

Sample 4-year Degree Plan for  
**Bachelor of Science in Biotechnology 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>	<b>14</b>	<b>Total Credits</b>	<b>15</b>

Year	Fall Semester		Spring Semester	
2nd	ENVS 2000 Principles of Environmental Science	3	MATH 3470 Applied Statistics <b>OR</b>	3
			BIOL 3090 Biometry	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>	<b>15</b>	<b>Total Credits</b>	<b>16</b>

Year	Fall Semester		Spring Semester	
3rd	ENGR 3500 Engineering Design I	3	ENGR 3501 Engineering Design II	3
	BIOL 3170 Cell & Molecular Biology	3	ENGB 3001 Thermodynamics	3
	BIOL 3171 Cell & Molecular Biology Lab	1	ENGT Analytical Biotechnology for Engineers	3
	ENGT 3100 Advanced Biomaterials	3	GE SW	3
	ENGT 3200 Bioprocesses	3	Unrestricted Elective	3
	Unrestricted Elective	3		
		<b>Total Credits</b>	<b>16</b>	<b>Total Credits</b>

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

**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: **121**
- 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 BTE 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: **37**
- 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: **48**
- There are 3 unrestricted electives for this Program in order to meet ABET accreditation requirements and enable required Core and Elective course offerings specific to Biotechnology Engineering.
- The above credit classification is done in order to meet ABET accreditation requirements and enable required Core and Elective course offerings specific to Biotechnology 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.

**Concentration Requirement:**

- Students must concentrate in either Bioprocessing OR Bioenvironmental Technology by completing 12 upper division credits from the approved lists of courses for the corresponding BTE program concentration (refer to the catalog).

*\*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>*