

CHEMISTRY / PHYSICS LICENSURE Fall 2019
REQUIRES A TOTAL OF 64 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	
https://stander.udayton.edu	

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
<u>Select additional courses to total 20 hours in Chemistry:</u>	
CHM 302 Physical Chemistry	3
CHM 314 Organic Chemistry II	3
CHM 314L Organic Chemistry II Laboratory	1
CHM 341 Environmental Chemistry	3
CHM 341L Environmental Chemistry Laboratory	1
CHM 420 Biochemistry	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
<u>Select additional courses to total 20 hours in Physics:</u>	
PHY 303 Intermediate Mechanics I	3
PHY 333 Digital and Analog Electronics for Scientists	3

Biology & Earth Science Requirements: (8 sem. hrs. req.)

BIO 151 Concepts of Biology I	3
BIO 151L Biology Laboratory Investigation I	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

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

EARTH / PHYSICS LICENSURE Fall 2019
REQUIRES A TOTAL OF 72 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 and Participation in Science	
https://stander.udayton.edu	

Earth Science Requirements: (24 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 Laboratory	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
<u>Select additional courses to total 24 hours in Geology:</u>	
GEO 307 Geomorphology	3
GEO 307L Geomorphology Laboratory	1
GEO 309 Surface and Groundwater Hydrology	3
GEO 309L Surface and Groundwater Hydrology Laboratory	1
GEO 303 Field Geology	6
GEO 401 Paleontology	3
GEO 401L Paleontology Laboratory	1
GEO 403 Sedimentary	3
GEO 403L Sedimentary Laboratory	1

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
<u>Select additional courses to total 20 hours in Physics:</u>	
PHY 303 Intermediate Mechanics I	3
PHY 333 Digital and Analog Electronics for Scientists	3

Biology & Chemistry Requirements: (12 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

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