

Secondary Science Education/Physics Double Major

Name:			
General Education Requirements			
Fundamental Studies			
<i>Requirements: credits</i>			
Academic Writing (AW)	ENGL 101	3	
Professional Writing (PW)		3	
Oral Comm. (OC)		3	
Math (MA)	MATH 140	4	
Analytic Reasoning (AR)	MATH 140	-	
Distributive Studies			
<i>Requirements: credits</i>			
Natural Science Lab (NL)	PHYS 272/275	5	
Natural Sciences (NS)	PHYS 171	3	
History/Social Sciences (HS)	TLPL 414	3	
History/Social Sciences (HS)		3	
Humanities (HU)		3	
Humanities (HU)		3	
Scholarship in Practice (SP)	TLPL 101 & TLPL 102	3	
Scholarship in Practice (SP, non major)		3	
I-Series			
<i>Requirements: credits</i>			
I-Series (IS)		3	
I-Series (IS)		3	
Diversity			
<i>Requirements: credits</i>			
Understanding Plural Soc. (UP)		3	
Understanding Plural Soc. (UP) or Cultural Competency (CC)	TLPL 401	3	
Experiential Learning- optional			
<i>Requirements: credits</i>			
			n/a
			n/a
Students must earn a minimum of 120 credits to complete a degree.			
Requirements for Graduation:			
<input type="checkbox"/> At least 30 credits must be earned at UMD			
<input type="checkbox"/> 15 of the final 30 credits must be earned at the 300-400 level			
<input type="checkbox"/> 12 upper level major credits must be earned at UMD			

UID:			
UNIV 100		1	
Major Requirements			
<i>(Grade of C- or higher is required, unless otherwise stated)</i>			
<i>Requirements</i>		Credits	Grade
Benchmark Requirements			
Year 1 - Benchmark Requirement			
AW with C- or higher		3	
MA with C- or higher		4	
Year 2 - Benchmark Requirement			
PHYS 171		3	
		1	
MATH 140		4	
MATH 141		4	
Gateway Requirement			
TLPL 401 with B- or higher		3	
Physics Major Education Track Requirements			
PHYS 171 Introductory Physics: Mechanics and Relativity (NS)		3	
PHYS 272 Introductory Physics: Fields (NL when taken with PHYS 275)		3	
PHYS 273 Introductory Physics: Waves		3	
PHYS 274 Mathematical Methods for Physics I		3	
PHYS 275 Exper. Physics I: Mechanics, Heat & Fields (NL when taken with PHYS 272)		2	
PHYS 276 Exper. Physics II: Electricity and Magnetism		2	
PHYS 4xx Advanced Physics Elective		3	
PHYS 410 Classical Mechanics or 411 Intermediate Electricity & Magnetism		4	
PHYS 375 Experimental Physics III: Electromag Waves, Optics and Modern (SP)		4	
PHYS 373 Mathematical Methods for Physics II		3	
PHYS 371 Modern Physics		3	
MATH 140 Calculus I		4	
MATH 141 Calculus II		4	
MATH 241 Calculus III		4	
Pre-Professional Education Requirements required to earn the PHYS education track degree			
TLPL 101 Inquiry Teaching of STEM in Elementary School		1	
TLPL 102 Inquiry Teaching of STEM in Middle School		2	
EDHD 426 Cognitive and Motivational Literacy Content		3	
TLPL 415 Prespectives in Science*		3	
TLPL 414 Knowing and Learning		3	
TLPL 401 Project Based Instruction (<i>B- or higher is required</i>)		3	
Professional Education Requirements			
BSCI 348T Research Methods* (Satisfied in TLPL 415, formal change in process)		3	--
TLPL 425 Learning and Teaching in Science (Fall Only)		3	
TLPL 479F Field Experiences in Science Education (Fall Only)		2	
TLPL 421 Student Teaching Seminar in Sec Sci (Spring Only)		2	
TLPL 489F Student Teaching in Sec Sci (Spring Only)		12	
TLPL 488B Teaching Acad, Cult, & Ling Diverse Studs in Sec Ed (Spring Only)		2	

Secondary Science Education/Physics (Education Track) Double Major Four Year Academic Plan

Year 1	Fall	Cr.	Spring	Cr.	
Benchmark Requirements AW with C- or higher MA with C- or higher	ENGL 101 (AW)	3	MATH 141	4	
	MATH 140 (MA/AR)	4	PHYS 171 (NS)	3	
	TLPL 101	1			
	History/Social Sciences (HS)*	3	Oral Communication (OC)	3	
	Humanities (HU)*	3	TLPL 102 (SP in combination with TLPL 101)	2	
	UNIV 100	1	Elective*	3	
	<i>Total</i>		<i>15</i>	<i>Total</i>	<i>15</i>
Year 2	Fall	Cr.	Spring	Cr.	
Benchmark Requirements PHYS 171 PHYS 174 PHYS 272 Math 140 Math 141	MATH 241	4	PHYS 273 Intro Physics: Waves	3	
	PHYS 272/275 (NL)	5	PHYS 274 Math Methods for Physics I	3	
	TLPL 414 (HS)	3	EDHD 426	3	
	Humanities (HU) / Scholarship in Practice (SP, non major)	3	Elective	3	
			Elective	3	
	<i>Total</i>		<i>15</i>	<i>Total</i>	<i>15</i>
	Test of Basic Skills				
Year 3	Fall	Cr.	Spring	Cr.	
Gateway Requirements TLPL 401 with B- or higher <i>Apply to the COE by Dec. 1st</i> Minimum 2.75 cumulative GPA	PHYS 371 Modern Physics	3	TLPL 415 Perspectives in Science	3	
	PHYS 276 Experimental Physics II	2	Elective	3	
	TLPL 401 (CC)	3	PHYS 373 Math Methods for Physics II	3	
	Elective	5	PHYS 375 Experimental Physics III (SP)	3	
	Elective	3	Elective	3	
	<i>Total</i>		<i>16</i>	<i>Total</i>	<i>15</i>
Year 4	Fall	Cr.	Spring	Cr.	
	YEARLONG INTERNSHIP				
	TLPL 425	3	TLPL 421	2	
	TLPL 479F	1	TLPL 489F	12	
	Professional Writing (PW)	3	TLPL 488B	2	
	PHYS 411 Intermediate E&M or PHYS410 Classical Mechanics	4			
	PHYS 4xx Physics Elective	3			
	<i>Total</i>		<i>Total</i>	<i>16</i>	
Total Credits: 121					
This is a proposed plan and the College of Education does not guarantee that these courses will be offered in the designated semester. Consult the <i>Schedule of Classes</i> for class availability and meeting times.					
* All students must complete two Distribute Studies courses that are approved for I-series courses. Students must complete Understanding Plural Society and Cultural Competence courses that may also fulfill a Distributive Studies category.					
Students must also meet with their Academic Advisor in CMSC / Physics Department to discuss the Physics course requirements.					
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