

University of Alaska Fairbanks Intended Learning Outcomes for

Bachelor of Science, Wildlife Biology and Conservation

1. Knowledge

Graduates in wildlife biology should demonstrate a broad knowledge of the biology of animals that includes an understanding of the structure and function of individual organisms, the interactions among populations and communities of animals, plants, people and their environment, and the principles of monitoring and managing animals and their habitats.

2. Competency

Communication: Graduates in wildlife biology should be able to effectively communicate scientific evidence in both oral and written form. They should be able to make cogent scientific arguments for specialist audiences in the sciences but should also be able to present their arguments and evidence to general audiences.

Technical proficiency: Graduates in wildlife biology should be competent in the collection of data on animals, their habitats and the thoughts and behaviors of humans related to wildlife. They should be able to record and maintain accurate data records and to summarize, graph, and interpret data sets using computer tools. They should be able to use computer software to produce a technical report that includes graphs, tables, and references .

Information literacy: Graduates in wildlife biology should be able to recognize gaps in their own knowledge and have the ability to find, evaluate, interpret and apply scientific evidence to a problem. They should be able to access the technical literature in the natural sciences using online resources, and to distinguish between peer-reviewed scientific literature and less dependable sources of information. Graduates should cite others' work responsibly and accurately.

Quantitative approaches: Graduates in wildlife biology should be able to apply quantitative approaches to test hypotheses and solve problems in monitoring and managing populations of wildlife. In particular, they should be competent to recognize bias in data collection and appreciate the role of stochasticity in biological processes. They should be able to distinguish discrete and continuous variation, summarize and analyze data using statistics, and create visual displays of information that effectively summarize data.

Collaboration: Graduates should be able to collaborate effectively with others on scientific projects, leading to a productive outcome.

3. Critical and creative thinking

Graduates in wildlife biology should be able to apply their knowledge of the principles of biology, chemistry, physics, and mathematics to solve problems of understanding, monitoring and managing populations of wildlife. They should be able to critically evaluate scientific claims about wildlife, such as those they will encounter in the scientific literature and the media. Graduates should be able to formulate hypotheses and predictions, design a study, interpret the results logically, and communicate the results effectively.

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