

Winona State University
Four Year Map
Physics Option 1 (PHYP)

Fall Year 1			Spring Year 1		
Course	Requirement Met	SH	Course	Requirement Met	SH
Chemistry 212, Principles of Chemistry I	GE Goal 3/Major	4	Chemistry 213, Principles of Chemistry I	GE Goal 3/Major	4
Math 120, PreCalc	GE Goal 4	4	Math 212, Calculus 1	GE Goal 4/Major	4
English 111, College Rdg/Wrt	GE Goal 1	4	Communication Studies 191	GE Goal 1	3
OR 100, Intro to Higher Education	Gen Elective	1	Physics 221, University Physics 1	GE Goal 3/Major	4
General Education Elective	GE Goal 5/6/7/8/9/10	3	Physics 231, University Physics 1B	Major	1
Phys 099, The Career Physicist	Major	0	Phys 099, The Career Physicist	Major	0
Notes: May swap Eng 111 with CMST 191 in Spring			Notes:		
		Total SH 16			Total SH 16
Fall Year 2			Spring Year 2		
Course	Requirement Met	SH	Course	Requirement Met	SH
Math 213, Calculus 2	GE Goal 4/Major	4	Physics 340, Modern Physics	Major/WI	4
Physics 222, University Physics 2	GE Goal 3/Major	4	Math 313, Differential Equations	Major	3
Physics 232, University Physics 2B	Major	1	Math 314, Linear Algebra and Diff Eq	Major	1
General Education Elective	GE Goal 5/6/7/8/9/10	3	General Education Elective	GE Goal 5/6/7/8/9/10	3
General Education Elective	GE Goal 5/6/7/8/9/10	3	Math 312, Multivariable Calculus	Major/CAI	4
Notes:			Notes:		
		Total SH 15			Total SH 15
Fall Year 3			Spring Year 3		
Course	Requirement Met	SH	Course	Requirement Met	SH
Physics 350, Mechanics	Major	4	Physics 345, Thermodynamics & Statistics	Major/CAI	4
Physics 330, Electronics	Major/WI	4	Physics Elective	Major E	2
General Education Elective	GE Goal 5/6/7/8/9/10	3	General Education Elective	GE Goal 5/6/7/8/9/10	3
Phys 099, The Career Physicist	Major	0	General Education Elective	GE Goal 5/6/7/8/9/10	3
Physics 451, Quantum Mechanics	Major	3	Phys 099, The Career Physicist	Major	0
Notes: If you haven't yet, talk to advisor about post graduation plans			Notes:		
		Total SH 14			Total SH 12
Fall Year 4			Spring Year 4		
Course	Requirement Met	SH	Course	Requirement Met	SH
Physics 430, Electricity and Magnetism I	Major/CAI	3	Physics 431, Electricity and Magnetism II	Major	3
Physics 460, Undergraduate Research I	Major/OI	2	Physics 370, Optics	Major/WI	4
Math 413, Advanced Applied Mathematics	Major	3	Physics 460, Undergraduate Research II	Major/OI	2
Physics 320, Computational	Major	2	Physics Elective	Major E	3
General Education Elective	GE Goal 5/6/7/8/9/10	3	General Education Elective	GE Goal 5/6/7/8/9/10	3
General Education Elective	GE Goal 5/6/7/8/9/10	3	Notes: Apply for graduation		
		Total SH 16			Total SH 15

Updated on 6/19/2019

Key:

GE goal	General Education Goal Area
GE	A general elective that counts toward graduation but does not count toward the major
Major	Satisfies a major requirement
Minor	Satisfies a minor requirement
Major E	Satisfies a major elective
CAI	Critical Analysis Intensive
OI	Oral Intensive
WI	Written Intensive
PDW	Physical Development and Wellness

General Education Goals (please see website for more information)

- Goal 1 Communication (7 SH)
- Goal 2 Critical Thinking (met when all other goals met)
- Goal 3 Natural Science (7 SH)
- Goal 4 Mathematics/Logical Reasoning (3 - 4 SH)
- Goal 5 Social/Behavioral Sciences (9 SH)
- Goal 6 Humanities and Fine Arts (9 SH)
- Goal 7 Human Diversity (3 SH)
- Goal 8 Global Perspective (3 SH)
- Goal 9 Ethic and Civic Responsibility (3 SH)
- Goal 10 People and the Environment (3 SH)

Course offered every other year

- Phys 320
- Phys 321
- Phys 332
- Phys 333
- Phys 345
- Phys 350
- Phys 420
- Phys 430
- Phys 431
- Phys 451