

Secondary Science Education/Chemistry Double Major

Name:			
General Education Requirements			
Fundamental Studies			
<i>Requirements: credits</i>	Course	Credits	Grade
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>	Course	Credits	Grade
Natural Science Lab (NL)	BSCI 170/171	4	
Natural Sciences (NS)	PHYS 161	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	
Big Questions			
Normally double counted with Distributive Studies			
<i>Requirements: credits</i>	Course	Credits	Grade
Big Questions		3	
Big Questions		3	

Diversity			
(overlap permitted with Distributive Studies and/or Big Questions)			
<i>Requirements: credits</i>	Course	Credits	Grade
Understanding Plural Soc. (UP)		3	
Understanding Plural Soc. (UP) or Cultural Competency (CC)	TLPL 401	3	
Experiential Learning- optional			
(overlap permitted with other requirements/courses)			
<i>Requirements: credits</i>	Course	Credits	Grade

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	
Content Major Degree Requirements Chemistry B.A.			
<i>Requirements.</i>	<i>(Grade of C or higher is required)</i>	Credits	Grade
Lower level requirements see CHEM.umd.edu for substitutions			
BSCI 170 Principles of Biology I		3	
PHYS 131 Physics for Life Sciences I		4	
PHYS 132 Physics for Life Sciences II		4	
MATH 135 Discrete Math for Life Science (Or MATH140)		4	
MATH 136 Calculus for Life Science (Or MATH141)		4	
CHEM 131 General Chemistry I: Fundamentals of General Chemistry *		3	
CHEM 177 Introduction to Laboratory Practices and Research in the Chemical Science		2	
CHEM 231 and CHEM 232 Organic Chemistry I With Lab		4	
CHEM 241 and CHEM 242 Organic Chemistry II With Lab *		4	
CHEM 271 and CHEM 272 General and Analytical Chemistry Lecture and Lab		4	
* CHEM LEP Gateway requirements			
Upper level requirements			
CHEM 395 Prof Issues in Chemistry & Biochem		1	
BCHM 461 Biochemistry 1		3	
CHEM 401 Advanced Inorganic Chemistry		3	
CHEM 480 Principles of Physical Chemistry		3	
BCHM 477 Biomolecular Measurement and Data Analysis		3	
CHEM upper level electives		3	
College of Education Degree Requirements			
Year 1 - Benchmark Requirement			
AW with C- or higher			
MA with C- or higher			
Gateway Requirements			
CHEM LEP Gateway requirements and admission to CHEM major			
TLPL 401 with B- or higher		3	
Pre-Professional Education Requirements			
TLPL 101 Inquiry Approach to Teaching STEM (Step 1)		1	
TLPL 102 Inquiry Teaching of STEM in Middle School		2	
EDHD 426 Cognitive and Motivational Literacy Content		3	
TLPL 401 Student-Centered Curriculum and Instruction		3	
TLPL 414 Knowing and Learning in Mathematics and Science		3	
TLPL 415 Perspectives in Science		3	
Professional Education Requirements			
TLPL 425 Teaching and Learning Highschool Science (Fall Only)		3	
TLPL 479F Student Teaching Seminar in Sec Sci (Fall Only)		1	
TLPL 421 Practices in Secondary School Science Teaching (Spring Only)		2	
TLPL 489F Internship in Education: Science (Spring Only)		12	
TLPL 477 Special Topics in Education; Teaching Academically, Culturally & Linguistically Diverse Students in Secondary Education (Spring Only)		2	

Secondary Science Education/Chemistry Double Major Four Year Academic Plan

Year 1	Fall	Cr.	Spring	Cr.	
Benchmark Requirements AW with C- or higher MA with C- or higher CHEM 146/177	MATH 140 (MA/AR)	4	BSCI 170/171 (NL)	4	
	CHEM 146/177	5	CHEM 237	4	
	ENGL 101 (AW)	3	MATH 141	4	
	UNIV 100	1	HUMANITIES (HU)*	3	
	TLPL 101	1	TLPL 102 (SP, in combination with TLPL 101)	2	
	<i>Total Credits</i>		14	<i>Total Credits</i>	17
Year 2	Fall	Cr.	Spring	Cr.	
Benchmark 2 Requirements MATH 130 or 140 BSCI 170/171	PHYS 161 (NS)	3	CHEM 276 (or CHEM 271)	2	
	CHEM 247	4	CHEM 277	3	
	MATH 241 (Recommended)	4	PHYS 260/261	4	
	TLPL 414 (HS)	3	ORAL COMMUNICATION (OC)	3	
	HUMANITIES (HU) / Scholarship in Practice (SP; non major)*	3	EDHD 426	3	
	<i>Total Credits</i>		17	<i>Total Credits</i>	15
<i>Test of Basic Skills</i>					
Year 3	Fall	Cr.	Spring	Cr.	
Gateway Requirements TLPL 401 with B- or higher Admission to CHEM LEP	CHEM 481	3	CHEM 482	3	
	CHEM 483	2	CHEM 484	2	
	CHEM 401	3	CHEM 395	1	
	<i>Apply to the COE by Dec. 1st</i>	TLPL 401 (CC)	3	Elective	3
	Cumulative GPA of 2.75	PROFESSIONAL WRITING (PW)	3	History/Social Sciences (HS)*	3
				TLPL 415	3
	<i>Total Credits</i>	14	<i>Total Credits</i>	15	
Year 4	Fall	Cr.	Spring	Cr.	
	YEARLONG INTERNSHIP				
	CHEM 425	4	TLPL 421	2	
	CHEM upper level elective	3	TLPL 489F	12	
	TLPL 425	3	TLPL 477	2	
	TLPL 479F	1			
	CHEM upper level elective	3			
	<i>Total Credits</i>	14	<i>Total Credits</i>	16	
				Total Degree credits: 122	

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 *Schedule of Classes* for class availability and meeting times.

* All students must complete two Distribute Studies courses that are approved for Big Questions 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 CMNS/Chemistry Department to discuss the Chemistry program requirements.

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Secondary Science Education/Chemistry Double Major, B.A.
Benchmarks

45-credit review

Completion of English and Math fundamental studies with a C- or better

Minimum cumulative GPA of 2.75

75-credit review

Passing scores on a Test of Basic Skills

Minimum cumulative GPA of 2.75

Submission of FC/MCEE Self-Assessment

Admission to the full degree/professional program (0834P)

TLPL 401 with grade of B- or better

Satisfactory completion of other Chemistry Gateway courses

Double Major with Chemistry on file

90-credit review:

Passing scores on a Test of Basic Skills

Minimum cumulative GPA of 2.75

Satisfactory Evaluation on FC/MCEE

TLPL 415 with a C- or better

Double Major with Chemistry on file

105-credit review:

Passing scores on a Test of Basic Skills

Minimum GPA of 2.75

Satisfactory Evaluation on FC/MCEE and PBA

Passing Scores on the Praxis II - see Advisor for Details.

Students must successfully complete the edTPA

TLPL 425 with a C- or better

TLPL 479F with a Satisfactory grade, "S"

Double Major with Chemistry on file