

**LIFE SCIENCE / CHEMISTRY LICENSURE 2014-2015**  
**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 <a href="https://stander.udayton.edu">https://stander.udayton.edu</a>	

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 309 Comparative Anatomy.....	3
BIO 309L Comparative Anatomy Laboratory .....	1
BIO 310 Ecology.....	3
BIO 310L Ecology Laboratory .....	1
BIO 314 Plant Biology .....	3
BIO 314L Plant Biology Laboratory .....	1
BIO 411 General Microbiology .....	3
BIO 411L General Microbiology 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. Students who do not possess needed skills should take CPS 111 or a higher level CPS course.

**LIFE SCIENCE / PHYSICS LICENSURE 2014-2015**  
**REQUIRES A TOTAL OF 80 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 <a href="https://stander.udayton.edu">https://stander.udayton.edu</a>	

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 309 Comparative Anatomy .....	3
BIO 309L Comparative Anatomy Laboratory.....	1
BIO 310 Ecology .....	3
BIO 310L Ecology Laboratory.....	1
BIO 314 Plant Biology .....	3
BIO 314L Plant Biology Laboratory .....	1
BIO 411 General Microbiology .....	3
BIO 411L General Microbiology 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

Chemistry & Earth Science 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
CHM 313 Organic Chemistry I.....	3
CHM 313L Organic Chemistry I 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

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.