



# Transfer Planning Worksheet 2020-2021



**NORTH CENTRAL  
COLLEGE 1861**

Student Name: \_\_\_\_\_ North Central ID# \_\_\_\_\_ College Representative: \_\_\_\_\_ Date: \_\_\_\_\_

## Biology, Biological Sciences Track, B.S.

The B.S. degree in Biology provides a comprehensive foundation for students with interests in any area of the biological sciences, including key support courses from chemistry, physics and mathematics. This degree is appropriate for students planning for careers at the bachelor's level as well as those preparing for graduate or professional study after graduation. All B.S. students complete a common core, then select upper-division courses that match their specific interests and career plans. Research experience is built into the program for all students, as is the development of skills in scientific writing and presentation.

Students can choose from two tracks (and can switch between the tracks if their interests change). The Biological Science track is appropriate for those preparing for research careers, graduate school or employment in any area of biology, while the Biomedical Science track is appropriate for students preparing for medical, dental or veterinary programs after graduation. Students preparing for secondary education, for careers that combine biology with another area, or for the allied health fields may wish to consider a B.A. program.

## Major Requirements

Core Courses			
Course Name	Equivalent	Credit	Grade
BIOL 195 - Investigating Biology			
BIOL 210 - Cells and Systems	BIOL 2151 @ COD		
BIOL 220 - Ecology and Evolution	BIOL 2150 @ COD		
BIOL 230 - Genes and Genomics			
BIOL 240 - Biostatistics			
Capstone			
One of the following:			
Course Name	Equivalent	Credit	Grade
BIOL 410 - Animal Behavior			
BIOL 450 - Environmental Ecology Through Models and Experiments			
BCHM 465 - Advances in Biomedical Research			
Research Experience			
Students must complete a research experience which is presented in BIOL 490 - Seminar; students take the zero-credit BIOL 290 - Seminar twice as participants before presenting. The research experience could be any of the following:			
<ul style="list-style-type: none"> <li>Complete a capstone research course (BIOL 410, BIOL 450 or BCHM 465)</li> <li>Complete an on- or off-campus summer research program</li> <li>Complete an independent research project with a faculty member</li> <li>Complete a research-based internship or other project approved by the department chair</li> </ul>			
Biological Science Track Courses			
Advanced Electives			
Three of the following:			
Course Name	Equivalent	Credit	Grade
BIOL 310 - Biology of Animals			
BIOL 315 - Animal Physiology			
BIOL 320 - Plant Growth and Function			
BIOL 325 - Plant Interactions in a Changing World			
BIOL 330 - Evolution			
BIOL 340 - Infectious Disease			
BIOL 350 - Conservation Ecology			
BIOL 360 - Molecular Biology of Cancer			

BIOL 370 - Mechanisms of Development			
BCHM 365 - Principles of Biochemistry			
NEUR 310 - Advanced Molecular Neuroscience			

### Required Support Courses

Course Name	Equivalent	Credit	Grade
CHEM 121 - General Chemistry I	CHEM 1551 @ COD		
CHEM 122 - General Chemistry II	CHEM 1552 @ COD		
CHEM 251 - Organic Chemistry I	CHEM 2551 @ COD		
CHEM 252 - Organic Chemistry II	CHEM 2552 @ COD		
CHEM 310 - Chemical Analysis			

### Additional Requirements for the B.S. Degree

Course Name	Equivalent	Credit	Grade
MATH 151 - Calculus I	MATH 2231 @ COD		
MATH 152 - Calculus II	MATH 2232 @ COD		

### Physics Sequence

One of the following sequences:

#### Non-Calculus

Course Name	Equivalent	Credit	Grade
PHYS 131 - Physics I (Non-Calculus)	PHYS 1201 @ COD		
PHYS 132 - Physics II (Non-Calculus)	PHYS 1202 @ COD		

#### Calculus-Based

Course Name	Equivalent	Credit	Grade
PHYS 161 - Physics I: Mechanics and Heat	PHYS 2111 @ COD		
PHYS 162 - Physics II: Electromagnetism, Waves and Optics	PHYS 2112 @ COD		