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GEOL 431.01: Environmental Geochemistry

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Geology 431 - Environmental Geochemistry

Lecture Tues. & Thurs.	13:10-14:30PM	Room SC 304	Instructor: J. N. Moore
Office SC 307;	Phone: 243-6807	e-mail: gl_jnm@selway.umt.edu	
Office Hours:	Mon. 14:10-15:00 or by appointment	Tues. 14:30-15:30	Thurs. 14:30-15:30

Grading

Two Take-home Exams @ 25% each for 50%
 Final Take Home Exam 40%
 Problem sets and other assignments 10%

Preliminary Schedule

(this schedule may be changed to better accomodate our progress in these and other topics)

Date Lecture Topics

9/5 Introduction and metal contamination of natural systems.
 9/7 No class, reading assignment for discussion on 9/12.
 9/12 Chemical Fundamentals I.
 9/14 Chemical Fundamentals II..
 9/19 Chemical Reaction Types..
 9/21 Sedimentology and Measuring Metals in Sediments.
 9/26 Grain Size Controls.
 9/28 Geochemical classification and Eh-pH diagrams.
 10/3 Eh-pH diagrams II.
 10/5 Classes of Geochemical Environments.
 10/10 Geochemical environments.
 10/12 EXAM
 10/17 Mining-derived Contamination
 10/19 Mining-derived Contamination
 10/24 Mining-derived Contamination
 10/26 Photosynthesis-linked Periodic Variations
 10/31 Metal Toxicity
 11/2 Metal toxicity
 11/7 Election day holiday, no class.
 11/9 Sediment toxicity
 11/16 EXAM Geological Society of America Meeting, no class.
 11/21 EXAM Geological Society of America Meeting, no class.
 11/16 Arsenic Contamination from natural Sources
 11/21 Biomethylation
 11/23 Determining Geochemical Background
 11/28 Determining Geochemical Background
 11/30 Pit Lakes
 12/5 Pit Lakes
 12/7 Catch Up Time
 12/12 Review
 12/14 Final Exam handed out.

12/19 Finals week. Final Exam due Thursday, 12/21 at 15:30

* Many of these lectures will be modified from those used in previous classes. Those lectures are at the following link: [LECTURES](#)

**Readings will be posted in envelope outside my office door or on the G431 web site.