

Thursday October 7 – Friday October 2010
University Hospital Aachen, Germany

Course Overview

Gain skills and confidence using the preferred method for cardiac cycle assessment in intact hearts at our Pressure-Volume training course.

Using Millar MPVS-Ultra Pressure-Volume units and catheters with PowerLab data acquisition systems, you will learn how to record and plot left-ventricular pressure and volume signals against each other in real time, generating characteristic pressure-volume (PV) loops. You will also learn how to analyse your data and extract hemodynamic parameters to evaluate the mechanical properties of the heart.

ADInstruments application scientists will be joined by a panel of researchers experienced in the field of pressure-volume analysis, including Leiden University's Associate Professor Paul Steendijk. Associate Professor Steendijk has been involved in the development and application of conductance catheter methodology for many years and has published extensively on this subject.

To ensure you and your research receive individual attention, the training course is strictly limited to 8 participants.

Who should attend?

This course has been designed for cardiovascular scientists who are new to pressure-volume techniques, including:

- New members of pressure-volume research groups who need to better understand the underlying theory, experiment protocols and techniques
- Researchers who are considering or have recently purchased a Pressure-Volume System who need to start producing valid results quickly

As the course will include basic computerised data acquisition training, it may not be suitable for experienced PowerLab users – please contact us to determine if this course is right for you.

Learning Outcomes

At the end of this training course you will be able to:

- Successfully install and maintain a Pressure-Volume System
- Calibrate Mikro-Tip pressure volume catheters
- Position catheters within the heart for optimal data recording
- Configure LabChart software settings for accurate pressure and volume recording
- Generate PV loops, and extract relevant hemodynamic parameters from your recordings

Workshop Hosts

- Dr Marc Hein – Research Fellow, University Hospital Aachen
- Dr Bettina Röhl – Research Fellow, University Hospital Aachen
- Associate Professor Paul Steendijk, Department of Cardiology, Leiden University
- Mark de Reus – General Manager, ADInstruments

Training Agenda

Day 1 (Thursday October 7 2010)

9:00 – 12:00

LabChart Software Training

The Basics of Data Acquisition

- PowerLab and LabChart setup
- Sampling rate and range
- Amplification and filtering
- Data display options
- Saving options

LabChart for Cardiovascular Research

- Optimal recording settings for cardiovascular parameters
- Units Conversion and Multipoint Calibration
- Customising Cyclic Measurements for waveform detection
- XY View for PV Loops
- Signal processing and Data extraction
- Export Options and File management

12:00 – 13:00

Lunch (supplied by ADInstruments)

13:00-13:30

“Analysis of ventricular function by pressure-volume loops and pressure-volume relations”

Prof. Paul Steendijk

13:30-14:30

“Ventricular volume measurements by the conductance catheter: practical aspects, methods and animal models”.

Dr. Marc Hein

14:30-15:00

“Pitfalls and dealing with problems”.

Dr. Anna Röhl

15.30 - 15.30

Break

15:30-17:00:

Blood Pressure and PV Loop analysis options

Mark de Reus

Evening

Group Dinner (supplied by ADInstruments)

Training Agenda

Day 2 (Friday October 8 2010)

9:00 – 12:00

Surgical Demonstrations

- Surgery techniques
- Catheter placement
- Acquiring baseline data
- Acquiring saline bolus data
- Acquiring occlusion data

12:00 – 13:00

Lunch (supplied by ADInstruments)

13:00 – 17:00

Data Analysis

- Baseline, saline bolus and occlusion data analysis
- Parallel conductance compensation
- Hemodynamic parameter extraction

Discussion

Training Organisational Details

Costs and Registration

Cost: 750 Euros (+VAT) per person.

Included: Lunch both days and dinner Thursday night.

To register or find out more, please send an email to info.de@adinstruments.com

How to Get to University Hospital Aachen

By Plane

Bus and train connections to Aachen are available from Düsseldorf, Cologne-Bonn, Maastricht, Weeze and Brussels Charleroi airports.

By Car

- At the Aachen motorway intersection take the Holland route toward Antwerpen/Heerlen.
- Turn right off the motorway at Exit No. 2, “Aachen-Laurensberg”
- Continue to head towards Maastricht. Follow the shuttle with 4 lanes with the signpost “Universitätsklinikum”.
- Parking lots (both paid and free-of-charge) are available in front of the clinic complex.



By Train

Get off at Aachen Hbf. Across the road from the main station you take bus 3B from bus stop H2. The bus stops in front of the main portal of the University Hospital Aachen.

Weekday departure times main station Aachen:

06:04 - 19:49 o'clock (every 15 minutes)

19:58 - 23:28 o'clock (every 30 minutes)

A detailed timetable can be received at AVV online-services.