ARTICULATION AGREEMENT

Between the

ASSOCIATE IN SCIENCE DEGREE – ENGINEERING PROGRAM

Of

Northern Essex Community College

And the

UNIVERSITY OF MASSACHUSETTS LOWELL
James B. Francis College of Engineering

Fall 2011
This articulation agreement has been established between Northern Essex Community College (NECC) and the University of Massachusetts Lowell’s College of Engineering (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 Engineering at Northern Essex Community College while also transferring into Bachelor of Science in Engineering Degree Programs 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 corresponding Engineering 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 Engineering 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 Engineering at NECC.
2. To facilitate the completion of students’ Bachelor of Science Degrees in various Engineering Programs 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 engineering degree programs.

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 Programs of Study with an overall GPA of 2.5 or higher to the appropriate Bachelor of Science in Engineering Degree Program.

3. UML guarantees the transfer of credit as stipulated in the attached Programs of Study. The University of Massachusetts Lowell requires that at least 50% of the major be completed in residence; the total number of credits required to earn a Bachelor of Science in Engineering Degree from UML is at least 122 credits and varies by Degree Program. 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 should be advised to take liberal arts courses that will transfer as general education electives.

5. Under the UML Massachusetts Advantage Plus Program, Massachusetts state community college students who have earned an Associate's degree in Engineering Science 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: Basic Engineering 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: Basic Engineering 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 Engineering Department maintaining its’ program approval from the Massachusetts Board of Higher Education.
ARTICULATION AGREEMENT
Between the Associate in Science Degree: Basic Engineering
NORTHERN ESSEX COMMUNITY COLLEGE
And the
UNIVERSITY OF MASSACHUSETTS LOWELL
College of Engineering

Signature Page

Lane A. Glenn  Date  Marty Meehan  Date
President, Northern Essex Community College  Chancellor, University of Massachusetts Lowell

William Heineman  Date
Vice President for Academic Affairs

Susan Grolnic  Date  John Ting  Date
Dean, Art, Business, Communication and Technology  Dean, James B. Francis, College of Engineering

Paul Chanley  Date
Program Coordinator, Engineering & Electronic Technology

Grace Y. A. Young  Date  Gerald Durkin  Date
Dean, Academic Advising Articulation, Transfer, Testing and TRiO  Associate Dean of Enrollment and Director of Transfer Admissions
## NECC Course Requirements & Credits | UMass Lowell Equivalent & Credits
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**CHM 121 General Chemistry I** | **84.121,123 Chemistry I/Lab**<br>4<br>**CIS 140 Intro to Computer Science** | **25.108 Intro Engineering II**<br>2<br>**CTE 101 Fundamentals Digital Logic and Design Lab** | **16.265 Logic Design**<br>5<br>**ECO 201 Micro Economics** | **49.201 Microeconomics**<br>3<br>**ECO 202 Macro Economics** | **49.202 Macroeconomics**<br>3<br>**ENG 101 English Composition I** | **42.101 College Writing I**<br>3<br>**ENG 102 English Composition II** | **42.102 College Writing II**<br>3<br>**EST 104 Engineering Essentials & Design** | **16.100 Intro to ECE**<br>3<br>**EST 231-Engineering Circuit Analysis I** | **16.201 Circuit Theory I**<br>16.207 Basic EE Lab<br>5<br>**EST 232-Engineering Circuit Analysis II** | **16.202 Circuit Theory II**<br>16.207 Basic EE Lab<br>5<br>**MAT 251 Calculus I** | **92.131 Calculus I**<br>4<br>**MAT 252 Calculus II** | **92.132 Calculus II**<br>4<br>**MAT 253 Calculus III** | **92.231 Calculus III**<br>4<br>**MAT 254 Differential Equations** | **92.236 Eng Differential Equations**<br>4<br>**PHS 131 Engineering Physics I** | **95.141,96.141 Physics I/Lab**<br>4<br>**PHS 132 Engineering Physics II** | **95.144,96.144 Physics II/Lab**<br>4<br>**Not required for NECC Graduation but can be taken via NECCUM(Spring, Yr 2)** | **92.360 Math Structures for CpE**<br>0<br>**Not required for NECC Graduation**<br>CIS 240 C++ Programming Language **OR Taken by NECCUM (Spring Yr 2)** | **16.216 ECE Applications Programming**<br>0<br>**Humanities Elective**<br>COM 111 strongly recommended | **42.199 English 100 Level Elective**<br>3