

Course venue: [Mathematics building, University of Tartu, Juhan Liivi 2](#)

Daily timetable

9:00 – 9:30	Recap of yesterday's practicals
9:30 – 10:30	Lecture
10:30 – 10:50	Coffee break
10:50 – 12:50	Practical
12:50 – 14:00	Lunch
14:00 – 14:30	Recap of morning's practical
14:30 – 15:30	Lecture
15:30 – 16:00	Tea break
16:00 – 18:00	Practical

Thursday 1 June

9:00 – 9:15	Welcome (KF)
9:15 – 10:30	Introduction to R language and commands reading data (MP)
10:30 – 10:50	Coffee break
10:50 – 12:50	Practical: Practice with basic R Simple reading and data input
12:50 – 14:00	Lunch
14:00 – 14:30	Recap of morning practical
14:30 – 15:30	Language, indexing, <code>subset()</code> , <code>ifelse()</code> , <code>attach()</code> , <code>detach()</code> , <code>search</code> . Simple simulation. Simple graphics. (KF)
15:30 – 16:00	Tea break
16:00 – 18:00	Practical: Simple simulation Tabulation Introduction to graphs in R
18:00 – 19:00	Tour of the genome center before the
19:00 – 21:00	Welcome reception at the Estonian Genome Center (Eesti Geenivaramu), Riia 23b.

Friday 2 June

9:00 – 9:30	Recap of yesterday's practicals.
9:30 – 10:30	Poisson regression for follow-up studies — likelihood for a constant rate Logistic regression for cc-studies (JP)
10:30 – 10:50	Coffee break
10:50 – 12:50	Practical: Rates, rate ratio and rate difference with <code>glm</code> Logistic regression with <code>glm</code>
12:50 – 14:00	Lunch
14:00 – 14:30	Recap of morning practical
14:30 – 15:30	Linear models, fitting, predictions from models, reference category, using a quadratic and graphing it. A simple spline example. <code>predict</code> , <code>ci.lin</code> , <code>ci.exp</code> . (EL)
15:30 – 16:00	Tea break
16:00 – 18:00	Practical: Simple estimation of effects Estimation and reporting of linear and curved effects

Saturday 3 June

- 9:00 – 9:30 Recap of yesterday's practicals
- 9:30 – 10:30 More advanced graphics in R, including `ggplot2` (MP)
- 10:30 – 10:50 Coffee break.
- 10:50 – 12:50 Practical: Graphical meccano
- 12:50 – 14:00 Lunch
- Afternoon Orienteering and visit at the [Estonian National Museum](#) (optional)

Sunday 4 June

- 9:00 – 9:30 Recap of yesterday's practicals
- 9:30 – 10:30 Survival analysis: Kaplan Meier & simple Cox-model. Simple competing risks and relative survival. (JP)
- 10:30 – 10:50 Tea break
- 10:50 – 12:50 Practical: Survival and competing risks in oral cancer. Relative survival.
- 12:50 – 14:00 Lunch
- 14:00 – 14:30 Recap of morning practical
- 14:30 – 15:30 Dates in R; follow up representation in `Lexis` objects, time-splitting, multistate model and SMR. (BxC)
- 15:30 – 16:00 Coffee break.
- 16:00 – 18:00 Practical: Time-splitting and SMR (Danish diabetes patients)

Monday 5 June

- 9:00 – 9:30 Recap of yesterday's practicals
- 9:30 – 10:30 Nested and matched cc-studies & Case-cohort studies (EL)
- 10:30 – 10:50 Coffee break.
- 10:50 – 12:50 Practical: CC study: Risk factors for Coronary heart disease
- 12:50 – 14:00 Lunch
- 14:00 – 14:30 Recap of morning practical
- 14:30 – 15:30 Causal inference. (KF)
- 15:30 – 16:00 Coffee break.
- 16:00 – 18:00 Practical: Simulation and causal inference
- 19:00 – Course dinner at [Wilde](#)

Tuesday 6 June

- 9:00 – 9:30 Recap of yesterday's practicals
- 9:30 – 10:30 Multistate models, Poisson models for rates and simulation of `Lexis` objects (BxC)
- 10:30 – 10:50 Coffee break.
- 10:50 – 12:30 Practical: Multistate-model: Renal complications
- 12:30 – 13:00 Recap of morning practical
- 13:00 – 13:15 Wrap-up and farewell.
- 13:15 – 14:15 Lunch

Further material will appear at this year's course website:

<http://bendixcarstensen.com/SPE/2017>