

STEVENSON

U N I V E R S I T Y

Carroll Community College A.S. Transfer Plan

A.S. in Engineering to B.S. in Biomedical Engineering

This transfer plan is intended for students pursuing an A.S. in Engineering at Carroll Community College who are interested in pursuing a B.S. in Biomedical Engineering at Stevenson University. The equivalencies below demonstrate how a student can meet both the requirements of the associate degree and prepare for a seamless transfer to Stevenson. Any student who enters Stevenson with an A.A. or A.S. degree will have completed all general education requirements with the exception of composition II if not taken at the community college. Please note:

- Only courses that have course equivalencies are displayed. This guide does not show all transferable courses from this college. It also does not display all Stevenson University courses that will fulfill a specific requirement.
- 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.
- 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 scholarship information please see the “Paying for College” page on: <http://www.stevenson.edu/transfer>
- Transfer plans are intended to be used as planning tools. If you need additional assistance in selecting courses to take prior to transferring to Stevenson University, contact Stevenson Admissions at 443-352-4450.

| Community College Degree Requirements | Stevenson Equivalency | Category | Credits Transferred |
|---|--|---------------------|----------------------------|
| ENGR 100 – Introduction to Engineering | BME 101 Introduction to Biomedical Engineering | Program Requirement | 3 |
| CHEM 105 – Principles of General Chemistry 1/L | CHEM 115/115L General Chemistry | Program Requirement | 4 |
| CHEM 106 – Principles of General Chemistry 2/L | CHEM 116/116L General Chemistry II | Program Requirement | 4 |
| CHEM 201 – Organic Chemistry 1/L | CHEM 210 Organic Chemistry I/CHEM 210L Organic Chemistry I | Program Requirement | 5 |
| ENGL 101 – College Writing 1 | ENG 151 General Education | General Elective | 3 |
| MATH 135 – Calculus of a single variable 1 | MATH 220 Calculus I | Program Requirement | 4 |
| MATH 136 – Calculus of a single variable 2 | MATH 221 Calculus II | Program Requirement | 4 |
| MATH 205 – Multivariable calculus | MATH 222 Calculus III | Program Requirement | 4 |
| PHYS 111 – Physics 1 for Scientists and Engineers | PHYS 215 General Physics I | Program Requirement | 4 |
| PHYS 212 – Physics 2 for Scientists and Engineers | PHYS 216 General Physics II | Program Requirement | 4 |

| Community College Degree Requirements | Stevenson Equivalency | Category | Credits Transferred |
|---|--|--|---------------------|
| Electives: SU Recommends: <ul style="list-style-type: none"> MATH 215 – Differential equations (4) BIOL 101 – Fundamentals of Biology (4) ENGR 102 – Statics (3) – or -- CIS 132 – Principles of programming (3) | <ul style="list-style-type: none"> MATH 321 Introduction to Differential Equations BIO 113 General Biology I: Cell Biology and Genetics and Biology 113L General Elective | <ul style="list-style-type: none"> Program Requirement Program Requirement General Elective | 11 |
| Gen Ed requirements (2 – Arts & Humanities, 1 - Diversity, 1 - Social & behavioral Science) SU Recommends: ENGL 102 Writing about literature | ENG 152 College Writing II | General Education Requirement (Second Composition Course) | 10 |
| Total | 60 Credits 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 at Carroll Community College 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 (0 credits)

Total Major Requirements (52-54 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 Clinical Immersion, 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), choose from: (6-8 credits)

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*

BME 440 Topics in Biomedical Engineering *

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

Additional Credits Needed: (up to 8 credits)

Up to 8 credits of general electives if needed to meet the 120 credit minimum for the B.S. Degree

Total credits to be taken at SU: 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 |
| | BME 314 Biostatistics | 3 | BME 210 Thermodynamics | 3 |
| | BME 380 Biomechanics | 4 | BME 230 Biofluids | 3 |
| | Science Elective (1 of 2) | 3-4 | BME 320 Clinical Immersion | 3 |
| | General Elective | 3 | SCI 215 Writing in the Sciences | 3 |
| CREDITS | 17-18 CREDITS | | 15-16 CREDITS | |
| 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 |
| | BME Elective (1 of 2) | 3-4 | BME Elective (2 of 2) | 3-4 |
| | BME 470 BME Design Capstone I | 3 | General elective (if needed) | 3 |
| | General elective (if needed) | 3 | | |
| CREDITS | 16-17 CREDITS | | 13-14 CREDITS | |

Signed 02.01.2021