

# **Department of Biology**

## **Bachelor of Science in Education**

### **Biology First Field - Secondary Teaching (Option B)**

#### **I. General Information**

- A. The emphasis in secondary teaching for biology.
- B. General education and professional education requirements are to be fulfilled (as outlined in the university catalog at the time of your matriculation to ESU and the B.S.E. biology program). A list of those courses is available from your advisor.
- C. In order for you to be admitted to the Professional Education program, the Department of Biological Sciences must provide a favorable recommendation to the Teachers College upon reviewing your qualifications. To enter the Phase I sequence of education courses, you must have (and maintain) an overall GPA of 2.50, including a minimum GPA of 2.5 in biology course work on the biology degree contract. You must also have completed ED 220, Intro. to Teaching; EN 107 and 108, Freshman English I and II; and SP 101, Public Speaking, all with a grade of "C" or higher, and pass the PPST test with designated score. Forms for application to enter Phase I should be completed with your advisor during your junior year. This includes having a 2.75 GPA or higher in the 35-hour general education core and having 100 hours of documented service with youth.
- D. During the second semester of your junior year, you should complete a degree contract with your advisor. This will be approved by the Department chairperson and will initiate a degree analysis that will clearly state the remaining courses to complete the appropriate forms to apply for student teaching.
- E. Before the beginning of your last academic year, you should discuss potential student teaching localities with your advisor, who will help you complete the appropriate forms to apply for student teaching. The biology faculty must approve candidates for biology student teaching.
- F. Be aware of the following prerequisites: Chemistry I is prerequisite to MC 150, Molecular and Cellular Biology. Biology of Animals and Biology of Plants are prerequisites to General Genetics, Ecology and the GB 584 Teaching Biology methods course. GB 584 must be completed before student teaching.
- G. To add General Science as an additional teaching endorsement, consult with your advisor before your senior year. To add teaching fields in the physical sciences, consult with Dr. Thompson or Professor Backhus in physical sciences.
- H. You must complete math through the level of college algebra. This may involve taking a course in intermediate algebra, depending on your high school course work.
- I. This program provides a student with the biology content course work for a stand-alone first-field certification in biology (1311), when completed with the appropriate general education and professional education course work. Because of the small size of many Kansas schools and the resulting need for teachers who can teach several areas, it is recommended that students consider preparation in a second field. There is a great demand for broadly-trained science teachers, and teaching fields in the physical sciences require the least amount of additional course work.

*Biology web site: <http://biology.emporia.edu>*

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## II. Biology Requirements for First Field (Option B)

<u>COURSES</u>	<u>HOURS</u>
GB 140-141..... Principles of Biology and Lab.....	4
MC 350-351..... Molecular and Cellular Biology and Lab.....	4
BO 212-213..... Biology of Plants and Lab.....	4
ZO 214-215..... Biology of Animals and Lab.....	4
MC 316-317..... Microbiology and Lab.....	4
ZO 362-363..... Human Anat. And Physiology and Lab.....	5
GB 425-426..... General Genetics and Lab.....	4
EB 480..... Principles of Ecology.....	3
EB 481..... Field Ecology I.....	2
GB 584..... Teaching Biology in Secondary & Middle School	3
Biology electives approved by biology education advisor; .....	<u>7</u>
One computer class may be included as a biology elective.	
<p style="text-align: right;">TOTAL</p>	44

## III. Physical Science Requirements

<u>COURSES</u>	<u>HOURS</u>
CH 123-124..... Chemistry I and Lab .....	5
CH 370-371..... Gen. Organic Chemistry and Lab .....	5
Lab course in Physics .....	<u>4/5</u>
<p style="text-align: right;">TOTAL</p>	58/59