

Le Moyne College										
Physics Major, typical program for B.S. with Concentration in Pre-Engineering (Electrical)***										
(as of 2016-17 Academic Year)										
Revised April 2021										
CREDIT	FIRST-YEAR		SOPHOMOR		JUNIOR		SENIOR			
	F	S	F	S	F	S	F	S		
MAJOR REQUIREMENTS										
PHYSICS										
PHY 105*	General Physics I (calc.)	3	3							
PHY 103*	General Physics Lab I	1	1							
PHY 106*	General Physics II (calc.)	3		3						
PHY 104*	General Physics Lab II	1		1						
PHY 201	Fields and Waves	3			3					
PHY 203	Foundations of Modern Physics	3				3				
PHY 231	Foundations Lab	1			1					
PHY 303*	Classical Electr/magn Theory I	3						3		
PHY 321	Analytical Mechanics I	3			3					
PHY 331	Atomic & Nuclear Physics Lab	1				1				
PHY 333	Computational Physics	3					3			
PHY 307	Quantum Mechanics I	3				3				
PHY 308/XX	Quantum Mechanics II or 3XX/4XX	3					3			
PHY 401*	Mathematical Physics	3							3	
PHY 405	Statistical Physics	3							3	
PHY 431	Advanced Physics Lab	1					1			
PHY 476	Physics Capstone	3							3	
MAJOR SUPPORT										
MATHEMATICS										
MTH 145*	Calculus I	4	4							
MTH 146*	Calculus II	4		4						
MTH 245*	Calculus III	4			4					
MTH 304*	Differential Equations Sci-Eng	4				4				
MTH 110*	Statistics I	3		3						
MTH 311*	Intro to Probability	3					3			
OTHER SCIENCES										
CHM 151*	Chemical Principles I	4					4			
CORE REQUIREMENTS										
ENGLISH/SOC SCI/HIST/RELIG/PHILOS										
COR 100	First Year Seminar	3	3							
WRT 101	Critical Writing	3	3							
HST 110	World Civilization I	3	3							
HST 111	World Civilization II	3		3						
PHL 110	Introduction to Philosophy	3		3						
PHL 210	Moral Philosophy	3			3					
EAC 1	Encountering Another Culture/	3			3					
EAC 2	Foreign Language	3				3				
ENG 210	Major Authors	3					3			
ENG 310	Literature & Culture	3						3		
IDS	Interdiscip. NatSci/SocSci/Math	3							3	
THE	Theology	3							3	
REL	Religious Studies	3							3	
(SOC)	Social Science	3							3	
COR 400	Senior Seminar: Transformations	3							3	
VPA	Visual & Performing Arts	1					1			
DIV	Diversity	0								
ADDITIONAL MASTERS PREREQUISITES*										
ENGINEERING										
ELE 231**	Electrical Engineering I (or PHY 311)	3			3					
ELE 291**	Electrical Engineering Lab I	1			1					
ELE 292**	Electrical Engineering Lab II (or PHY 312)	1				1 (or 4)				
ELE 251**	Fundamentals of Linear Systems	3					3			
ELE 314**	Power Engineering	3					3			
ELE 333**	Analog Circuits	3						3		
CSE 261**	Digital Logic	3						3		
CSE 262**	Digital Logic Lab	1						1		
ELE 351**	Systems & Signal Analysis	3							3	
ELECTIVES										
PHY 3XX/4X	Major Elective, only if PHY-312 not	3							3	
TOTAL CREDITS		137	17	17	17	15 (or 18)	20	18	18	15

* Satisfies pre-requisites for admission to masters program. 3.0 GPA in math/science/eng & overall -15

** Taken at Syracuse University

*** So long as pre-reqs (*-ed courses) are satisfied, students with B.A. degrees may also enter the M.S. program

☆ PHY 312 is a Spring semester course. ELE 292 is a Fall semester course

PHY 3XX/4XX courses, except PHY 311, 331, 431, & 476, are offered in alternate years, so students graduating in odd-numbered years follow a program with the 3rd and 4th years of PHY courses interchanged.