

## HYDROGEOLOGY (ERTH 455)

**Instructor:** Xiaolong (Leo) Geng (POST 709, x66331), [xgeng@hawaii.edu](mailto:xgeng@hawaii.edu)

**Schedule:** T-R 1030-1145a (POST 733) T (0130-0420 p) HIG 217

**Coursework will include:** (1) reading the textbook, (2) completing problem sets, (3) completing laboratory assignments and field trip reports, (4) mid-term exam, and (5) final exam.

**Textbook:** *Applied Hydrogeology* by C.W. Fetter, 2001, 4<sup>th</sup> ed., Prentice Hall

### Course Goals:

This class concerns the use of critical information and reasoning to understand hydrological, geological, and chemical processes and their interaction. We use quantitative and qualitative approaches to learn how the compositions of Earth materials constrain these processes. Relevant mathematical principles are covered. Laboratory, field trips, and computer simulations are used as efficient tools to supplement the lectures. This course helps many students towards their careers in environmental companies and government agencies.

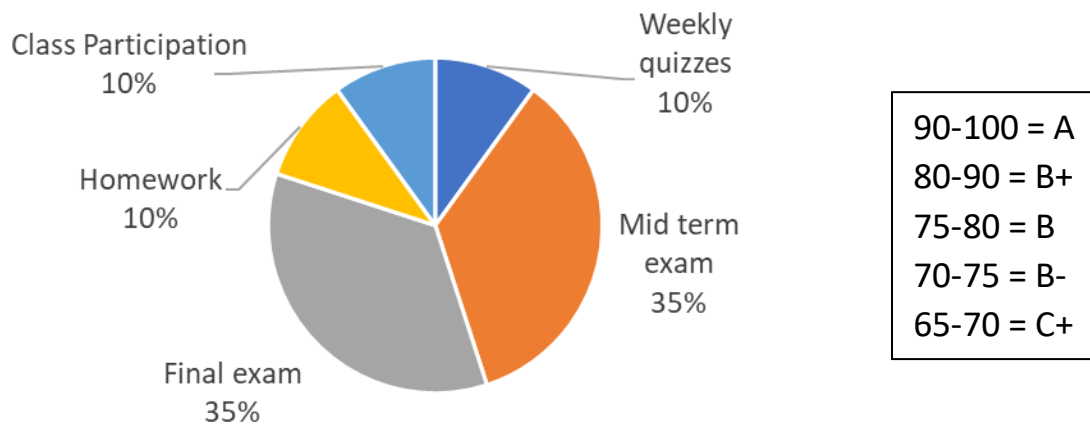
### Lecture Topics (subject to change!):

- Introduction and Hydrogeologic Cycle
- Math Review
- Groundwater Occurrence
- Groundwater Flow
- Groundwater Flow Applications
- Groundwater in Geologic Environments
- Groundwater Development & Management in Hawaii
- Groundwater Exploration
- Groundwater Quality

### Lab Exercise, field Trips, and special Lectures

- Capillary rise, porosity, and specific yield laboratory determinations
- Permeability determination using laboratory columns
- Sandbox (pumping test) experiment
- Board of Water Supply (BWS) Tours
- Guest lectures

## Grading



## TITLE IX:

The University of Hawai'i is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking. If you or someone you know is experiencing any of these, the University has staff and resources on your campus to support and assist you. Staff can also direct you to resources that are in the community. Here are some of your options:

As members of the University faculty, your instructors are required to immediately report any incident of potential sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and your instructors cannot guarantee confidentiality, you will still have options about how your case will be handled. Our goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

If you wish to remain ANONYMOUS, speak with someone CONFIDENTIALLY, or would like to receive information and support in a CONFIDENTIAL setting, use the confidential resources available here: <http://www.manoa.hawaii.edu/titleix/resources.html#confidential>

If you wish to directly REPORT an incident of sex discrimination or gender-based violence including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence or stalking as well as receive information and support, contact the Title IX Coordinator (808) 956-2299 [t9uhm@hawaii.edu](mailto:t9uhm@hawaii.edu).