

# **ARTICULATION AGREEMENT**

**Between the**

**ASSOCIATE IN SCIENCE DEGREE – Computer Science:  
Computer Science Transfer Concentration**

**PROGRAM**

**Of**

**Northern Essex Community College**

**And the**

**UNIVERSITY OF MASSACHUSETTS LOWELL  
College of Science**

**Spring 2019**

This articulation agreement has been established between Northern Essex Community College (NECC) and the University of Massachusetts Lowell's College of Science (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 Computer Science Transfer Concentration at Northern Essex Community College while also transferring into Bachelor of Science in Computer Science Degree Program at the University of Massachusetts Lowell.

Students completing the described course programs, in accordance with the minimum standards as set in this agreement, will be admitted to the Computer Science Degree program at the University of Massachusetts Lowell. Furthermore, such students who complete the described series of courses will receive an Associates of Science Degree in Computer Science Transfer Concentration at NECC, and may qualify for a tuition waiver through UML's Massachusetts Advantage Plus Program as described below. Students who do not meet the minimum standards set forth herein will be considered for admission to UML on a case-by-case basis.

#### OBJECTIVES:

1. To facilitate the completion of students' Associates of Science Degree in Computer Science Transfer at NECC.
2. To facilitate the completion of students' Bachelor of Science Degrees in various Computer Science Program 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 Computer Science degree program.

#### 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. When appropriate, the requirements of the Mass Transfer Program will be honored. 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 Program of Study with an overall GPA of 2.5 or higher to the appropriate Bachelor of Science in Computer Science Degree Program.
3. UML guarantees the transfer of credit as stipulated in the attached Program of Study. The University of Massachusetts Lowell may accept courses taken beyond the Associates Degree (60 credits); 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. Northern Essex Community College students interested in participating in this agreement are advised to take liberal arts courses that are recommended in this agreement for the best possible transfer experience.
5. Under the UML Massachusetts Advantage Plus Program, Massachusetts state community college students who have earned an Associate's degree in Computer Science Transfer Concentration from NECC and graduated with a 3.0 or better grade point average will receive a full-tuition waiver at UML. After transferring, students must be continuously enrolled and maintain a 3.0 grade point average at UML to continue the waiver for up to four semesters.


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: Computer Science: Computer Science Transfer Concentration 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: Computer Science Transfer Concentration 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 Computer Science Department maintaining its' program approval from the Massachusetts Board of Higher Education.




Between the Associate in Science Degree: Computer Science Transfer  
NORTHERN ESSEX COMMUNITY COLLEGE  
And the  
UNIVERSITY OF MASSACHUSETTS LOWELL  
College of Sciences


 4/11/19  
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Lane A. Glenn  
President,  
Northern Essex Community College

 5/29/19  
Jacqueline Moloney Date  
Chancellor  
University of Massachusetts Lowell


 4/11/19  
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William Heineman Date  
Vice President, Academic and Student Affairs  
Northern Essex Community College

 5/16/19  
\_\_\_\_\_  
Michael Vayda Date  
Provost and Vice Chancellor  
for Academic Affairs  
University of Massachusetts Lowell

**Julie Chen, Ph.D.**  
**Interim Provost**


  
Carolyn Knoepfler  
Assistant Dean, Science, Technology,  
Engineering, and Mathematics (STEM)  
Northern Essex Community College

4/3/19  
Date


 05/14/2019

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Nouredine Melikechi Date  
Dean, Kennedy College of Sciences  
University of Massachusetts Lowell


4/3/19  
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 Jason Termini Date  
 Department Chair, Computer Sciences  
 Northern Essex Community College

David Adams  
Computer Science  
Undergraduate Coordinator  
University of Massachusetts Lowell

 5/31/19  
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Gerald Durkin Date  
Associate Dean of Enrollment and  
Director of Transfer Admissions  
University of Massachusetts Lowell

**NORTHERN ESSEX COMMUNITY COLLEGE**  
Associate of Science in Computer Science: Computer Science Concentration  
To  
**UNIVERSITY OF MASSACHUSETTS LOWELL**  
Bachelor of Science in Computer Science

NECC Course Requirements		UMass Lowell Equivalent & Credits	
CIS 113 Database Management	4	CS.1990-Computer Sci. 1000 Elective	3
CIS 115 Information Security	4	CS.1990 Computer Sci. 1000 Elective	3
CIS117 Intro to Linux	1	CS.1990 Computer Sci.1000 Elective	1
CIS 154 C Programming	4	COMP.1010 Computing 1 COMP1030L Computing 1 Lab	3 1
CIS 160 Computer Science 1	4	COMP. 1990 Computer Sci. 1000 Elective	4
CIS 252 Computer Science II	4	COMP. 1020 Computing II COMP. 1040L Computing II Lab	3 1
CIS 225 Microcomputers	4	COMP. 2030 Assembly Language Programming COMP.2030L Assembly Language Programming Lab	3 1
ENG 101 English Composition 1	3	ENGL.1010 College Writing I	3
ENG 102 English Composition II	3	ENGL. 1020 College Writing II	3
MAT 251 Calculus I	4	MATH.1310 Calculus I	4
MAT 252 Calculus II	4	MATH.1320 Calculus II	4
<b>Program Electives</b>			
CIS 240 C++ Programming	4	COMP. 2010 Computing III COMP.2010L Computing III Lab	3 1
CTE 101	3	EECE.2650 Logic Design	3
CTE 103	1	No Transfer Credit, but experience is a plus	0
Natural Science <b>Strongly Recommended:</b> PHS 131, CHM 121, BIO 111	4	Appropriate Natural Science Equivalent with Lab	4
<b>Electives</b>			
Humanities Elective <b>Strongly Recommended:</b> COM 112 Interpersonal Communications	3	ENGL. 2200 Oral& Written Communication for CS	3
Social Science Elective <b>Strongly Recommended:</b> SOC 101 Introduction to Sociology	3	SOCI.1010 Introduction to Sociology	3
Free Elective	3/4	See Advisor for appropriate elective	
<b>Additional Courses Taken Via NECCUM</b>			
Not required for NECC Graduation but can be taken via NECCUM – Fall Yr 2		MATH.2190 Discrete Structures I (Prereq MAT 251)	3

<i>Not required for NECC Graduation but can be taken via NECCUM –Spring Yr 2</i>		MATH. 3220 Discrete Structures II Prereq Discrete Structures 1.	3
<i>Not required for NECC Graduation but can be taken via NECCUM—Spring Yr 2</i>		MATH.3860 Probability and Statistics (Prereq MAT 252	3