

**UNIVERSITY OF NEVADA LAS VEGAS**  
**GEOLOGY 474/674 - HYDROGEOLOGY (3 Credits)**

Zhongbo Yu

email:zhongbo@unlv.nevada.edu

Office: LFG 201A

Office phone: (702) 895-2447

Course page: <http://hydro.nevada.edu/courses/gey474>

**COURSE OBJECTIVES**

To develop an understanding of the fundamentals of several aspects of hydrogeology including:

- Darcy's law, which describes how water flows through a porous media.
- The main equations of flow, which are conservation statements for steady-state and transient conditions
- Hydraulic testing methods, primarily pumping tests, which are used to determine the hydraulic properties of a water-bearing rock unit.
- Principles of aqueous geochemistry that pertains to groundwater systems.
- Mass transport phenomena, which describe how solutes and particles move through a porous media.
- Contaminant hydrogeology including transport phenomena and remediation.

**Course text:** Domenico, P.A., and F.W. Schwartz, 1990. Physical and Chemical Hydrogeology: John Wiley and Sons, New York, NY or Fetter, C.W., 2001. Applied Hydrogeology: Prentice Hall, Upper Saddle River, NJ.

**Homework Assignments:** New homework assignments will be handed out each week. The assignment will be due the following week. Late assignments will be penalized.

<b>Grading:</b>	Two mid-term exams	30%
	Final Exam	25%
	Homework Assignments	45%

*If you require a disability assistance, please contact the Disability Resource Center (0866)*

*Students are welcome to use the UNLV Writing Center free of charge (3908).*

*The UNLV does not discriminate on the basis of race, color, creed, religion, national or ethnic origin, gender, age, sexual orientation, disability, or veteran status.*

*The University requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. For more information, visit <http://www.unlv.edu/committees/copyright>.*