

Engineering Applications of Electrochemistry
Chemical Engineering E 4201
Fall, 2019

Textbook:

Alan C. West, *Electrochemistry and Electrochemical Engineering. An Introduction.*
ISBN. 9781470076047

Course Prerequisite: Physical chemistry and transport phenomena, or permission of instructor.

Homework: Homework will be required on a nearly weekly basis. We anticipate 10 HW assignments. Homework will be collected but not graded. Solutions will be provided. We will record whether they were turned in or not (10% of grade). Late assignments not accepted.

Course Grade: Depending on the year, mix of exams, design projects, homework

Topics.

Chapter 1-10

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Applied Chemistry E 4201

Tentative Outline (Changes from year-to-year, especially towards the semester end).

Week #1:	Chapters 1 and 2 : Introduction, Background Concepts
Week #2:	Chapters 2 and 3: Background Concepts, Electrode Kinetics
Week #3:	Chapter 3: Electrode Kinetics
Week #4:	Chapter 4: Thermodynamics
Week #5:	Chapter 4: Thermodynamics
Week #6:	Chapter 5: Transport Phenomena
Week #7:	Chapter 5: Transport Phenomena
Week #8:	Chapter 6: Current Distributions
Week #9:	Chapter 6 and 7: Current Distributions and Rotating Electrodes
Week #10:	Chapter 7: Rotating Electrodes
Week #11:	Chapter 9: Porous Electrodes
Week #12:	Chapter 9: Porous Electrodes
Week #13:	Special Topics
Week #14:	Special Topics