

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

Daily timetable

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| 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

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| 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

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| 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 – 15:45 | Linear and generalized linear models (EL) Introduction to splines (MP) |
| 15:45 – 16:15 | Tea break |
| 16:15 – 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>