

Erasmus+ Moby Dig - Transnational mobility & interdisciplinary STEM modules in the digital era

Transnational Course in Biomaterials and Chemistry

Location: University of Oulu

Timetable for Intensive Study Period (ISP)

Friday 11.1

Welcome, KE1091

Study 12-17, 19-20

Social program 16-18:30

- 12:00-14:00 Introduction to Chemistry Research.
 - For all chemistry students and exchange students
- 14:30-15:00 Welcome and introduction to ISP (Tellus, Brisk).
- 15:00-16:00 Video meeting with the other ISP participants 15-16 (Tellus, Brisk).
- 16:00-17:00 Introduction to ISP continues.
- 17:00-18:30 Get-together / Team-building evening
 - Exit Oulu, Kajaaninkatu 22
- 19:00-20:00 Self-study, daily summary

Saturday 12.1

Self-study 8-14

Social program 14-20

- 8:00-14:00 Self-study
 - Familiarization for the ISP program and laboratory safety issues *
- 14:00-15:30 Brunch at Tuba Food Lounge (Mannenkatu 2)
- 15:30-17:00 Walk around city and to ice hockey game
- 17:00-20:00 Kärpät-Lukko, ice hockey game

Sunday 13.1

Social program 10-14,

Self-study 14-20

- 10:00-14:00 Social Program (on your own), City of Oulu
 - Walk around at the city and at neighbourhood
 - Possibility to walk on the ice of Bothnic Sea at Nallikari
 - Main tourist attractions
 - Shopping
- 14:00-20:00 Self-study
 - Laboratory safety issues – instructions*
 - Preparation of the biomaterials – instructions*

Monday 14.1

Lab day, KE1091

Study (Lab) 9-16

Self-study 18-20

- 9:00-12:00 Laboratory safety issues*
- 12:00-13:00 Lunch break at Restaurant Napa
- 13:00-16:00 Preparation of the biomaterials*
- Bus to home/hotel/apartment
- 18:00-20:00 Self study
 - Binding of metal ions (Cu, Fe, Co) from synthetic and industrial waste waters – instructions*
 - Analysis of results

Tuesday 15.1 **Lab day, KE1091**

Study (Lab) 9-16

Self-study 18-20

- 9:00-12:00 Binding of metal ions (Cu, Fe, Co) from synthetic and industrial waste waters *
- 12:00-13:00 Lunch break at Restaurant Napa
- 13:00-14:00 Binding of metal ions (Cu, Fe, Co) from synthetic and industrial waste waters*
- 14:00-16:00 ICP-OES analyses*
- Bus to home/hotel/apartment
- 18:00-20:00 Self-study
 - Preparation of LA from sawdust and fiber sludge with MW reactor- instructions*
 - Analysis of results

Wednesday 16.1 **Study 8-16**

Self-study 18-20

- Visit to local chemistry companies: Stora Enso, Optitune, Eurofins Ahma
 - For all chemistry students and exchange students
 - Schedule
- 8:30 Bus from the University
- 9 Visit to Stora Enso
- Bus to Restaurant Preludi → Lunch break
- 12:00 Bus from Preludi
- 12:30 Visit to Optitune
- 14:00 Visit to Eurofins Ahma
- 15:30-16:00 Walk back to the University
- Bus to home/hotel/apartment
- 18:00-20:00 Self study
 - Writing a report about company visits

Thursday 17.1 **Lab day, KE1091**

Study (Lab) 9-16

Self-study 18-20

- 9:00-12:00 Preparation of LA from sawdust and fiber sludge with MW reactor*
- 12:00-13:00 Lunch break at Restaurant Napa
- 13:00-16:00 Determination of LA content*
- Bus to home/hotel/apartment
- 18:00-20:00 Self-study
 - Analysis of results

Friday 18.1 **Lab day and reporting, KE1091 and Tellus, Learning time 9-20**

Study 9-16.

- 9:00-12:00 Characterization of the modified biomass: e.g. IR, NMR and Analysis of HPLC and GC results
- 12:00-13:00 Lunch break at Restaurant Napa
- 13:00-16:00 Group work, reporting, Tellus*
- Bus to home/hotel/apartment

Saturday 19.1

**Conclusions, feedback → open end
Study 12-19**

- 12:00-12:15 Meeting at the University
- 12:15-13:00 Lunch at Restaurant Napa
- 13:00-14:00 Presentations and feedback (Tellus, Frost Club)
- 15:00-16:00 ISP summary
- 16:00-17:00 Bus to Oulu city Center
- 17:00-19:00 Conclusion during the Dinner

Sunday 20.1

**Self-study 8-12, 18-20
Social program 12-21**

- 8:00-12:00 Self-study, Familiarization for the results obtained in Luleå and Karlsruhe
- Trip to Rovaniemi and Santa Claus Village <https://www.santaclausvillage.info>
Train to Rovaniemi: InterCity 711 12:27 Oulu - 14:40 Rovaniemi
From railway station to Santa Claus village: [Santa's Express](#)
Train back to Oulu: InterCity 266 18:00 Rovaniemi - 20:32 Oulu
- 18:00-20:00 Self-study, Discussion about the results obtained in Luleå and Karlsruhe

* Details about lab the work and lab/reporting instruction can be found from Canvas.

** Information about companies can be found from Canvas.