

Sample 4-year Degree Plan for  
**Bachelor of Science in Biomedical Engineering**  
 Last revised **2023-2024\***

*This is ONLY a sample degree plan. Please meet with your academic advisor prior to registration to formulate your own plan, and for additional information refer to the [academic catalog](#).  
 If you were placed into introductory Writing and/or Mathematics courses based on your placement and/or test scores, please consult with your academic advisor to develop a degree plan.*

| Year | Fall Semester                             | Spring Semester                            |
|------|---|--|
| 1st  | ENGE 1000 Intro to Engineering (GE I&T) 3 | CSCI 1611 Gentle Intro. to Programming** 3 |
|      | BIOL 2050 General Biology I 4             | BIOL 2052 General Biology II 4             |
|      | BIOL 2051 General Biology I Lab 1         | BIOL 2053 General Biology II Lab 1         |
|      | GE WC&IL 1 3                              | GE WC&IL 2 3                               |
|      | MATH 2214 Calculus I (GE QA&SR) 3         | MATH 2215 Calculus II 3                    |
|      |   | ENGR 1500 Design Project Experience I 1    |
|      | <b>Total Credits</b> 14                   | <b>Total Credits</b> 15                    |

| Year | Fall Semester                             | Spring Semester                          |
|------|---|--|
| 2nd  | MATH 2216 Calculus III 3                  | MATH 3305 Linear Algebra 3               |
|      | ENGE 2000 Linear Circuits & Systems 3     | MATH 3307 Differential Equations 3       |
|      | ENGE 2001 Linear Circuits & Systems Lab 1 | ENGB Biomechanics 3                      |
|      | CHEM 2050 General Chemistry I (GE NW) 3   | ENGT Fund. of Biomaterials 3             |
|      | CHEM 2051 General Chemistry I Lab 1       | ENGR 2500 Design Project Experience II 1 |
|      | PHYS 2050 General Physics I 3             | GE H&P 3                                 |
|      | PHYS 2051 General Physics I Lab 1         |  |
|      | <b>Total Credits</b> 15                   | <b>Total Credits</b> 16                  |

| Year | Fall Semester                                      | Spring Semester                      |
|------|--|--------------------------------------|
| 3rd  | ENGR 3500 Engineering Design I 3                   | ENGR 3501 Engineering Design II 3    |
|      | ENGB 3002 Transport in Living Systems 3            | ENGB 3001 Thermodynamics 3           |
|      | ENGB 3004 Biomedical Instrument. & Device Design 4 | BIOL 3032 Human Anatomy 3            |
|      | BIOL 3034 Human Physiology 3                       | BIOL 3033 Human Anatomy Lab 1        |
|      | BIOL 3035 Human Anatomy Lab 1                      | BIOL 3170 Cell & Molecular Biology 3 |
|      | ENGE 3000 Signals & Systems 3                      | MATH 3470 Applied Statistics 3       |
|      | <b>Total Credits</b> 17                            | <b>Total Credits</b> 16              |

| Year | Fall Semester                  | Spring Semester                |
|------|--------------------------------|--------------------------------|
| 4th  | ENGB Upper Division Elective 3 | ENGB Upper Division Elective 3 |
|      | ENGB Upper Division Elective 3 | ENGB Upper Division Elective 3 |
|      | GE AE 3                        | GE T&M 3                       |
|      | GE GC 3                        | GE CA 3                        |
|      | GE CT 3                        | GE SW 3                        |
|      | <b>Total Credits</b> 15        | <b>Total Credits</b> 15        |

**Baccalaureate Requirements**

- Total Degree Credits Required = 120 credits of which a minimum of 36 are Upper-Division Credits (level 3000 and above)
- Completion of Major Requirements (*as indicated above*)
- Completion of General Education Requirements (*as indicated above*)
- Cumulative GPA of at least 2.0; Major GPA of at least 2.0
- Residency Requirements: 12 credits of major course work and 24 of the last 30 credits immediately preceding graduation (*Service member's Opportunity College students please see your academic advisor*)

**Program-Specific Requirements**

- The total Credit count for the Program complies with University requirements at HPU. The total for this Program is: **123**
- The General Education Credit Point count for the Program complies with University requirements at HPU. The GE Total credit for this program is: **27** (9 x 3), excluding (3 x 3); **this number excludes 9 counted as core BME courses**

- The Credit count for Basic Math & Science for the Program complies with ABET Accreditation requirements of 1 out of 4 years (equivalent to 30 credits). The total is: **47**
- The Credit count for Engineering (including Computer Science) for the Program complies with ABET Accreditation requirements of 1.5 out of 4 years (equivalent to 45 credits). The total is: **49**
- There are no unrestricted electives for this Program in order to meet ABET accreditation requirements and enable required Core and Elective course offerings specific to Biomedical Engineering.
- The above credit classification is done in order to meet ABET accreditation requirements and enable required Core and Elective course offerings specific to Biomedical Engineering.
- The Engineering Research series (I, II, & III) can be either an extension of the Design Project, or relevant industry work such as an internship or a supervised project work under a CNCS faculty.

**To qualify for a Concentration in Biotechnology Engineering (BTE):**

- Students must complete 12 credits of electives from the approved list in the BME program concentration in BTE (refer to the catalog).
- The Total Credit Point Count for all subjects undertaken with a focus on BTE is: 12.

*\*This schedule is only a suggestion; make sure you understand the necessary prerequisites for each course and consult with your Academic Advisor. Course availability is subject to change; actual degree audits may change depending on course availability in a given semester.*

*\*\*If you seek to place out of CSCI 1611 with direct entry into CSCI 2651, contact Dr. Crawford (scrawford@hpu.edu).*

*For more information on our General Education curriculum please refer to our Academic Catalog or visit: <https://www.hpu.edu/gen-ed/index.html>*