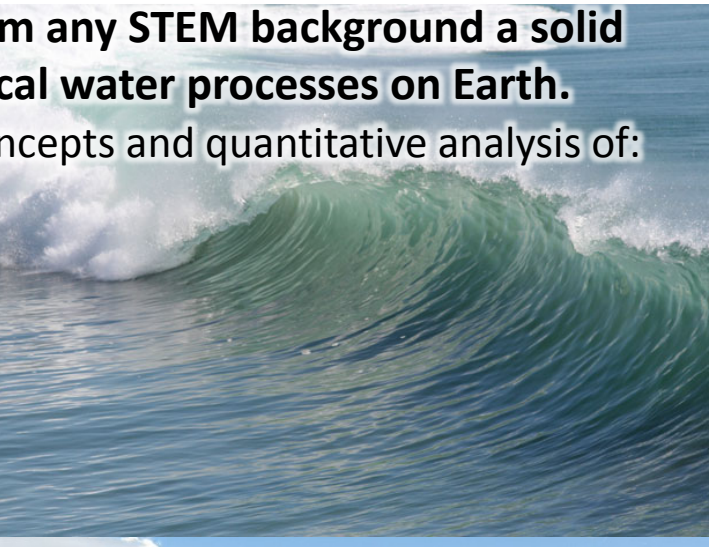
Graduate Natural Science Course **(ENVSCI 577)*:***

Advanced Environmental Hydrology

Goal: **Provide graduate students from any STEM background a solid foundation in all aspects of physical water processes on Earth.**

Description: Graduate level survey of concepts and quantitative analysis of:

- surface water and boundary layer flows, mixing, and stratification in rivers, lakes, reservoirs, and the ocean;
- waves, tides, and tsunamis;
- groundwater flow and transport;
- surface water-groundwater interactions, including wetlands, submarine groundwater discharge, and biogeochemical and ecological consequences of mixing;
- surface-atmosphere energy, vapor, and gas exchange from open water and land;
- soil moisture, unsaturated flows, plant water use;
- watershed dynamics, ecological and landscape water use.



Preferred preparation: college-level physics, calculus, prior hydrology exposure
Prior differential equations and fluid mechanics not required or assumed.

3 credits M/W/F 1:10-2pm Spring 2018 (even springs)

Based in Vancouver, AMS to any campus

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