

BIOINFORMATICS FOUNDATIONS AS

Purpose: The Bioinformatics Foundations AS offers students a powerful Computer Science option with an emphasis in Biology and Chemistry: the opportunity to complete an Associate of Science degree with course credits that are articulated with Winona State University Rochester's Computer Science – Bioinformatics bachelor's degree. The curriculum has been specifically designed so that students completing this degree and transferring to Winona State University Rochester will enter with junior-year status with courses applying to the Computer Science – Bioinformatics bachelor's degree program.

Award

Bioinformatics Foundations AS Degree..... 60 credits total
Computer Science Curriculum 19 credits
MnTC Curriculum/General Education 41 credits

Program course sequence begins in the Fall.

General Education courses may be taken in any semester. Contact your Advisor.

RECOMMENDED FULL-TIME COURSE SEQUENCE

Not all courses are scheduled every semester. See course schedule: <https://eservices.minnstate.edu/registration/search/basic.html?campusid=306>.

Semester 1		Semester 2	
COMP 1150 Computer Science Concepts	3 cr	COMP 2243 Programming and Problem Solving	4 cr
ENGL 1117 Reading and Writing Critically I	4 cr	MATH 1119 Applied Calculus	3 cr
BIOL 1220 Concepts of Biology	4 cr	Or	or
MnTC Goal 5	3 cr	MATH 1127 Calculus I	5 cr
Open Elective (PHED course recommended)	1 cr	COMM 1114 Fundamentals of Public Speaking	3 cr
		ENGL 1118 Reading & Writing Critically II	4 cr
Total Credits	15	Total Credits	14 -16
Semester 3		Semester 4	
COMP 2247 Algorithms and Data Structures	4 cr	CHEM 1127 Chemical Principles I	4 cr
MATH 2218 Discrete Mathematics	4 cr	MATH 2350 Introduction to Mathematical	4 cr
BIOL 2300 Genetics	4 cr	Statistics (Offered Spring Semester Only)	
MnTC Goal 6	3 cr	MnTC Goal 6	3 cr
		MnTC Goal 5	3 cr
		MnTC Electives (Approved MnTC course)	2 cr
Total Credits	15	Total Credits	16

RECOMMENDED PART-TIME COURSE SEQUENCE

Not all courses are scheduled every semester. See course schedule: <https://eservices.minnstate.edu/registration/search/basic.html?campusid=306>.

Semester 1		Semester 2	
ENGL 1117 Reading and Writing Critically I	4 cr	COMP 1150 Computer Science Concepts	3 cr
BIOL 1220 Concepts of Biology	4 cr	MnTC Goal 5	3 cr
		Open Elective (PHED course recommended)	1 cr
Total Credits	8	Total Credits	7
Semester 3		Semester 4	
COMP 2243 Programming and Problem Solving	4 cr	MATH 1119 Applied Calculus	3 cr
ENGL 1118 Reading & Writing Critically II	4 cr	Or	or
		MATH 1127 Calculus I	5 cr
		COMM 1114 Fundamentals of Public Speaking	3 cr
Total Credits	8	Total Credits	6 or 8

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Semester 5 COMP 2247 Algorithms and Data Structures MnTC Goal 6 Total Credit	4 cr 3 cr 7	Semester 6 MATH 2218 Discrete Mathematics BIOL 2300 Genetics Total Credits	4 cr 4 cr 8
Semester 7 CHEM 1127 Chemical Principles I MATH 2350 Introduction to Mathematical Statistics (Offered Spring Semester Only) Total Credits	4 cr 4 cr 8	Semester 8 MnTC Goal 6 MnTC Goal 5 MnTC Electives (Approved MnTC course) Total Credits	3 cr 3 cr 2 cr 8

Course descriptions can be found at: <https://www.rctc.edu/academics/courses/course-descriptions>.