In this course you will learn:
- to analyze channel (or stream) flow using a number of governing physical principles such as energy, continuity and momentum equations.
- to assess outflows of lakes and reservoirs into straight channels and the influence of their slope on flow regimes.
- to analyze different channel segments when controls are present and what changes of slope, direction, material, and shape have on the flow parameters.
- to tackle ordinary differential equations numerically to investigate transient sections and the surface profiles that form.
- to analyze basic time dependent flows in 1-D channels and lastly, and most importantly, why water flows downhill!

You will work on challenging HW problems and also get a chance to use your knowledge to work on a Project of your choosing using Channel flow software such as HEC-RAS to carry out and analyze a real world problem. Last but not least, you will present your work using the format, for added fun.