Program Level Learning Outcome Rubric – Wildlife and Fisheries Science, Texas A&M University

1. Identify the drivers of animal populations

	Performance Indicators	1	2	3	4
		Developing	**Sufficient**	**Proficient**	**Exemplary**
a.	**Ecological Processes**	1. a. 1 **Define** and **describe** biotic and abiotic factors that affect ecological processes.	1. a. 2 **Identify** individual ecological processes and abiotic and biotic factors at play in animal communities and at ecosystem scales.	1. a. 3 **Estimate** how ecological processes and abiotic and biotic factors change animal populations at various scales (i.e., community level vs entire ecosystems).	1. a. 4 **Predict** how biotic and abiotic factors will affect ecological processes and animal populations at various scales.
b.	**Spatial/Temporal Processes**	1. b. 1 **Distinguish** large scale spatial processes from temporal processes.	1. b. 2 **Define** and **describe** large spatial and temporal scale changes in landscapes and seascapes. **Examine** and **interpret** spatial and temporal data.	1. b. 3 **Explain** large spatial and temporal scale changes in landscapes and seascapes. **Compile** spatial data using GIS and/or remote sensing over various temporal scales.	1. b. 4 **Evaluate** how spatial and temporal processes affect animal populations. **Compare** and interpret spatial data and maps over time.
c.	**Relationship Between Society and Ecological Systems for Fishes and Wildlife**	1. c. 1 **Describe** historical, cultural, and social values related to wildlife and fisheries and the environment. **Describe** how these values can affect animal populations.	1. c. 2. **Interpret** national and international regulations that affect wild animal and fish populations and their habitats	1. c. 3 **Analyze** social and economic stances on the environment and environmental economics.	1. c. 4 **Determine** the best management practices by **synthesizing** social and ecological data.
d.	**Systematics**	1. d. 1 **Outline** the Linnaean classification system and **recognize** that modern classifications are derived from phylogenetic studies.	1. d. 2 **Employ** taxonomic keys to identify organisms to the level of species. **Identify** major groups of organisms based on key characteristics.	1. d. 3 **Define** and **interpret** relationships of animals based on phylogenetic trees. **Recognize** the role of species delimitation and phylogeny reconstruction in the conservation of biodiversity.	1. d. 4 **Generate** phylogenetic trees and preform phylogenetic analysis.