

# G 163 : FIELD GEOLOGY: RIVERS, LAKES AND SPRINGS OF CENTRAL OREGON

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## Transcript title

Rivers, Lakes and Springs

## Credits

4

## Grading mode

Standard letter grades

## Total contact hours

80

## Lecture hours

20

## Lab hours

60

## Course Description

Exploration of the water bodies and hydrologic cycle of Central Oregon, with emphasis on how water is used by humans. Meets for lecture followed by all-day field trip to sites in Central Oregon. Appropriate for non-majors.

## Course learning outcomes

1. Explain the fundamentals of hydrologic processes and water resources in Central Oregon.
2. Apply the scientific skills of observation, interpretation, and hypothesis testing.
3. Connect hydrologic processes and water resources to their personal lives, thereby becoming earth science literate members of society.
4. Explain the interconnectedness of environmental, social, and economic systems in the context of geology.
5. Analyze the major environmental, social, and economic challenges and potential solutions of our time using a systems thinking approach.

## Content outline

- Hydrology of Central Oregon, including the hydrologic cycle of the Upper Deschutes River Watershed and the greater Deschutes Basin, and groundwater, surface water, bedrock geology and their interactions.
- Fluvial processes of Central Oregon, including meandering, incision, aggradation, lava dams, and other interactions with volcanic bedrock.
- Humans and Water in Central Oregon, including water rights, agricultural water usage, municipal water usage, conservation, and watershed restoration

## Required materials

Field trips will occur in place of on-campus labs, with options to ensure accessibility for every student. Transportation will be provided.

## General education/Related instruction lists

- Science Lab