students for careers in academia, government, or industry. Students complete a minimum of 60 credits from a list of core and approved courses within their section. In addition, students are typically a Teaching Assistant (TA) for at least one semester. It is expected that students will first-author at least one peer-reviewed journal article. For more information about your program, including your graduate program handbook and learning outcomes please visit the Degree Directory.

Plan Admission Requirements

Application deadlines Applications available on the UNLV Graduate College website. Applications for fall admission that are completed by the posted deadline will be given priority for state-funded graduate assistantships. Admission is based on a combination of criteria that may differ from one year to another, however, most successful applicants have a minimum of a 3.0 undergraduate grade point average (junior and senior years). Students interested in enrolling in the Quantitative Biology and Bioinformatics Track (Subplan 5) must have taken two semester-long biology classes prior to admission. Decisions for fall applicants will be made by April 1 if not sooner. Applications are not considered complete unless they contain: A completed Graduate College Application with Official transcripts and three Letters of Recommendation. A two-page personal statement describing why the applicant wishes to obtain a Ph.D. in biological sciences. All domestic and international applicants must review and follow the Graduate College Admission and Registration Requirements. Students are accepted into a degree program as described in the Graduate Catalog. The faculty and corresponding sub-disciplines and sub-plans within the described programs are subject to change at any time.

Plan Requirements

See Subplan Requirements below. Subplan 1: Post-Bachelor's – Cellular and Molecular Biology Track Subplan 2: Post-Bachelor's – Ecology and Evolutionary Biology Track Subplan 3: Post-Bachelor's – Integrative Physiology Track Subplan 4: Post-Bachelor's – Microbiology Track Subplan 5: Post-Bachelor's – Quantitative Biology and Bioinformatics Track Subplan 6: Post-Master's Track

Subplan 1 Requirements: Post-Bachelor's - Cellular and Molecular Biology Track

Total Credits Required: 60

Course Requirements

Core Course – Credits: 1

BIOL 701 Ethics in Scientific Research **1 - 2**

Required Courses – Credits: 9

Complete 9 credits from the following list of courses:

BIOL 607 Molecular Biology	3
BIOL 625 Genomics	
BIOL 645 Cell Physiology	3
CHEM 772 Nucleic Acid Chemistry	3

Didactic Courses – Credits: 9

Complete 9 credits of advisor-approved didactic courses.

Seminar Courses – Credits: 6

Complete 6 credits from the following course:

BIOL 793A Advanced Topics in Life Sciences: Ecology and Evolution	1 - 2
BIOL 793B Advanced Topics in Life Sciences: Organismal Physiology	1 - 2
BIOL 793C Advanced Topics in Life Sciences: Cell and Molecular Biology	1 - 2
BIOL 793D Advanced Topics in Life Sciences: Microbiology	1-2

Elective Courses – Credits: 23

Complete 23 credits of advisor-approved independent study, colloquium, seminar, or didactic courses.

Dissertation – Credits: 12

BIOL 799 Dissertation

3 – 6

Degree Requirements

Complete a minimum of 60 credits beyond the undergraduate degree. At least 24 of these credits (excluding dissertation) must be completed at the 700-level. Dissertation credits may be repeated for credit as needed, but only 12 credits may be counted towards the 60 credits minimum graduation requirement. Students must complete the specific didactic course work required. See SoLS's Graduate Student Handbook <http://sols.unlv.edu/current.html> for specific requirements. Students working on their dissertation must register for at least 3 credits each semester (excluding summer) until the Dissertation is completed and given final approval.

Graduation Requirements

See Plan Graduation Requirements below.

Subplan 2 Requirements: Post-Bachelor's - Ecology and Evolutionary Biology Track

Total Credits Required: 60

Course Requirements

Core Course – Credits: 1

BIOL 701 Ethics in Scientific Research

1 - 2

Didactic Courses – Credits: 18

Complete 18 credits of advisor-approved didactic courses.

Seminar Courses – Credits: 6

Complete 6 credits from any combination of the following courses:

BIOL 793A Advanced Topics in Life Sciences: Ecology and Evolution	1 - 2
BIOL 793B Advanced Topics in Life Sciences: Organismal Physiology	1 - 2
BIOL 793C Advanced Topics in Life Sciences: Cell and Molecular Biology	1 - 2
BIOL 793D Advanced Topics in Life Sciences: Microbiology	1-2
BIOL 796 Graduate Seminar	1 - 2
BIOL 714 Topics in Population and Evolutionary Genetics	3
BIOL 781 Topics in Population and Evolutionary Ecology	3
BIOL 783 Topics in Community and Ecosystem Ecology	3
BIOL 784 Topics in Applied Ecology and Conservation Biology	3

Elective Courses – Credits: 23

Complete 23 credits of advisor-approved independent study, colloquium, seminar, or didactic courses.

Dissertation – Credits: 12

BIOL 799 Dissertation

3 - 6

Degree Requirements

Complete a minimum of 60 credits beyond the undergraduate degree. At least

Complete a minimum of 60 credits beyond the undergraduate degree. At least 24 of these credits (excluding dissertation) must be completed at the 700-level. Dissertation credits may be repeated for credit as needed, but only 12 credits may be counted towards the 60 credits minimum graduation requirement. Students must complete the specific didactic course work required. See SoLS's Graduate Student Handbook <http://sols.unlv.edu/current.html> for specific requirements. Students working on their dissertation must register for at least 3 credits each semester (excluding summer) until the Dissertation is completed and given final approval.

Graduation Requirements

See Plan Graduation Requirements below.

Subplan 3 Requirements: Post-Bachelor's - Integrative Physiology Track

Total Credits Required: 60

Course Requirements

Core Course – Credits: 1

BIOL 701 Ethics in Scientific Research

1 - 2

Didactic Courses – Credits: 18

Complete 18 credits of advisor-approved didactic courses.

Seminar Courses – Credits: 6

Complete 6 credits from the following course:

**BIOL 793A Advanced Topics in Life Sciences:
Ecology and Evolution**

1 - 2

**BIOL 793B Advanced Topics in Life Sciences:
Organismal Physiology**

1 - 2

BIOL 793C Advanced Topics in Life Sciences: Cell and Molecular Biology	1 - 2
BIOL 793D Advanced Topics in Life Sciences: Microbiology	1-2
BIOL 796 Graduate Seminar	1 - 2

Elective Courses – Credits: 23

Complete 23 credits of advisor-approved independent study, colloquium, seminar, or didactic courses.

Dissertation – Credits: 12

BIOL 799 Dissertation	3 - 6
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Degree Requirements

Complete a minimum of 60 credits beyond the undergraduate degree. At least 24 of these credits (excluding dissertation) must be completed at the 700-level. Dissertation credits may be repeated for credit as needed, but only 12 credits may be counted towards the 60 credits minimum graduation requirement. Students must complete the specific didactic course work required. See SoLS's Graduate Student Handbook <http://sols.unlv.edu/current.html> for specific requirements. Students working on their dissertation must register for at least 3 credits each semester (excluding summer) until the Dissertation is completed and given final approval.

Graduation Requirements

See Plan Graduation Requirements below.

Subplan 4 Requirements: Post-Bachelor's - Microbiology Track

Total Credits Required: 60

Course Requirements

Core Course – Credits: 1

BIOL 701 Ethics in Scientific Research

1 - 2

Required Courses – Credits: 3

Complete 3 credits from the following list of courses:

BIOL 609 Virology

BIOL 618 Microbial Ecology

BIOL 653 Immunology

3

BIOL 664 Bacterial Pathogenesis

3

BIOL 660 Microbial Physiology

3

BIOL 685 Microbial Genetics

4

Didactic Courses – Credits: 15

Complete 15 credits of advisor-approved didactic courses.

Seminar Courses – Credits: 6

Complete 6 credits from any combination of the following courses:

**BIOL 793A Advanced Topics in Life Sciences:
Ecology and Evolution**

1 - 2

**BIOL 793B Advanced Topics in Life Sciences:
Organismal Physiology**

1 - 2

**BIOL 793C Advanced Topics in Life Sciences:
Cell and Molecular Biology**

1 - 2

**BIOL 793D Advanced Topics in Life Sciences:
Microbiology**

1-2

BIOL 796 Graduate Seminar

1 - 2

Elective Courses – Credits: 23

Complete 23 credits of advisor-approved independent study, colloquium, seminar, or didactic courses.

Dissertation – Credits: 12

BIOL 799 Dissertation

3 – 6

Degree Requirements

Complete a minimum of 60 credits beyond the undergraduate degree. At least 24 of these credits (excluding dissertation) must be completed at the 700-level. Dissertation credits may be repeated for credit as needed, but only 12 credits may be counted towards the 60 credits minimum graduation requirement. Students must complete the specific didactic course work required. See SoLS's Graduate Student Handbook <http://sols.unlv.edu/current.html> for specific requirements. Students working on their dissertation must register for at least 3 credits each semester (excluding summer) until the Dissertation is completed and given final approval.

Graduation Requirements

See Plan Graduation Requirements below.

Subplan 5 Requirements: Post Bachelor's - Quantitative Biology and Bioinformatics Track

Total Credits Required: 60

Course requirements

Core Course - Credits: 1

BIOL 701 Ethics in Scientific Research

1 - 2

Required Courses - Credits: 6

Complete 6 credits from the following list of courses:

BIOL 611 Molecular Evolution	3
BIOL 616 Bioinformatics	3
BIOL 625 Genomics	
BIOL 636 Biometry	3
BIOL 680 Introduction to Biological Modeling	3
BIOL 714 Topics in Population and Evolutionary Genetics	3

Didactic courses - Credits: 12

Complete 12 credits of advisor-approved didactic courses.

Seminar Courses – Credits: 6

Complete 6 credits from the following course:

BIOL 793A Advanced Topics in Life Sciences: Ecology and Evolution	1 - 2
BIOL 793B Advanced Topics in Life Sciences: Organismal Physiology	1 - 2
BIOL 793C Advanced Topics in Life Sciences: Cell and Molecular Biology	1 - 2
BIOL 793D Advanced Topics in Life Sciences: Microbiology	1-2
BIOL 796 Graduate Seminar	1 – 2
BIOL 714 Topics in Population and Evolutionary Genetics	3
BIOL 781 Topics in Population and Evolutionary Ecology	3
BIOL 783 Topics in Community and Ecosystem Ecology	3
BIOL 784 Topics in Applied Ecology and Conservation Biology	3

Elective Courses – Credits: 23

Complete 23 credits of advisor-approved independent study, colloquium, seminar, core, or didactic courses.

Dissertation – Credits: 12

BIOL 799 Dissertation	3 – 6
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Degree Requirements

Complete a minimum of 60 credits beyond the undergraduate degree. At least 24 of these credits (excluding dissertation) must be completed at the 700-level. Dissertation credits may be repeated for credit as needed, but only 12 credits may be counted towards the 60 credits minimum graduation requirement. Students must complete the specific didactic course work required. See SoLS's Graduate Student Handbook <http://sols.unlv.edu/current.html> for specific requirements. Students working on their dissertation must register for at least 3 credits each semester (excluding summer) until the Dissertation is completed and given final approval.

Graduation requirements

See Plan Graduation Requirements below.

Subplan 6 Requirements: Post-Master's Track

Total Credits Required: 30

Course Requirements

Core Course – Credits: 1

BIOL 701 Ethics in Scientific Research	1 - 2
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Seminar Courses – Credits: 6

Complete 6 credits from the following courses:

BIOL 793A Advanced Topics in Life Sciences: Ecology and Evolution	1 - 2
BIOL 793B Advanced Topics in Life Sciences: Organismal Physiology	1 - 2
BIOL 793C Advanced Topics in Life Sciences:	1 - 2

Cell and Molecular Biology	
BIOL 793D Advanced Topics in Life Sciences: Microbiology	1-2
BIOL 796 Graduate Seminar	1 – 2
BIOL 714 Topics in Population and Evolutionary Genetics	3
BIOL 781 Topics in Population and Evolutionary Ecology	3
BIOL 783 Topics in Community and Ecosystem Ecology	3
BIOL 784 Topics in Applied Ecology and Conservation Biology	3

Didactic Courses – Credits: 11

Complete 11 credits of advisor-approved didactic courses.

Dissertation – Credits: 12

BIOL 799 Dissertation	3 – 6
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Degree Requirements

Complete a minimum of 30 credits when entering the program with a master's degree from another institution. At least 9 of these credits must be completed at the 700-level. Dissertation credits may be repeated for credit as needed, but only 12 credits may be counted towards the 30 credits minimum graduation requirement. Students must complete the didactic course work required by the Section (e.g., Ecology and Evolutionary Biology, Cell and Molecular Biology, Microbiology, and Integrative Physiology) to which they belong. See SoLS's Graduate Student Handbook <http://sols.unlv.edu/current.html> for specific requirements. Students working on their dissertation must register for at least three (3) credits each semester (excluding summer) until the Dissertation is completed and given final approval.

Graduation Requirements

See Plan Graduation Requirements below.

Plan Graduation Requirements

The student must submit all required forms to the Graduate College as well as apply for graduation up to two semesters prior to completing their degree

requirements. The student must submit and successfully defend their dissertation by the posted deadline. The defense must be advertised and is open to the public. After the dissertation defense, the student must electronically submit a properly formatted pdf copy of their dissertation to the Graduate College for format check. Once the dissertation format has been approved by the Graduate College, the student will submit the approved electronic version to ProQuest. Deadlines for dissertation defenses, format check submissions, and the final ProQuest submission can be found here.

The [Degrees Directory](#) provides current and consistent degree information. Submission of this form indicates acknowledgment and understanding that every department is responsible creating and maintaining accurate and updated program information on the UNLV Degrees Directory.

If the changes included on this form impact the program handbook attach the updated handbook before submitting this form. If you need a Word version of the most recent handbook please email GradCurriculum@unlv.edu.

If new courses are added as placeholders within this proposal, new courses must be created using a Course Create form simultaneously to the process of this proposal.

Degrees Directory Program Entry* Check this box to acknowledge the above statement.


Changes will be applicable to* Current Students
 New Students
 Both Current and New Students

If applicable to current students, changes are Mandatory Optional

Effective Date*

4. LAUNCH proposal by clicking  in the top left corner.

5. After launching the proposal, make all changes and fill in all additional fields.


6. Finish the launch of your proposal by clicking the icon  located in the Proposal Toolbox on left side at top. Make your decision, comment is optional, and click on "Make decision".

You can check the status of the proposal by clicking  in Proposal Toolbox to verify that the proposal has gone to the next step.

III. Department Vote Information

Note: This section is to be filled out by the Department Chair on behalf of the committee.

(The role has been assigned to the corresponding person on this step. If incorrect, please notify GradCurriculum@unlv.edu)

1. Review the proposal. Discuss and make appropriate revisions.
2. Fill in vote information.
3. Then go to the proposal toolbox at the top right side. Click on  and select the corresponding decision for the committee. This will enable the proposal to go to the next person on the workflow.

You can check the status of the proposal by clicking  in Proposal Toolbox to verify that the proposal has gone to the next step.

If Dual or Interdisciplinary: add votes from all departments/colleges involved

(e.g. "Dpt A: / Dpt. B")

Date faculty voted on proposal 2/5/21


Result of vote 13Y, 3N

Manner of vote Qualtrics Survey On-line

IV. Unit Vote Information

Note: This section is to be filled out by the College Committee Chair on behalf of the committee.

(The role has been assigned to the corresponding person on this step. If incorrect, please notify GradCurriculum@unlv.edu)

1. Review the proposal. Discuss and make appropriate revisions.
2. Fill in vote information.
3. Then go to the proposal toolbox at the top right side. Click on  and select the corresponding decision for the committee. This will enable the proposal to go to the next person on the workflow.

You can check the status of the proposal by clicking  in Proposal Toolbox to verify that the proposal has gone to the next step.

If Dual or Interdisciplinary: add votes from all departments/colleges involved

(e.g. "College A: / College B")

Date faculty voted on proposal 2/11/21

Result of vote 5Y, 0N

Manner of vote Webex meeting

V. Processing Notes (Graduate College/Registrar Use Only)

Program Alerts (E.g. This program is no longer accepting applications)

PS Processing Notes

PS Processing Date

Initials

Aalog Processing Notes

Aalog Processing Date

Initials

Comments for Doctor of Philosophy - Biological Sciences

Curriculog	3/2/2021 2:19 pm Reply
Emily Lin has approved this proposal on Graduate College Dean.	
Curriculog	3/2/2021 1:51 pm Reply
Graduate Curriculum has approved this proposal on Graduate Programs Committee.	
Gregory Moody	3/2/2021 1:20 pm Reply
14-0 in favor. WebEx March 2, 2021	
Curriculog	3/2/2021 1:20 pm Reply
Gregory Moody has approved this proposal on Graduate Programs Committee.	
Curriculog	2/17/2021 4:59 pm Reply
Andrew Andres has approved this proposal on School/College Associate Dean/ Dean.	
Rohan Dalpatadu	2/17/2021 1:38 pm Reply
Approved with a vote of 5-0-0.	
Curriculog	2/17/2021 1:38 pm Reply
Rohan Dalpatadu has approved this proposal on School/College Committee.	
Curriculog	2/12/2021 4:32 pm Reply
Life Sciences Chair has approved this proposal on Department Chair.	
Curriculog	2/12/2021 2:11 pm Reply
Life Sciences Graduate Coordinator has approved this proposal on Graduate Coordinator.	
Curriculog	2/11/2021 4:13 pm Reply
Graduate Curriculum has approved this proposal on Technical Review.	
Curriculog	2/3/2021 1:14 pm Reply
Keala Kiko has approved this proposal on Originator.	

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Curriculog 2/2/2021 4:44 pm [Reply](#)

Keala Kiko has launched this proposal.

Curriculog 2/2/2021 4:24 pm [Reply](#)

Keala Kiko imported from the map 2021-2022 Working Graduate Catalog into the following proposal fields: I. General Information: Degree/ Certificate Name, I. General Information: Degree Type, I. General Information: Program Type, II. Program Changes: After you have launched proposal, update prospective curriculum here.