

Life Sciences First Year

The Life Sciences First Year (LSFY) program at NC State University was developed with the goal of helping students find the right fit in a degree program at NC State. LSFY is a joint program between the College of Agriculture and Life Sciences and the College of Sciences. Designed for students who enter NC State with an interest in any aspect of the life sciences, the LSFY curriculum allows students to begin laying the foundation for further studies in any of the life science degree programs at NC State. At the same time, the advising program and specially designed courses encourage and provide the means for students to explore their academic interests to settle on the academic home that is best for them, while understanding what they need to do to achieve their professional goals. After learning more about degree requirements and exploring their own interests and aptitudes (both in and out of class), LSFY students apply by the end of their first year to transfer into a degree program.

The LSFY program includes all incoming first-year students who express interest in earning a degree in one of the following majors: *Biochemistry*, *Biological Sciences*, *Genetics*, *Microbiology*, *Nutrition Science*, *Plant Biology*, or *Zoology*. There is no need to fill out a special application for the program.

To learn more about the LSFY program, visit the website (<https://departments.sciences.ncsu.edu/lsfy/>).

Contact

Life Sciences First Year Program

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Semester Sequence

This is a sample.

Course	Title	Hours
First Year		
Fall Semester		
LSC 101	Critical and Creative Thinking in the Life Sciences	2
LSC 103	Exploring Opportunities in the Life Sciences ¹	1
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4
Chemistry and Lab ²		4
Calculus ³		3-4
GEP Health and Exercise Studies (http://catalog.ncsu.edu/undergraduate/gep-category-requirements/gep-health-exercise-studies/)		1
Hours		15-16

Spring Semester

ENG 101	Academic Writing and Research	4
BIO 183	Introductory Biology: Cellular and Molecular Biology	4
Chemistry and Lab ²		4
Calculus ³		3-4
Hours		15-16
Total Hours		30-32

¹ Exploring Opportunities in the Life Sciences

- Most LSFY students will take LSC 103 Exploring Opportunities in the Life Sciences, which allows them to explore a variety of degree programs at NC State. Some students may instead choose a section that explores a single area within the life sciences in more depth—examples include BCH 103 Introduction to Biochemistry, MB 103 Introductory Topics in Microbiology, and PB 103 Perspectives on Botany. All sections of 103 will also address transition issues common to many first-semester college students as well as resources and opportunities available at NC State.

² Chemistry

- Chemistry Placement: Students who do not place into CH 101 Chemistry - A Molecular Science or more advanced chemistry should try to complete preparatory coursework (CH 111 Preparatory Chemistry or equivalent) in the summer prior to their freshman year.
- First Semester: Life science students take CH 101 Chemistry - A Molecular Science and CH 102 General Chemistry Laboratory to start their required coursework in chemistry, but those interested in pursuing chemistry, biochemistry, or chemical engineering will want to consider CH 103 General Chemistry I for Students in Chemical Sciences and CH 104 General Chemistry Laboratory I for Students in Chemical Sciences instead—these students should consult with an advisor to select the appropriate chemistry course.
- Second Semester: Students should work with their advisor and/or the Undergraduate Coordinator(s) in their major(s) of interest to decide on the appropriate chemistry course to take during their second semester. Some will want to take quantitative chemistry (CH 201 Chemistry - A Quantitative Science/CH 202 Quantitative Chemistry Laboratory) and some will want to start organic chemistry. Degree programs in the life sciences at NC State typically require two semesters of organic chemistry (CH 221 Organic Chemistry I/CH 222 Organic Chemistry I Lab and CH 223 Organic Chemistry II/CH 224 Organic Chemistry II Lab), but there are exceptions. The following require only one semester of organic chemistry (CH 220 Introductory Organic Chemistry or CH 221 Organic Chemistry I/CH 222 Organic Chemistry I Lab): Environmental Sciences and Marine Science Biological Oceanography. **Note:** CH 220 Introductory Organic Chemistry is not a replacement for CH 221 Organic Chemistry I and does not serve as a pre-requisite for CH 223 Organic Chemistry II.

³ Calculus

- Most NC State majors in life sciences require MA 131 Calculus for Life and Management Sciences A and MA 231 Calculus for Life and Management Sciences B, but some students (particularly those interested in Biochemistry and some aspects of Environmental Science) may wish to pursue the three semester sequence instead (MA 141 Calculus I, MA 241 Calculus II, and MA 242 Calculus III). Two life science majors (Nutrition Science

and Plant Biology) and some related majors require only one semester of calculus, and therefore accept MA 121 Elements of Calculus in place of MA 131 Calculus for Life and Management Sciences A. However, MA 121 Elements of Calculus cannot be used as a prerequisite for MA 231 Calculus for Life and Management Sciences B, so you should not take that option unless you are absolutely sure you will not want or need to take a second semester of calculus.

- Student who decide not to take a second semester of calculus should work with their advisor and/or the Undergraduate Coordinator(s) in their major(s) of interest to decide on an appropriate course to take during their second semester instead of calculus.
- Students who place into a pre-calculus course should try to complete preparatory coursework (MA 107 Precalculus I or equivalent) in the summer.

⁴ *ENG 101 Academic Writing and Research and the General Education Program (GEP)*

- All NC State students take 39 credit hours as part of the General Education Program (GEP). For students in the life sciences, 15 of those credit hours are met by major requirements. The remaining 24 GEP credit hours include ENG 101 Academic Writing and Research, which can be taken either the first or second semester of the first year. Any students taking an additional GEP Elective in the first year are encouraged to explore First Year Inquiry (http://www.ncsu.edu/firstyearinquiry/current_courses.htm) and the GEP course lists (<http://oucc.dasa.ncsu.edu/general-education-program/>) for Humanities or Social Sciences or Interdisciplinary Perspectives for courses of interest.

General Notes:

- Students entering NC State with credit for college courses will work with an advisor to determine appropriate course choices based on their interests and program requirements.
- All students are required to take online placement exams in chemistry and math before they finalize their first-semester schedules.
- Minimum requirements to be eligible for any degree program in the life sciences are C- or better grades in LSC 101 Critical and Creative Thinking in the Life Sciences, BIO 181 Introductory Biology: Ecology, Evolution, and Biodiversity, BIO 183 Introductory Biology: Cellular and Molecular Biology, CH 101 Chemistry - A Molecular Science or CH 103 General Chemistry I for Students in Chemical Sciences, and ENG 101 Academic Writing and Research. An overall GPA of 2.0 or better is required for continued enrollment at NC State.