

BACHELOR OF SCIENCE IN EDUCATION IN ADOLESCENT YOUNG ADULT EDUCATION, 7-12

Dr. Katie Cripe, Program Coordinator

Overview

In cooperation with various discipline departments in the University, the Department of Teacher Education and Leadership Studies offers a four-year adolescent/young adult license approved by the Ohio Department of Education. The Adolescent/Young Adult (Grades 7-12), Bachelor of Science in Education degree requires a minimum of 122 semester hours of course work (each content area requires a specific number of semester hours) including a semester of student teaching. The concentration areas include Social Studies, Math, Language Arts, Biology, Chemistry, Physics, and Earth Science. This teaching license requires passage of the Ohio Assessments for Educators in order to be eligible to student teach. In cooperation with various academic disciplines in the University, the Department of Teacher Education offers a four-year AYA Education Program (grades 7-12), Integrated Social Studies, approved by the Ohio Department of Education. The AYA License, Grades 7-12, Bachelor of Science in Education degree requires a minimum of 122 semester hours of course work. This teaching field also requires passage of the Ohio Assessments for Educators in order to be eligible to student teach.

Employment Opportunities

Graduates of the Adolescent/Young Adult Program will be qualified to teach in the 7-12 classroom. Additional opportunities may be available in the private sector to tutor students. It is recommended that students in this major consider adding the Teaching English to Speakers of Other Languages (TESOL) endorsement to increase marketability. Graduates wanting to teach College Credit Plus courses should consider a Master of Science in Education Content Area Concentration degree.

Professional Dispositions:

In addition to the above learning outcomes, teacher candidates are expected to display the following professional dispositions:

- Creating fairness in the classroom
- Providing an inclusive environment that is safe and conducive to learning
- Demonstrating the belief that all students can learn
- Fostering collaborative relationships to support student learning and well-being
- Exhibiting professional skills

Student Teaching

- Student teaching application must be submitted following instructions found on the portal.
- Late applications will likely result in a delay to student teaching by one semester. Application and forms are due to the Office of Student Field Experience:
 - September 1—to Student Teach the following Spring Semester
 - February 1—to Student Teach the following Fall Semester
- Prerequisites:
 - BCOE Upper Division status
 - Overall 2.75 GPA
 - Minimum of 2.67 GPA in subject area curriculum and 2.67 in professional education courses with no grade less than a "C"
 - Passage of OAE test(s) and ACTFL tests for foreign language

Completing a Bachelor of Science in Education with Licensure

- Successful completion of student teaching (endorsed) with CPAST average score of 2 with no zeros
- Minimum score of 39 on edTPA, with the exception of a 34 for Foreign Language

Completing a Bachelor of Science in Education without Licensure

- A teacher candidate may choose to graduate without licensure. Teacher candidates who wish to graduate without licensure must take TCED 4830 (3 SH) capstone course in place of student teaching.

Field Experiences and Student Teaching

Students complete over 120 hours of pre-clinical experiences in addition to student teaching. Field experiences are included in the following courses and offer opportunities to provide varying levels of classroom support (observing, one-on-one tutoring, small group teaching, co-teaching, whole class teaching).

Field Experiences

- EDFN 1501 Introduction to Education
- EDFN 3708 Education and Society
- SPED 2630 Individuals with Exceptionalities in Society
- TERG 3711 Reading Application in Content Areas, Secondary Years

Preclinical Field Experiences:

The preclinical experience is conducted in local schools and provides an opportunity for teacher candidates to complete an in-depth field experience prior to student teaching. This field experience requires a substantial time commitment, as teacher candidates spend the entire day in schools during designated weeks. The Adolescent/Young Adult preclinical experience is scheduled during the fall semester. Applications for the preclinical experience must be submitted (1) one year in advance to BCOE Room 2101, by September 1 for the preclinical experience. Contact the Beeghly College of Education, academic advisors for minimum preclinical prerequisites.

- EDFN 3710 Educational Assessment
- SED 3706 Principles of Teaching Adolescents

And

- SED 4800C Science Methods for Adolescent and Young Adult Learners

Or

- SED 4800E English Methods for Adolescent and Young Adult Learners

Or

- SED 4800M Mathematics Methods for Adolescent and Young Adult Learners

Or

- SED 4800S Social Studies Methods for Adolescent and Young Adult Learners

Student Teaching

Students complete a 16 week student teaching experience. Students must pass the edTPA performance-based assessment with a minimum score of 37 during this experience.

- SED 4842 Supervised Student Teaching: High School
- SED 4842A Student Teaching Seminar for Secondary Education

Advisement

Advisement is provided by the education advisors in Beeghly Hall. Majors in this program must complete general education requirements, subject area curriculum requirements, reading course requirements, and professional education requirements. Prior to student teaching, all adolescent/young adult majors must complete a preclinical experience.

Required Assessments

The Ohio Assessments for Educators (OAE) assess the content area and professional (pedagogical) knowledge of candidates who are seeking initial Ohio educator license or adding a new licence area. The assessments are aligned with Ohio's New Learning Standards. Teacher candidates must pass these exams prior to student teaching.

003 Assessment of Professional Knowledge Adolescence to Young Adult (7-12) (All AYA Teacher Candidates)

020 English Language Arts (for teacher candidates with ELA concentration)

027 Mathematics (for teacher candidates with Math concentration)

024 Integrated Science (for teacher candidates with Science concentration)

025 Integrated Social Studies (for teacher candidates with Social Studies concentration)

Endorsements

The following endorsements are available to individuals holding this teaching license and may increase marketability: K-12 TESOL Endorsement, K-12 Reading Endorsement.

General Information

- It is highly recommended that all teacher candidates meet with an academic advisor every semester.
- Neither admission to the University nor declaration of a major related to a teaching field guarantees admission to the TELS Teacher Education Programs or candidacy for a teaching license.
- A grade of "C" or better is required in all courses. Some courses cannot be taken CR/NC. Check with an Advisor. Professional education and preclinical courses may only be repeated one time.

Upper Division

- Formal Admission to Teacher Education (Upper-Division) is required before teacher candidates are allowed to enroll in certain junior and senior level courses in TELS.
- Upper division requirements:
 - ____ Completion of 50 SH
 - ____ Minimum 2.75 overall GPA
 - ____ "B" average or better (A-C, B-B) for: ENGL 1550 and ENGL 1551.
 - If failure to meet "B" average above must also complete:
 - ____ ENGL 2601 grade of "B" or better.
 - If you receive a "C" or below you will need to retake the course.
 - ____ "B" average or better (B-B-B, A-B-C) across the following:

____ EDFN 1501 ____ CMST 1545

____ SPED 2630 ____ HIST 2605 or HIST 2606

- After completing a minimum of 50 SH, submit the following:
 - Upper Division application (Portal)
 - Good Moral Character Statement
 - Copy of BCI & FBI clearances
 - Writing prompt (Blackboard)
- Deadlines for submission for upper division status (late applications may not be accepted):

- September 1—to register for Upper Division Courses for Spring
- February 1—to register for Upper Division courses for Summer & Fall

Admission to Preclinical and Evaluation for Graduation

- Request must be submitted to TaskStream one year prior to the intended preclinical semester no later than:
- September 1—for Fall preclinical (Late applications may not be accepted)
- February 1—for Spring preclinical (Late applications may not be accepted)
- Content GPA (2.67 minimum), Professional GPA (2.67 minimum), Overall GPA (2.75 minimum).

COURSE	TITLE	S.H.
FIRST YEAR REQUIREMENT -STUDENT SUCCESS		
YSU 1500	Success Seminar	1-2
or YSU 1500S	Youngstown State University Success Seminar	
or HONR 1500	Intro to Honors	
General Education Requirements		
ENGL 1550	Writing 1	3-4
or ENGL 1549	Writing 1 with Support	
ENGL 1551	Writing 2	3
Mathematics Requirement (Concentration Areas may require specific Math) Any MATH Gen. Ed.		3
Arts and Humanities (may be met by Concentration Area)		6
Natural Sciences (2 courses, 1 with lab) (7 s.h.) (may be met by Concentration Area)		7
Social Science (6 s.h.) (may be met by Concentration Area)		3
PSYC 1560	General Psychology	3
General Education Electives (9 s.h.)		
CMST 1545	Communication Foundations	3
Gen Ed Electives might be met by Concentration Area		6
Professional Education Curriculum		
EDFN 1501	Introduction to Education	3
TCED 2600	Becoming an Education Professional	1
TCED 2601	Diversity and Equity in the Classroom	1
PSYC 3709	Psychology of Education	3
SPED 2630	Individuals with Exceptionalities in Society ¹	3
SPED 2630L	Individuals with Exceptionalities in Society Laboratory Experience	0
SED 3706	Principles of Teaching Adolescents ²	3
TERG 3711	Reading Application in Content Areas, Secondary Years ²	3
EDFN 3708	Education and Society	3
Preclinical Curriculum		
EDFN 3710	Educational Assessment	3
TCED 4800L	Laboratory Experience for Teaching All Learners	0
Student Teaching Curriculum		
SED 4842	Supervised Student Teaching: High School ²	10
SED 4842A	Student Teaching Seminar for Secondary Education ²	2
TCED 5888E	Seminar edTPA Review	1
Concentration Area		51-88
Total Semester Hours		125-164

¹ Prerequisite for preclinical curriculum

² Upper division course.

INTEGRATED SOCIAL STUDIES CONCENTRATION AREA

COURSE	TITLE	S.H.
INTEGRATED SOCIAL STUDIES CONCENTRATION		
Preclinical Curriculum		
SED 4800S	Social Studies Methods for Adolescent and Young Adult Learners	3
Content Area Curriculum		
ANTH 1500	Introduction to Anthropology	3
ECON 2610	Principles 1: Microeconomics	3
ECON 2630	Principles 2: Macroeconomics	3
GEOG 1503	Physical Geography	3
GEOG 2630	Weather	3
GEOG 2630L	Weather Lab	1
GEOG 2640	Human Geography	3
GEOG 2626	World Geography	3
HIST 1501	Discovering American History	3
HIST 1511	World Civilization to 1500	3
HIST 1512	World Civilization from 1500	3
HIST 3702	Early America	3
HIST 3703	Nineteenth Century America	3
HIST 3712	United States in Crisis: 1900-1945	3
HIST 3748	History of Ohio	3
HIST 3764	Modern Europe, 1715 to the Present	3
HIST 3795	The Cold War World	3
HIST 4870	Senior Research Seminar	3
POL 1560	American Government	3
POL 2640	Contemporary World Governments	3
SOC 1500	Introduction to Sociology	3
Total Semester Hours		64

INTEGRATED MATH CONCENTRATION AREA

COURSE	TITLE	S.H.
INTEGRATED MATH CONCENTRATION		
Preclinical Curriculum		
SED 4800M	Mathematics Methods for Adolescent and Young Adult Learners	3
Content Area Curriculum		
MATH 1571	Calculus 1	4
MATH 1572	Calculus 2	4
MATH 2673	Calculus 3	4
MATH 3715	Discrete Mathematics	3
MATH 3720	Linear Algebra and Matrix Theory	3
MATH 3721	Abstract Algebra 1	4
STAT 3743	Probability and Statistics	4
MATH 3750	History of Mathematics	3
MATH 3751	Real Analysis 1	4
MATH 4830	Foundations of Geometry	3
MATH 4832	Euclidean Transformations	3
MATH 4872	Teaching Mathematics in Secondary Schools	3
CSIS 2610	Programming and Problem-Solving	3
CSIS 2610L	Programming and Problem-Solving Lab	1
Select one of the following MATH electives		2-3

MATH 3702	Problem Solving Techniques for Secondary Mathematics	
MATH 3705	Differential Equations	
MATH 4822	Abstract Algebra 2	
MATH 4896	Senior Undergraduate Research Project	
MATH 5828	Number Theory	
MATH 5835	Introduction to Combinatorics and Graph Theory	
MATH 5895	Selected Topics in Mathematics	
Total Semester Hours		51-52

INTERGRATED LANGUAGE ARTS CONCENTRATION AREA

COURSE	TITLE	S.H.
INTEGRATED LANGUAGE ARTS CONCENTRATION		
Preclinical Curriculum		
SED 4800E	English Methods for Adolescent and Young Adult Learners	3
Content Area Curriculum		
ENGL 2631	Mythology in Literature	3
ENGL 3700	Literary Study	3
ENGL 2651	Introduction to Language	3
ENGL 3705	Young Adult Literature	3
ENGL 3710	British Literature 1	3
ENGL 3711	British Literature 2	3
ENGL 3712	American Literature 1	3
ENGL 3713	American Literature 2	3
ENGL 3741	Advanced Writing for Teachers	3
ENGL 4881	Shakespeare and His World	3
JOUR 3725	News Reporting	3
JOUR 4821	Advising Student Media	3
Select one of the following World/Multicultural Lit courses		3
ENGL 2610	World Literature	
ENGL 2617	Women in Literature	
ENGL 2618	American Literature and Diversity	
ENGL 2620	African Literature	
ENGL 3732	Images of Women	
ENGL 3738	Selected Topics in World Literature	
ENGL 3790	Selected Topics in Multicultural Studies	
Select two of the following Oral Communications courses		
CMST 2655	Communication in Groups	3
CMST 2656	Interpersonal Communication	3
Select one of the following Advanced English Studies courses		3
ENGL 3706	Introduction to Literary Theory	
ENGL 4890	Senior Seminar	
Select one of the following Language/Linguistic courses		3
ENGL 3750	Language and Culture	
ENGL 3757	Development of the English Language	
ENGL 4850	Sociolinguistics	
ENGL 4851	Language Acquisition	
ENGL 4855	Advanced Linguistics	
ENGL 4858	English Grammar	
Select one of the following Media Literacy courses		3
THTR 1590	History of Motion Pictures	
ENGL 2665	Introduction to Film Study	
ENGL 3743	Introduction to Public, Professional and Technical Writing	

Select one of the following American Literacy courses	3
ENGL 3770 American Literature in Historical Perspective	
ENGL 3780 American Genres	
ENGL 4862 Themes in American Literature	
ENGL 4864 American Literary Conversations	
ENGL 4871 The Black Experience in American Literature	
Select one of the following British Literature courses	3
ENGL 4830 Major Figures in British Literature	
ENGL 4831 British Genres, Circles, and Movements	
ENGL 4860 The Medieval World	
ENGL 4882 The English Renaissance	
ENGL 4886 Restoration and Eighteenth Century British Literature	
ENGL 4887 The Romantic Period	
ENGL 4892 Nineteenth Century British Literature Studies	
ENGL 4895 Early Twentieth Century British Studies	
ENGL 4896 British Literature from World War II to the Present	

Total Semester Hours **63**

INTERGRATED SCIENCE BIOLOGY CONCENTRATION AREA

COURSE	TITLE	S.H.
INTEGRATED SCIENCE BIOLOGY CONCENTRATION		
Professional Education Curriculum		
TEMC 3707	Science/Technology/Society	3
Preclinical Curriculum		
SED 4800C	Science Methods for Adolescent and Young Adult Learners	3
Content Area Curriculum		
MATH 1571	Calculus 1	4
MATH 1572	Calculus 2	4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory	4
CHEM 3719 & 3719L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
BIOL 2601 & 2601L	General Biology 1: Molecules and Cells and General Biology I: Molecules and Cells Laboratory	4
PHYS 2608	Sound	3
PHYS 2610 & 2610L	General Physics 1 and General Physics Laboratory 1	5
PHYS 2611	General Physics 2	4
GEOL 1505 & 1505L	Physical Geology and Physical Geology Laboratory	4
GEOL 2602	Introduction to Oceanography	3
GEOG 2630	Weather	3
ASTR 1504	Descriptive Astronomy	3
Select one of the CHEM electives		
CHEM 2604 & 2604L	Quantitative Analysis and Quantitative Analysis Laboratory	5
CHEM 3720 & 3720L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
CHEM 3785	Biochemistry 1	3
Select 14 s.h. of the following:		
BIOL 3741 & 3741L	Animal Diversity and Animal Diversity Laboratory	14

BIOL 3702 & 3702L	Microbiology and Microbiology Laboratory	
BIOL 3721	Genetics	
BIOL 3762 & 3762L	Field Botany and Field Botany Laboratory	
BIOL 3759	Evolution	
BIOL 4890 & 4890L	Molecular Genetics and Molecular Genetics Laboratory	
BIOL 3730 & 3730L	Human Physiology and Human Physiology Laboratory	
Select 3 s.h. of the following PHYS electives:		3
PHYS 3703	Classical Mechanics and Dynamics	
PHYS 3704	Modern Physics	
PHYS 3705L	Thermodynamics and Classical Statistical Mechanics Laboratory	
PHYS 4805	Undergraduate Physics Research	
PHYS 2607	Physical Science for Middle and Secondary Education	
PHYS 3705	Thermodynamics and Classical Statistical Dynamics	
Select one of the following E/SS electives:		3-4
ENST 2600	Foundations of Environmental Science	
GEOG 3703	Human Impacts on the Environment	
GEOG 3730	Global Climates	
GEOL 3720	Field Investigations in Geology	

Total Semester Hours **87-88**

INTERGRATED SCIENCE CHEMISTRY CONCENTRATION AREA

COURSE	TITLE	S.H.
INTEGRATED SCIENCE CHEMISTRY CONCENTRATION		
Professional Education Curriculum		
TEMC 3707	Science/Technology/Society	3
Preclinical Curriculum		
SED 4800C	Science Methods for Adolescent and Young Adult Learners	3
Content Area Curriculum		
MATH 1571	Calculus 1	4
MATH 1572	Calculus 2	4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory	4
CHEM 2604 & 2604L	Quantitative Analysis and Quantitative Analysis Laboratory	5
CHEM 3719 & 3719L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
CHEM 3720 & 3720L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory	4
Any CHEM 3700:4899		3
BIOL 2601 & 2601L	General Biology 1: Molecules and Cells and General Biology I: Molecules and Cells Laboratory	4
BIOL 2602 & 2602L	General Biology 2: Organisms and Ecology and General Biology: Organisms and Ecology Laboratory	4
PHYS 2608	Sound	3
PHYS 2610 & 2610L	General Physics 1 and General Physics Laboratory 1	5
PHYS 2611 & 2611L	General Physics 2 and General Physics laboratory 2	5

GEOL 1505 & 1505L	Physical Geology and Physical Geology Laboratory	4
GEOL 2602	Introduction to Oceanography	3
GEOG 2630 & 2630L	Weather and Weather Lab	4
ASTR 1504	Descriptive Astronomy	3
Select 5 s.h. of the following BIOL electives		5
BIOL 3741 & 3741L	Animal Diversity and Animal Diversity Laboratory	
BIOL 3702 & 3702L	Microbiology and Microbiology Laboratory	
BIOL 3721	Genetics	
BIOL 3762 & 3762L	Field Botany and Field Botany Laboratory	
BIOL 3759	Evolution	
BIOL 4890 & 4890L	Molecular Genetics and Molecular Genetics Laboratory	
BIOL 3730 & 3730L	Human Physiology and Human Physiology Laboratory	
Select 3 s.h. of the following PHYS electives		3-4
PHYS 3703	Classical Mechanics and Dynamics	
PHYS 3705 & 3705L	Thermodynamics and Classical Statistical Dynamics and Thermodynamics and Classical Statistical Mechanics Laboratory	
PHYS 3704 & 3704L	Modern Physics and Modern Physics Laboratory	
PHYS 4805	Undergraduate Physics Research	
PHYS 2607	Physical Science for Middle and Secondary Education	
Select one of the following E/SS electives		3-4
ENST 2600	Foundations of Environmental Science	
GEOG 3703	Human Impacts on the Environment	
GEOG 3730	Global Climates	
GEOL 3720	Field Investigations in Geology	

Total Semester Hours 84-86

INTERGRATED SCIENCE EARTH SCIENCE CONCENTRATION AREA

COURSE	TITLE	S.H.
INTEGRATED SCIENCE EARTH CONCENTRATION		
Professional Education Curriculum		
TEMC 3707	Science/Technology/Society	3
Preclinical Curriculum		
SED 4800C	Science Methods for Adolescent and Young Adult Learners	3
Content Area Curriculum		
MATH 1571	Calculus 1	4
MATH 1572	Calculus 2	4
GEOL 1505 & 1505L	Physical Geology and Physical Geology Laboratory	4
GEOL 2605	Historical Geology	4
GEOL 2602	Introduction to Oceanography	3
GEOG 2630	Weather	3
ASTR 1504	Descriptive Astronomy	3
ASTR 2609	Moon and Planets	3
BIOL 2601 & 2601L	General Biology 1: Molecules and Cells and General Biology I: Molecules and Cells Laboratory	4

BIOL 2602 & 2602L	General Biology 2: Organisms and Ecology and General Biology: Organisms and Ecology Laboratory	4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory	4
CHEM 3719 & 3719L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
PHYS 2608	Sound	3
PHYS 2610 & 2610L	General Physics 1 and General Physics Laboratory 1	5
PHYS 2611 & 2611	General Physics 2 and General Physics 2	8
Select one of the following E/SS electives		3-4
GEOL 3720	Field Investigations in Geology	
ENST 2600	Foundations of Environmental Science	
Select 5 s.h. of the following BIOL electives		5
BIOL 3741 & 3741L	Animal Diversity and Animal Diversity Laboratory	
BIOL 3702 & 3702L	Microbiology and Microbiology Laboratory	
BIOL 3721	Genetics	
BIOL 3762 & 3762L	Field Botany and Field Botany Laboratory	
BIOL 3759	Evolution	
BIOL 4890 & 4890L	Molecular Genetics and Molecular Genetics Laboratory	
BIOL 3730 & 3730L	Human Physiology and Human Physiology Laboratory	

Select one of the following CHEM electives 3-5

CHEM 2604 & 2604L	Quantitative Analysis and Quantitative Analysis Laboratory	
CHEM 3720	Organic Chemistry 2	
CHEM 3785	Biochemistry 1	
Select 3 s.h. of the following PHYS electives		3
PHYS 3703	Classical Mechanics and Dynamics	
PHYS 3705 & 3705L	Thermodynamics and Classical Statistical Dynamics and Thermodynamics and Classical Statistical Mechanics Laboratory	
PHYS 3704 & 3704L	Modern Physics and Modern Physics Laboratory	
PHYS 4805	Undergraduate Physics Research	
PHYS 2607	Physical Science for Middle and Secondary Education	

Total Semester Hours 84-87

INTERGRATED SCIENCE PHYSICS CONCENTRATION AREA

COURSE	TITLE	S.H.
INTEGRATED SCIENCE PHYSICS CONCENTRATION		
Professional Education Curriculum		
TEMC 3707	Science/Technology/Society	3
Preclinical Curriculum		
SED 4800C	Science Methods for Adolescent and Young Adult Learners	3
Content Area Curriculum		
MATH 1571	Calculus 1	4
MATH 1572	Calculus 2	4

PHYS 2608	Sound	3	Year 1		
PHYS 2610 & 2610L	General Physics 1 and General Physics Laboratory 1	5	Fall		S.H.
PHYS 2611 & 2611L	General Physics 2 and General Physics laboratory 2	5	YSU 1500	Success Seminar	1-2
BIOL 2601 & 2601L	General Biology 1: Molecules and Cells and General Biology I: Molecules and Cells Laboratory	4	or YSU 1500S or HONR 1500	or Youngstown State University Success Seminar or Intro to Honors	
BIOL 2602 & 2602L	General Biology 2: Organisms and Ecology and General Biology: Organisms and Ecology Laboratory	4	ENGL 1550 or ENGL 1549	Writing 1 or Writing 1 with Support	3-4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4	POL 1560	American Government (counts as Social Science Elective)	3
CHEM 1516 & 1516L	General Chemistry 2 and General Chemistry 2 Laboratory	4	EDFN 1501	Introduction to Education	3
CHEM 3719 & 3719L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4	TCED 2600	Becoming an Education Professional	1
GEOL 1505 & 1505L	Physical Geology and Physical Geology Laboratory	4	TCED 2601	Diversity and Equity in the Classroom	1
GEOL 2602	Introduction to Oceanography	3	Concentration Area		3-6
GEOL 2630 & 2630L	Weather and Weather Lab	4		Semester Hours	15-20
ASTR 1504	Descriptive Astronomy	3		Spring	
Select 11 s.h. from the following PHYS electives		11	ENGL 1551	Writing 2	3
PHYS 3703	Classical Mechanics and Dynamics		SPED 2630	Individuals with Exceptionalities in Society	3
PHYS 3705 & 3705L	Thermodynamics and Classical Statistical Dynamics and Thermodynamics and Classical Statistical Mechanics Laboratory		SPED 2630L	Individuals with Exceptionalities in Society Laboratory Experience	0
PHYS 3704 & 3704L	Modern Physics and Modern Physics Laboratory		PSYC 1560	General Psychology	3
PHYS 4805	Undergraduate Physics Research		Concentration Area		6-9
PHYS 2607	Physical Science for Middle and Secondary Education			Semester Hours	15-18
Select 5 s.h. of the following BIOL electives		5		Summer	
BIOL 3741 & 3741L	Animal Diversity and Animal Diversity Laboratory		Concentration Area		3-11
BIOL 3702 & 3702L	Microbiology and Microbiology Laboratory			Semester Hours	3-11
BIOL 3721	Genetics		Year 2		
BIOL 3762 & 3762L	Field Botany and Field Botany Laboratory		Fall		
BIOL 3759	Evolution		CMST 1545	Communication Foundations	3
BIOL 4890 & 4890L	Molecular Genetics and Molecular Genetics Laboratory		Concentration Area		12-17
BIOL 3730 & 3730L	Human Physiology and Human Physiology Laboratory			Semester Hours	15-20
Select one of the following CHEM electives		3-5		Spring	
CHEM 2604 & 2604L	Quantitative Analysis and Quantitative Analysis Laboratory			Concentration Area	17-19
CHEM 3720 & 3720L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory			Semester Hours	17-19
CHEM 3785	Biochemistry 1		Year 3		
Select one of the following E/SS electives		3-4	Fall		
ENST 2600	Foundations of Environmental Science		Concentration Area		15-18
GEOG 3703	Human Impacts on the Environment			Semester Hours	15-18
GEOG 3730	Global Climates		Spring		
GEOL 3720	Field Investigations in Geology		SED 3706	Principles of Teaching Adolescents	3
Total Semester Hours		83-86	TERG 3711	Reading Application in Content Areas, Secondary Years	3
			Concentration Area		9-14
				Semester Hours	15-20
			Summer		
			Concentration Area		4-7
				Semester Hours	4-7
			Year 4		
			Fall		
			EDFN 3708	Education and Society	3
			EDFN 3710	Educational Assessment	3
			TCED 4800L	Laboratory Experience for Teaching All Learners	0
			SED 4800S	Social Studies Methods for Adolescent and Young Adult Learners	3
			Concentration Area		4-9
				Semester Hours	13-18

Spring

SED 4842	Supervised Student Teaching: High School	10
SED 4842A	Student Teaching Seminar for Secondary Education	2
TCED 5888E	Seminar edTPA Review	1
Semester Hours		13
Total Semester Hours		125-164

Learning Outcomes

The following learning outcomes are based on The Ohio Standards for the Teaching Profession. These standards were developed for use as a guide for teachers as they continually reflect upon and improve their effectiveness as educators throughout all of the stages of their careers. These standards serve as an important tool for teachers as they consider their growth and development in the profession. These standards in developing and content of our teacher education programs. They are interrelated and connect in teachers' practice.

- Teachers understand student learning and development and respect the diversity of the students they teach.
- Teachers know and understand the content area for which they have instructional responsibility.
- Teachers understand and use varied assessments to inform instruction, evaluate and ensure student learning.
- Teachers plan and deliver effective instruction that advances the learning of each individual student.
- Teachers create learning environments that promote high levels of learning and achievement for all students.
- Teachers assume responsibility for professional growth, performance and involvement as an individual and as a member of a learning community.
- Teachers collaborate and communicate with students, parents, other educators, administrators and the community to support student learning. Teachers assume responsibility for professional growth, performance and involvement as an individual and as a member of a learning community.