



THE OHIO STATE UNIVERSITY

COLLEGE OF ENGINEERING

Corrosion: Fundamentals and Experimental Methods Short

Course Schedule 2023

Prerecorded lectures for early viewing

Lecture Pre1	Introduction to Corrosion
Lecture Pre2	Functioning of Potentiostats
Lecture Pre3	Pourbaix Diagrams
Lecture Pre4	Introduction to Electrochemical Impedance Spectroscopy
Lecture Pre5	Intergranular Corrosion

Note that the times in the following daily schedule are approximate

Monday, May 1, 2023

8:30-9:30	Optional time for pre watching lectures: Pre1, Introduction to Corrosion
9:30-10:45	Lecture 1: Thermodynamics
10:45-11:00	Morning Break
11:00-11:30	Lecture 2: Electrode Kinetics I
11:30-12:30	Lecture 3: Electrode Kinetics II
12:30-1:30 PM.	Optional Lunch and Learn
1:30-2:30	Lecture 4: Electrode Kinetics III
2:30-2:45	Afternoon Break
2:45-4:15	Lab I: Corrosion Potential Measurements and Polarization Methods for Determining Corrosion Rate
4:15-5:15	Optional Data Analysis Hour
7:00-8:00	Optional Office Hour

Tuesday, May 2, 2023



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8:30-9:30	Optional time for pre watching lecture: Pre2, Potentiostats
9:30-10:30	Lecture 5: Galvanic Corrosion
10:30-10:45	Morning Break
10:45-11:45	Lecture 6: Experimental Details
11:45-12:15 PM	Lecture 7: Passivity
12:15-1:15	Optional Lunch and Learn
1:15-2:15	Lab I Wrap-up
2:15-2:30	Afternoon Break
2:30-4:00	Lab II: Galvanic Corrosion
4:00-5:00	Optional Data Analysis Hour
7:00-8:00	Optional Office Hour

Wednesday, May 3, 2023

8:30-9:30	Optional time for pre watching lecture: Pre3, Pourbaix Diagrams
9:30-10:15	Lecture 8: Localized Corrosion I
10:15-10:30	Morning Break
10:30-11:30	Lecture 9: Localized Corrosion II
11:30-12:15 PM	Lecture 10: Localized Corrosion III
12:15-1:15 p.m.	Optional Lunch and Learn
1:15-2:00	Lab II Wrap-up
2:00-2:15	Afternoon Break
2:15-4:00	Lab III: Polarization Methods and Electrochemical Methods for Evaluating Localized Corrosion
4:00-5:00	Optional Data Analysis Hour
7:00-8:00	Optional Office Hour

Thursday, May 4, 2023

8:30-9:30	Optional time for pre watching lecture: Pre4, Intro to EIS
9:30-10:15	Lecture 11: EIS of Coated Metals I
10:15-11:00	Lecture 12: EIS of Coated Metals II
11:00-11:15	Morning Break
11:15-12:15 PM	Lecture 13: EIS of Coated Metals III
12:15-1:15 p.m.	Optional Lunch and Learn
1:15-2:00	Lab III Wrap-up



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2:00-2:15	Afternoon Break
2:15-4:00	Lab IV: EIS
4:00-5:00	Optional Data Analysis Hour
7:00-8:00	Optional Office Hour

Friday, May 5, 2023

8:30-9:30	Optional time for pre watching lecture: P5, Other Corrosion Forms
9:30-10:30	Lab IV Wrap-up
10:30-10:45	Morning Break
10:45-11:30	Lecture 14: Atmospheric Corrosion
11:30-12:00	Lecture 15: Inhibitors
12:00-1:00 p.m.	Optional Lunch and Learn
1:00-1:30	Lecture 16: Corrosion Simulation Software Demonstration
1:30-2:15	Lecture 17: Environmentally Assisted Cracking 1
2:15-2:30	Afternoon Break
2:30-3:30	Lecture 18: Environmentally Assisted Cracking 2
3:30-4:00	Discussion