

The following page indicates the **course-to-course equivalency**, including general education requirements, as agreed upon within the articulation agreement between Harford Community College's Associate of Science Degree in Engineering and Sweet Briar College's Bachelor of Science degree in Engineering Science.

| HARFORD COMMUNITY COLLEGE to SWEET BRIAR COLLEGE  |  |            |  |           |                         |
|---|--|------------|--|-----------|-------------------------|
| HCC Course  | Area Satisfied                           | Credits    | Sweet Briar College Equivalent                                 | Credits   | Area Satisfied          |
| CHEM 111: General Chemistry (GL)  | Gen. Ed. Prgrm Req.                      | 4          | CHEM 131: General Chemistry<br>CHEM 141: General Chemistry Lab | 3<br>1    | CORE 160<br>Prgm Req.   |
| ENG 101: English Composition (GE)   | Gen. Ed.                                 | 3          | ENGL 1XX: English Composition                                  | 3         | CORE 120                |
| ENGR 103: Introduction to Engineering Design  | Program Req.                             | 4          | ENGR 110: Introduction to Engineering                          | 4         | Prgm Req.               |
| MATH 203: Calculus (GM)   | Gen. Ed. / Program Req.                  | 4          | MATH 123: Calculus I   | 3 + 1*    | Prgm Req. &<br>Core 170 |
| MATH 204: Calculus II (GM)  | Program Req.                             | 4          | MATH 124: Calculus II  | 3 + 1*    | Prgm Req.               |
| MATH 206: Calculus III  | Program Req.                             | 4          | MATH 223: Calculus III   | 3 + 1*    | Prgm Req.               |
| MATH 208: Elementary Differential Equations   |  | 3          | MATH 328: Ordinary Differential Equations                      | 3         | Prgm Req.               |
| PHYS 203: Gen. Phys.: Mechanics and Particle Dynamics (GS)<br><b>AND</b> PHYS 200: General Physics Lab (GL)**           | Gen. Ed. / Program Req. / Track elective | 4          | PHYS 171: Gen. Physics I w/ Lab                                | 4         | Prgm Req.               |
| PHYS 204: Gen. Phys.: Vibrations, Waves, Heat, Electricity, and Magnetism (GL)  | Gen. Ed. / Program Req.                  | 4          | PHYS 172: General Physics II w/ Lab                            | 4         | Prgm Req.               |
| ART 121: Introduction to Drawing Non-Majors (GH)  | Gen. Ed.                                 | 3          | ART 121 & GH elective=CORE 150                                 | 3         | CORE 150                |
| Any HCC Arts/Humanities (GH) course <b>except</b> CMST 210  | Gen. Ed.                                 | 3          | ART 121 & GH elective=CORE 150                                 | 3         | CORE 150                |
| Physical Education  |  |            | PHED 1XX   | 1         | Gen Elective            |
| <b>Choose from:</b><br>HIST 101, 102, 103, 104, 109, 110, 202 (GB)(D)   | Gen. Ed.<br>GB/D                         | 3          |  | 3         | Gen Elective            |
| <b>Choose from:</b><br>PS 101 (GB), PS 102 (GB), PS 106 (GB), PS 201 (GB), PS 204 (GB)(D), ECON 101 (GB), ECON 102 (GB) | Gen. Ed.<br>GB                           | 3          | Depends on choice  | 3         | CORE 140                |
| Track Electives   |  |            |  |           |                         |
| CSI 131: Computer Science I   | Track Elective                           | 4          | ENGR 125: Intro. to Comp. Sci. with Lab                        | 4         | Prgm Req.               |
| ENGR 201: Dynamics  | Track Elective                           | 3          | ENGR 206: Dynamics and Kinematics                              | 3         | Prgm Req.               |
| ENGR 104: Statics <b>AND</b> ***<br>ENGR: 202: Mechanics of Materials***  | Track Electives                          | 6          | ENGR 205: Statics and Strength of Materials                    | 3         | Prgm Req.               |
| MATH 216: Introduction to Statistics (GM)   | Track Elective                           | 4          | MATH 205: Applied Statistics                                   | 3 + 1     | Prgm Req.               |
| <b>Total:</b>   |  | <b>64†</b> |  | <b>60</b> |                         |

†Per Sweet Briar College [Transfer Credit Policy](#), no more than 60 semester hours of transfer credit will be counted toward the degree.

\*3 credits will transfer to SBC to satisfy program and Core requirements. The additional credit will transfer to SBC and apply to general elective credit requirements.

\*\* It is recommended that students take PHYS 200 concurrent with PHYS 203.

\*\*\*Both courses must be taken to satisfy the ENGR 205: Statistics and Strength of Materials program requirement at SBC.

**Note:** Students who choose not to complete the recommended courses may have to satisfy these requirements upon transferring to Sweet Briar College.

Completion of the Bachelor of Science degree in Engineering Science degree program at Sweet Briar College requires students to successfully complete the following coursework:

| <b>Sweet Briar College<br/>Remaining Program &amp; Degree Requirements</b> |  |                     |                    |
|--|--|---------------------|--------------------|
| <b>SBC Course Number</b>   | <b>SBC Course Title</b>                                | <b>Credit Hours</b> | <b>Explanation</b> |
| <b>Remaining Engineering Science Requirements: 38 credits</b>              |  |                     |                    |
| BUSN 326   | Project Selection and Management                       | 3                   |                    |
| ENGR 120   | Foundations of Engineering Analysis                    | 1                   |                    |
| ENGR 215   | Materials Science and Engineering                      | 4                   |                    |
| ENGR 221   | Electrical Circuits                                    | 4                   |                    |
| ENGR 232   | Engineering Design in the Community                    | 3                   |                    |
| ENGR 307   | Thermal and Fluid Systems                              | 4                   |                    |
| ENGR 324   | Mechatronics   | 4                   |                    |
| ENGR 341   | Theory of Structure                                    | 3                   |                    |
| ENGR 378   | Engineering Co-op                                      | 1                   |                    |
| ENGR 415   | Systems Modeling and Controls                          | 3                   |                    |
| PHYS 215   | Matlab Programming                                     | 1                   |                    |
| PHYS 233   | Intermediate Physics Laboratory                        | 1                   |                    |
| ENGR 451   | Capstone Design I                                      | 1                   |                    |
| ENGR 452   | Capstone Design II                                     | 2                   |                    |
| ENGR 453   | Capstone Design III                                    | 1                   |                    |
|  | 2 credits in approved courses from CHEM, MATH, or PHYS | 2                   |                    |
| <b>CORE Courses: 15 credits</b>  |  |                     |                    |
| <b>General Electives: 6 credits</b>  |  |                     |                    |
| <b>Total credits to be taken :</b>   |  | <b>60</b>           |                    |

**SUMMARY:**

|   |     |
|---|-----|
| Total credits hours to transfer from Harford Community College:       | 60  |
| Total credit hours needed in core engineering science courses at SBC: | 38  |
| Total credit hours needed in Leadership Core courses                  | 15  |
| Total credit hours of general electives to be satisfied at SBC:       | 6   |
| <hr/>   |     |
| Total credit hours for B.S. degree from SBC:                          | 120 |

