Rheobit™ Course Schedule

November 4th – 8th, 2024

Course Instructors – Geoff Rowe, Wes Cooper, and Mike Anderson

Day 1 Monday – 1:00 to 5:00pm

Basic Concepts and Historical Perspectives on Characterization

1. Introduction to Rheobit
2. Rheological Concepts
3. Nature of Asphalt Binders

Day 2 Tuesday – 8:00 to 5:00pm

4. Characterization and Specification of Asphalt Binders using Classical Methods

Basic Testing Concepts

5. Characterization - Viscosity
6. Characterization - Oscillatory Shear

LUNCH (12:00 to 1:00)

7. Characterization – Creep
8. Characterization – Miscellaneous
9. Sources of Measurement Error

Day 3 Wednesday – 8:00 to 5:00pm

Laboratory Sessions – BBR and DSR

Practicum #1 BBR

Practicum #2 DSR

LUNCH (12:00 to 1:00)

Master Curve Principles

10. Examples of Rheological Data
11. Time-Temperature superposition

Practicum #3 – Time-temp shifting (using EXCEL software) and introduction to RHEA

Day 4 Thursday – 8:00 to 5:00pm

Models and Inter-conversions

12. Rheological Models
13. Interconversion of Oscillatory and Creep Data

Practicum #4 – The RHEA Software – Overview, demonstration and use

LUNCH (12:00 to 1:00)

Ultimate Properties – Measurement and Characterization

14. Fatigue, Fracture and Ultimate Properties
15. Important Implications of t-T Equivalency

Day 5 Friday – 8:00 to 12:00pm

Rheology and Specifications

16. Modification of Binders by Mineral Filler
17. Effect of Modification on Properties of Asphalt Binders
18. Recent Trends in Binder Characterization and Specification

Notes:

*Examples will be provided in **MS EXCEL** format. Other software will be installed – **make sure you have administrative permission to install software on your laptop**.*

Handouts will be provided in PDF format.

Copies will also be made available online for use during and after the course with Apple or Android systems.