MEMORANDUM OF UNDERSTANDING
HARFORD COMMUNITY COLLEGE & TOWSON UNIVERSITY
May 1, 2018

Biological Sciences (Organismal Biology and Ecology Concentration) B.S. Degree

Harford Community College, Bel Air, Maryland, and Towson University, agree to follow the articulation of courses outlined in the articulation (course equivalency) document, for completion of requirements for the Bachelor of Science degree in Biological Sciences (Attachment A), which is attached to, and incorporated by reference into, this Memorandum of Understanding (MOU). The following principles guide the operation of this MOU, with the requirements for transfer in specific curricula set forth in Attachment A.

1. Towson University will accept a maximum number of 64 credits from Harford Community College as outlined in the Attachment A. The number of transferable credits specific to this program is reflected in Attachment A.

2. Students who have completed the Associate of Science Degree in the Biology program at Harford Community College may transfer into Towson University’s Biological Sciences: Organismal Biology and Ecology concentration program with junior standing provided that the student has completed all courses identified on Attachment A (which is attached to, and incorporated by reference into, this MOU) with a cumulative GPA of 2.00 or higher. Courses completed at Harford Community College with 300 or 400 level Towson University course equivalencies will transfer as lower-level credit but will satisfy course content as indicated.

3. Only courses in which a grade of C (2.00) or better is earned will apply toward the major at Towson University.

4. In accordance with the MHEC transfer policy pertaining to general education requirements, Towson University will accept the completion of Harford Community College’s general education requirements (GenEds) and students will be required to complete courses at Towson University to satisfy the remaining University Core requirements as shown in Attachment A.

5. Towson University recognizes college-level experiential learning gained through previous work, military and/or volunteer service or life experience. Credit for prior learning may also be established through course challenge or standardized credit by examination.

6. Harford Community College students transferring to Towson University will be given every consideration for financial aid and will be eligible to compete for academic scholarships upon entrance to Towson University subject to stated scholarship deadlines.

7. Both Harford Community College and Towson University agree to work together to facilitate the transfer of students from Harford Community College to Towson University
to work cooperatively to insure the high quality of the programs at the respective institutions. Transfer of students will be in accordance with policies and procedures of both institutions, as they may be amended from time to time.

8. This MOU will be in effect initially for ten years, beginning spring 2018, with a review every two years by both parties. Any revisions the parties deem necessary must be evidenced in writing and signed by the authorized officials of each institution. The MOU may be terminated by either party for due cause and after adequate notice of not less than six months is given to the other party.

9. Towson University will establish procedures to provide information on the academic progress of Harford Community College students enrolled as part of this MOU.

10. This MOU, when signed, constitutes the entire agreement between the parties and supersedes all prior agreements and understandings between the parties respecting the matter hereof.

HARFORD COMMUNITY COLLEGE AND TOWSON UNIVERSITY

Dr. Steven Thomas
Vice President for Academic Affairs
Date 5/17/20

Dr. Timothy Chandler
Provost and Executive Vice-President for Academic Affairs
Date 6/1/18
<table>
<thead>
<tr>
<th>COURSE #</th>
<th>COURSE TITLE</th>
<th>CRS.</th>
<th>TU EQUIVALENCY</th>
<th>CORE</th>
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<tr>
<td>ENG 101</td>
<td>English Composition (GE) [grade of C or better]</td>
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<td>TSEM 102 (WAIVED)</td>
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<td>Townson Seminar</td>
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<tr>
<td>MATH 109 OR MATH 203 *</td>
<td>Precalculus Mathematics (GM) OR Calculus I (GM)</td>
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<td>ENGL 102</td>
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<td>English Composition</td>
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<td>GH</td>
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<td>MATH 219</td>
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<td>Mathematics</td>
<td>4407</td>
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<td>GB</td>
<td>Behavioral/Social Science (GB)</td>
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<td>MATH 273</td>
<td>4.</td>
<td>Creativity &amp; Creative Development</td>
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<td>CHEM 111</td>
<td>General Chemistry I (GL)</td>
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<td>CHEM 131/131L</td>
<td>6.</td>
<td>Social &amp; Behavioral Sciences</td>
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<td>CHEM 112</td>
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<td>CHEM 132/132L</td>
<td>7.</td>
<td>Biological &amp; Physical Science w/Lab</td>
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<td>5.</td>
<td>Arts &amp; Humanities</td>
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<td>GH</td>
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<td>Social &amp; Behavioral Sciences</td>
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<td>MATH 273</td>
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<td>Advanced Writing Seminar</td>
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<td>Metropolitan Perspectives</td>
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<td>BIO 208</td>
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<td>BIOL 109 (309)</td>
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<td>The United States as a Nation</td>
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<td>Global Perspectives</td>
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<td>BIOL 202</td>
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<td>Ethical Issues &amp; Perspectives</td>
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<td>PHYS 102 OR PHYS 204</td>
<td>Introductory Physics II (GL) OR Gen Phys: Vibrations, waves, Heat, Electricity &amp; Magnetism (GL)</td>
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<td>Organic Chemistry I</td>
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</table>

Total Program Requirements at Harford: 60

Maximum Credits in Transfer: 64


* See Course Selection Notes

** One GB or GH course must also satisfy Diversity requirement at HCC.
HARFORD COMMUNITY COLLEGE - Biology A.S. Degree
TOWSON UNIVERSITY - Biological Sciences B.S. Degree – Organismal Biology and Ecology Concentration

*Course Selection at HCC:

Choosing your program electives will depend on whether you are calculus-ready when you enter the Biology Associate of Science program at HCC.

Students who do NOT require pre-calculus should take MATH 203 (Calculus I) 4 credits to satisfy the General Education math requirement and program requirement at HCC. MATH 203 will also satisfy Core 3 and the program Math requirement at TU. Please note that students intending to take the calculus-based physics sequence (PHYS 200 & 204 at HCC or PHYS 241 & 242 at TU) must take MATH 203 and MATH 204.

Students who do not require pre-calculus will have 4 credits of program electives to take at HCC. The following options are suggested for satisfying the program elective:

- BIO 202 (Biodiversity). This course transfers as BIOL 208 and will satisfy a Breadth requirement for the major at TU. Students choosing BIO 202 may need to take additional elective credit to meet the required 60 credits for degree at HCC.
- BIO 107 (General Zoology) and BIO 110 (Introduction to Plant Sciences). These courses transfer to TU as BIOL 207 and BIOL 205 respectively and will satisfy a Breadth requirement for the major at TU. Please note that BOTH courses must be completed to satisfy the Breadth requirement. Students transferring with only BIO 107 or BIO 110 will need to complete either BIOL 205 or BIOL 207 at TU to satisfy the Breadth requirement. Students who take both courses at HCC will graduate with more than 60 credits, but will still be able to earn the baccalaureate degree in 120 credits. A maximum of 64 credits will be transferred to TU.

Students who REQUIRE pre-calculus should take MATH 109 (Pre-Calculus) to satisfy the General Education math requirement and MATH 203 (Calculus I) as the program elective at HCC. Calculus is required to complete the A.S. degree at HCC and will satisfy the Ancillary Math requirement of the major at TU.
HARFORD COMMUNITY COLLEGE- Biology A.S. Degree
TOWSON UNIVERSITY- Biological Sciences B.S. Degree – Organismal Biology and Ecology Concentration

CORE REQUIREMENTS TO BE COMPLETED AT TOWSON 15 UNITS

| CORE 4:  | Creativity and Creative Development | 3 Units |
| CORE 9:  | Advanced Writing Seminar            | 3 Units |
| CORE 10: | Metropolitan Studies                | 3 Units |
| CORE 12: | Global Perspectives                | 3 Units |
| CORE 14: | Ethical Issues and Perspectives     | 3 Units |

PROGRAM REQUIREMENTS TO BE COMPLETED AT TOWSON 26-41 UNITS

FOUNDATION COURSES: 1 UNIT

BIOL 204 EDUCATIONAL AND CAREER PLANNING FOR THE BIOLOGIST

BREADTH COURSES: 8-20 UNITS

- SELECT ONE OF THE FOLLOWING (if BIO 202 or BIO 107 AND BIO 110 were not taken at HCC): (0-8 UNITS)
  - BIOL 205 & GENERAL BOTANY AND
  - BIOL 207 GENERAL ZOOLOGY
  - OR
  - BIOL 208 BIODIVERSITY

- SELECT ONE OF THE FOLLOWING: (4 UNITS)
  - BIOL 405 MOLECULAR ECOLOGY, EVOLUTION & CONSERVATION
  - BIOL 408 CELL BIOLOGY
  - BIOL 409 MOLECULAR BIOLOGY

- SELECT ONE OF THE FOLLOWING: (4-8 UNITS)
  - BIOL 221/221L & HUMAN ANATOMY & PHYSIOLOGY I W/LAB AND
  - BIOL 222/222L HUMAN ANATOMY & PHYSIOLOGY II W/LAB
  - OR
  - BIOL 325 ANIMAL PHYSIOLOGY
  - OR
  - BIOL 436 PLANT PHYSIOLOGY
ELECTIVE COURSES: 13-16 UNITS

- PRINCIPLES OF ECOLOGY ELECTIVE: (4 UNITS)
  SELECT ONE OF THE FOLLOWING:
  BIOL 310  CONSERVATIVE BIOLOGY
  BIOL 402  GENERAL ECOLOGY
  BIOL 406  LIMNOLOGY
  BIOL 435  PLANT ECOLOGY

- DIVERSITY ELECTIVE: (3-4 UNITS)
  BIOL 334  HUMANS, SCIENCE AND THE CHESAPEAKE BAY
  BIOL 347  MARINE BIOLOGY
  BIOL 353  INVERT ZOOLOGY
  BIOL 371  ANIMAL BEHAVIOR
  BIOL 413  EVOLUTION
  BIOL 432  VASCULAR PLANT TAXONOMY
  BIOL 444  WILDLIFE MANAGEMENT
  BIOL 446  TROPICAL ECOLOGY AND CONSERVATION
  BIOL 447  TROPICAL FIELD ECOLOGY
  BIOL 452  WETLAND ECOLOGY
  BIOL 455  FISH BIOLOGY
  BIOL 456  ORNITHOLOGY
  BIOL 458  MAMMALOGY
  BIOL 461  ENTOMOLOGY
  BIOL 467  HERPETOLOGY
  GEOG 221  INTRO TO GEOSPATIAL TECHNOLOGY

- ORGANISMAL ELECTIVES: (6-8 UNITS)
  SELECT TWO ELECTIVES FROM THE LIST OF PRINCIPLES OF ECOLOGY OR DIVERSITY ELECTIVES ABOVE.
  (BIOL 491 – ELECTIVE IN INDEPENDENT RESEARCH – MAY BE USED AS ONE OF THE ELECTIVES.)

ANCILLARY COURSES: 4 UNITS

SELECT ONE OF THE FOLLOWING:
  MATH 237  ELEMENTARY BIOSTATISTICS
  PSYC 212  BEHAVIORAL STATISTICS
HARFORD COMMUNITY COLLEGE- Biology A.S. Degree  
TOWSON UNIVERSITY- Biological Sciences B.S. Degree – Organismal Biology and Ecology Concentration

**Additional Bachelor Degree Requirements**
- A C (2.0) or higher is required in all major and minor courses
- A cumulative grade point average (GPA) of 2.0 is required
- 32 units of the bachelor’s degree must be completed at the upper level (courses numbered 300 or above)

**Total Credits to B.S. Degree**  
Harford Biology A.S. Degree 60  
Completion of Core at TU 15  
Completion of Major Requirements at TU 26-41  
Elective Credits at TU 4-19