

**CHEMISTRY LICENSURE 2014-2015**  
**REQUIRES A TOTAL OF 58 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>		

Chemistry Requirements: (30 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

Select additional courses to total 30 hours in Chemistry:

CHM 302	Physical Chemistry .....	3
CHM 341	Environmental Chemistry .....	3
CHM 341L	Environmental Chemistry Laboratory .....	1
CHM 420	Biochemistry .....	3

General Science Requirements: (16 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
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 & Calculus I .....	4
MTH 169	Analytic Geometry & 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.

**PHYSICS LICENSURE 2014-2015**  
**REQUIRES A TOTAL OF 65 SEMESTER HOURS**

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

EDT 434	Science Methods For AYA .....	3
EDT 434L	Science Methods For AYA Lab .....	1
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Chemistry Requirements: (8 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

Physics Requirements: (30 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 303	Intermediate Mechanics I .....	3
PHY 321	Atomic and Nuclear Physics .....	3
PHY 333	Digital and Analog Electronics .....	3
PHY 408	Intermediate Electricity and Magnetism I .....	3

Select additional courses to total 30 hours in Physics:

PHY 301	Thermal Physics .....	3
PHY 390	Introduction to Quantum Mechanics .....	3
PHY 395	Research Participation I .....	1
PHY 403	Intermediate Mechanics II .....	3
PHY 409	Intermediate Electricity and Magnetism II .....	3
PHY 430L	Advanced Laboratory I .....	1
PHY 431L	Advanced Laboratory II .....	1

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: (15 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
MTH 219	Applied Differential Equations .....	3

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.