ARTICULATION AGREEMENT

between the

ASSOCIATE IN LIBERAL ARTS–PHYSICAL SCIENCE – EARTH SCIENCE CONCENTRATION

of

NORTHERN ESSEX COMMUNITY COLLEGE

and the

UNIVERSITY OF MASSACHUSETTS LOWELL
College of Science

BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE
ENVIRONMENTAL STUDIES AND ENVIRONMENTAL GEOSCIENCE OPTIONS

Spring 2013
This articulation agreement has been established between Northern Essex Community College (NECC) and the University of Massachusetts Lowell (UML) College of Science Environmental, Earth and Atmospheric Sciences Department. This agreement was developed with the intent of facilitating the success of students at Northern Essex Community College 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 in Liberal Arts: Physical Sciences Earth Science option at Northern Essex Community College while also transferring into Bachelor of Science in Environmental Science – Environmental Studies or Environmental Geoscience options 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 Environmental Science Degree program at the University of Massachusetts Lowell. Furthermore, such students who complete the described series of courses will receive an Associates of Liberal Arts: Physical Science Degree -- Earth Science option at NECC, and may qualify for 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 in Liberal Arts: Physical Sciences Degree – Earth Science option at NECC

2. To facilitate the completion of students’ Bachelor of Science Degrees in Environmental Science – Environmental Studies or Environmental Geoscience options 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 toward UML’s Environmental Science– Environmental Studies or Environmental Geoscience options 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 Bachelor of Science in Environmental Science Degree Program.

3. UML guarantees the transfer of credit as stipulated in the attached Program 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 Environmental Science from UML is 120 credits. The University of Massachusetts Lowell may accept courses beyond the Associates Degree (60 credits); however, students are encouraged to contact the transfer advisor at the University of Massachusetts 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 the 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 Liberal Arts: Physical Sciences—Earth Science option 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 Liberal Arts: Physical Sciences Degree—Earth Science option 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 of Liberal Arts: Physical Sciences Degree—Earth Science option 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 Environmental, Earth and Atmospheric Science Department maintaining its' program approval from the Massachusetts Board of Higher Education.
ARTICULATION AGREEMENT
between the Associate in Liberal Arts Degree: Earth Science
NORTHERN ESSEX COMMUNITY COLLEGE
and the
UNIVERSITY OF MASSACHUSETTS LOWELL
College of Science

Signature Page

Lane A. Glenn 7/11/13
President, Northern Essex Community College

Marty Meehan 8/5/13
Chancellor, University of Massachusetts Lowell

William Heineman 6/24/13
Vice President for Academic Affairs

Ahmed Abdelal 7/29/13
Provost

Judith Zubrow 4/20/13
Dean of Foundational Studies, Liberal Arts & Sciences

Mark Hines 6/11/13
Dean, College of Science

Noemi Custodia-Lora 6-20-13
Assistant Dean of Foundational Studies, Liberal Arts & Sciences

G. Nelson Eby 7/25/13
Chair, Environmental, Earth & Atmospheric Science

Grace Y.A. Young 6-25-13
Dean, Academic Advising Articulation, Transfer, Testing and TRiO

Gerald Durkin 8/5/13
Associate Dean of Enrollment and Director of Transfer Admissions
## Northern Essex Community College

**Physical Science – Earth Science Concentration**

To

**University of Massachusetts Lowell**

**Bachelor of Science in Environmental Science – Environmental Studies and Environmental Geoscience Options**

<table>
<thead>
<tr>
<th>NECC credits</th>
<th>UML 84.121 / 84.123</th>
<th>Title</th>
<th>UML credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121</td>
<td>4</td>
<td>Chemistry I &amp; Lab</td>
<td>4</td>
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<tr>
<td>CHM 122</td>
<td>4</td>
<td>Chemistry II &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>ENG 101</td>
<td>3</td>
<td>42.101</td>
<td>College Writing I</td>
</tr>
<tr>
<td>ENG 102</td>
<td>3</td>
<td>42.102</td>
<td>College Writing II</td>
</tr>
<tr>
<td>MAT 251</td>
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<td>92.131</td>
<td>Calculus I</td>
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<tr>
<td>MAT 252</td>
<td>4</td>
<td>92.132</td>
<td>Calculus II</td>
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</table>

### Required courses for NECC Earth Science AA

### NECC General Education Requirements

- **Behavior Science**
  - 6 credits
- **Fine & Performing Arts / Foreign Language / Philosophy & Religion**
  - 6 credits
  - *varies* - up to 18 credits (9 social science and 9 arts and humanities.)
- **History / Government**
  - 6 credits
- **Literature**
  - 6 credits

### Program elective and concentration courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>UML 81.111 / 81.117</th>
<th>Title</th>
<th>UML credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 111*</td>
<td>4</td>
<td>Principles of Biology I and Lab</td>
<td>4</td>
</tr>
<tr>
<td>ERS 125</td>
<td>4</td>
<td>87.102</td>
<td>Environmental Problems Seminar</td>
</tr>
<tr>
<td>ERS 130**</td>
<td>4</td>
<td>85.141 / 85.143</td>
<td>Weather &amp; Climate</td>
</tr>
<tr>
<td>ERS 140**</td>
<td>4</td>
<td>89.101 / 89.103</td>
<td>General Geology</td>
</tr>
<tr>
<td>PHS 111</td>
<td>4</td>
<td>95.103 / 96.103</td>
<td>General Physics I</td>
</tr>
<tr>
<td>PHS 112</td>
<td>4</td>
<td>95.104 / 96.104</td>
<td>General Physics II</td>
</tr>
</tbody>
</table>

### NECCUM courses that can be taken at UML to satisfy NECC AA

Instead of NECC’s ERS 140 and ERS 130

<table>
<thead>
<tr>
<th>Course Code</th>
<th>UML 87.201</th>
<th>Title</th>
<th>UML credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERS 140</td>
<td>4</td>
<td>Earth &amp; Environmental Systems I and Lab</td>
<td>4</td>
</tr>
<tr>
<td>ERS 130</td>
<td>4</td>
<td>Earth &amp; Environmental Systems II and Lab</td>
<td>4</td>
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</tbody>
</table>

### Courses not required for NECC graduation but can be taken via NECCUM

<table>
<thead>
<tr>
<th>Course Code</th>
<th>UML 87.101</th>
<th>Title</th>
<th>UML credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>87.101</td>
<td>Environmental Science Seminar</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>89.307 / 89.309</td>
<td>Earth Materials I</td>
<td>4</td>
</tr>
<tr>
<td>0</td>
<td>89.310 / 89.312</td>
<td>Earth Materials II</td>
<td>4</td>
</tr>
<tr>
<td>0</td>
<td>89.331 / 89.333</td>
<td>Earth History</td>
<td>4</td>
</tr>
<tr>
<td>0</td>
<td>89.319 / 89.321</td>
<td>Surface Processes</td>
<td>4</td>
</tr>
</tbody>
</table>

### Course can be taken at NECC to meet requirement at UML (not needed for NECC Major)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>UML 81.112 / 81.118</th>
<th>Title</th>
<th>UML credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 112</td>
<td>0</td>
<td>Principles of Biology II and Lab</td>
<td>4</td>
</tr>
</tbody>
</table>

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* BIO 111 is recommended for the NECC program elective. MAT 125 may also be used.

** 87.201 and 87.202 are required courses for EEAS, ERS 130 and ERS 140 do not satisfy that requirement. They may be used as reverse transfer credits toward ERS 140 – System I and ERS 130 – Systems II with approval from the NECC department chair.