

Final project for ERT474/574

UPDATE ON NOV 12 2025, YIFAN CHENG

In this final project, you are expected to form a group of 2 to 3 members. Each group will conduct a hydrologic modeling study for a basin of selection.

Overall procedures

1. Week 11: Finalize the selection of targeted river basin.
2. Week 12-13: Perform the hydrologic modeling studies using the data and configuration provided by the instructor
3. Week 14 (Monday, Nov 24): Progress update: hydrologic model results and evaluation against USGS observations
4. Week 16 (Monday, Dec 8): Final oral presentation (baseline model performance, analysis of the potential errors, sensitivity analysis for one parameter, and final thoughts)
5. Final report due: Dec 15 (Monday)

Hydrologic modeling setup and evaluation

Model setup: Instructions for the setup and configuration of VIC will be provided in [CourseMaterials25](#). We will NOT provide detailed instruction to set up mizuRoute because this is very similar to Homework #8.

Optional model spin-up: Each group are expected to run VIC and mizuRoute from 2011 to 2024. I will leave it up to you whether you would like to perform spin-up of the model. Bonus credits will be assigned to groups if they perform a decent spin-up. For a proper spin-up, please check [week 10 lab](#).

Model evaluation: You are expected to evaluate the model performance of mizuRoute output against the observed streamflow from USGS. An example script is provided in [CourseMaterials25](#). Please note that this script as an entry point. There are more interesting analysis you can do using what you learned in the first half of the semester.

Progress update on Monday (Week 14)

Each group are expected to finish running the VIC and mizuRoute model by now.

Each group will provide a 5-minute presentation discussing the setup of the modeling and model performance against the USGS observations.