

Adhesion Science Short Course Program

May 17-21, 2010

**The Inn at Virginia Tech and Skelton Conference Center
Blacksburg, Virginia**

(please note: schedule is subject to change)

MONDAY – May 17th

7:30 – 8:00 a.m.	.....	Registration <i>The Inn at Virginia Tech and Skelton Conference Center – 2nd floor</i>
8:00 – 8:15 a.m.	.....	Short Course Overview All
8:15 – 9:15 a.m.	.....	Survey of Polymer and Adhesive Parameters T. C. Ward
9:15 – 9:25 a.m.	.....	Break
9:25 – 10:35 a.m.	.....	Introduction to Chemistry of Adhesives I S. R. Turner
10:35 – 10:40 a.m.	.....	Break
10:40 – 12:00 p.m.	.....	Introduction to Chemistry of Adhesives II S. R. Turner
12:00 – 1:15 p.m.	.....	<u>Lunch</u> <i>The Inn at Virginia Tech and Skelton Conference Center, Preston's</i>
1:15 – 2:45 p.m.	.....	Stresses in Bonded Joints D. A. Dillard
2:45 – 2:55 p.m.	.....	Break
2:55 – 4:10 p.m.	.....	Adsorption on Surfaces/Surface Energy J. G. Dillard / A. R. Esker
4:10 – 4:20 p.m.	.....	Break
4:20 – 5:30 p.m.	.....	Surfaces and Surface Preparation J. G. Dillard / A. R. Esker
5:30 – 7:30 p.m.	.....	<u>Dinner (on your own)</u>
7:30 – 9:00 p.m.	<i>(Break included)</i>	Fracture of Adhesive Bonds D. A. Dillard

TUESDAY – May 18th

8:00 – 9:10 a.m.	.....	Basic Mechanical and Viscoelastic Response of Adhesives T. C. Ward
9:10 – 9:20 a.m.	.....	Break

9:20 – 10:30 a.m. **Adhesive, Sealant and Waterborne Rheology I**
R. M. Davis

10:30 – 10:45 a.m. **Walk to Labs**

TUESDAY – May 18th (continued)

10:45 – 12:15 p.m. **Laboratory 1 — Adhesive Bond Testing**
R. M. Davis (146 Randolph) & D. A. Dillard (217 Norris)

12:15 – 1:30 p.m. **Lunch**
The Inn at Virginia Tech and Skelton Conference Center, Preston's

1:30 – 3:00 p.m. **Adhesive Test Methods**
D.A. Dillard

3:00 – 3:30 p.m. **Break and Walk to Labs**

3:30 – 5:00 p.m. **Laboratory 2 — Surface Preparation / Bonding**
J. G. Dillard / A. R. Esker (CP 315)

5:00 – 7:00 p.m. **Dinner** (on your own)

7:00 – 8:00 p.m. **Introduction to Chemistry of Adhesives – III**
S.R. Turner

8:00 – 8:10 p.m. **Break**

8:10 – 9:00 p.m. **New Direction in Polymer Synthesis: Application to Adhesives**
S.R. Turner

WEDNESDAY – May 19th

8:00 – 9:30 a.m. **Analysis of Surfaces**
J. G. Dillard / A. R. Esker

9:30 – 10:00 a.m. **Break and Walk to Labs**

10:00 – 11:30 a.m. **Laboratory 1 — Adhesive Characterization**
T.C. Ward (CP 200)

11:45 – 1:00 p.m. **Lunch**
The Inn at Virginia Tech and Skelton Conference Center, Preston's

1:00 – 2:30 p.m. **The Free Volume Model and DSC**
T.C. Ward

2:30 – 2:45 p.m. **Break**

2:45 – 3:45 p.m. **Adhesive, Sealant and Waterborne Rheology II**
R. M. Davis

3:45 – 4:00 p.m. **Walk to Labs**

4:00 – 5:30 p.m. **Laboratory 2 – Adhesive Synthesis and Measurements**
S.R. Turner (1013 Hahn)

5:30 p.m. **Dinner (on your own)**

THURSDAY – May 20th

8:00 – 9:10 a.m. **Master Curves and Superposition**
T.C. Ward

9:10 – 9:20 a.m. **Break**

9:20 – 10:15 a.m. **PSA Performance and Testing**
D.A. Dillard & J. G. Dillard / A. R. Esker

10:15 – 10:30 a.m. **Break and Walk to Labs**

10:30 – 12:00 noon **Laboratory 1 — Mechanical Properties**
D. A. Dillard (217 Norris)

12:00 – 1:30 p.m. **Lunch**
The Inn at Virginia Tech and Skelton Conference Center, Preston's

1:30 – 2:45 p.m. **Adhesive, Sealant and Waterborne Rheology III**
R. M. Davis

2:45 – 3:15 p.m. **Break and Walk to Labs**

3:15 – 4:45 p.m. **Laboratory 2 — Bonding-Failure Analysis**
J. G. Dillard / A. R. Esker (CP 315 & 008 Hahn)

6:30 – 9:00 p.m. **Group Dinner** (*The Inn at Virginia Tech - Solitude Room – 2nd Floor*)

FRIDAY – May 21st

8:00 – 8:50 a.m. **Applications of Surface Science to Adhesion**
J. G. Dillard / A. R. Esker

8:50 – 9:00 a.m. **Break**

9:00 – 10:00 a.m. **Durability and Design**
D.A. Dillard

10:00 – 10:15 a.m. **Break**

10:15 – 11:30 a.m. **Case Study Problem Solving**
All

11:30 – noon **Wrap-up and Evaluations**