



SAMPLE MII Adhesion Science Short Course Schedule

This schedule is for informational purposes only - it does not represent the finalized schedule, and should be considered tentative and subject to change.

MONDAY

Start	End	
8:00am	8:15am	Short Course Introductions
8:15am	9:20am	Introduction to Adhesion, Mechanical Properties, & Failures: Stresses, Strains, & Energies
9:20am	9:35am	Q&A / BREAK
9:35am	10:40am	Designing Adhesives using the Polymer Parameters
10:40am	10:55am	Q&A / BREAK
10:55am	12:00pm	What the Glue Sees: Surfaces, Surface Energies, and Adhesion
12:00pm	1:00pm	LUNCH
1:00pm	2:10pm	Viscoelasticity: Importance of Time & Temperature Dependence and Applications to Adhesives
2:10pm	2:25pm	Q&A / BREAK
2:25pm	3:35pm	Understanding Stresses in Adhesive Bonds: Driving Forces for Failure
3:35pm	3:50pm	Q&A / BREAK
3:50pm	5:00pm	Understanding and Improving Interfaces: Surface Analysis and Preparation

TUESDAY

Start	End	
8:00am	9:10am	Fracture Mechanics Applications to Adhesives & Adhesion
9:10am	9:25am	Q&A / BREAK
9:25am	10:35am	Adhesive Selection: Adhesive Classes and Chemistries
10:35am	10:50am	Q&A / BREAK
10:50am	12:00pm	Adhesive, Sealant, and Waterborne Rheology I
12:00pm	1:00pm	LUNCH
1:00pm	2:10pm	Free Volume, DSC and Intro to Time-Temp Superposition TTS
2:10pm	2:25pm	Q&A / BREAK

2:25pm	3:35pm	Test Methods for Adhesion: Characterizing Adhesion & Bond Performance
3:35pm	3:50pm	Q&A / BREAK
3:50pm	5:00pm	Adhesive, Sealant, and Waterborne Rheology II

WEDNESDAY

Start	End	
8:00am	9:10am	Surface Analysis and Characterization
9:10am	9:25am	Q&A / BREAK
9:25am	10:35am	Introduction to Dynamic Mechanical Methodology and Application to Adhesives
10:35am	10:50am	Q&A / BREAK
10:50am	12:00pm	Adhesion Challenges: Impact, Durability, Environmental Effects, and Accelerated Characterization
12:00pm	1:00pm	LUNCH
1:00pm	2:10pm	Adhesive, Sealant, and Waterborne Rheology III
2:10pm	2:20pm	Q&A / BREAK
2:20pm	2:35pm	Go to LABS
2:35pm	4:35pm	Laboratory Opportunities: <ul style="list-style-type: none"> 1) Chemistry: Surface analysis, contact angle, polymer synthesis and cure progression OR <ul style="list-style-type: none"> 2) Polymer Viscoelasticity: DMA, TMA, Rheometer OR <ul style="list-style-type: none"> 3) Mechanical Testing: Fracture testing (SENB and DCB), peel testing, DIC, FEA

THURSDAY

Start	End	
8:00am	9:10am	PSA and Soft Matter Adhesion and Characterization
9:10am	9:25am	Q&A / BREAK
9:25am	10:35am	Phase Separation and Interdiffusion
10:35am	10:50am	Q&A / BREAK
10:50am	12:00pm	Wood and Wood Bonding: Our Critically Important Natural Resource
12:00pm	1:00pm	LUNCH
1:00pm	2:10pm	Frontiers in Adhesion
2:10pm	2:20pm	Q&A / BREAK
2:20pm	2:35pm	Go to LABS
2:35pm	4:35pm	Laboratory Opportunities:

- 1) Chemistry: Surface analysis, contact angle, and polymer synthesis
- OR
- 2) Polymer Viscoelasticity: DMA, TMA, Rheometer
- OR
- 3) Mechanical Testing: Fracture testing (SENB and DCB), peel testing, DIC, FEA

FRIDAY

Start	End	
8:00am	9:00am	Analyzing Demo Data & Interpretations (Surfaces, DCB, TTSP, DIC/FEA)
9:00am	9:20am	Putting it into Practice: Case Study Overviews
9:20am	9:35am	Q&A / BREAK
9:35am	10:45am	Case Study Team Solutions
11:00am	11:15am	Wrap-up; collect evaluations; receive certificates