

Department of Education & School Psychology

Curriculum Content—Physical Science Dual Field Licensure

BS INTERDISCIPLINARY PHYSICS MAJOR

With an interdisciplinary focus on Chemistry

OAE Tests – Chemistry (009) and Physics (035)

Course #	Course Title	Hours	Gr.	Sem.
PH 135/135L	Physics I and Lab	5		Fall
PH 136/136L	Physics II and Lab	5		Spring
PH 246	Modern Physics	3		Fall
PH 247	Modern Physics Laboratory	1		Fall
PH 315/315L	Classical Mechanics and Workshop	4		
PH 347	Advanced Laboratory	2		
PH 365/365L	Electricity and Magnetism and Workshop	4		
PH 408	Senior Research or Design Project	2		
PH 445/445L	Quantum Physics and Workshop	4		
EP 217	Mathematical methods of Physics and Engineering	3		Spring
EP 260/260L	DC/AC Circuits and Lab	4		
EP 451/451L	Numerical Physics and Workshop	4		

CH 141/143*	General Chemistry I and Lab	5		Fall
CH 142/144	General Chemistry II and Lab	5		Spring
CH 221/223	Organic Chemistry I and Lab	4		Fall
CH 222/224	Organic Chemistry II and Lab	4		Spring
CH 431	General Biochemistry	4		Spring

BL 155/156	Principles of Biology I and II	6		
BL 157/158	Principles of Biology Lab I and II	2		

PH 115/L	Environmental Earth Science and Lab	4		Fall
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MT 135	Calculus and Analytic Geometry I	4		
MT 136	Calculus and Analytic Geometry II	4		
MT 233	Calculus and Analytic Geometry III	4		

Select One:				
CH 361	Introductory Physical Chemistry	3		Fall
CH 367	Physical Chemistry I Lab	2		Spring and Fall
CH 365	Physical Chemistry I	3		Fall
CH 367	Physical Chemistry I Lab	2		Spring & Fall
CH 366	Physical Chemistry II	3		Every other Spring
CH 368	Physical Chemistry II Lab	2		

NOTES:

*CH 151/153 (5 credits) may substitute for CH 141-144 with Chair's approval.

The above program with 30 credit hours of lower division CH and BL plus 5-8 credit hours of upper division chemistry plus earth science substantially exceeds the requirements for a BS in Interdisciplinary Physics. The BS in Interdisciplinary Physics only requires 24 credit hours of lower division CH and BL courses.

Revised FEB 2019