

# Instruct-ERIC Course on Calorimetric and Spectroscopic Characterization of Biomolecules

## PRELIMINARY PROGRAMME:

### DAY 1:

- 12:30 – 13:00 *Registration*
- 13:00 – 13:10 **Welcome**
- 13:10 – 14:40 **Lecture: Biomolecules and their interactions** (Josef Houser)
- 14:40 – 15:00 *Coffee break*
- 15:00 – 16:00 **Lecture: Sample quality assessment** (Josef Houser)
- 16:00 – 17:00 **Initial discussion of participants' scientific background and projects**

### DAY 2:

- 09:00 – 10:30 **Lecture: Biomolecular calorimetry – Introduction ITC** (Raul Pacheco Gomez)
- 10:30 – 11:00 *Coffee break*
- 11:00 – 12:30 **Lecture: Biomolecular calorimetry – Introduction DSC** (Raul Pacheco Gomez)
- 12:30 – 13:30 *Lunch break*
- 13:30 – 15:00 **Hands-on: Isothermal titration calorimetry/Differential scanning calorimetry** (Raul Pacheco Gomez/Jitka Holková)
- 15:00 – 15:30 *Coffee break*
- 15:30 – 17:00 **Hands-on: Isothermal titration calorimetry/Differential scanning calorimetry** (Raul Pacheco Gomez/Jitka Holková)
- 17:00 – 18:00 **Hands-on: Calorimetric measurement of attendees' samples** (optional)

### DAY 3:

- 09:00 – 10:30 **Lecture: Biomolecular calorimetry – Applications ITC** (Raul Pacheco Gomez)
- 10:30 – 11:00 *Coffee break*
- 11:00 – 12:30 **Lecture: Biomolecular calorimetry – Applications DSC** (Raul Pacheco Gomez)
- 12:30 – 13:30 *Lunch break*
- 13:30 – 15:30 **Hands-on: Calorimetry data evaluation** (Raul Pacheco Gomez)
- 15:30 – 16:00 *Coffee break*
- 16:00 – 17:30 **Hands-on: Complex data analysis using SEDPHAT** (Peter Schuck, Grzegorz Piszczek, Huaying Zhao)
- 17:00 – 18:00 **Tour of CEITEC MU Core Facilities** (optional)
- 19:00 – 22:00 *Social event (optional)*

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## PRELIMINARY PROGRAMME:

### DAY 4:

09:00 – 10:30

**Lecture: Biomolecular fluorescence spectroscopy** (TBA)

10:30 – 11:00

**Case study: Novel approach to FRET measurement set-up and analysis**

(Tomáš Brom)

11:00 – 11:30

*Coffee break + move to C04*

11:30 – 13:00

**Hands-on: Fluorescence spectroscopy Duetta** (TBA)

13:00 – 14:00

Lunch break

14:00 – 15:30

**Lecture: Circular dichroism spectroscopy** (Markus Epe)

15:30 – 15:45

*Coffee break*

15:45 – 16:45

**Lecture: Circular dichroism spectroscopy – applications** (Martin Textor)

16:45 – 18:00

**Hands-on: Circular dichroism** (Martin Textor)

### DAY 5:

09:00-10:30

**Hands-on: CD spectroscopy data evaluation** (Martin Textor)

10:30-11:00

*Coffee break*

11:00-12:30

**Hands-on: Fluorescence spectroscopy** (TBA/Jitka Holkova)

12:30-13:30

*Lunch break*

13:30-15:30

**Hands-on: Spectroscopical measurement of attendees' samples** (optional)

15:30-16:00

*Coffee break*

16:00-17:00

**Final discussion and course wrap-up**