Program Planning Guide for LEAP - RAS

This sheet is intended to guide students in the Late Entry Accelerated Program (LEAP) with an intended master's in **robotics and autonomous systems** 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.*

As stated in the academic bulletin, effective Fall 2025, 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 courses required for their foundational phase through Boston University. The full list of courses needed for a student's foundational phase will be determined during a conversation with their faculty advisor.
    - 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 matriculating. They will be required to take 6 of the 9 courses at BU.
- A student cannot take courses outside of Boston University during the Fall and Spring semesters.
- If a student is interested in taking 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.

Taken	Need	College	Course	Course Title	Pre-requisites	Co-requisites	Units
Core Courses							
		CAS	MA 124	Calculus II	Calc I		4
		CAS	MA 225	Multivariate Calculus	Calc II		4
		CAS	MA 226	Differential Equations	Multivariate Calc **or** CAS MA 230		4
		CAS	PY 211	General Physics I (calculus-based)	Calc I	Calc II	4
		ENG	EK 103	Computational Linear Algebra			3
		ENG	EK 301	Engineering Mechanics I	General Physics I, EK 125	Multivariate Calc	4
		ENG	EK 302	Engineering Mechanics II	EK 301		
		ENG	ME 357	Introduction to Computer Aided Design			2
		ENG	EK 381	Probability, Statistics, & Data Science for Engineers	Multivariate Calc, EK 103		4
Controls - choose one of the following courses							
		ENG	ME 404	Dynamics and Control of Mechanical Systems			4
		ENG	EC 402	Control Systems			4
		ENG	BE 404	Modern Control in Biomedical Engineering			4
Electrical or Mechanical Design – choose one of the following courses							
		ENG	EK 307	Electric Circuits	General Physics II		4
		ENG	EC 410	Intro to Electronics **for students familiar with EK307 materials*			4
		ENG	ME 360	Electromechanical Design **for students interested in CAD based design*			4
Programming – choose one of the following courses							
		ENG	EK 125	Introduction to Programming for Engineers **for students with no programming experience*			4
		ENG	EC 327	Introduction to Software Engineering **for students with introductory programming experience*			4

		ENG	EC 413	Computer Organization **for students with significant programming experience*			4

Tentative Program Plan

The LEAP foundational phase is a streamlined set of courses to put students on par with students graduating with a bachelor's in engineering and is therefore a rigorous, fast-paced curriculum. The Graduate Programs Office recommends students in LEAP take **no more than 12 units (3 courses) in their first semester.**

Student Name: ____ Student BUID: ____________# of foundational phase courses needed: _____

Faculty Advisor Name: ___________________________________ Faculty Advisor Signature: ____

Semester (e.g. Fall 2025)	Course # (e.g. EK125)	Notes