Bachelor of Science in Biology

Program Overview

The Niswansder Department of Biology is dedicated to providing a welcoming academic environment with student-focused mentoring to graduate persons with the communication skills and technical expertise necessary to address today's complex biological challenges to improve the human condition. Students that major in biology can go into diverse settings such as biological research technician, government scientist, ecologist, high school biology teacher, science writing, health communication specialists, medical technologist, medicine, dentistry, or veterinary science.

Degree Requirements

To earn this degree, students must have a GPA of 2.0 or higher in the Major as well as an overall GPA of 2.0, complete a minimum of 120 credit hours, and fulfill the course requirements of the program listed below.

*This is a sample plan; specific courses may vary from year to year. Academic advisors will work with each student to develop their individual schedule.

| | Major Epocific | Required Courses | CREDITS |
|-----|--------------------------|---|---------|
| . / | Major-Specific | | CREDITS |
| | BIOL 106/L^ | Principles of Biology I/Lab | 4 |
| | BIOL 100/L BIOL 108/L | Principles of Biology II/Lab | 4 4 |
| | BIOL 229/L | Introduction to Molecular Biology/Lab | 4 |
| | BIOL 315/L | Ecology/Lab | 4 |
| | BIOL 395 | Orientation to Research | 1 |
| | 2.02395 | | - |
| | Choose 1 of the | e following: | CREDITS |
| | BIOL 243/L | Botany/Lab | 3 |
| | BIOL 245/L | Plant Sciences/Lab | 4 |
| | 10 | | |
| | Choose 1 of the | e following: | CREDITS |
| | BIOL 331/L | Invertebrate Zoology/Lab | 4 |
| | BIOL 364/L | Comparative Vertebrate Anatomy/Lab | 4 |
| | | | |
| | Choose 1 of the | e following: | CREDITS |
| | BIOL 475L | Internship in Biology | 3 |
| | BIOL 496 | Research in Biology | 3 |
| | | | |
| | Choose 1 of the | e following: | CREDITS |
| | BIOL 313/L | Microbiology/Lab | 4 |
| | BIOL 332 | DNA Science | 3 |
| | BIOL 365 | Cell Biology | 3 |
| | | | |
| | Nine hours of e | electives in biology | CREDITS |
| | Elective* | | 3 |
| | Elective* | | 3 |
| | Elective* | | 3 |
| | | | |
| | 2 semesters of | chemistry & lab selected from one sequence | CREDITS |
| | CHEM 105/R/L | Intro to Inorganic Chemistry/Recitation/Lab | 5 |
| | CHEM 106/L | Intro to Organic Chemistry/Lab | 4 |
| | OR | | |
| | | General Chemistry I/Recitation/Lab | 5 |
| | CHEM 113/R/L | General Chemistry II/Recitation/Lab | 5 |

| MAJOR | *Options |
|----------------|------------------|
| CORE | ^CORE equivalent |
| ELECTIVE/MINOR | |
| EXPERIENTIAL | |

Total Program Credits: 120+

| | CORE | | CREDITS | | | | |
|--------------|-----------------|-------------------------------------|---------|--|--|--|--|
| \sim | | Foundation | | | | | |
| | LA-FWS | First-Year Writing Seminar | 3 | | | | |
| | LA-FCS | First-Year Communication Seminar | 3 | | | | |
| | LA-FQR | R Quantitative Reasoning | | | | | |
| | LA-FSS | First Year Success Seminar | 1 | | | | |
| | LA-FCG | Cultural and Global Understanding | 3-5 | | | | |
| | | Exploration | | | | | |
| | LA-EAH | Arts and Humanities | 3 | | | | |
| | LA-ENS | Natural Sciences | 3-6 | | | | |
| | LA-ESS | Social Sciences | 3-4 | | | | |
| | | Transformation | | | | | |
| | LA-TFR | Faith, Reason, and Ethics | 3 | | | | |
| | LA-TBI | Big Issues - 2 courses | 6-7 | | | | |
| | LA-TCE | Creative Expression | 1-3 | | | | |
| | | | | | | | |
| | Additional cred | dits to bring total to 120+ credits | CREDITS | | | | |
| \checkmark | | Electives | | | | | |
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| | | Experiential Learning | | | | | |
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Example Course Sequence:

The following is a sample of a semester-by-semester approach to completing this program in 4 years.

| YEAR 1 | | | | | | |
|-----------------|-------------------------------------|---------|------------------|--|--|--|
| FIRST SEMESTER | | | | | | |
| COURSE | | CREDITS | PREREQUISITES | | | |
| BIOL 106/L^ | Principles of Biology I/Lab | 4 | Fall | | | |
| CHEM 111/R/L | General Chemistry I/Recitation/Lab | 5 | Fall | | | |
| LA-FWS | First-Year Writing Seminar | 3 | | | | |
| LA-FSS | First Year Success Seminar | 1 | | | | |
| LA-FCS | First-Year Communication Seminar | 3 | | | | |
| | | | | | | |
| JAN TERM | | | | | | |
| COURSE | | CREDITS | | | | |
| | | | | | | |
| | | | | | | |
| SECOND SEMESTER | | | | | | |
| COURSE | | CREDITS | | | | |
| BIOL 108/L | Principles of Biology II/Lab | 4 | Spring | | | |
| Elective* | | 3 | | | | |
| CHEM 113/R/L | General Chemistry II/Recitation/Lab | 5 | CHEM 111, Spring | | | |
| LA-FQR | Quantitative Reasoning | 4 | | | | |
| | | | | | | |
| | | 32 | | | | |

| YEAR 2 | | | | | | | | | |
|-----------------|---------------------------------------|---------|---|--|--|--|--|--|--|
| THIRD SEMESTER | | | | | | | | | |
| COURSE | | | PREREQUISITES | | | | | | |
| BIOL 229/L | Introduction to Molecular Biology/Lab | 4 | One year of biology & one year of chemistry | | | | | | |
| BIOL 245/L | Plant Sciences/Lab | 4 | BIOL 106/L, BIOL 108/L | | | | | | |
| LA-TFR | Faith, Reason, and Ethics | 3 | | | | | | | |
| ELECTIVE/MINOR | | 3 | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| JAN TERM | | | | | | | | | |
| COURSE | | CREDITS | | | | | | | |
| EXPERIENTIAL | | 3 | | | | | | | |
| | | | | | | | | | |
| FOURTH SEMESTER | | | | | | | | | |
| COURSE | | CREDITS | | | | | | | |
| BIOL 313/L | Microbiology/Lab | 4 | BIOL 229 or BIOL 260 | | | | | | |
| Elective* | | 3 | | | | | | | |
| LA-ESS | Social Sciences | 3 | | | | | | | |
| ELECTIVE/MINOR | | 3 | | | | | | | |
| | | | | | | | | | |
| | | 30 | | | | | | | |

4-Year Sample Schedule Cont.

| YEAR 3 | | | | | | | | |
|----------------|------------------------------------|---------|----------------------|-----------|--|--|--|--|
| FIFTH SEMESTER | | | | | | | | |
| COURSE | | CREDITS | PREREQUISITES | | | | | |
| Elective* | | 3 | | | | | | |
| LA-EAH | Arts and Humanities | 3 | | | | | | |
| LA-TCE | Creative Expression | 3 | | | | | | |
| ELECTIVE/MINOR | | 3 | | | | | | |
| ELECTIVE/MINOR | | 3 | | | | | | |
| JAN TERM | | | | | | | | |
| COURSE | | CREDITS | | | | | | |
| EXPERIENTIAL | | 3 | | | | | | |
| SIXTH SEMESTER | | | | | | | | |
| COURSE | | CREDITS | | | | | | |
| BIOL 364/L | Comparative Vertebrate Anatomy/Lab | 4 | BIOL 106/L, BIOL 108 | 8/L, Fall | | | | |
| LA-TBI | Big Issues | 3 | | | | | | |
| ELECTIVE/MINOR | | 3 | | | | | | |
| EXPERIENTIAL | | 3 | | | | | | |
| | | | | | | | | |
| | | 31 | | | | | | |

| YEAR 4 | | | | | | | |
|------------------|-----------------------------------|---------|---------------|-------------|--------------|-------------|---------|
| SEVENTH SEMESTER | | | | | | | |
| COURSE | | CREDITS | PREREQUISITES | | | | |
| BIOL 315/L | Ecology/Lab | 4 | BIOL 106 | L, BIOL 10 | 8/L, Fall, a | lternate ye | ears |
| BIOL 395 | Orientation to Research | 1 | BIOL 106 | L, BIOL 10 | 8/L, FWS | or ENG 11: | ı, Fall |
| LA-TBI | Big Issues | 3 | | | | | |
| LA-FCG | Cultural and Global Understanding | 3 | | | | | |
| EXPERIENTIAL | | 3 | | | | | |
| | | | | | | | |
| JAN TERM | | | | | | | |
| COURSE | | CREDITS | | | | | |
| BIOL 475 | Internship in Biology | 3 | Junior or s | senior stan | ding, BIOL | 395 | |
| | | | | | | | |
| EIGHTH SEMESTER | | | | | | | |
| COURSE | | CREDITS | | | | | |
| EXPERIENTIAL | | 3 | | | | | |
| ELECTIVE/MINOR | | 3 | | | | | |
| ELECTIVE/MINOR | | 3 | | | | | |
| EXPERIENTIAL | | 3 | | | | | |
| | | | | | | | |
| | | 29 | | | | | |
| | | | | | | | |
| | TOTAL CREDITS | 122 | | | | | |