### CHEMISTRY (7-12)
#### LICENSURE REQUIREMENTS
#### ADVISING FORM/CHECKLIST

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#### EDUCATION COURSES
- ___ EDUC 110 The Role of the School
- ___ EDUC 251 Psychological Foundations of Education
- ___ EDUC 367 Secondary Methods: Science (0.5)
- ___ EDUC 369 Field Practicum: Secondary (0.5)
- ___ EDUC 370 Secondary Teaching: Knowledge and Practice
- ___ EDUC 377 Teaching Workshop: Supporting & Extending the Learning (0.5)
- ___*EDUC 471-473 Student Teaching: Secondary and PreK-12
- ___*EDUC 474 Being & Becoming a Professional: Secondary & PreK-12 Student Teaching Seminar (0.5)

*Concurrent enrollment during student teaching seminar.

#### CHEMISTRY COURSES
- ___ CHEM 110 General Chemistry I and Lab (1.25)
- ___ CHEM 111 General Chemistry II and Lab (1.25)
- ___ CHEM 260 Organic Chemistry I and Lab (1.25)
- ___ CHEM 261 Organic Chemistry II and Lab (1.25)
- ___ CHEM 270 Analytical Chemistry and Lab (1.25)
- ___ CHEM 350 Physical Chemistry I
- ___ CHEM 352 Physical Chemistry Laboratory (0.25)
- ___ CHEM 340 Biochemistry I and Lab (1.25)
- ___** CHOOSE ONE OF THE FOLLOWING SETS:**
  - PHYS 110/111 General Physics for Physical Science Majors I, II and Lab (1.25) OR
  - PHYS 115/116 Principles of Physics I, II and Lab (1.25)
- ___** CHOOSE AT LEAST TWO FROM THE FOLLOWING:**
  - CHEM 341 Biochemistry II OR
  - CHEM 351 Physical Chemistry II and Lab (1.25) OR
  - CHEM 460 Instrumental Analysis (1.25) OR
  - CHEM 470 Advanced Inorganic Chemistry (1.25) OR
  - CHEM 490 Independent Study OR
  - CHEM 491 Directed Reading
- ___** CHOOSE AT LEAST ONE FROM EACH GROUP:**
  - BIOL 122 Organisms and Their Environment and Lab (1.25) OR
  - BOMI 125 Introduction to Microbiology and Lab (1.25) OR
  - BOMI 233 Ecology and the Human Future OR
  - BIOL 120 Introduction to Cell Biology and Lab (1.25) OR
  - ZOOL 102 Genes, Evolution and Society and Lab (1.25)
  - AND
  - ___ CHEM 230 Environmental Chemistry OR
  - GEOL 110 Physical and Environmental Geology OR
  - ASTR 110 Elementary Astronomy OR
  - ASTR 111 The Astronomical Universe and Lab (1.25)

*Each course is 1 unit or 3.75 semester hours, unless otherwise specified.*

OVER
### ADDITIONAL COURSES

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<tr>
<td>___</td>
<td>MATH 110 Calculus I</td>
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<td>MATH 111 Calculus II</td>
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<td><em>DIVERSITY COURSES (2)</em></td>
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* Students seeking teaching licenses must complete two unit courses with a substantial focus on non-Euro-American topics.*

### Please Note:

1. Students also must complete the state-mandated examinations for licensure.
2. In order to graduate from OWU, students must declare an academic major and meet the requirements. Licensure requirements may differ from the requirements for the major.

Each course is 1 unit or 3.75 semester hours, unless otherwise specified.

Revised 03/2017