

LEAP Program Plan Materials Science & Engineering

Student: _____ **BU-ID#** _____

Course pre-requisites are listed in parentheses. Other required courses may be designated as part of the advising process. All students must present evidence of previous equivalent coursework or complete the following:

Core Courses				
	Taken	Needs	#	Title
1			ENG EK 121	Introduction to Programming & Data Science
2			ENG EK 122	Programming for Engineers
3			CAS MA 124	Calculus II (MA 123)
4			CAS MA 225	Multivariate Calculus (MA124)
5			CAS MA 226	Differential Equations (MA225)
6			CAS PY 211	Physics I (co-req. MA124)
7			CAS PY 212	Physics II (PY 211)
8			CAS PY 313	Elementary Modern Physics (MA 124 and PY212)
9			ENG EK 301	Engineering Mechanics I (PY 211 and EK 127; co-req. MA 225)
10			ENG ME 304	Energy and Thermodynamics (PY 211, co-req. MA 225)
11			ENG ME 306	Introduction to Materials Science (PY 212; PY 313 recommended)
12	Track Courses - choose one track (a) through (d):			
a	Biomaterials – choose one sequence (either CH101 and 102 or CH171 and 172)			
			CAS CH 101	General Chemistry I and
			CAS CH 102	General Chemistry II
			CAS CH 171	Principles of General Chemistry and
			CAS CH 172	Principles of Organic Chemistry (CH171)
b	Materials for Energy and Environment			
			CAS CH 131	General Chemistry for the Engineering Sciences
			ENG EK 335 (S)	Introduction to Environmental Engineering
			Or ENG EK 408 (F)	Introduction to Clean Energy and Storage Technologies (PY 211, PY212, CH131, MA123)
c	Electronic/Photonic Materials			
			CAS CH 131	General Chemistry for the Engineering Sciences
			ENG EK 307	Electric Circuit Theory (co-reqs. MA 226 and PY212)
d	Nanomaterials			
			CAS CH 131	General Chemistry for the Engineering Sciences
			ENG EC 481	Fundamentals of Nanomaterials and Nanotechnology (PY 313)

Minimum # of courses needed for LEAP foundation: _____

Comments:

Advisor Initials: _____ Date: _____

