Program Planning Guide for LEAP – SE
Fall '26 – Spring '27

This sheet is intended to guide students in the Late Entry Accelerated Program (LEAP) with an intended master's in **systems 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 **matriculating** into 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	Pre-requisites	Co-requisites	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	MA 193	Discrete Mathematics for Engineering			2
		ENG	EK 103	Computational Linear Algebra	Intro to Programming for Engineers (EK 125)		3
Choose one of the following courses							
		ENG	EK 381	Probability, Statistics, & Data Science for Engineers	Multivariate Calculus (MA 225) and Computational Linear Algebra (EK 103)		4
		ENG	EK 500	Probability with Statistical Applications	Differential Equations (MA 226)		4
Choose one of the following courses							
		ENG	EC 401	Signals and Systems	Differential Equations (MA 226) and Electric Circuits (EK 307)		4
		ENG	BE 403	Biomedical Signals & Controls	Differential Equations (MA 226) and Electric Circuits (EK 307)		4

Choose one of the following courses							
		ENG	EC 330	Applied Algorithms for Engineers	Intro to Software Engineering (EC 327), **recommended** Discrete Mathematics for Engineering (MA 193)		4
		CAS	CS 330	Introduction to Analysis of Algorithms	Introduction to Computer Science 2 (CS 112) and Combinatoric Structures (CS 131) and one of the following: Geometric Algorithms (CS 132) **or** Algebraic Algorithms (CS 235) **or** Probability in Computing (CS 237)		4
Choose three of the following courses							
		ENG	ME 404 **or** EC 402	ME 404 - Dynamics and Control of Mechanical Systems	Engineering Mechanics II (EK 302)		4
				EC 402 - Control Systems	Differential Equations (MA 226) and Electric Circuits (EK 307) and Signals & Systems (EC 401)		4
		ENG	EC 414	Machine Learning	Computational Linear Algebra (EK103) and Intro to Programming for Engineers (EK125) and Probability, Statistics, & Data Science for Engineers (EK381)		4
		ENG	EC 418	Intro to Reinforcement Learning	Computational Linear Algebra (EK103) Multivariate Calculus (MA225), and Probability, Statistics, & Data Science for Engineers (EK381)		
		ENG	EC 441	Introduction to Computer Networking	Probability, Statistics, & Data Science for Engineers (EK 381), **recommended** Introduction to Software Engineering (EC 327) and Signals & Systems (EC 401)		4
		ENG	ME 420	Supply Chain Engineering	Probability, Statistics, & Data Science for Engineers (EK 381)		4