

Course venue: [Mathematical Sciences building, Juhan Liivi 2, Tartu](#)

Daily timetable

9:00 – 9:30	Recap of yesterday's practicals
9:30 – 10:30	Lecture
10:30 – 11:00	Coffee break
11:00 – 13:00	Practical
13:00 – 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

Friday 23 August

8:30 – 9:00	Registration
9:00 – 9:15	Welcome (MP)
9:15 – 10:30	R History and Ecology (MP)
10:30 – 11:00	Coffee break
11:00 – 13:00	Practical: Practice with basic R Simple reading and data input
13:00 – 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 –	Welcome reception: at J. Liivi 2 (Math Building), 6th floor

Saturday 24 August

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 – 11:00	Coffee break
11:00 – 13:00	Practical: Rates, rate ratio and rate difference with <code>glm</code> Logistic regression with <code>glm</code>
13:00 – 14:00	Lunch
14:00 – 14:30	Recap of morning practical
14:30 – 15:45	Linear and generalized linear models (EL) All you ever wanted to know about 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

Sunday 25 August

- 9:00 – 9:30 Recap of yesterday's practicals
- 9:30 – 10:30 More advanced graphics in R, including `ggplot2` (MP)
- 10:30 – 11:00 Coffee break.
- 11:00 – 13:00 Practical: Graphical meccano
- 15:00 – 17:30 Outdoor activity at Raadi manor park (more info to follow)

Monday 26 August

- 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 – 11:00 Tea break
- 11:00 – 13:00 Practical: Survival and competing risks in oral cancer. Relative survival.
- 13:00 – 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)
- 18:00 – Tour of the Estonian Genome Centre

Tuesday 27 August

- 9:00 – 9:30 Recap of yesterday's practicals
- 9:30 – 10:30 Nested and matched cc-studies & Case-cohort studies (EL)
- 10:30 – 11:00 Coffee break.
- 11:00 – 13:00 Practical: CC study: Risk factors for Coronary heart disease
- 13:00 – 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
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- 19:00 – Course dinner, venue TBA

Wednesday 28 August

- 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 – 11:00 Coffee break.
- 11:00 – 12:15 Practical: Multistate-model: Renal complications
- 12:15 – 12:45 Recap of morning practical
- 12:54 – 13:00 Wrap-up and farewell.
- 13:00 – 14:00 Lunch

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

<http://bendixcarstensen.com/SPE>