

EARTH SCIENCE LICENSURE Fall 2020
REQUIRES A TOTAL OF 60 SEMESTER HOURS

Pedagogy Requirements: (4 sem. hrs. req.)

EDT 434	Science Methods for AYA.....	3
EDT 434L	Science Methods for AYA Lab.....	1
STANDER SYMPOSIUM	Presentation & Participation in Science Research https://stander.udayton.edu	

Earth Science Requirements: (30 sem. hrs. req.)

GEO 115	Physical Geology	3
GEO 115L	Physical Geology Laboratory.....	1
GEO 116	Geological History of the Earth.....	3
GEO 116L	Geological History of the Earth Lab.....	1
GEO 201	Mineralogy.....	3
GEO 201L	Mineralogy Laboratory.....	1
GEO 208	Environmental Geology.....	3
GEO 208L	Environmental Geology Laboratory.....	1
GEO 301	Structural Geology.....	3
GEO 301L	Structural Geology Laboratory.....	1
GEO 307	Geomorphology.....	3
GEO 307L	Geomorphology Laboratory.....	1

Select additional courses to total 30 hours in Geology:

GEO 303	Field Geology.....	6
GEO 308	Problems & Decisions in Environ Geo.....	3
GEO 308L	Problems & Decisions in Environ Geo Lab ...	1
GEO 309	Surface and Groundwater Hydrology.....	3
GEO 309L	Surface and Groundwater Hydrology Lab	1
GEO 401	Paleontology.....	3
GEO 401L	Paleontology Laboratory.....	1
GEO 403	Sedimentology.....	3
GEO 403L	Sedimentology Laboratory.....	1
GEO 404	Problems in Geology.....	1-4
PHY 250	Descriptive Astronomy.....	3

Biology, Chemistry & Physics Requirements: (20 sem. hrs. req.)

BIO 151	Concepts of Biology I.....	3
BIO 151L	Biology Laboratory Investigation I.....	1
CHM 123	General Chemistry I.....	3
CHM 123L	General Chemistry I Laboratory.....	1
CHM 124	General Chemistry II.....	3
CHM 124L	General Chemistry II Laboratory.....	1
PHY 201	General Physics I.....	3
PHY 201L	General Physics I Laboratory.....	1
PHY 202	General Physics II.....	3
PHY 202L	General Physics II Laboratory.....	1

Math Requirements: (6 sem. hrs. req.)

MTH 148	Introductory Calculus I.....	3
MTH 149	Introductory Calculus II.....	3

Computer Requirements: Use of computers is required in BIO 151L, GEO 307, GEO 401, and GEO 404. Students who do not possess needed skills should take CPS 111 or a higher level CPS course.

Integrated Science License: Requires a single and/or dual field concentration area, and the Integrated Science state of Ohio teaching license will be processed by the University of Dayton once ODE has issued the single and/or double field concentration license.

LIFE SCIENCE LICENSURE Fall 2020
REQUIRES A TOTAL OF 59 SEMESTER HOURS

Pedagogy Requirements: (4 sem. hrs. req.)

EDT 434	Science Methods for AYA.....	3
EDT 434L	Science Methods for AYA Lab.....	1
STANDER SYMPOSIUM	Presentation & Participation in Science Research https://stander.udayton.edu or *BIO 420 or *BIO 421	

Biology Content Requirements: (33 sem. hrs. req.)

BIO 151	Concepts of Biology I.....	3
BIO 151L	Biology Laboratory Investigation I.....	1
BIO 152	Concepts of Biology II.....	3
BIO 152L	Biology Laboratory Investigations II.....	1
BIO 301	Evolution.....	3
BIO 310	Ecology.....	3
BIO 310L	Ecology Laboratory.....	1
BIO 312	General Genetics.....	3
BIO 312L	Genetics Laboratory.....	1
BIO 395	Global Environmental Biology.....	3
HSS 305	Human Anatomy or ***BIO 475 Human Anatomy ...	3
HSS 307	Human Physiology or ***BIO 403 Physiology I.....	3
HSS 305L, HSS 307L, ***BIO 475L, or ***BIO 403L		1

Select additional courses to total 33 hours in Biology Content including at least 1 additional laboratory credits:

*BIO 299	Biology Seminar (Biology Majors only).....	1
BIO 309	Comparative Anatomy.....	3
BIO 309L	Comparative Anatomy Laboratories.....	1
BIO 311	Introductory Entomology.....	3
BIO 314	Plant Biology.....	3
BIO 314L	Plant Biology Laboratory.....	1
*BIO 411	General Microbiology.....	3
*BIO 411L	General Microbiology Laboratory.....	1
**BIO 420	Biology Capstone Seminar.....	1
**BIO 421	Biological Problems.....	1-2
BIO 459	Environmental Ecology.....	3
BIO 466	Biology of Infectious Disease.....	3
HSS 305L, HSS 307L, ***BIO 475L, or ***BIO 403L		1
*Permission required. **CHM 313 & L are prerequisites.		
***CHM 314 & L are prerequisites.		

Chemistry, Earth Science & Physics Requirements: (16 sem. hrs. req.)

CHM 123	General Chemistry I.....	3
CHM 123L	General Chemistry I Laboratory.....	1
CHM 124	General Chemistry II.....	3
CHM 124L	General Chemistry II Laboratory.....	1
GEO 115	Physical Geology.....	3
GEO 115L	Physical Geology Laboratory.....	1
PHY 201	General Physics I.....	3
PHY 201L	General Physics I Laboratory.....	1

Math Requirements: (6 sem. hrs. req.)

MTH 148	Introductory Calculus I.....	3
MTH 149	Introductory Calculus II.....	3