

**ARTICULATION AGREEMENT**

**Between the**

**ASSOCIATE IN SCIENCE DEGREE – BIOLOGY PROGRAM**

**Of**

**Northern Essex Community College**

**And the**

**UNIVERSITY OF MASSACHUSETTS LOWELL**

**Kennedy College of Sciences**

**Fall 2017**

This articulation agreement has been established between Northern Essex Community College (NECC) and the University of Massachusetts Lowell's Kennedy College of Sciences (UML). This agreement was developed with the intent of facilitating the success of students at Northern Essex Community College (NECC) and the University of Massachusetts Lowell as well as the transfer of course credits between the two partner institutions. Furthermore, these agreements are intended to serve as a guideline for those who desire to complete their Associates of Science Degree in Biology at Northern Essex Community College while also transferring into Bachelor of Science in Biology (General or Bioinformatics Track) Degree Program at the University of Massachusetts Lowell.

Students completing the described course program, in accordance with the minimum standards as set in this agreement, will be admitted to the Biology Degree program (General or Bioinformatics Track) at the University of Massachusetts Lowell. Furthermore, such students who complete the described series of courses will receive an Associates of Science degree in Biology at NECC. Students who do not meet the minimum standards set forth herein will be considered for admissions to UML on a case-by-case basis.

#### OBJECTIVES:

1. To facilitate the completion of students' Associates of Science Degree in Biology at NECC.
2. To facilitate the completion of students' Bachelor of Science Degree in Biology Program (General or Bioinformatics Track) at UML.
3. To encourage the transfer of qualified students from Northern Essex Community College to the University of Massachusetts Lowell by providing effective and concise guidelines.
4. To award appropriate academic credit for courses completed at NECC towards UML's Biology degree program (General or Bioinformatics Track).

#### TERMS OF THE TRANSFER ARTICULATION AGREEMENT:

1. This document is based upon the evaluation of course descriptions offered by NECC and UML. NECC courses as listed in this agreement will transfer to UML provided a grade of "C- " or higher has been earned. Courses judged below college level by the University of Massachusetts Lowell will not be accepted for transfer credit.
2. UML guarantees the acceptance of all students who complete those NECC courses in the related concentrations as listed in the attached Programs of Study with an overall GPA of 2.5 or higher to the Bachelor of Science in Biology Degree Program.
3. UML guarantees the transfer of credit as stipulated in the attached Programs of Study. The University of Massachusetts Lowell may accept courses taken beyond the Associates Degree; however, students are encouraged to contact the transfer advisor at the University of Massachusetts Lowell for approval.
4. Northern Essex Community College transfer students will be subject to all general education requirements of the University of Massachusetts Lowell as set forth in the University of Massachusetts Lowell catalog. Students meeting the requirement of the General Education Foundation Courses (MASS Transfer Block) will be exempt from 35

credits of University general education requirements, but will be required to meet any specific Kennedy College of Sciences general education requirements, not to exceed two courses.

This agreement shall remain in effect for a period of three years from the date of its enactment, with the provision that the terms specified herein will continue to apply to students admitted from Northern Essex Community College's Associate in Science Degree: Biology program within one year of the expiration of the agreement. Each institution agrees to provide timely notice to the other in the event of any modification to the curriculum that might affect compatibility for admission and transfer of coursework. This agreement may be subject to change, with notification, if curriculum requirements change at either institution. Students admitted to the Northern Essex Community College's Associate in Science Degree: Biology program prior to such notification shall be admitted to the University of Massachusetts Lowell on the basis of this agreement. This agreement is conditional upon the Biology Department maintaining its' program approval from the Massachusetts Board of Higher Education.



**NORTHERN ESSEX COMMUNITY COLLEGE**  
 Associate of Science Biology  
 To  
**UNIVERSITY OF MASSACHUSETTS LOWELL**  
 Bachelor of Science Biology (Bioinformatics Track)

NECC Course Requirements

UMass Lowell Equivalent

BIO 111 Introductory Biology I	4	BIOL.1110 Principles of Biology I BIOL.1170L Experimental Biology I	3 1
BIO 112 Introductory Biology II	4	BIOL.1120 Principles of Biology II BIOL.1180L Experimental Biology II	3 1
BIO 215 General Ecology	4	BIOL.2400 Evolution, Ecology & Conserv.	3
BIO 230 Cell Biology	4	BIOL. 2200 Princ of Cell& Molecular Bio	3
CHM 121 General Chemistry I	4	CHEM.1210 Chemistry I CHEM.1230L Chemistry I Laboratory	3 1
CHM 122 General Chemistry II	4	CHEM.1220 Chemistry II CHEM.1240L Chemistry II Laboratory	3 1
CHM 221 Organic Chemistry I	4	CHEM. 2210 Organic Chemistry I CHEM. 2270L Organ Chem Lab 1A	3 1
CHM 222 Organic Chemistry II	4	CHEM. 2220 Organic Chemistry II CHEM. 2280L Organic Chem Lab IIA	3 1
ENG 101 English Composition I	3	ENGL.1010 College Writing I	3
ENG 102 English Composition II		ENGL.1020 College Writing II	3
MAT 125 Statistics and MAT 171 Calculus for Business/Social/Life Sciences OR MAT 251 Calculus I and MAT 252 Calculus	4	MATH.2830 Introduction to Statistics And MATH.1220 Management Calculus <b>OR</b> MATH.1310 Calculus I And MATH.1320 Calculus II	3 4 4 4
Behavioral Science Elective Strongly Recommended: PSY 101 Intro Psychology	3	PSYC.1010 Introduction to Psychological Sciences	3
Social Science Elective Strongly Recommended: ECO 201 Microeconomics Or ECO 202 Macroeconomics	3	ECON.2010 Microeconomics Or ECON.2020 Macroeconomics	3
Humanities Elective Strongly Recommended: PHI 110 Ethics	3	PHIL.2030 Introduction to Ethics	3
Humanities Elective Strongly Recommended: ENG 103 Technical Writing	3	ENGL.2260 Scientific & Tech Comm	3

**Additional course to be taken via NECCUM**

<b>Additional course to be taken via NECCUM</b>			
Biology Elective: Strongly Recommended: Via NECCUM BIOL. 2350 Genetics BIOL. 2370 Problems in Genetics (Can use as BIO Elective in NECC Program)	3 1	BIOL. 2350 Genetics BIOL. 2370 Problems in Genetics	3 1
<i>Not required for NECC Graduation but can be taken via NECCUM</i>	0	MATH. 3210 Discrete Structures I <b>Or</b> MATH. 1390 Calculus for Life Sciences II	4