

## BIOLOGY

Endorsement Name	<b>Biology</b>
Department	Biology
License area [ State of Iowa]	5 – 12 Biology
Required Education Minor	Secondary Education Minor
Updated	4/6/2023

**OPTION ONE: The student completes a Biology major at Luther College to include the following requirements.**

	BIO 151: Principles of Biology: Ecology, Evolution, and Biodiversity	4
	BIO 152: Principles of Biology: Molecules and Cells	4
	BIO 201: Genetics	4
	BIO 490: Bio Senior Project	2
	<u>One of the following:</u> CHEM 151: Chemical Principles I	4
	<b>AND</b> CHEM 152: Chemical Principles II	4
	<b>OR</b> CHEM 201: Advanced Chemical Principles	4
	<u>One course from the following:</u> MATH 150: Calculus in Context * BIO 256: Biostatistics [if used to fulfill quantitative/stats requirement, it does not count toward 20 Bio hours above 201] PSYCH 350: Behavioral Statistics	4
	<u>One course from each category:</u> <b>Ecology or Evolution:</b> BIO 354: Evolutionary Biology BIO 365: Ecology <b>Microbiology or Physiology:</b> BIO 243: Microbiology BIO 255: Human Physiology BIO 262: Environmental Animal Physiology <b>Botany and Zoology:</b> BIO 251: Entomology BIO 252: Botany BIO 253: Invertebrate Zoology BIO 258: Vertebrate Natural History	12

**OPTION TWO: This is for a student with a major in a different field, planning to teach Biology, *in the State of Iowa*, under the second teaching area provision. This student must complete the Secondary Education Minor.**

	BIO 151: Principles of Biology: Ecology, Evolution, and Biodiversity	4
	BIO 152: Principles of Biology: Molecules and Cells	4
	BIO 201: Genetics	4
	<u>One course from each category:</u> <b>Ecology or Evolution:</b> BIO 354: Evolutionary Biology BIO 365: Ecology <b>Microbiology or Physiology:</b> BIO 243: Microbiology BIO 255: Human Physiology BIO 262: Environmental Animal Physiology <b>Botany and Zoology:</b> BIO 251: Entomology BIO 252: Botany BIO 253: Invertebrate Zoology BIO 258: Vertebrate Natural History	12

\*This course will be reviewed by the State of Iowa at the beginning of the Fall 2023 semester.