

ARTICULATION AGREEMENT

between

**NORTHERN ESSEX COMMUNITY COLLEGE**

Associate in Science

Computer and Information Sciences: Information Technology Option

Computer and Information Science: Networking and Security Option

and the

**UNIVERSITY OF MASSACHUSETTS LOWELL**

Bachelor of Science in Information Technology

Fall 2023

This articulation agreement has been established between Northern Essex Community College (NECC) and the University of Massachusetts Lowell Kennedy College of Sciences and the Division of Graduate, Online & Professional Studies.

Students completing the Associate in Science in Computer and Information Sciences: Information Technology Option, or the Associate in Science Computer and Information Sciences: Networking and Security Option at Northern Essex Community College, in accordance with the minimum standards as set by the University of Massachusetts Lowell, will be admitted to the Bachelor of Science in Information Technology Degree at the University as juniors. Students who do not meet the minimum standards will be considered for admission on a case-by-case basis.

**OBJECTIVES:**

1. To encourage the transfer of qualified students from Northern Essex Community College to UMass Lowell.
2. To award academic credit for courses completed for the associate degree toward the requirements for the bachelor's degree as stated in this agreement.
3. To provide students with accurate and clear information regarding the transfer of their coursework and credits to UMass Lowell.

**TERMS OF THE ARTICULATION AGREEMENT:**

1. UMass Lowell guarantees the acceptance of students who complete one of the associate degree programs at NECC with an overall cumulative GPA of 2.0 or better to the Bachelor of Science in Information Technology program at UMass Lowell. All bachelor's degree candidates are required to earn a minimum 2.00 cumulative grade point average (GPA) in their UMass Lowell courses, to present a minimum of 120 credits, fulfill the residency requirements, conform to the general regulations and requirements of the University, satisfy the regulations and academic standards of the colleges which exercise jurisdiction over the degrees for which they are matriculating, satisfy the curriculum requirements established by the departments or programs in their major, and complete the University's Core Curriculum requirements, which are listed within the program's curriculum outline.
1. This agreement acknowledges the transfer of credit as stipulated in the attached Program of Studies and requires the completion of the associate degree. UMass Lowell may accept courses taken beyond the associate degree (20 courses); however, students are encouraged to contact the advisor within the program department for approval.
2. UMass Lowell normally requires that 50% of the major is completed in residence.
3. Students transferring from NECC will be subject to all general education requirements at UMass Lowell as set forth in the UMass Lowell catalog. Students interested in participating in this agreement should be advised to take the suggested liberal arts courses. These courses are required at UMass Lowell and students are advised to complete them as a part of their associate degree. Students meeting the requirements of the General Education Foundation Courses (formerly known as the *Mass Transfer Block*) will be deemed to have completed the

University's Core Curriculum Requirements but will be required to meet any specific Information Technology Department general education requirements.

4. This document is based upon the evaluation of course descriptions presented to UMass Lowell. Courses listed in this agreement will transfer provided a grade of "C- "or better has been earned. Where a student has successfully completed the Mass Transfer Block at NECC, it will be honored by UMass Lowell.

This agreement shall remain in effect for a period of three years from the date the agreement is signed by both parties, with the provision that the terms specified herein will continue to apply to students admitted from NECC, within one year of the expiration of the agreement. Each institution agrees to provide timely notice to the other in event of any modification to the curriculum that might affect compatibility for admission and transfer of coursework. This agreement may be terminated with notice if curriculum requirements change at either institution. This agreement may be replaced by mutual consent of both institutions at any time and the terms of that agreement will replace those in this agreement. Students admitted to the associate degree program prior to notification of termination or execution of a replacement agreement shall be admitted to UMass Lowell based on this agreement.

**Attachments: A, A1, B, B1**

**A. NECC AS IT Option to UMass Lowell BS IT Program**

**A1. NECC AS IT option in BSIT Curriculum**

**B. NECC AS Networking and Security Option to UMass Lowell BS IT Program**

**B1. NECC AS Networking and Security Option in BSIT Curriculum**

SIGNATURES

University of Massachusetts Lowell

DocuSigned by:  
*Joseph Hartman*

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Joseph Hartman, Ph.D., P.E.  
Provost and Vice Chancellor  
Academic Affairs

Northern Essex Community College

DocuSigned by:  
*Lane Glenn*

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Lane Glenn, Ph.D.  
President

DocuSigned by:  
*Paul Beaudin*

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Paul Beaudin, Ph.D.  
Provost

DocuSigned by:  
*Noureddine Melikechi*

AF11B9D0849742F...

Noureddine Melikechi, D.Phil.  
Dean of Kennedy College of Sciences

DocuSigned by:  
*Carolyn Knoepfler*

FD1C47C1E0D54A3...

Carolyn Knoepfler, Ph.D.  
Dean of STEM

DocuSigned by:  
*Holly Yanco*

F152CE1540A6494...

Holly Yanco, Ph.D.  
Chair, Computer Science

DocuSigned by:  
*Jason Termini*

6623668B90F1498...

Jason Termini, MS  
Chair, Computer, and Information Sciences

DocuSigned by:  
*Nancy Ludwig*

B4D4D2247EFF426...

Nancy Ludwig, Ed.D.  
Executive Dean,  
Division of Graduate, Online & Professional Studies

DocuSigned by:  
*Yelena Rykalova*

3A435002D96A401...

Yelena Rykalova, Ph.D.  
Assistant Teaching Professor  
BSIT Program Coordinator

DocuSigned by:  
*Michelle Sunday*

88F643122501463...

Michelle Sunday, M.Ed.  
Director of Transfer, Articulation, and  
Academic Center Advising

## Transfer Agreement (Guide) For

Be (NECC)-AS in Computer & Information Science: Information Technology Option  
Transferring into UMass Lowell (UML) Bachelor of Science in Information Technology-  
Division of Graduate, Online and Professional Studies ([Online](#))

NECC Courses		UMASS Lowell Equivalents	
ENG101 English Composition I	3	ENGL.1010 College Writing I	3
ENG102 English Composition II	3	ENGL.1020 College Writing II	3
Free Elective	3	Appropriate equivalent course	3
<b>Strongly recommended: a Lab Science (required in UML's Core)</b>		<b>Science course must include a lab and be 4 credits</b>	
Humanities Elective	3	Appropriate equivalent course	3
Math Elective <b>Strongly recommend MAT 125 (required in BSIT Program)</b>	4	<b>MAT 125-Statistics transfers in as MATH.2830 Intron to Statistics (Required in the BSIT program)</b>	3
Math Elective <b>Strongly recommend: MAT 130 (Precalculus for Bus/Soc/L. Sci required in BSIT program)</b>	4	<b>MAT 130-Precal for Bus/Soc/LS transfers in as MATH.1205 Applied Precalculus (Required in the University Core Curriculum)</b>	3
Social Science Elective	3	Appropriate equivalent course	3
CIS112 Integrated Computer Applications	4	COMP.1990 Computer Sci 1000 level Elect	3
CIS 113 Data Management	4	COMP.1990 Computer Sci 1000 level Elect	3
CIS114 Help Desk & Soft Skills	3	<b>No Transfer Credits</b>	0
CIS115 Information Security	4	INFO 2950: Principles of Information Security	3
CIS117 Introduction to Linux	1	COMP.1990 Computer Sci 1000 level Elect	1
CIS140 Introduction to Computer Science	4	COMP.1990 Computer Sci 1000 level Elect	3
CIS153 Programming for IT	4	INFO.2030 Introduction to Programming with Python	3
CIS245 Linux Administration	4	INFO.2990 Info Tech 2000 level elective	3
CTN110 Introduction to Information Technology	3	INFO.1600 Intro to Info Systems	3
CTN201 Computer Networks I	3	INFO.2750 Networking	3
Program Elective <b>Strongly Recommend: Take one of the following courses: CIS 154, CIS 215, CIS 220, CIS 235 or CTN 222</b>	3/4	Free Elective (Applied to BSIT Program)	3
Program Elective <b>Strongly Recommend: Take one of the following courses: CIS 254, CIS 215, CIS 220, CIS 235 or CTN 222</b>	3/4	Free Elective (Applied to BSIT Program)	3
<b>See Attachment A1 for number of Credits Transferring into BSIT</b>			

*INFO Tech and COMP Sci electives that have been evaluated and are applicable to the associate degree from NECC will be credited towards the BSIT Elective requirements.*

## Attachment A1

	UML Course ID	University Breadth of Knowledge Requirements (12 courses/36-38 credits)	Credits	NECC Course ID	Northern Essex CC AS in CIS: Information Technology Option	Credits
University Core	ENGL.1010	College Writing, I	3	ENG 101	English Comp I (3)	3
	ENGL.1020	College Writing II	3	ENG 102	English Comp II (3)	3
	----,----	Arts & Humanities Course (AH) Ethics Course-choose from approved courses	3			
	----,----	Arts & Humanities Course (AH) Writing course-choose from approved courses	3			
	----,----	Arts & Humanities Course (AH)	3		Humanities Elective (3)	3
	----,----	Social Sciences Course (SS)	3		Social Science Elective (3)	3
	----,----	Social Sciences Course (SS)	3			
	----,----	Social Sciences Course (SS)	3			
	MATH.1205	Applied Pre-Calculus	3		Math Elective: <b>Strongly recommended: MAT 130 (4) (Required in BSIT Program)</b>	3
	----,----	Science with Lab Perspective (SCL) & Lab	3 or 3+1		Free Elective: <b>Strongly recommend Science with Lab (4) ****</b> see below	3+1
----,----	Science with Lab Perspective (SCL) & Lab	3 or 3+1				
----,----	STEM Perspective Course: INFO.1600-Intro to Info Systems	3	CTN 110	Intro to Information Technology (3)	3	
		<b>Total Credits</b>	<b>36-38</b>			<b>22</b>
		<b>Information Technology Degree Requirements</b>				
		<b>14-15 courses/42 credits</b>				
IT Requirements	INFO 2670	C Programming	3			
	INFO 2750	Networking	3	CTN 201	Computer Networks (3)	3
	INFO 2950	Principles of Information Security	3	CIS 115	Information Security (4)	3
	INFO 2785	Intro to Operating Systems	3			
	MIST 3030	Database Management Systems	3			
	INFO 3600	Intro to Data Structures w/C	3			
	INFO 2380	Website Development	3			
	INFO 3120	Shell Scripting	3			
	INFO3070	Intro to Cloud Computing	3			
	MIST 4020	Systems Analysis and Design	3			
	INFO 4800	Project based Info Systems <b>OR</b>	6			
	INFO 4770	Project Based Info Systems I	3			
		<b>AND</b>				
	INFO 4780	Project Based Info Systems Part II	3			
MATH 2830	Intro to Statistics			Math Elective: <b>Strongly recommend MAT 125 (4)</b>	3	
MATH 2195	Discrete Structures for IT <b>OR</b>	3				
MATH.2190	Discrete Structures					
		<b>Total Credits</b>	<b>42</b>			<b>9</b>
		<b>Information Technology Electives</b>				
		<b>(7 courses/21 credits)</b>				
IT Electives		Information Technology Elective	3	CIS 112	Integrated Computer Applications (4)	3
		Information Technology Elective	3	CIS 113	Database Management (4)	3
		Information Technology Elective	3	CIS 153	Programming for IT (4)	3
		Information Technology 3000/4000 Elective	3			
		Information Technology 3000/4000 Elective	3			
		Information Technology 3000/4000 Elective	3			
		Information Technology 3000/4000 Elective	3			
		<b>Total Credits</b>	<b>21</b>			<b>9</b>

Free Electives	<b>Free Electives (7 courses/21 credits) **</b>					
	Free Elective	3	CIS 117	Introduction to Linux (1) plus 2 UNCR credits (excess credits from 4 credit IT courses)	3	
	Free Elective	3	CIS 140	Introduction to Computer Science (4)	3	
	Free Elective	3	CIS 245	Linux Administration (4)	3	
	Free Elective	3		Program Elective-Strongly recommended: CIS 154, CIS 215, CIS 220, CIS 235, or CTN 222	3	
	Free Elective	3		Program Elective-Strongly recommended: CIS 154, CIS 215, CIS 220, CIS 235, or CTN 222	3	
	Free Elective	3		UNCR Credits from NECC 4 credit IT courses	3	
	Free Elective	3				
		<b>Total Credits</b>	<b>21</b>			<b>18</b>
		<b>Total Program Credits</b>			<b>Transfer Credits</b>	<b>58 ***</b>

NOTES: \* IT Electives may be used towards certificate when possible

\*\* Free Electives may be used towards a minor when possible

\*\*\* **Number of credits transferred and applied to program is dependent on students taking the recommended Math courses.**

\*\*\*\* In order to transfer 4 credits in for the Science course, the course taken must be 4 credits that includes the lab.

UNCR credits are excess credits from NECC 4 credit IT courses.

**Attachment B****Transfer Agreement  
(Guide) For**

Be (NECC)-AS in Computer & Information Science: Networking and Security Option  
 Transferring into UMass Lowell (UML) Bachelor of Science in Information Technology-  
 Division of Graduate, Online and Professional Studies (**Online**)

NECC Courses		UMASS Lowell Equivalents	
ENG101 English Composition I	3	ENGL.1010 College Writing I	3
ENG102 English Composition II	3	ENGL.1020 College Writing II	3
Humanities Elective	3	Appropriate equivalent course	3
Math Elective <b>Strongly recommended: MAT 125 (Required in BSIT Program)</b>	4	<b>MAT 125-Statistics transfers in as MATH.2830 Intron to Statistics (Required in the BSIT program)</b>	3
Math Elective <b>Strongly recommended: MAT 130 (Precalculus for Bus/Soc/L. Sci required in BSIT program Required in BSIT Program)</b>	4	<b>MAT 130-Precal for Bus/Soc/LS transfers in as MATH.1205 Applied Precalculus (Required in the University Core Curriculum)</b>	3
Social Science Elective	3	Appropriate equivalent course	3
CIS 113 Data Management	4	COMP.1990 Computer Sci 1000 level Elect	3
CIS115 Information Security	4	INFO 2950: Principles of Information Security	3
CIS117 Introduction to Linux	1	COMP.1990 Computer Sci 1000 level Elect	1
CIS140 Introduction to Computer Science	4	COMP.1990 Computer Sci 1000 level Elect	3
CIS153 Programming for IT	4	INFO.2030 Introduction to Programming with Python	3
CIS215 Advanced Computer Security	4	INFO.2990 Info Tech 2000 level elective	3
CIS245 Linux Administration	4	INFO.2990 Info Tech 2000 level elective	3
CTN110 Introduction to Information Technology	3	INFO.1600 Intro to Info Systems	3
CTN201 Computer Networks 1	3	INFO.2750 Networking	3
CTN222 Computer Networks II	4	COMP.2990 Computer Sci 2000 level elect	3
CTN223 Computer Networks III	4	COMP.2990 Computer Sci 2000 level elect	3
Program Elective <b>Strongly recommended: Take one of the following: CIS 154, CIS220 or CIS 235</b>	3/4	Free Elective (Applied to BSIT Program)	3
Program Elective <b>Strongly recommended: Take one of the following: CIS 154, CIS220 or CIS 235</b>	3/4	Free Elective (Applied to BSIT Program)	3
<b>See Attachment B1 for number of Credits Transferring into BSIT</b>			

*INFO Tech and COMP Sci electives that have been evaluated and are applicable to the associate degree from NECC will be credited towards the BSIT Elective requirements.*



## Attachment B1

	UML Course ID	University Breadth of Knowledge Requirements (12 courses/36-38 credits)	Credits	NECC Course ID	Northern Essex CC AS in CIS: Networking and Security Option	Credits
University Core	ENGL.1010	College Writing, I	3	ENG 101	English Comp I (3)	3
	ENGL.1020	College Writing II	3	ENG 102	English Comp II (3)	3
	----,----	Arts & Humanities Course (AH) Ethics Course-choose from approved courses	3			
	----,----	Arts & Humanities Course (AH) Writing course-choose from approved courses	3			
	----,----	Arts & Humanities Course (AH)	3		Humanities Elective (3)	3
	----,----	Social Sciences Course (SS)	3			
	----,----	Social Sciences Course (SS)	3		Social Science Elective (3)	3
	----,----	Social Sciences Course (SS)	3			
	MATH.1205	Applied Pre-Calculus	3		Math Elective: <b>Strongly recommended: MAT 130</b>	3
	----,----	Science with Lab Perspective (SCL) & Lab	3 or 3+1			
----,----	Science with Lab Perspective (SCL) & Lab	3 or 3+1				
----,----	STEM Perspective Course: INFO.1600-Intro to Info Systems	3	CTN110	Introduction to Information Technology	3	
		<b>Total Credits</b>	<b>36-38</b>			<b>18</b>
		<b>Information Technology Degree Requirements 14-15 courses/42 credits</b>				
IT Requirements	INFO 2670	C Programming	3			
	INFO 2750	Networking	3	CTN 201	Computer Networks (3)	3
	INFO 2950	Principles of Information Security	3	CIS 115	Information Security (4)	3
	INFO 2785	Intro to Operating Systems	3			
	MIST 3030	Database Management Systems	3			
	INFO 3600	Intro to Data Structures w/C	3			
	INFO 2380	Website Development	3			
	INFO 3120	Shell Scripting	3			
	INFO3070	Intro to Cloud Computing	3			
	MIST 4020	Systems Analysis and Design	3			
	INFO 4800	Project based Info Systems <b>OR</b>	6			
	INFO 4770	Project Based Info Systems I	3			
	INFO 4780	<b>AND</b> Project Based Info Systems Part II	3			
	MATH 2830	Intro to Statistics	3		Math Elective: <b>Strongly recommend MAT 125</b>	3
MATH 2195	Discrete Structures for ITOR	3				
MATH.2190	Discrete Structures					
		<b>Total Credits</b>	<b>42</b>			<b>9</b>
		<b>Information Technology Electives (7 courses/21 credits) *</b>				
IT Electives		Information Technology Elective	3	CIS 113	Database Management (4)	3
		Information Technology Elective	3	CIS 153	Programming for IT (4)	3
		Information Technology Elective	3	CIS 215	Advanced Computer Security (4)	3
		Information Technology 3000/4000 Elective	3			
		Information Technology 3000/4000 Elective	3			
		Information Technology 3000/4000 Elective	3			
		Information Technology 3000/4000 Elective	3			
		<b>Total Credits</b>	<b>21</b>			<b>9</b>

Free Electives		<b>Free Electives (7 courses/21 credits) **</b>					
		Free Elective	3	CIS 117	Introduction to Linux (1) plus 2 UNCR credits (excess credits from 4 credit IT courses)	3	
		Free Elective	3	CIS 140	Introduction to Computer Science (4)	3	
		Free Elective	3	CIS245	Linux Administration (4)	3	
		Free Elective	3	CTN 222	Computer Networks II (4)	3	
		Free Elective	3	CTN 223	Computer Networks III (4)	3	
		Free Elective	3		Program Elective-Strongly recommended: CIS 154, CIS220 or CIS 235	3	
		Free Elective	3		Program Elective-Strongly recommended: CIS 154, CIS220 or CIS 235	3	
			<b>Total Credits</b>	<b>21</b>			<b>21</b>
			<b>Total Program Credits</b>	<b>120</b>		<b>Transfer Credits</b>	<b>57 ***</b>

**NOTES:** \* IT Electives may be used towards certificate when possible

\*\* Free Electives may be used towards a minor when possible

\*\*\* **Number of credits transferred and applied to program is dependent on students taking the recommended Math courses.**

**UNCR credits** are excess credits from NECC 4 credit IT courses.