# 2+2 Articulation Agreement for Carroll Community College and Towson University Associates Degree: A.S. in Biology

Bachelor's Degree:B.S. in Molecular Biology, Biochemistry, & Bioinformatics (M) Bioinformatics Concentration Effective Term: Fall 2019

#### Section 1: Course Completion Planfor Carroll CC

This section outlines the courses to take for the Carroll CCgeneral education and program requirements in order to complete both Carroll CC and TUdegrees within a total of 4 years and 120 credits. Refer to section 2 for specific course details and transfer planning information.

Table 1: General Education Courses Applied to TU Core Curriculum

Carroll CC Requirement	Carroll CC Course to Take	Credits	Towson University Equivalent Course	
English Composition	ENGL 101 College Writing	3	ENGL 102 Writing for a Liberal Education	
Mathematics	Choose one course:  fMATH 123 Precalculus 1  fMATH 130 Precalculus	4-5	Equivalency varies by course:  fMATH 115 College Algebra fMATH 119 Precalculus	
Arts & Humanities	Any arts & humanities course.	3	Equivalency will vary by course.	
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Social & Behavioral Sciences	Any social & behavioral science course.	3	Equivalency will vary by course.	
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Biological & Physical Sciences	CHEM 105 Principles of General Chemistry 1	4	CHEM 131 & CHEM 131L General Chemistry I Lecture & Lab	
Biological & Physical Sciences	BIOL 101 Fundamentals of Biology 1	4	BIOL 200 & BIOL 200L Intro Cell Biology & Genetics Lecture & Lab	
English Literature	ENGL 102 Writing about Literature	3	ENGL TLLEnglish Lower Level Elective	
Program Requirement	BIOL 102 Fundamentals of Biology 2	4	BIOL 202 Intro to Ecology & Evolution	

Total general education applied to the TU Core Curriculum: 34-35 cred its

Students will transfer with a Core Package 3, which indicates that they must only complete the Advanced Writing Seminar (Core 9) and Ethical Perspectives (Core 14) requirements at TU. If a student takes an ethics course as an Arts & Humanities general education course, they will be required to complete another Core Curriculum requirement. The Towson Seminar (Core 1) requirement is waived for all incoming transfer students.

Table 2: Program Requirements and Electives Applied to TU Degree

Carroll CC Requirement	Carroll CC Course to Take	Credits	Towson University Equivalent Course
Program Requirement	BIOL 215 Microbiology	4	BIOL 215 Essentials of Microbiology
Program Requirement	BIOL 240 Genetics 4		BIOL T09 Genetics
Program Requirement	CHEM 106 Principles of General Chemistry 2	4	CHEM 132 & CHEM 132L General Chemistry II Lecture & Lab

# Section 3: Degree Requirements to Be Completed at U

This section outlines the requirements students will complete upon transferring into the Bioinformatics concentration

## Section 4: Additional Requirements & Recommendations for TU Degree Completion

#### RECOMMENDATIONS FOR MB3 MAJOR -BIOINFORMATICS CONCENTRATION:

f Students who intend to complete graduate and/or professional degrees should consider completing two terms of physics. This is a requirement for many graduate and professional programs.

#### BACHELOR'S DEGREE REQUIREMENTS FOR ALL STUDENTS:

- f A C (2.0) or higher is required in all major courses and prerequisites.
- f A cumulative grade point average (GPA) of 2.0 is required.
- f 32 units of the bachelor's degree must be completed at the upper level (courses numbered 300 or above).

### **Degree Completion Summary**

TOTAL UNITS REQUIRED FOR B.S. DEGREE	120 UNITS
Carroll CC A.S. Degree in Biology	60-61
Completion of Core Curriculum at TU	6
MB3 Major – Bioinformatics Concentration Coursework Taken at TU	48
General Electives Taken at TU	5-6