

# BIOLOGY (B.S.)

## Bachelor of Science Program

Program Code: BS-AS

Major Code: BIL

The B.S. degree program in the biological sciences supplements a full curriculum in biology with significant ancillary science and mathematics courses. In addition to preparing students for careers at the bachelor's degree level, this degree program helps prepare students for graduate education in the fields of biology, health, and medicine.

A departmental honors program is also available. Students should contact the department for additional information.

BIO 111 is the required initial biology course in the program. Students must earn a C or better in BIO 111 to take more advanced biology courses.

## Academic Performance Policy

Students who have a GPA of less than 2.0 in BIO-prefixed courses required for the major at the end of a semester will be placed on departmental probation. Students will then have two semesters to raise their GPA to a 2.0 or greater in BIO-prefixed required courses or they will be dismissed from the department.

## Program Requirements

Code	Title	Credit Hours
General Education 23 Requirements ( <a href="http://ecatalog.buffalostate.edu/undergraduate/collegewide-degree-requirements-baccalaureate-degrees/#IF_Courses">http://ecatalog.buffalostate.edu/undergraduate/collegewide-degree-requirements-baccalaureate-degrees/#IF_Courses</a> )		
33 cr hrs		33
<b>Required Courses (33-34 cr hrs)</b>		
BIO 111	FOUNDATIONS OF BIOLOGY	3
BIO 211	INTRODUCTION TO CELL BIOLOGY AND GENETICS	4
BIO 213	INTRODUCTION TO ECOLOGY, EVOLUTION, AND BEHAVIOR	4
BIO 300	BIOSTATISTICS	4
or MAT 311	INTRODUCTORY PROBABILITY AND STATISTICS	
BIO 303	GENETICS	4
BIO 314	ADVANCED CELL BIOLOGY	4
BIO 316	GENERAL MICROBIOLOGY	4
BIO 333	BIOLOGICAL FORM, FUNCTION AND DIVERSITY	4
BIO 440	APPLICATIONS IN BIOTECHNOLOGY	3

## Electives (7-8 cr hrs)

BIO 301	CELL PHYSIOLOGY
BIO 305	MOLECULAR BIOLOGY
BIO 350	GENES IN POPULATIONS
BIO 402	COMPARATIVE ANIMAL PHYSIOLOGY
BIO 408	PLANT PHYSIOLOGY
BIO 435	CANCER BIOLOGY
BIO 450	RECOMBINANT DNA TECHNOLOGY
CHE 470	BIOCHEMISTRY I

## Select four credits of biology electives at the 300 level or above.

Excludes BIO 308, BIO 309, BIO 311, BIO 312, BIO 322, BIO 324 and BIO 355.

## Required Credit Hours Outside the Major (24 cr hrs)

CHE 111 & CHE 113	FUNDAMENTALS OF CHEMISTRY I and LABORATORY FOR FUNDAMENTALS OF CHEMISTRY I
CHE 112 & CHE 114	FUNDAMENTALS OF CHEMISTRY II and LABORATORY FOR FUNDAMENTALS OF CHEMISTRY II
CHE 201 & CHE 203	ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY LABORATORY I
CHE 202 & CHE 204	ORGANIC CHEMISTRY II and ORGANIC CHEMISTRY LABORATORY II
PHY 107	GENERAL PHYSICS I
PHY 108	GENERAL PHYSICS II

## All College Electives 13-27 credit hours

**Total Credit Hours 120**

Students will:

1. demonstrate an understanding of core concepts and principles in Biology
2. demonstrate proficiency in scientific writing