


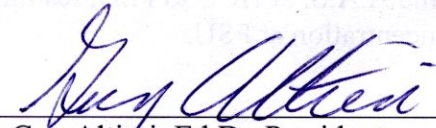
# ARTICULATION AGREEMENT

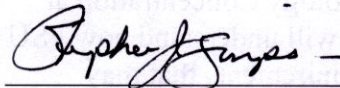
**Hagerstown Community College**  
**Associate of Applied Science in Biotechnology**

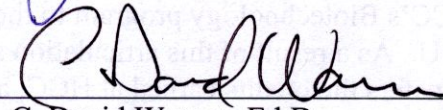
**Frostburg State University**  
**Bachelor of Science in Biology, Biotechnology Concentration**

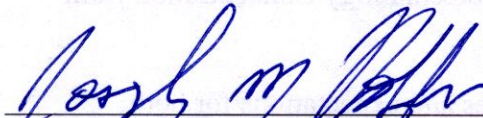
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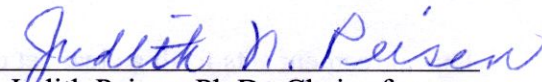
  
Jonathan Gibraltar, Ph.D., President  
Frostburg State University

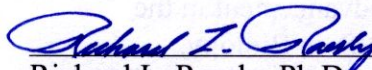
  
Guy Altieri, Ed.D., President  
Hagerstown Community College

  
Stephen J. Simpson, Ph.D., Provost  
Frostburg State University

  
C. David Warner, Ed.D.  
Vice President, Academic Affairs  
Hagerstown Community College

  
Joseph M. Hoffman, Ph.D., Dean  
College of Liberal Arts and Sciences  
Frostburg State University

  
Judith Peisen, Ph.D., Chair of  
Mathematics and Science Division  
Hagerstown Community College

  
Richard L. Raesly, Ph.D.  
Department of Biology  
Frostburg State University

This agreement is effective with new Frostburg State University admits Spring 2012. This agreement will be reviewed annually.

## ARTICULATION AGREEMENT

Hagerstown Community College, Associate of Applied Science in Biotechnology Transfer and Frostburg State University, Bachelor's of Science in Biology, Biotechnology Concentration.

### RECITALS

Hagerstown Community College (hereafter referred to as "HCC"), a community college in Washington County, Maryland, and Frostburg State University ("FSU"), a comprehensive regional institution in Western Maryland and a constituent institution of the University System of Maryland, agree to offer an articulated program leading to the award of an Associate of Applied Science (A.A.S.) in Biotechnology Transfer Degree and a Bachelor of Science (B.S.) in Biology, Biotechnology Concentration. The parties further agree that students from HCC, through this articulation agreement, will be permitted to transfer credits earned for the A.A.S. at HCC to FSU, leading to the award of the B.S. degree in Biology, Biotechnology Concentration at FSU.

#### I. Purpose

- a. It is the intent that this articulation agreement will facilitate a smooth transition from HCC's Biotechnology program to the B.S. in Biology, Biotechnology Concentration at FSU. As a result of this articulation agreement, HCC graduates will understand how FSU transfers the credits earned at HCC, as well as the changes in requirements that may permit more flexible scheduling once the student has been admitted to and enrolled at FSU. This agreement provides a systematic plan for students to receive both the A.A.S. degree from HCC and the B.S. degree in Biology, Biotechnology Concentration from FSU.
- b. This agreement sets forth a clear set of responsibilities and expectations for both institutions. The parties agree to work collaboratively to meet the needs of HCC graduates in facilitating transfer to FSU.
- c. HCC encourages graduates to continue their educational pathway in biotechnology for both personal and professional development, as well as career advancement in the profession. This articulation agreement for completion of the B.S. in Biology, Biotechnology Concentration facilitates students' successful achievement of credentials in the field.



## II. Requirements of the Program

- a. The program is designed for graduates of the A.A.S. degree in Biotechnology at HCC. Students must complete the A.A.S. degree at HCC in order to participate in the transfer program. A maximum of seventy (70) credit hours from HCC will be allowed toward fulfillment of the one hundred twenty (120) credit hours required for completion of the B.S. degree.
- b. After completion of the A.A.S., and upon admittance by FSU, the student may commence the B.S. in Biology, Biotechnology Concentration.
- c. Biotechnology students from HCC will have their coursework evaluated by FSU to determine which FSU general education requirements and discipline requirements have been met. HCC courses shall be evaluated by FSU for transferability, and FSU shall accept courses for transfer at its sole discretion. By taking full advantage of the HCC-FSU course agreements described below, the transfer student will matriculate at FSU with junior standing.
- d. In accordance with Code of Maryland Regulations (COMAR), all courses meeting general education requirements at HCC will transfer to FSU as general education courses.
- e. Students must maintain a 2.0 cumulative grade point average at HCC in order to transfer to the FSU Biology, Biotechnology Concentration.
- f. The maximum number of credits that will be accepted by FSU toward degree requirements from non-direct classroom instruction (including CLEP, AP, and other nationally recognized standardized examination scores) is thirty (30) credits. Tech Prep credits will transfer if recorded on HCC's transcript. Credit awarded for experiential learning ("life experience") is recognized by, and is transferable to, FSU if recorded on HCC's transcript.
- g. HCC students who have completed the Biotechnology Transfer degree will be given every consideration for financial assistance and will be eligible to compete for academic scholarships at FSU.
- h. This agreement becomes effective on the date set forth on the first page of this document. HCC and FSU agree to publicize this program. The parties further agree to monitor the performance of the program and to make revisions as may be mutually agreed upon as necessary. Changes or amendments to this agreement must be made in writing and appended to this agreement.
- i. This agreement may be terminated by either party with one year written notice to the other. The parties agree that termination shall include an agreement that students currently enrolled in the program at the time of termination shall be permitted to complete the program as described herein.



### III. A.A.S. in Biotechnology Transfer-B.S. in Biology, Biotechnology Concentration Transfer Courses

The following indicates the transfer of course agreement between the HCC and FSU:

a. General Education Requirements to be completed at HCC

HCC GEP Requirements	HCC	Transfers to FSU as:
ENGLISH COMPOSITION (3cr.)	ENG 101 (3cr.)	ENGL 101
ARTS/HUMANITIES (3cr.)	Any approved General Education course in Arts/Humanities except PHL 101	Group A (Fine and Performing Arts) or Group B (Humanities) – One of three courses required
SOCIAL SCIENCES (3cr.)	Any approved General Education course in Behavioral/Social Sciences except HIS courses	Group D (Social and Behavioral Sciences) – One of two courses required
MATHEMATICS (3-4cr.)	MAT 101, 164, 203 (MAT 164 (3cr.) or 203 (4cr.) satisfies FSU GEP and Biotech requirements)	GEP Core Skill in math and required in biotechnology transfer degree program
NATURAL SCIENCE (8cr.)	BIO 113 and CHM 103 (8cr.)	Group C: BIOL 149 and CHEM 201 (Required under the Biotechnology transfer program)
DEMONSTRATION OF TECHNOLOGY FLUENCY (3cr.)	IST 102 (3cr.)	COSC 100 – Tech Fluency requirement and GEP Group E

Total General Education Credits Taken at HCC = 23-24

b. FSU Biotechnology Requirements to be completed at HCC

In addition to the general education requirements indicated in the preceding section of this articulation agreement, the B.S. degree with a major in Biology, Biotechnology Concentration at FSU requires students to successfully complete the following course work:

Frostburg State University			HCC Program Equivalent
Course Number	Course Title	Credit Hours	
BIOL 149	General Biology I	(4.0)	BIO 113 (GEP)
BIOL 150	General Biology II	4.0	Program elective: BIO 114
BIOL 304	Microbiology	4.0	BIO 205
BIOL 310	Cell Biology	4.0	BIO 201
Biology Elective	Group 4 Distribution	3.0-4.0	BTC 202 (4cr.)
CHEM 201	General Chemistry I	(4.0)	CHM 103 (GEP)
CHEM 202	General Chemistry II (or CHEM 133)	4.0	Program elective: CHM 104
CHEM 301	Organic Chemistry I	4.0	CHM 203
CHEM 302	Organic Chemistry II	4.0	Program elective: CHM 204
MATH209	Elements of Applied Probability and Statistics	3.0	MAT 119 (4cr.)

c. Additional Biotechnology Requirements for AAS at HCC

Hagerstown Community College			Transfer to FSU as
Course Number	Course Title	Credit Hours	
BTC 101	Intro to Biotechnology	3.0	Credit towards 120
BTC 201	Discovery Research	4.0	Credit towards 120
BTC 269	Biotechnology Internship	1.0-3.0	Credit towards 120
PHL 103	Ethics	3.0	GEP Group B (Humanities): PHIL 102 – Second of three courses required

Program Requirements Transferred = 42-44

Total Transfer Credits Required = 65-67  
Maximum Transfer Credits Allowed = 70



d. Additional General Education Requirements to be completed primarily at FSU:

Additional FSU GEP Requirements	FSU	HCC Equivalent One additional course maximum
Advanced composition (3cr.)	See approved list. ENGL 338 or 339 preferred.	None. Must be 300-400-level completed at a four-year college
Group A: Fine and Performing Arts  OR  Group B: Humanities (3cr.)	If ART or MUS not selected for HCC ARTS/HUM course. See approved list of choices in art/dance/music/theatre arts appreciation.  If not selected for HCC ARTS/HUM course. Must be different discipline (not PHIL). See approved list of choices in history/languages/literature.	ART 101, 231, 232; HUM 201; or MUS 101  HIS 208 or HUM 208 (third of three A/H courses required)
Group D: Social and Behavioral Sciences (3cr.)	See approved list of choices in economics/geography/political science/ psychology/ sociology. Must be different discipline than first course at HCC.	ECO 201, GEO 105, POL 101, PSY 201, SOC 101 preferred (second of two courses required)
Group E: The FSU Colloquia (3cr.)	IDIS 150/151 or IDIS/SUST 155	None
Group F: Identity and Difference (3cr.)	See approved list. Upper-division (300-400) choice required.	None

Total Additional FSU General Education Requirements = 15cr.  
Total General Education Requirements at HCC and FSU = 41cr.

e. Biotechnology Degree Requirements to be completed at FSU

Frostburg State University			Notes
Course Number	Course Title	Credit Hours	
BIOL 340	Ecology	4.0	
BIOL 350	Genetics	3.0	

BIOL 401	Genetics Laboratory	1.0	
BIOL 435	Molecular Biology	4.0	
BIOL 437	Molecular Biology Seminar (Capstone)	1.0	
BIOL 438	Biotechnology Laboratory	3.0	
BIOL 440	Developmental Biology	4.0	
BIOL 445	Immunology	4.0	
CHEM 455	Biochemistry I	3.0	
CHEM 456	Biochemistry Lab	3.0	
CHEM 457	Biochemistry II	3.0	
PHYS 215 or PHYS 261	General Physics I or Principles of Physics I: Mechanics	4.0	
PHYS 216 or PHYS 262	General Physics II or Principles of Physics II: Electricity and Magnetism	4.0	
MATH 220 or 236	Calculus with Applications or Calculus I	3.0 or 4.0	If MAT 164 or 203 not completed for math general education requirement at HCC
Total Credits Taken at FSU = 53-57			
<b>TOTAL CREDITS REQUIRED FOR BACHELOR'S DEGREE = 121 -127</b>			

f. Course Sequencing

Biotechnology Transfer students transferring to the Biology, Biotechnology Concentration Program at FSU shall be notified by HCC and FSU that the Biology, Biotechnology Concentration curriculum is built upon a series of established course sequences. For students to progress through the program, they must have the appropriate pre-requisites, corequisites, and must maintain a minimum 2.0 GPA.

Students wishing to participate in the program should develop an education plan at HCC by contacting:

Judith N. Peisen, Ph.D.  
Department Chair, Mathematics and Science Division

HCC will direct students interested in participating in the Biology, Biotechnology Concentration Transfer program to apply for admission to FSU, indicating Biology, Biotechnology Concentration as the intended major. Applications can be submitted online at:  
<http://gobobcats.frostburg.edu/appentry.htm>.

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THE STATE OF TEXAS, COUNTY OF DALLAS, ss. I, the undersigned, Judge of the County Court, do hereby certify that the above is a true and correct copy of the original as filed in my office this 10th day of December, 1913.

(Signature of Judge)

The undersigned, Clerk of the County Court, do hereby certify that the above is a true and correct copy of the original as filed in my office this 10th day of December, 1913.

The undersigned, Secretary of the County Court, do hereby certify that the above is a true and correct copy of the original as filed in my office this 10th day of December, 1913.

J. M. ...

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This document is subject to the provisions of the Public Information Act, Chapter 552, Texas Government Code. Any release of this information is subject to the provisions of that act.