

ARTICULATION AGREEMENT

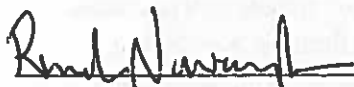
Hagerstown Community College

Biology, Arts and Sciences, A.S.

Frostburg State University

Bachelor of Science (BS) in Biology, Molecular Biology Concentration

Entered into this 22nd of August, 2016
(Date) (Month)



Ronald Nowaczyk, PhD, President
Frostburg State University

Guy Altieri, EdD, President
Hagerstown Community College



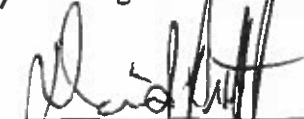
Ahmad Tootoonchi, PhD, Provost
Frostburg State University

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



Joseph M. Hoffman, PhD, Dean
College of Liberal Arts and Science
Frostburg State University

Cynthia A. Dove, Ph.D
Interim Chair, Mathematics and Science Division
Hagerstown Community College



David Puthoff, PhD
Department of Biology
Frostburg State University

This agreement is effective with new Frostburg State University admits Fall 2016. 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, Molecular Biology 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 Degree and a Bachelor of Science (B.S.) in Biology, Molecular Biology 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, Molecular Biology 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, Molecular Biology 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, Molecular Biology 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, Molecular Biology Concentration facilitates students' successful achievement of credentials in the field.

111. A.A.S. in Biotechnology Transfer-B.S. in Biology, Molecular Biology 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:
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
SOCIAL SCIENCES (3cr.)	Any approved General Education course in Behavioral/Social Sciences <u>except HIS courses</u>	Group D (Social and Behavioral Sciences) - One of two courses
NATURAL SCIENCE (8cr.)	BIO 113 and CHM 103 (8cr.)	Group C: BIOL 149 and CHEM 201 (Required under the Biotechnology transfer program)
DIVERSITY (3cr.)	Any approved General Education course in Diversity category (3cr.)	Group F: (Identity and Difference)
ENGLISH COMPOSITION (3cr.)	ENG 101 (3cr.)	ENGL 101
MATHEMATICS (3-4cr.)	MAT 101 (3cr.), 161 (4cr.) or 203 (4cr.) satisfies FSU GEP and Biotech requirements)	GEP Core Skill in math and required in biotechnology transfer degree program

Total General Education Credits Taken at HCC = 23-24

b. FSU Molecular Biology Requirements to be completed at HCC

In addition to the general education requirements indicated in the preceding section of this articulation agreement, the BS degree with a major in Biology, Molecular Biology 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)
CHEM201	General Chemistry I	4.0	CHM 103 (GEP)
BIOL 310	Cell Biology	4.0	BIO 201
BIOL 304	Microbiology	4.0	BIO 205
Biology Electives	Group 4 Distribution	4.0	BTC 201 Discovery Research
Biology Electives	Group 4 Distribution	4.0	BTC 202 Biomanufacturing
BIOL 438	Biotechnology Lab	3.0	BTC 269
MAT 109	Elements of Applied Probability and Statistics	3.0	MAT 109 (3 cr)
BIOL 160 *	General Zoology	4.0	BIO 114 (Program elective)
CHEM202	General Chemistry II (or CHEM 133)	4.0	Program elective: CHM 104
CHEM 301 CHEM 311/312	Organic Chemistry I	4.0	CHM 203
CHM 302 CHEM 321/322 *	Organic Chemistry II	4.0	Program elective: CHM204

*** Either BIO 114 or CHM 204 will meet the HCC requirements

c. Additional Biotechnology Requirements for AAS at HCC

Hagerstown Community College Courses			Transfer to FSU As
Course Number	Course Title	Credit Hours	
BTC 101	Introduction to Biotechnology	3.0	Credit towards 120
CHM 204	General Chemistry II	4	
PHL 103	Ethics	3.0	GEP Group B (Humanities) PHIL 102. Second of 3 required courses

d. Program Requirements Transferred 43 credits

e. Total Transfer credits required: 66-67 credits

f. Maximum Transfer Credits Allowed: 70 credits

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
Tech. Fluency requirement (3cr.)	See approved list.	IST 102

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

e. Molecular Biology Degree Requirements to be completed at FSU

Frostburg State University			Notes
Course Number	Course Title	Credits	
BIOL 161	General Botany	4	
BIOL 350	Genetics	3	
BIOL 401	Genetics Laboratory	1	
BIOL 435	Molecular Biology	4	
BIOL 437	Molecular Biology Seminar (Capstone)	1	
BIOL 427	Comparative Anatomy	4	
BIOL 445	Immunology	4	
CHEM 455	Biochemistry I	3	
CHEM 456	Biochemistry Lab	3	
CHEM 457	Biochemistry II	3	
PHYS 215 or 261	General Physics I or Principles of Physics I	4	
PHYS 216 or 262	General Physics II or Principles of Physics II	4	
MATH 220 or 236	Calculus with Applications or Calculus I	3 or 4	If MAT 164 or 203 not completed for math general education requirement at HCC
Total credits taken at FSU = 56-57			
Total credits required for Bachelor's degree = 120			

f. Course Sequencing

Biotechnology Transfer students transferring to the Biology, Molecular Biology Concentration Program at FSU shall be notified by HCC and FSU that the Biology, Molecular Biology 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, co-requisites, and must maintain a minimum 2.0 GPA.

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

Cynthia A. Dove, Ph.D

Interim Department Chair, Mathematics and Science Division

HCC will direct students interested in participating in the Biology, Molecular Biology Concentration Transfer program to apply for admission to FSU, indicating Biology, Molecular Biology Concentration as the intended major. Applications can be submitted online at: www.frostburg.edu