

Le Moyne College										
Physics Major, typical program for B.S. with Concentration in Pre-Engineering (Mechanical and Aerospace)***										
(as of 2016-17 Academic Year)										
Revised 4-20-17										
		CREDIT	FIRST-YEAR		SOPHOMORE		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 311*	Electronics I	4			4					
PHY 333*	Computational Physics	3						3		
PHY 307	Quantum Mechanics I	3					3			
PHY 308/XXX	Quantum Mechanics II or 3XX/4XX	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 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										
ECS 221**	Statics	3			3					
ECS 325**	Mechanics of Solids	4				4				
ECS 326**	Engineering Materials	3							3	
MAE 315**	Mech/Aero Lab	3							3	
MAE 321**.#	Dynamics of Mechanical Systems	3						3		
MAE 322**	Control Systems	3								3
MAE 341**	Fluid Mechanics	4					4			
ELECTIVES										
PHY 3XX/4XX	Major Elective	3								3
TOTAL CREDITS		137	17	17	17	18	18	17	18	15

* Satisfies pre-requisites for admission to masters program. 3.0 GPA in math/science/eng & overall also req'd 0

** 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 321 is a pre-requisite for MAE 321, so students graduating in odd-numbered years must take MAE 321 in their senior year

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.