AMENDED
ARTICULATION AGREEMENT

Cecil College
Associate of Science – Arts and Sciences Transfer Program (Mechanical Engineering Option)

Frostburg State University
Bachelor of Science in Engineering

Entered into this 18th day of September, 2020.

Thomas K. Hixson
Dean
College of Liberal Arts and Sciences
Frostburg State University

Christy Dryer
Vice-President of Academic Programs
Cecil College

Jamil Abdo
Chair, Department of Physics and Engineering
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Dean of Science, Technology, Engineering, and Math (STEM)
Cecil College

This agreement will be reviewed annually.

ARTICULATION AGREEMENT

Cecil College, Associate of Science – Arts and Sciences Transfer Program
(Mechanical Engineering Option) and
Frostburg State University, Bachelor of Science in Engineering.

RECITALS

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

I. Purpose

a. It is the intent that this articulation agreement will facilitate a smooth transition from completion of Cecil College's Associate of Science Arts and Sciences Transfer program (Mechanical Engineering option) to the B.S. in Engineering program at FSU. As a result of this articulation agreement, Cecil graduates will understand how FSU transfers the credits earned at Cecil. This agreement provides a systematic plan for students to receive both the A.S. degree from Cecil 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 Cecil graduates in facilitating transfer to FSU.

c. Cecil 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. Arts and Sciences Transfer program (Mechanical Engineering option) at Cecil College. Students must complete an A.S. degree in mechanical engineering in order to participate in the transfer program. A maximum of seventy (70) credit hours from Cecil will be allowed toward fulfillment of the one hundred twenty (120) credit hours required for completion of the B.S. degree. Students are limited to a maximum of ninety (90) credits when transferring courses from other four-year colleges and universities.

b. Mechanical Engineering students from Cecil will have their coursework evaluated by FSU to determine which FSU general education requirements and discipline requirements have been met. Cecil 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 Cecil-FSU course agreements described below, the transfer student will matriculate at FSU with junior standing.

c. In accordance with Code of Maryland Regulations (COMAR), all courses meeting general education requirements at Cecil will transfer to FSU as general education courses (up to a maximum of 36 credits).

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 Cecil's transcript.

f. While Cecil College 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. Cecil students who have completed the A.S. Arts and Sciences Transfer degree (Mechanical Engineering option) 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. Cecil 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. Arts and Sciences Transfer (Mechanical Engineering option) -B.S. in Engineering Transfer Courses

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

a. General Education Requirements to be Completed at Cecil College (34 credits)

	Cecil College Equivalent	**Explanation/Notes**
ENGLISH COMPOSITION (3 credits)	EGL 101	
HUMANITIES (6 credits)	EGL 102 AND One additional 3 credit course from the Arts/Humanities	Equivalent to ENGL 150.
SOCIAL SCIENCE (6 credits)	Two approved general education courses (in two different disciplines) from the Social Sciences category.	
MATHEMATICS (4 credits)	MAT 201	Required in the Mechanical Engineering degree program
NATURAL SCIENCE (8 cr; one course must have a lab component)	CHM 103 &113 AND PHY 217	Required in the Mechanical Engineering degree program
MODES OF INQUIRY ELECTIVE (4 cr)	CHM 104/114 or PHY 218	Required in the Mechanical Engineering degree program.

b. FSU's Technology Fluency Graduation Requirement

All competencies under FSU's technology fluency requirement are met by completion of Cecil's PHE 101 (Introduction to Engineering Design), a required course under the A.S. Arts and Sciences Transfer Program (Mechanical Engineering option.

c. Degree Program Requirements to be Completed at Cecil College (34 credits)

The B.S. degree with a major in Engineering at FSU requires students to successfully complete the following course work. Some of these courses also may meet general education requirements, as indicated above.

Frostburg State University			Cecil Program Equivalent
Course Number	Course Title	Credit Hours	
ENES 100	Introduction to Engineering Design	3.0	PHE 101
MATH 236	Calculus I	x	MAT 201 Already in GEP above
MATH 237	Calculus II	4.0	MAT 202
MATH 238	Calculus III	4.0	MAT 203
MATH 432	Differential Equations	3.0	MAT 246
CHEM 201	General Chemistry I	x	CHM 103 & 113 Already in GEP
PHYS 261	Principles of Physics I – Mechanics, Waves and Oscillations	x	PHY 217 Already in GEP above
PHYS 262	Principles of Physics II – Thermodynamics, Electricity and Magnetism	x	PHY 218 Already in GEP above
PHYS 263	Principles of Physics III – Light and Modern Physics	4.0	PHY 219[1]
* ENES 102	Statics	3.0	PHE 211
ENES 220	Mechanics of Materials	3.0	PHE 213
ENES 221	Dynamics	3.0	PHE 212
ENME 232	Thermodynamics	3.0	PHE 221
TOTAL Program Credits=61			

[1] The student learning outcomes of Cecil's PHY 218 and 219 combined are equivalent to the learning outcomes of FSU's PHYS 262 and 263 courses.

d. Degree Program Requirements to be Completed at FSU (52 credits)

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

Frostburg State University			Notes
Course Number	Course Title	Credit Hours	
ENME 350	Electronics and Instrumentation I	3.0	
ENME 351	Electronics and Instrumentation II	3.0	
ENGL 338	Technical Writing	3.0	
ENME 331	Fluid Mechanics	3.0	
ENME 332	Transfer Processes	3.0	
ENME 382	Engineering Materials and Manufacturing	3.0	
ENME 481	Project Development in Materials Engineering	3.0	
ENME 405	Fundamentals of Materials Engineering	3.0	
PHYS 499	Special Topics: Programming Concepts	4.0	
ENME 373	Advanced Computer-Aided Design	3.0	
ENME 410	Fundamentals for Design and Engineering of Material Properties	3.0	
ENME 425	Microfabrication	3.0	
ENES 401	Fundamentals of Energy Engineering	3.0	
	Arts/Humanities	3.0	Fulfills 3 hrs. of GEP colloquia requirements.
	Identity and Difference course (general education)	3.0	Required for GEP
	300-400 level Technical Electives (any ENEE, ENES, or ENME course)	6.0	
Total = 52			

e. Course Sequencing

Mechanical Engineering students transferring to the Engineering Program at FSU shall be notified by Cecil College 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 Cecil by contacting:

Veronica Dougherty, Ph.D.
Dean of Science, Technology, Engineering, and Math (STEM)
Cecil College
410-287-6060, ext. 260
vdougherty@cecil.edu

Cecil College will direct students interested in participating in the Mechanical Engineering Transfer program to apply for admission to FSU, indicating Engineering as the intended major. Applications can be submitted online at: www.frostburg.edu.

Contact person at FSU for the program is:

Jamil Abdo, Ph.D.
Chair, Department of Physics and Engineering
Frostburg State University
301-687-7026
jabdo@frostburg.edu