Applied Physics Plan of Study

NOTES: Physics 3X0 = Statistical Mechanics, and Classical Mechanics; Physics 4X0 = Quantum Mechanics, and Electromagnetic Theory. Only one of these four courses is required, but any of these courses and Advanced Laboratory (Physics 384) can be taken any time after the second semester of the second year. Physics 3XX = Astrophysics, or Nuclear and Particle. Exact rotation depends on the student's year of major declaration.

Freshman		
Fall Semester		
FSEM 100	First-Year Seminar	3
Physics 190	Physics PEER Journey	1
Physics 105	University Physics I	4
Math 121	Calculus I	4
General Education Courses		3
		15
Spring Semester		
Physics 106	University Physics II	4
Math 122	Calculus II	4
General Education Courses		6
		15
Sophomore		
Fall Semester		
Physics 211	Modern Physics	3
Physics 290 (recommended)	Math Methods for Physics	3
General Education Courses		9
		15
Spring Semester		
Physics 220	Materials, Fluids, and Thermodynamics	3
General Education Courses		12
		15
Junior		
Fall Semester		
Physics 290	Math Methods for Physics	3
Physics 283 or 300	Electronics or Optics**	4
General Education Courses		9
		16
Spring Semester		
Physics 3X0 or 4X0	Upper-level Theory Elective	4
General Education Courses		9
		13
Senior		
Fall Semester		
Physics 283 or 300	Electronics or Optics**	4
Physics 471 or 3XX	Special Topics Elective	3
General Education Courses		8

		15
Spring Semester		
Physics 482	Senior Seminar	2
Physics 3X0 or 4X0	Physics Elective	3 or 4
Electives		9
		15
Total Credits	15	12
		120
** These courses are offer	red every other year	

COURSE OFFERING ROTATION FOR UMW PHYSICS MAJORS (2024 – 2028)

REQUIRED COURSES FOR BOTH MAJORS

CRS	NAME	CR	ATR	PRERQ	F24	S25	F25	S26	F26	S27	F27	S28
105	University Physics I	4	WI									
106	University Physics II	4	WI									
190	Physics PEER Journey	1	P/F									
211	Modern Physics	3		106								
290	Math Methods of Physics	3		106								
	(Majors can take Math)											
482	Seminar	2	SI	senior								

REQUIRED COURSES IN PHYSICS MAJOR

CRS	NAME	CR	ATR	PREREQ	F24	S25	F25	S26	F26	S27	F27	S28
320	Classical Mechanics	4		211,290								
360	Statistical Mechanics	4		211,290								
384	Advanced Laboratory	3	WI	211								
400	Electromagnetism	4		211,290								
410	Quantum Mechanics	4		211,290								

REQUIRED COURSES IN APPLIED PHYSICS

CRS	NAME	CR	ATR	PREREQ	F24	S25	F25	S26	F26	S27	F27	S28
220	Mat'ls, Fluids, & Thermo	3		106								
283	Electronics	4		106								
292	Optics	4		106								

ELECTIVE COURSES IN EITHER PHYSICS MAJOR

CRS	NAME	CR	ATR	PREREQ	F24	S25	F25	S26	F26	S27	F27	S2 8
310	Nuclear Physics	3		211,290								
319	Astrophysics	4	DI	211,290								
471	Special Topics	3		106 or 290								