

**ACADEMIC PROGRAM ARTICULATION AGREEMENT BETWEEN  
COLLEGE OF SOUTHERN MARYLAND (CSM)  
AND  
STEVENSON UNIVERSITY (SU) REGARDING TRANSFER FROM CSM'S A.S. IN  
ENGINEERING TO SU'S B.S. IN BIOMEDICAL ENGINEERING**

This Academic Program Articulation Agreement (“Agreement”) is entered into by and between **College of Southern Maryland** (the “Sending Institution”) and Stevenson University the “Receiving Institution”) (collectively, the “Institutions”) to facilitate the transfer of academic credits from **the A.S. in Engineering** for the completion of the B.S. in Biomedical Engineering (the “Program(s)”).

### A. Qualifying Students

This Agreement pertains to the transfer of “Qualifying Students”, *i.e.*, those students who:

1. Enter the Sending University in Fall 2019 or after
2. Have successfully completed the program at the Sending Institution;
3. Are enrolled in the Sending Institution, in good standing; and

### B. Responsibilities of the Institutions

The Institutions agree to implement the transfer of Qualifying Students in accordance with applicable law and the following requirements and protocols:

1. A Qualifying Student may transfer into from the Transferring Institution into the Receiving Institution for the completion of the Program.
2. Courses that the Receiving School will accept credits for towards completion of the Program include:

| College of Southern Maryland Degree Requirements                                    | Stevenson Equivalency   | Category            | Credits Transferred |
|---|---|---------------------|---------------------|
| EGR-1100 - Introduction to Engineering  | <ul style="list-style-type: none"> <li>• BME 101 Introduction to Biomedical Engineering</li> </ul>                                | Program Requirement | 3                   |
| CHE-1200 - General Chemistry I/L* (4) and<br>CHE-1210 - General Chemistry II/L* (4) | <ul style="list-style-type: none"> <li>• CHEM 115/115L General Chemistry</li> <li>• CHEM 116/116L General Chemistry II</li> </ul> | Program Requirement | 8                   |
| EGR-1210 - Statics  | TR 199  | General Elective    | 3                   |
| MTH-1200 - Calculus I and Analytic Geometry   | MATH 220 Calculus I   | Program Requirement | 4                   |
| MTH-1210 - Calculus II  | MATH 221 Calculus II  | Program Requirement | 4                   |
| MTH-2200 - Calculus III   | MATH 222 Calculus III   | Program Requirement | 4                   |
| MTH-2210 - Differential Equations   | <b>Fulfills requirement for:</b><br>MATH 321 Introduction to Differential Equations   | Program Requirement | 4                   |

| College of Southern Maryland Degree Requirements   |  | Stevenson Equivalency  | Category | Credits Transferred |
|--|--|--|----------|---------------------|
| PHY-1310: Calculus Based Physics I (previously PHY-1210 & PHY-1210L)   | <ul style="list-style-type: none"> <li>• PHYS 215 General Physics I</li> <li>• PHYS 216 General Physics II</li> <li>• PHYS 299</li> </ul>  | <ul style="list-style-type: none"> <li>• Program Requirement</li> <li>• Program Requirement</li> <li>• General Elective</li> </ul> | 12       |                     |
| PHY-2300: Calculus-Based Physics II (previously PHY-2200 & PHY-2200L)  |  |  |          |                     |
| PHY-2320: Calculus-Based Physics III (previously PHY-2210 & PHY-2210L)   |  |  |          |                     |
| <b>Electives:</b><br><b>SU Recommends:</b> <ul style="list-style-type: none"> <li>• CHE-2200 - Organic Chemistry I* (3) and CHE-2200L - Organic Chemistry I - Lab* (1)</li> <li>• BIO-1060 (3) Principles of Biology I and BIO-1060L: Principles of Biology Lab (1)</li> </ul> | <ul style="list-style-type: none"> <li>• CHEM 210 Organic Chemistry I/CHEM 210L Organic Chemistry I*</li> <li>• Biology 113 General Biology I: Cell Biology and Genetics and Biology 113*</li> </ul> | <ul style="list-style-type: none"> <li>• Program Requirements</li> </ul>   | 8        |                     |
| ENG-1010 - Composition and Rhetoric  | English 151: College Writing I   | General Education Requirement  | 3        |                     |
| General Education Social/Behavioral Science (6 credits)  | General Education Social Science   |  | 6        |                     |
| General Education Arts   | General Education Fine Arts  |  | 3        |                     |
| General Education Humanities   | General Education Humanities   |  | 3        |                     |
| <b>Total</b>   | 65 credits<br>Please note: A minimum of 60 credits are needed for the associate's degree   |  |          |                     |

### Remaining Courses to be taken at Stevenson

Students who complete the plan above including all recommended courses and earn the A.S. in Engineering will take the following courses at Stevenson to meet the B.S. in Biomedical Engineering requirements. Students who transfer before completing the associate degree may have more general education and program requirements to take and fewer free electives.

#### General Education Requirements (3 credits)

English 152 Writing about Literature

#### Total Remaining Program Requirements (52 credits)

SCI 215 Writing in the Sciences, 3 credits  
 BME 205 Problem Solving and Design, 4 credits  
 BME 210 Thermodynamics, 3 credits  
 BME 230 Biofluids, 3 credits  
 BME 314 Biostatistics, 3 credits  
 BME 315 Biomaterials, 4 credits  
 BME 320 Biomedical Engineering Internship, 3 credits  
 BME 335 Instrumentation, 3 credits  
 BME 340 Systems Physiology, 4 credits  
 BME 380 Biomechanics, 4 credits  
 BME 470/475 Biomedical Engineering Design Capstone I & II\*, 6 credits

#### Basic Science Electives (2 courses, 6-8 credits), choose from:

BIO 217 Principles of Biochemistry  
 BIO 222 Human Anatomy  
 BIO 230 Genetics  
 BIO 310 Cell Biology  
 BIO 322 Human Physiology  
 BIO 330 Molecular Genetics  
 BIOCH 327 Biochemistry  
 BICH 427 Advanced Biochemistry  
 CHEM 211 Organic Chemistry II/CHEM 211L Organic Chemistry II Laboratory  
 CHEM 340 Medicinal and Drug Chemistry

**BME electives. Take two courses, choose from: (6 credits)**

BME 325 Transport Systems\*  
 BME 330 Bioelectric Systems\*  
 BME 365 Independent Research in Biomedical Engineering\*  
 BME 425 Synthetic Biology\*

*\*Courses currently under development. Suitable substitutes will be identified as needed.*

**Additional Requirements: (up to 6 credits)**

Up to 6 credits of general electives if needed to meet the 120-credit minimum for the B.S. Degree  
 Total to be taken at SU: 55-60.

**Suggested Course Sequence**

| YEAR 3              |                                    |     |   |     |
|---------------------|------------------------------------|-----|---|-----|
| SEMESTER            | FALL                               |     | SPRING                                    |     |
| RECOMMENDED COURSES | BME 205 Problem Solving and Design | 4   | Science elective (2 of 2)                 | 3-4 |
|                     | ENG 152 College Writing II         | 3   | BME 210 Thermodynamics                    | 3   |
|                     | BME 314 Biostatistics              | 3   | BME 230 Biofluids                         | 3   |
|                     | BME 380 Biomechanics               | 4   | BME 320 Biomedical Engineering Internship | 3   |
|                     | Science Elective (1 of 2)          | 3-4 | SCI 215 Writing in the Sciences           | 3   |
| <b>CREDITS</b>      | <b>17-18 CREDITS</b>               |     | <b>15-16 CREDITS</b>                      |     |
| YEAR 4              |                                    |     |   |     |
| SEMESTER            | FALL                               |     | SPRING                                    |     |
| RECOMMENDED COURSES | BME 335 Instrumentation            | 3   | BME 315 Biomaterials                      | 4   |
|                     | BME 340 Systems Physiology         | 4   | BME 475 BME Design Capstone II            | 3   |
|                     | General elective (if needed)       | 3   | BME Elective (2 of 2)                     | 3   |
|                     | BME Elective (1 of 2)              | 3-4 | General elective (if needed)              | 3   |
|                     | BME 470 BME Design Capstone I      | 3   |   |     |
| <b>CREDITS</b>      | <b>16-17 CREDITS</b>               |     | <b>13 CREDITS</b>                         |     |

## 3. Additional Provisions

- Program requirements must be completed with a grade of “C” or better, and general education courses must be passed with a grade of “D” or better, with the exception of college composition, which must be passed with a “C-” — 70 or higher.
- Students must maintain a (a 2.5) cumulative grade point average in order to transfer.
- Stevenson participates in general education block transfer. Students entering Stevenson with an A.A., A.S., or A.A.T. degree from a Maryland community college will have met all of Stevenson’s general education requirements, with the exception of a second composition course if not already taken. The attached transfer plans for applicable programs detail the coursework students would take under the block transfer program. Not all programs are eligible for block transfer.
- Stevenson University will accept up to 70 credits from 2-year institutions. Up to 90 credits can be applied to degree requirements from a combination of 2-year institutions, 4-year institutions, and non-direct classroom instruction (including CLEP, AP, and other nationally recognized standardized examination scores). For additional information about credit transfer, please see:  
<http://www.stevenson.edu/admissions-aid/getting-started/transfer-students/transfer-credit-evaluation/>
- For non-direct classroom instruction, an appropriate score is determined by Stevenson University, and student must submit original test scores/results to Stevenson University. Tech Prep credits will/will not transfer. Credit awarded for prior learning (“life experience”) is not recognized by, and is not transferable to, Stevenson University.
- Students intending to transfer should complete the admission application for Stevenson University following the third semester of their Associate Degree program. Students should contact the Financial Aid Office at Stevenson University as soon as possible in regard to college deadlines for financial aid. Students who have completed an associate degree at a Maryland community college are guaranteed admissions to Stevenson.

4. The Receiving Institution shall designate, and shall provide to the Sending Institution, the contact information for a staff person at the Receiving Institution who is responsible for the oversight of the transfer of Qualifying Students. The Sending Institution shall designate, and shall provide to the Receiving Institution, the contact information for a staff person at the Sending Institution who is responsible for the oversight of the transfer of Qualifying Students.

|  | Sending Institution                                      | Receiving Institution  |
|--|--|--|
| Name of staff person responsible for oversight | Jacquelyn Rogers   | Dave Copenhaver  |
| Title of staff person                          | Coordinator of Transfer and Articulation                 | Assistant Director of Transfer Admissions                                |
| Email address                                  | <a href="mailto:jgrogers@csmd.edu">jgrogers@csmd.edu</a> | <a href="mailto:wcopenhaver@stevenson.edu">wcopenhaver@stevenson.edu</a> |
| Telephone Number                               | 301-934-7571   | 443-352-4409   |

Should the staff person or position change, the institution will promptly provide new contact information to the partner institution and inform the Maryland Higher Education Commission of the change.

Additional contact information:

| [Role & Responsibilities of persons listed here] | Sending Institution  | Receiving Institution  |
|--|--|--|
| Name of person                                   | Byron Brezina  | Amanda Hostalka  |
| Title of person                                  | Program Coordinator for Engineering                        | Vice Provost, Outreach   |
| Email address                                    | <a href="mailto:btbrezina@csmd.edu">btbrezina@csmd.edu</a> | <a href="mailto:ahostalka@stevenson.edu">ahostalka@stevenson.edu</a> |
| Telephone Number                                 | 301-539-4749   | 443-394-9549   |

5. If the Qualifying Student is using federal Title 38 VA Education Benefits (GI Bill® Education Benefits), the Institutions shall adhere to all applicable U.S. Department of Veterans Affairs' regulations, including the regulations governing the awarding prior credit, as regulated under Title 38, Code of Federal Regulations, Sections 21.4253(d)(3) and 21.4254(c)(4).
  - For scholarship information please see the "Paying for College" page on: <http://www.stevenson.edu/transfer>
6. Each Institution shall adhere to all applicable transfer requirements set forth in the Annotated Code of Maryland and the Code of Maryland Regulations.
7. Each Institution shall advise students regarding transfer opportunities under this Agreement, and shall advise students of financial aid opportunities and implications associated with the transfer.
8. Should either Institution make changes to program requirements, the institution will inform the partner institution immediately. The articulation agreement should be updated to reflect the changes and forwarded to the Maryland Higher Education Commission.

### **C. Term and Termination**

1. This agreement shall be effective on the date that it is signed by the appropriate and authorized representatives of each Institution.
2. Either Institution may, at its sole discretion, terminate this Agreement upon delivering 60 days written notice to the other Institution and the Maryland Higher Education Commission.
3. Both Institutions agree to meet once every 3 year(s) to review the terms of this agreement.

### **D. Amendment**

1. This Agreement constitutes the entire understanding and agreement of the Institutions with respect to their rights and obligations in carrying out the terms of the Agreement, and supersedes any prior or contemporaneous agreements or understandings.
2. This Agreement may be modified only by written amendment executed by both Institutions.

#### **E. Governing Law**

This Agreement shall be governed by, and construed in accordance with, the laws of the State of Maryland.

#### **F. Counterparts**

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

#### **G. Notice of Agreement**

1. The Institutions agree to provide a copy of this Agreement, with any amendments, to the Maryland Higher Education Commission.
2. The Institutions agree to provide copies of this Agreement to all relevant individuals and departments of the Institutions, including but not limited to students, academic department chairs participating in the transfer, offices of the president, registrar's offices, and financial aid offices.

#### **H. No Third-Party Beneficiaries**

There are no third-party beneficiaries to this Agreement.

#### **I. Representations and Warranties of the Parties**

Both Institutions represent and warrant that the following shall be true and correct as of the Effective Date of this Agreement, and shall continue to be true and correct during the term of this Agreement:

1. The Institutions are and shall remain in compliance with all applicable federal, state, and local statutes, laws, ordinances, and regulations relating to this Agreement, as amended from time to time.
2. Each Institution has taken all action necessary for the approval and execution of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives.

|  |   |
|--|---|
| <p>College of Southern Maryland</p> <p>By: <u><i>Rodney Redmond</i></u><br/>Dr. Rodney Redmond<br/>Provost &amp; Vice President of Learning<br/><b>10/04/2022</b><br/>Date</p> | <p>Stevenson University</p> <p>By: <u><i>Susan T. Gorman</i></u><br/><small>Susan T. Gorman (Oct 19, 2022 07:07 EDT)</small><br/>Susan Thompson Gorman, PhD<br/>EVP Academic Affairs and Provost<br/><b>10/19/2022</b><br/>Date</p> |
|--|---|

Date of next review (3 years from date of last signature).