

# Bioinformatics, Minor

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Bioinformatics is a field that lies at the intersection of biology, statistics and computer science and is focused on the analysis of large biological datasets. This interdisciplinary major gives students training of sufficient depth in both biology and computer science that they are competent to approach problems in bioinformatics from the perspective of both parent fields.

## Interdisciplinary Bioinformatics Minor

Code	Title	Hours
<b>Required Courses</b>		
BIOL 3201	Genetics <sup>1</sup>	3
BIOL 4201	Genomics and Bioinformatics	3
<b>Biology Elective - Choose one of the following:</b>		<b>3</b>
BIOL 2001	Principles of Biological Investigation	
BIOL 3101	Biochemistry and the Molecular Basis of Biology	
BIOL 3400	Ecology	
BIOL 3404	Evolutionary Biology	
BIOL 4404	Molecular Evolution	
COSC 2100	Data Structures <sup>2</sup>	3
<b>Choose one of the following:</b>		<b>3</b>
MATH 2780	Introduction to Regression and Classification	
MATH 3700	An Introduction to Modeling with Simulation and Scientific Computing	
COSC 3570	Introduction to Data Science	
or MATH 3570	Introduction to Data Science	
COSC 4610	Data Mining	
MATH 4730	Introduction to R for Statistics and Data Science	1
MATH 4740	Biostatistical Methods and Models <sup>3</sup>	3
or MATH 4720	Statistical Methods	
<b>Total Credit Hours:</b>		<b>19</b>

<sup>1</sup> BIOL 1001 General Biology 1 is a prerequisite for BIOL 3201 Genetics.

<sup>2</sup> COSC 1020 Object-Oriented Software Design is a prerequisite for COSC 2100 Data Structures.

<sup>3</sup> MATH 1400 Elements of Calculus, MATH 1410 Calculus for the Biological Sciences or MATH 1450 Calculus 1 is a prerequisite for MATH 4740 Biostatistical Methods and Models and MATH 4720 Statistical Methods.

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