

Program Planning Guide for LEAP – BME

Fall '26-Spring '27

This sheet is intended to guide students in the Late Entry Accelerated Program (LEAP) with an intended master's in **biomedical engineering** through their foundational phase courses. A final decision on exactly which courses a student is required to take will be made during a conversation with their faculty advisor. Other required courses may be designated as a part of the advising process.

*LEAP students are required to earn a B or higher in a Calculus I course prior to **starting** LEAP. Students who have not taken Calculus I prior to matriculating will not be able to start the LEAP foundational phase curriculum, which begins immediately with Calculus II and other courses building on Calculus I concepts. Calculus I courses must have been completed within 5 years of a student's matriculation into LEAP.*

As stated in the [academic bulletin](#), LEAP students must abide by the following guidelines to successfully move into their master's program:

- After matriculating into LEAP, a student must take at least two-thirds of their remaining foundational phase courses at BU. A student's faculty advisor will determine how many courses the student will take during their foundational phase after discussing the student's academic and professional background.
 - **This calculation will not include courses taken prior to starting LEAP.** For example, if a student needs 12 courses to complete their foundational phase and has taken 3 of those courses prior to matriculating into LEAP, they will have 9 required courses in their foundational phase after starting LEAP. Of those 9 required courses, they will be required to take 6 at BU.
- A student cannot take courses outside of Boston University during BU's [academic year](#) (i.e., any time between the Fall semester's first day of classes and Spring semester's final exam day).
- If a student is interested in taking foundational phase courses outside of Boston University during a summer semester, they will need to first obtain approval from their faculty advisor.
- Audited courses will not count towards a student's foundational phase. To view the full audit policy, please visit our page [here](#).

**This program planning sheet is designed for LEAP students starting in Fall 2026 & Spring 2027. Courses listed are subject to change for future semesters.*

Taken	Need	College	Course	Course Title	Prerequisites	Corequisites	Units
Core Courses							
		ENG	EK 125	Intro to Programming for Engineers		Calculus I (MA 123)	4
		CAS	MA 124	Calculus II	Calculus I (MA 123)		4
		CAS	MA 225	Multivariate Calculus	Calculus II (MA124)		4
		CAS	MA 226	Differential Equations	Multivariate Calculus (MA 225 or MA 230)		4
		CAS	PY 211	General Physics I (calculus-based)	Calculus I (MA 123)	Calculus II (MA124)	4
		CAS	PY 212	General Physics II (calculus-based)	General Physics I (PY 211) and Calculus II (MA124)		4
		CAS	CH 131	General Chemistry for Engineering Sciences		Calculus I (MA 123)	4
		ENG	EK 103	Computational Linear Algebra	Intro to Programming for Engineers (EK 125)		3
		ENG	EK 301	Engineering Mechanics I	General Physics I (PY 211)	Multivariate Calculus (MA 225) and Intro to Programming for Engineers (EK 125)	4
		ENG	EK 307	Electric Circuits		General Physics II (PY 212)	4
		ENG	EK 381	Probability, Statistics, & Data Science for Engineers	Multivariate Calculus (MA 225) and Computational Linear Algebra (EK 103)		4

		ENG	BE 209	Principles of Molecular Cell Biology and Biotechnology			4
		ENG	BE 403	Biomedical Signals & Controls	Differential Equations (MA 226) and Electric Circuits (EK 307)		4
		ENG	BE 493	Biomedical Measurements Lab	Electric Circuits (EK 307)	Biomedical Signals & Controls (BE 403)	4
Choose one of the following courses							
		ENG	BE 404	Control Systems in Biomedical Engineering	Biomedical Signals & Controls (BE 403)		4
		ENG	BE 420	Introduction to Solid Biomechanics	Differential Equations (MA 226) and Computational Linear Algebra (EK 103) and Engineering Mechanics I (EK 301)		4
		ENG	BE 435	Transport Phenomena in Living Systems	General Physics I (PY 211) and Differential Equations (MA 226)		4
		ENG	BE 436	Fundamentals of Fluid Mechanics	Differential Equations (MA 226) and Engineering Mechanics I (EK 301)		4
		ENG	BE 424	Thermodynamics & Statistical Mechanics <i>*recommended for students interested in a PhD or BE605</i>	General Chemistry II (CH 102) and General Physics II (PY 212) and Differential Equations (MA 226) and Probability, Statistics, & Data Science for Engineers (EK 381)		4