Instructor  John Westall  
Gb 203, 737-2591; john.westall@oregonstate.edu  
Office hours: anytime or by appointment

Text  Bard and Faulkner, Electrochemical Methods 2e, Wiley

Schedule  
Lectures:  M-W-F  11:00-11:50  Gbad 101  
Discussion Sessions  Weekly, time TBA  
Homework:  Due on the Friday after it is assigned  
Tests:  Wednesday, January 30 (tentative)  
        Wednesday, February 20(tentative)  
Exam:  Tuesday, March 18, 14:00, Comprehensive

Prerequisite:  CH 442 (or permission)  
Credits: 4

Grading  
Test 1  24%  
Test 2  24%  
Exam  32%  
Class Participation, Quizzes, Homework  20%

Topics  
Fundamentals  
1. Electrochemical cell  
2. Charge transfer in a cell / equivalent circuit; thermodynamics  
3. Mass transfer I - R_s (migration only)  
4. Mass transfer II - R_{mt} (diffusion only, time-dependent solution)  
5. Mass transfer III - R_{mt} (diffusion and advection, steady state solution)  
6. Kinetics - R_{ct} - phenomenological approach  
7. Electric double layer  
8. Potentiometry  
9. Voltammetry  
10. Instrumentation  
Applications  
Donnan potential and suspension effect  
Corrosion  
Sensors  
Environmental electrochemistry  
Fuel cells

Expectation for Student Conduct - http://oregonstate.edu/admin/stucon/achon.htm

Accommodations for Students with Disabilities - Accommodations are collaborative efforts between students, faculty and Services for Students with Disabilities (SSD). Students with accommodations approved through SSD are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through SSD should contact SSD immediately at 737-4098.

Revised 01/05/08