Alpine Hydrology & Watershed Engineering Degree Pathway Guide

Four-Year Curricular Map, Flume Laboratory Milestones, and Professional Hydrologist Certification

B.S. IN ALPINE HYDROLOGY & WATERSHED ENGINEERING

Program Vision & Professional Accreditation

Designed to prepare graduates for American Institute of Hydrology (AIH) certification.

Combines advanced differential equations with active stream gauging and snowpack acoustic telemetry.

Curricular Milestone Matrix

? Year 1: Earth systems, environmental chemistry, calculus sequence, and fluid mechanics basics.

? Year 2: Snow hydrology, aquatic chemistry, open channel hydraulics, and ArcGIS Pro watershed delineation.

? Year 3: USGS PRMS distributed hydrological modeling, sediment transport, and groundwater MODFLOW simulations.

? Year 4: Senior capstone river basin optimization, reservoir rule curves, and Niwot Ridge field residency.

Career Placement Statistics

? 96% career or graduate school placement rate within 6 months of graduation.

? Primary employers include USGS Water Science Centers, US Bureau of Reclamation, and engineering consulting firms.