

LIFE SCIENCE / CHEMISTRY DUAL LICENSURE Fall 2020**REQUIRES A TOTAL OF 71 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		

Biology Requirements: (27 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	General Genetics Laboratory	1
HSS 305	Human Anatomy	3
HSS 307	Human Physiology	3

Select additional courses to total 27 hours in Biology and HSS:

BIO 309	Comparative Anatomy	3
BIO 309L	Comparative Anatomy Laboratories	1
BIO 395	Global Environmental Biology	3
BIO 411	Microbiology	3
BIO 411L	Microbiology Laboratory	1
BIO 466	Biology of Infectious Disease	3
HSS 305L	Human Anatomy Laboratory	1
HSS 307L	Human Physiology Laboratory	1

Chemistry Requirements: (20 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
CHM 201	Quantitative Analysis	3
CHM 201L	Quantitative Analysis Laboratory	1
CHM 313	Organic Chemistry I	3
CHM 313L	Organic Chemistry I Laboratory	1
CHM 314	Organic Chemistry II	3
CHM 314L	Organic Chemistry II Laboratory	1

Earth Science & Physics Requirements: (12 sem. hrs. req.)

GEO 115	Physical Geology	3
GEO 115L	Physical Geology 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: (8 sem. hrs. req.)

MTH 168	Analytic Geometry and Calculus I	4
MTH 169	Analytic Geometry and Calculus II	4

Computer Requirements: Use of computers is required in BIO 151L and BIO 152L and PHY 210 and 211. 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.

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EDT 434	Science Methods for AYA	3
EDT 434L	Science Methods for AYA Lab	1
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Biology Requirements: (27 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	General Genetics Laboratory	1
HSS 305	Human Anatomy	3
HSS 307	Human Physiology	3

Select additional courses to total 27 hours in Biology and HSS:

BIO 309	Comparative Anatomy	3
BIO 309L	Comparative Anatomy Laboratories	1
BIO 395	Global Environmental Biology	3
BIO 411	General Microbiology	3
BIO 411L	General Microbiology Laboratory	1
BIO 466	Biology of Infectious Disease	3
HSS 305L	Human Anatomy Laboratory	1
HSS 307L	Human Physiology	3

Physics Requirements: (20 sem. hrs. req.)

PHY 206	General Physics I—Mechanics	3
PHY 207	General Physics II—Electricity and Magnetism	3
PHY 208	General Physics III—Mechanics of Waves	3
PHY 210L	General Physics Laboratory I	1
PHY 211L	General Physics Laboratory II	1
PHY 250	Descriptive Astronomy	3
PHY 321	Atomic and Nuclear Physics	3
PHY 395	Research Participation I	1

Select additional courses to total 20 hours in Physics:

PHY 303	Intermediate Mechanics I	3
PHY 333	Digital and Analog Electronics for Scientists	3

Chemistry & Earth Science Requirements: (12 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

Math Requirements: (12 sem. hrs. req.)

MTH 168	Analytical Geometry and Calculus I	4
MTH 169	Analytical Geometry and Calculus II	4
MTH 218	Analytical Geometry and Calculus III	4