

Biodiversity and Conservation (BA/BS)

Students who choose this concentration often explore changing species diversity at site, local, regional, national, and/or global scales. Students also might explore ecosystem values and services, urban planning and design initiatives, and corporate sustainability and sustainable finance practices that encourage conservation and/or preservation.

Students in the BS degree program focus more on biology, ecology, and ecosystem sciences, while students pursuing the BA degree concentrate on public and private sector policies and initiatives from lenses of economics, political science, law, and anthropology to protect and restore species, ecosystems and biomes. The concentration combined with intensive senior research prepares students for graduate training in ecology, conservation, and environmental management. It also can prepare students for entry level positions in the field of conservation and ecosystem management in government, corporate, and NGO sectors.

The stunning diversity of species and ecosystems present on earth only a century ago continues its decline at an increasing rate. The importance of species loss was described metaphorically by Anne and Paul Ehrlich in the 1980'a. They likened the decline to the popping of rivets on aircraft earth. Losing one, even dozens, may have no effect on flight, but eventually if the trend continues the aircraft will crash. Species loss has long occurred without human knowledge and with little thought or care. Collective ignorance of the once-natural and life-sustaining functions that biological diversity has played in the history of life has left our planet in a turbulent state, and without a pilot. Although this message is more widely understood.

The world's plants have long regulated climate moderation, seasonal climatological cycles, carbon sequestration above and below ground; plant growth and reproduction; water cycling, nutrient, material cycling. These processes are crucial to create food, energy, and natural resources necessary for humans to survive and thrive. The forces diminishing biodiversity include: population growth, agriculture, forestry, urbanization, land use change, pollution, and industrial chemical threats, human and solid wastes, and climate warming. Both economic and population growth have increased human consumption of natural resources often well beyond their sustainable levels.