### LIFE SCIENCES (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.

#### SCIENCE AREA COURSES

- ___ BIOL 122 Organisms and their Environment and Lab (1.25)
- ___ BIOL 120 Introduction to Cell Biology and Lab (1.25)
- ___ CHEM 110 General Chemistry I and Lab (1.25)
- ___ CHEM 111 General Chemistry II and Lab (1.25)
- ___ **CHOOSE ONE OF THE FOLLOWING:**
  - BIOL 271 Genetics OR
  - ZOOL 261 Evolution
- ___ **CHOOSE FIVE OF THE FOLLOWING – AT LEAST ONE FROM EACH GROUP:**
  - **CONSERVATION, ECOLOGY, & EVOLUTION**
    - BOMI 233 Ecology and the Human Future OR
    - BOMI 355 Plant Response to Global Change (1.25) OR
    - BOMI 337 Adaptive Biology of Plants (1.25) OR
    - BOMI 344 Plant Communities and Ecosystems (1.25) OR
    - ZOOL 261 Evolution OR
    - ZOOL 345 Marine Biology (1.25) OR
    - ZOOL 347 Population and Community Ecology (1.25) OR
    - ZOOL 349 Island Biology (1.25) OR
    - ZOOL 353 Conservation Biology
  - **CELLULAR AND MOLECULAR**
    - BIOL 271 Genetics OR
    - BOMI 280 Medical Microbiology (1.25) OR
    - BOMI 326 Plant Physiology (1.25) OR
    - BOMI 328 Bacterial Physiology (1.25) OR
    - BOMI 353 Molecular Genetics (1.25) OR
    - BOMI 357 Molecular Biology of Viruses (1.25) OR
    - ZOOL 333 Developmental Biology (1.25) OR
    - ZOOL 351 Cell and Molecular Biology (1.25) OR
    - ZOOL 356 Immunology (1.25)

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

OVER
AND

**ORGANISMAL AND HUMAN BIOLOGY**

- BOMI 125 Introduction to Microbiology (1.25) OR
- BOMI 285 Biology of the Fungi (1.25) OR
- BOMI 252 Biodiversity of Flowering Plants (1.25) OR
- ZOOL 251 Human Structure and Function (1.25) OR
- ZOOL 311 Invertebrate Zoology (1.25) OR
- ZOOL 313 Entomology (1.25) OR
- ZOOL 325 Human Physiology (1.25) OR
- ZOOL 335 Comparative Physiology (1.25) OR
- ZOOL 341 Ornithology (1.25) OR
- ZOOL 343 Animal Behavior (1.25) OR
- ZOOL 361 Parasites and Immunity (1.25)

Choose one of the following:

- GEOL 110 Physical & Environmental Geology OR
- GEOL 112 History of the Earth

**ADDITIONAL COURSES**

Choose one additional full unit natural science course

Q Course, Quantitive Reasoning Requirement

*DIVERSITY COURSES (2)*

*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