

## Additional License Requirements: Life Science 9-12/ Science 5-8

### *Licensure Requirements (Additional License)*

- Praxis II: Content Area - Life Science
- Praxis II: Content Area – Middle School Science

### *Education Courses (Additional License)*

Typically satisfied  
with initial license

- GED 7815 Schools and Society, 4cr
- GED 7825 Educational Psychology, 4cr
- GED 7862 Education and Cultural Diversity, 4cr
- GED 7872 Exceptionality, 2cr
- GED 7867 Theory to Practice, 4cr

- GED 7875 Teaching in the Secondary School, 4cr
- GED 7871 Teaching Literacy in the Middle and Secondary School/5-12, 2cr
- GED 7874 Teaching Science in the Middle and Secondary School/5-12, 4cr
- GED 7790 Advanced Practicum, 1-3 cr.

### *Life Science Courses (Additional License)*

- BIOL 1800 Principles of Ecology and Evolution, 4cr
- BIOL 3060 Principles of Cell Biology, 4cr
- BIOL 3050 Principles of Genetics, 4cr
- BIOL 1820 Principles of Plant and Animal Physiology, 4cr

### *Biology Courses (choose one from each of the following three categories)*

#### *Organismal (Additional License)*

- BIOL 3400 Comparative Anatomy, 4cr
- BIOL 3500 Plant Adaptation & Diversity, 4cr
- BIOL 3650 Invertebrate Biology, 4cr
- BIOL 5600 Dev. Biology, 4cr

#### *Cell Molecular (Additional License)*

- BIOC 3820 Biochemistry I, 4cr
- BIOC 3830 Biochemistry II, 4cr
- BIOL 3830 Applied Biotechnology, 4cr
- BIOL 5550 Microbiology, 4cr
- BIOL 5760 Immunology, 4cr

#### *Population Biology (Additional License)*

- BIOL 3770 Population Genetics and Evolution, 4cr
- BIOL 5540 Aquatic Biology, 4cr
- BIOL 5590 Ecology, 4cr
- BIOL 5650 Animal Behavior, 4cr

#### *Course with research component (Additional License)*

NOTE: Hamline course that fulfills research component: BIOL 5650

### *Science 5-8 Courses (Additional License)*

- CHEM 1130 General Chemistry, 4cr
- CHEM 1140 General Chemistry, 4cr
- PHYS 1150/1230 General Physics I, 4cr
- PHYS 1160/1240 General Physics II, 4cr
- SCED 7021 Astronomy for Teachers, 4cr or equivalent Astronomy course
- SCED 7205 Earth System Science for Middle School Teachers, 4cr or equivalent Physical Geology course

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Continued...

*Related Courses (Additional License)*

Choose One: *(Additional License)*

MATH 1150 Pre-Calculus, 4cr

MATH 1170 Calculus I, 4cr

College Algebra (not offered at HU)

Choose One: *(Additional License)*

PSY 1340 Quantitative Methods, 4cr

M&E 1230 Statistics, 4cr