

COURSE OF STUDY
Muskingum University
AYA Integrated Science/7-12
Chemistry Major

Academic Year: 2025--2026

Student Name: _____

Education candidates are required to earn a B- or better in all EDUC courses to move forward in the program. Additionally, education candidates are required to complete all hours and assignments in the EDUC 201 and 301 practicum courses to move forward in the program. Each practicum course is 1 credit hour. Practicum courses fulfill the field hours required by the Ohio Department of Higher Education to complete licensure.

Pre-Admission Courses

Course #	Course Name	Credit Hours	Term Planned	Grade	Final Audit
EDUC 110	Introduction to Education	1			
EDUC 112	Educational Implications of Diversity (pre-co requisite EDUC 110)	3			
EDUC 101	Introductory Field Practicum 101 (co-requisite EDUC 112)	1			
EDUC 215	Educational Psychology	3			

Non-practicum Courses (Admission to Education Program Required)

Course #	Course Name	Credit Hours	Term Planned	Grade	Final Audit
EDUC 335	Educational Technology	3			
EDUC 341	Assessment in Education (co-requisite EDUC 313) (pre-co requisite EDUC 330)	3			

Practicum 201 Courses – General Methods Courses

Course #	Course Name	Credit Hours	Term Planned	Grade	Final Audit
EDUC 313	Curriculum and Instruction for the Adolescent (offered only in fall) (EDUC 201 co-requisite)	3			
EDUC 330	Serving Individuals with Exceptionalities (offered only in fall) (EDUC 201 co-requisite)	3			
EDUC 375	Professional Practices in AYA Education (co-requisite EDUC 201)	3			
EDUC 201	Intermediate Field Practicum SP___ FA___ SP___ FA___ SP___ FA___ TOTAL___				

Practicum 301 Courses – Content Method Courses

Course #	Course Name	Credit Hours	Term Planned	Grade	Final Audit
EDUC 384	Integrated Science Methods for Middle Childhood and AYA educators (pre-requisite EDUC 313) (offered only in odd spring) (EDUC 301 co-requisite)	3			
EDUC 413	Reading in the Content Areas (pre-requisite EDUC 313, or EDUC 370, EDUC 371) (EDUC 301 co-requisite)	3			
EDUC 301	Advanced Field Practicum SP___ FA___ SP___ FA___ SP___ FA___ TOTAL___				

Professional Semester

Course #	Course Name	Credit Hours	Term Planned	Grade	Final Audit
EDUC 418	Professional Practices in Teacher Education	2			
EDUC 419	Co-Teaching and Collaboration in Education	2			
EDUC 420	Pro-Active Approaches to Classroom Management and Support	2			
EDUC 451	Student Teaching in the Secondary Schools	9			
EDUC 461	Student Teaching Seminar	1			

Total Course Hours 45
Total Practicum Hours _____

All content area courses require a B- or better. Any course not meeting the grade of B- requires discussion with Education Advisor and Education Department Chair to determine further action.

Content Area Licensure Courses

Chemistry Major Requirements

Course #	Course Name	Credit Hours	Term Planned	Grade	Final Audit
CHEM 111	General Chemistry I	4			
CHEM 112	General Chemistry II (offered only in Spring)	4			
CHEM 213	Organic Chemistry I (pre-requisite CHEM 112) (offered only in Fall)	4			
CHEM 214	Organic Chemistry II (pre-requisite CHEM 213) (offered only in Spring)	4			
CHEM 230	Foundational Inorganic Chemistry (pre-requisite CHEM 112)	3			
CHEM 250	Professional Development of Chemistry (pre-requisite CHEM 112)	1			
CHEM 315	Physical Chemistry (pre-requisite CHEM 112) (co-requisite MATH 200 PHEN 121) (offered only in Fall)	4			
CHEM 335	Analytical Chemistry (pre-corequisite CHEM 315) (offered only in Fall)	4			
CHEM 355	Advanced Laboratory in Chemistry (pre-requisite CHEM 214, 315) (offered only in Fall)	3			
CHEM 454	Chemistry Seminar and Literature Research (pre-requisite CHEM 250) (co-requisite CHEM 355)	2			
CHEM 455	Chemistry Senior Seminar and Laboratory Research (inorganic option Spring ONLY) (pre-requisite CHEM 355, 454)	4			
CHEM ^{elective}	Choose one Chemistry Elective	3-4			
PHEN 121	Classical Physics I (pre- or co-requisite MATH 190)	4			
PHEN 122	Classical Physics II (pre-requisite PHEN 121, pre- or co-requisite MATH 200)	4			
MATH 190	Calculus I (pre-requisite MATH 180 or MATH ACT 24 or MATH SAT 576)	4			
MATH 200	Calculus II (pre-requisite MATH 190)	4			
Total Chemistry Major Hours		56-57			

Additional Integrated Science Requirements

BIOL 111	Organismal Biology I and	3			
BIOL 107	Biology Laboratory I (offered only Fall)	1			
BIOL 112	Organismal Biology II and	3			
BIOL 108	Biology Laboratory II (offered only in Spring)	1			
BIOL 121	Anatomy and Physiology I (offered only in Fall) OR	4			
EXSC 131	Human Structure and Function	4			
GEOL 101	Introduction to Geology	4			
PHEN 150	Introduction to Astronomy	3			
Total Additional Science Hours		19			

TOTAL HOURS