



Anton Paar

International
Academy of Rheology

Program

Always one step ahead – prepared for future demands

The International Academy of Rheology by Anton Paar offers you the opportunity to broaden your knowledge and to improve your skills in the field of rheology. The program ranges from seminars to workshops, webinars, eLearning courses and technical literature.

The International Academy of Rheology

- Stands for established, professional education
- Provides suitable training for every level of knowledge
- Is consistently aimed at meeting your needs and providing benefits
- Conveys forward-looking tips and ideas for your measuring profiles
- Offers the opportunity for exchange of experience with rheology experts and professionals
- Keeps you updated with topical webinars
- Offers access to eLearning opportunities
- Provides technical literature for self-study

Course overview

General rheology courses (building up on each other from 1 to 3):

1. Basics of rheology
2. Effective measurements with an MCR rheometer (with RheoCompass™)
3. RheoCompass™ software for advanced users

Application-specific rheology courses (freely selectable; brief general introduction included in every course)

- a) Rheology of paints and coatings
- b) Rheology of polymers
- c) Rheology of food
- d) Rheology of asphalt (Dynamic Shear Rheometer)
- e) Tribology (focus on lubes and greases)



Course descriptions

General rheology courses

1. Basics of Rheology

Target group: Rheology beginners and those who want to refresh their knowledge

Contents:

- Basic rheological terms and measurement variables
- Flow behavior of viscous materials and deformation behavior of viscoelastic materials
- Basic test methods
- Interpretation of measuring diagrams

2. Effective measurements with an MCR rheometer (with RheoCompass™)

Target group: MCR rheometer users who want to achieve basic knowledge of the software, gain more practical measuring experience for measurements with their MCR rheometer and learn more about proper maintenance.

Contents:

- Making effective measurements
 - Choosing the correct measuring system
 - Selecting the test method that provides the information you need
 - Detecting problems with test settings
 - Mitigating problems stemming from external factors
- Tips for avoiding measuring errors
- Your MCR rheometer
 - Care, components, capabilities, calibration

3. RheoCompass™ software for advanced users

Target group: MCR rheometer users who want to gain deeper insights into working with the RheoCompass™ software in order to be able to use the whole scope of its possibilities.

Contents:

- App Manager: Easy template selection for both standard templates and user-specific templates
- Database: RheoFinder database with search function based on Microsoft SQL
- Report Designer: Intuitive report setup
- Test Designer: Programmable test procedure for measurement and analysis

Application specific rheology courses

a) Rheology of paints and coatings

Target group: MCR rheometer users who want to enhance their knowledge about measuring paints and coatings and want to take advantage of the full range of possibilities a rheometer offers (rotation and oscillation).

Contents:

- Rheology of paints and coatings - theory
- Discussion of applicative questions
- Evaluation methods and diagrams (yield point, thixotropy, sagging, etc.) in theory and practical work
- Setting up a customer-specific measuring routine, measurements and analysis in small groups
- Discussion of the findings (measurement and report)
- Practical tests with participants' own samples on different setups

b) Rheology of polymers

Target group: People with working knowledge of polymer rheology who are interested in rheological test methods used to characterize thermoplastic polymers, with additional focus on polymer solutions, thermosets and elastomers such as dynamic mechanical thermal analysis.

Contents:

- Determination of appropriate tests to characterize polymers and interpret the data generated (flow curves, normal stress, stress relaxation, amplitude and frequency sweeps, DMA)
- Characterization of the changes in viscoelastic properties over a range of temperatures
- Identification of melt temperatures, glass transition temperatures, and curing kinetics
- Utilization of the appropriate measuring hardware based upon the sample to be measured

c) Rheology of food

Target group: People with working knowledge of food rheology who are interested in measuring foods and want to know more about the rheological possibilities.

Contents:

- Discussion of applicative questions - theory
- Extension of measuring options and profiles
- Evaluation methods and diagrams
- Setting up a customer-specific measuring routine, measurements and analysis in small groups
- Discussion of the findings (measurement and report)
- Practical tests with own samples at different setups

d) Rheology of asphalt (Dynamic Shear Rheometer)

Target group: People with working knowledge of asphalt rheology who are interested in measuring asphalt and bitumen and want to know more about the rheological possibilities.

Contents:

- Basics of asphalt rheology as well as state-of-the-art measuring methods
- Measurements in rotation and oscillation
- Standard measurements according to e.g. DIN 14770, AASHTO T 315 and MSCR
- Specific software templates for testing asphalt and bitumen
- Softening point (ring/ball measuring system), breaking point, flash point testing
- Practical measurements of participants' own samples

e) Tribology (focus on lubes and greases)

Target group: People with working knowledge of tribology who are interested in the friction and wear behavior of lubricants, materials or components.

Contents:

- Basic knowledge of tribology, tribosystems and tribocontacts
- Introduction to friction and wear behavior, and lubrication
- Discussion of scenarios and application examples
- Discussion of different test methods such as Stribeck curves
- Practical measurements of participants' own samples

Further materials

Literature

Anton Paar offers technical literature for self-study and reference work. The level ranges from basic knowledge to advanced and very specified information about certain measurements and materials.

Applied Rheology (Thomas G. Mezger)

Handbook of Rheology (Thomas G. Mezger)

Application Reports (www.anton-paar.com – login required)

Web platforms

www.world-of-rheology.com

www.viscopedia.com

eLearning

Let Joe Flow guide you through the basics of viscometry and rheometry (rotation and oscillation) that will help you to understand a rheometer and the purpose of rheological tests.

Meet Joe Flow: your guide to the exciting world of rheology.

Available courses

Basics of viscometry

Everything flows, but how? Buckle your seat belt and take a ride with Joe Flow into the field of viscometry.

Basics of rheometry: Rotation

Flow behavior from the inside out: Joe Flow returns to introduce you to rotational rheometry.

Basics of rheometry: Oscillation

The third and final rheo course with Joe Flow: All about measuring deformation and flow behavior.

How to order the courses

You can directly access the courses (via login) or order the corresponding links at: www.anton-paar.com/elearning



