



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Corrosion: Fundamentals and Experimental Methods Short Course – Spring 2024

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

Monday, April 29, 2024

Note that the times in the following daily schedule are approximate

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



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Tuesday, April 30, 2024

Note that the times in the following daily schedule are approximate

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

Wednesday, May 1, 2024

Note that the times in the following daily schedule are approximate

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

Thursday, May 2, 2024

Note that the times in the following daily schedule are approximate

8:30-9:30AM	Optional time for pre watching lecture: Pre4, Intro to EIS
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9:30-10:15AM	Lecture 11: EIS of Coated Metals I
10:15-11AM	Lecture 12: EIS of Coated Metals II
11-11:15AM	Morning Break
11:15AM-12:15 PM	Lecture 13: EIS of Coated Metals III
12:15-1:15PM	Optional Lunch and Learn
1:15-2PM	Lab III Wrap-up
2-2:15PM	Afternoon Break
2:15-4PM	Lab IV: EIS
4-5PM	Optional Data Analysis Hour
7-8PM	Optional Office Hour

Friday, May 3, 2024

Note that the times in the following daily schedule are approximate

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