### ARTICULATION AGREEMENT

#### **AMENDED**

#### **Baltimore City Community College** Associate of Science in Engineering Program

## Frostburg State University Bachelor of Science in Engineering

Dathelor of Science in Engineering				
Entered into this	day of, 2018.			
Ronald Monacafe / BEN Ronald H. Nowaczyk, Ph.D.	James Works J.			
	James H. Johnson, Jr., Ph.D., P.R.			
President	/Interim President			
Frostburg State University	Baltimore City Community College			
aslati A Try	Janja T. Lingold			
Elizabeth Throop, Ph.D.	Tonja L. Ringgold, Ed.D.			
Provost	Vice President for Academic Affairs			
Frostburg State University	Baltimore City Community College			
Daroth Carrobell	Simple			
Dorothy Campbell, Ph.D.	Enyinnaya Iweha, M.D.			
Interim Dean	Dean			
College of Liberal Arts and Sciences	School of Business, Science, Technology,			
Frostburg State University	Engineering, and Mathematics			
Em J. Mme	Baltimore City Community College			
Eric J. Møore, Ph.D.	Scott J. Saunders, M.A.			
Chair	Associate Dean			
Department of Physics and Engineering	Department of Mathematics & Engineering			
Frostburg State University	Baltimore City Community College			
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	Michael Kaye, M.S.			
	Engineering Coordinator			
	Department of Mathematics & Engineering			
	Baltimore City Community College			

This agreement is effective with new Frostburg State University admits Fall 2018.

This agreement will be reviewed annually.

#### ARTICULATION AGREEMENT

Baltimore City Community College, Associate of Science in Engineering and Frostburg State University, Bachelor of Science in Engineering.

#### RECITALS

Baltimore City Community College (hereafter referred to as "BCCC"), an agency of the state of Maryland and a community college in Baltimore City, 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 Science in Engineering (A.S.E.) Degree and a Bachelor of Science (B.S.) in Engineering. The parties further agree that students from BCCC, through this articulation agreement, will be permitted to transfer credits earned for the A.S.E. at BCCC to FSU, leading to the award of the B.S. degree in Engineering at FSU. The only concentration available pursuant to this agreement is electrical engineering.

#### I. Purpose

- a. It is the intent that this articulation agreement will facilitate a smooth transition from BCCC's Associate of Science in Engineering program to the B.S. in Engineering program at FSU. As a result of this articulation agreement, BCCC graduates will understand how FSU transfers the credits earned at BCCC. This agreement provides a systematic plan for students to receive both the A.S.E. degree from BCCC and the B.S. degree in Engineering 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 BCCC graduates in facilitating transfer to FSU.
- c. BCCC encourages graduates to continue their educational pathway in engineering for both personal and professional development, as well as career advancement in the engineering profession. This articulation agreement for completion of the B.S. in Engineering facilitates students' successful achievement of credentials in the field.

#### II. Requirements of the Program

- a. The program is designed for graduates of the A.S.E. degree in Engineering at BCCC. Students must have completed the A.S.E. degree at BCCC in order to enter into the transfer program. A maximum of seventy (70) credit hours from BCCC will be allowed toward fulfillment of the one hundred twenty (120) credit hours required for completion of the B.S. degree.
- b. Students completing the A.S.E. in electrical engineering program from BCCC will have their coursework transferred in as a block, fulfilling all of FSU's general education requirements, as well as freshman and sophomore discipline requirements. These students will matriculate at FSU with junior standing.
- c. In accordance with Code of Maryland Regulations (COMAR), all courses meeting general education requirements at BCCC will transfer to FSU as general education courses.
- d. Students must maintain a minimum of a 2.0 cumulative grade point average in order to transfer to the FSU Engineering Program.
- e. The maximum number of credits that will be accepted by FSU toward degree requirements from non-direct classroom instruction (including CLEP, AP, IB and FSU Special Departmental examination scores) is thirty (30) credits. Tech Prep credits will transfer where appropriate, as will credit awarded for experiential learning ("life experience") if recorded on BCCC's transcript.
- f. While BCCC and FSU do not presently have a dual admission program, if the parties later enter into such a program, this agreement will not preclude students from participation and students may apply for and receive the benefits of dual admission. Those students shall then be subject to the policies of said program should they apply.
- g. BCCC students who have completed the A.S.E. 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. BCCC 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. Curricula for engineering programs undergo frequent change and this agreement will be amended to reflect such changes as they occur. Amendments will be made in writing and appended to this agreement. Amendments need only be approved by the deans and chairs from both institutions.

i. This agreement may be terminated by either party with ninety (90) days 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.S.E. - B.S. in Engineering Transfer Courses

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

# a. <u>General Education Requirements</u> FSU's general education program requirements will be fulfilled in their entirety through completion of the A.S.E. degree at BCCC.

#### b. <u>Degree Program Requirements to be Completed at BCCC</u>

By completing the A.S.E. degree in electrical engineering at BCCC, students will have completed their introductory physics sequence, chemistry requirements, mathematics requirements, and all 100-200 level electrical engineering courses.

#### c. <u>Degree Program Requirements to be Completed at FSU</u>

All FSU bachelor's degree candidates must complete a minimum of 39 upperdivision (300-400) credit hours.

Frostburg State University		Notes	
Course	Course Title	Credit	
Number		Hours	
ENEE 322	Signal and System Theory	3.0	
ENEE 445	Intro. to Communication Systems	3.0	
ENEE 380	Electromagnetic Theory	3.0	
ENGL 338	Technical Writing	3.0	
ENEE 350	Computer Organization	3.0	
ENEE 303	Analog and Digital Electronics	3.0	
ENEE 307	Electronic Circuits Design	2.0	
ENES 310	Mechatronic and Robotic Design	3.0	
ENES 401	Fundamentals of Energy	3.0	
	Engineering		
ENES 491	Engineering Seminar	3.0	
ENEE 439	Topics in Signal Processing	3.0	
ENEE 475	Power Electronics	3.0	
ENEE 408	Capstone Design Project	3.0	
ENME 373	Advanced Computer-Aided	3.0	

	Design			
	Electives	3.0	Any to reach 120 credits	
			required for graduation	
	300-400 level Technical Electives	6.0	Must be from ENES,	
			ENEE, or ENME courses.	
Total = 50				

#### d. Course Sequencing

A.S.E. students transferring to the Engineering Program at FSU shall be notified by BCCC and FSU that the Engineering 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 BCCC by contacting:

Michael Kaye
Engineering Coordinator
Baltimore City Community College
410-462-8401
mkaye@bccc.edu

BCCC will direct students interested in participating in the Engineering Transfer program to apply for admission to FSU, indicating Engineering as the intended major. Applications can be submitted online at: <a href="https://www.frostburg.edu">www.frostburg.edu</a>.

Contact person at FSU for the program is:

Wudyalew Wondmagegn, Ph.D.
Program Coordinator, Department of Physics and Engineering
Frostburg State University
301-687-7072
wwondmagegn@frostburg.edu