ARTICULATION AGREEMENT

The Community College of Baltimore County
Associate of Science in Engineering (A.S.E.)
in Electrical Engineering

Frostburg State University
Bachelor of Science in Engineering
Concentration: Electrical Engineering

Entered into this 13th day of January, 2014.

Jonathan Gibralter, Ph.D.
President
Frostburg State University

Mark McColloch, Ph.D.
Vice President of Instruction
The Community College of Baltimore County

William P. Childs, Ed.D.
Interim Provost
Frostburg State University

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

Eric J. Moore, Ph.D.
Program Coordinator
Department of Physics and Engineering
Frostburg State University

This agreement is effective with new Frostburg State University admits Spring 2014.
This agreement will be reviewed every two years.

ARTICULATION AGREEMENT

The Community College of Baltimore County, Associate of Science in Engineering
in Electrical Engineering
and
Frostburg State University, Bachelor of Science in Engineering
Concentration: Electrical Engineering

RECITALS

The Community College of Baltimore County (hereafter referred to as "CCBC"), a community college in Baltimore 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 Science in Engineering (A.S.E.) Degree in Electrical Engineering and a Bachelor of Science (B.S.) in Engineering with a concentration in Electrical Engineering. The parties further agree that students from CCBC, through this articulation agreement, will be permitted to transfer credits earned for the A.S.E. at CCBC 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 at FSU.

I. Purpose

a. It is the intent that this articulation agreement will facilitate a smooth transition from CCBC's A.S.E. degree in Electrical Engineering to the B.S. in Engineering with a concentration in Electrical Engineering at FSU. As a result of this articulation agreement, CCBC graduates will understand how FSU transfers the credits earned at CCBC. This agreement provides a systematic plan for students to receive both the A.S.E. degree from CCBC and the B.S. degree in 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 CCBC graduates in facilitating transfer to FSU.

c. CCBC 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 Electrical Engineering at CCBC. Students must complete the A.S.E. degree at CCBC in order to enter into the transfer program. A maximum of seventy (70) credit hours from CCBC 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. degree in Electrical Engineering from CCBC will have their coursework transferred in as a block, fulfilling all of FSU's general education requirements, as well as freshman and sophomore discipline courses 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 CCBC 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. High School Articulated Credits will transfer where appropriate, as will credit awarded for experiential learning ("life experience") if recorded on CCBC's transcript.

f. While CCBC 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. CCBC 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. CCBC 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 shall be approved by the deans and chairs from both institutions, and the articulation staff notified.

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. Electrical Engineering - B.S. in Engineering Transfer Courses

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

a. General Education Requirements to be Completed at CCBC
FSU's general education program requirements will be fulfilled in their entirety through completion of the A.S.E. degree at CCBC, as outlined in Addendum I.

b. Degree Program Requirements to be Completed at CCBC
By completing the A.S.E. degree in Engineering in Electrical Engineering at CCBC, students will have completed their introductory physics sequence, chemistry requirements, mathematics requirements, and all 100-200 level electrical engineering courses, as outlined in Addendum I.

c. Degree Program Requirements to be Completed at FSU
All FSU bachelor's degree candidates must complete a minimum of 39 upper- division (300-400) credit hours, as outlined in Addendum II.

d. Course Sequencing
A.S.E. students transferring to the Engineering program at FSU shall be notified by CCBC 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. Appropriate courses are outlined in Addendum I, additional pre-requisite courses may be applicable. It is highly recommended that students consult with their faculty advisor at CCBC to follow this agreement. The Engineering Coordinator at CCBC will serve as the faculty advisor.

Students wishing to participate in the program should develop an education plan at CCBC by contacting:
Laura LeMire, Engineering Coordinator
The Community College of Baltimore County
443-840-1452
llemire@ccbcmd.edu

Contact person at FSU for the program is:
Eric J. Moore, Ph.D., Program Coordinator, Department of Physics and Engineering
Frostburg State University
301-687-4500
ejmoore@frostburg.edu

CCBC will direct students interested in participating in this agreement to apply for admission to FSU, indicating Engineering with a Concentration of Electrical Engineering as the intended major. Applications can be submitted online at: www.frostburg.edu.

The Community College of Baltimore County and Frostburg University will conduct a review/revision of the procedures and contract every two years. Re-approval of the document and/or any changes will be sent in writing to the parties below for renewal or termination of the agreement.

Laura LeMire, Engineering Coordinator
The Community College of Baltimore County
443-840-1452
llemire@ccbcmd.edu

Eric J. Moore, Ph.D.
Program Coordinator, Department of Physics and Engineering
Frostburg State University
301-687-4500
ejmoore@frostburg.edu

Nicole Zairi, Articulation Assistant to the Office of Instruction
The Community College of Baltimore County
443-840-4647
nzairi@ccbcmd.edu

Addendum I: CCBC Coursework

The Community College of Baltimore County Catalog Years 2013-2014 and 2014-2015			
Course Name	Course ID		Credits
General Education Requirements			
Fundamentals of Speech Communication	SPCM 101		3
College Composition I	ENGL 101		3
College Composition II	ENGL 102		3
General Chemistry I with Laboratory	CHEM 121/122		4
Calculus I	MATH 251		4
Calculus II	MATH 252		4
General Physics I	PHYS 151		4
General Education Electives *Choose courses from the list of approved General Education courses- courses must be from different disciplines and include 3 credits in a diversity course.*			
Social and Behavioral Sciences **Must choose a diversity course*			6
Arts & Humanities, Information Technology or Health & Wellness	CSIT 111 Logic and OO Design		3
	General Education	Total	34
Program Requirements			
Course Name	Course ID		Credits
Transitioning to College	ACDV 101		1
Introduction to Engineering Design	ENSC 101		3
Differential Equations	MATH 259		3
General Physics II	PHYS 251		4
Calculus III	MATH 253		4
General Physics III	PHYS 252		4
Computer Science I	CSIT 210		4
Principles of Electronics/Electricity	ENSC 114		3
Electronic Circuits I	ENSC 115		3
Introduction to Digital Electronics	ENSC 204		3
Engineering Math Applications	ENSC 245		2
		Total	34
	Engineering Transfer Degree	Total	68

Students completing the A.S.E. Engineering degree in Electrical Engineering from CCBC will have their coursework transferred in as a block, fulfilling all of FSU's general education requirements, as well as freshman and sophomore discipline courses requirements. These students will matriculate at FSU with junior standing into the B.S. in Engineering concentration: Electrical Engineering Degree .

Addendum II: Remaining Frostburg Coursework

Frostburg State University Catalog Year 2013-2015			
Course Number	Course Title	Credit Hours	Notes
ENME 350	Electronics and Instrumentation I	3.0	
ENME 351	Electronics and Instrumentation II	3.0	
ENME 480	Electromagnetic Theory	3.0	
ENGL 338	Technical Writing	3.0	
ENEE 303	Analog and Digital Electronics	3.0	
ENEE 350	Computer Organization	3.0	
ENEE 307	Electronic Circuits Design	2.0	
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	
ENES 310	Mechatronic and Robotic Design	3.0	
ENES 401	Fundamentals of Energy Engineering	3.0	
IDIS 150	Freshman Colloquium	3.0	Fulfills 3 hours of GEP colloquia requirements
	300/400 level Identity and Difference course (general education)	3.0	The rationale for this is to comply with the requirement that less than 70 credits be transferred and to enable students to meet the 39 credit minimum for upper division coursework.
	300-400 level Technical Electives	6.0	From PHYS, CHEM, ENEE, or ENME courses
Total = 50			