# Schedule

### IMB9335 December 5-9, 2022

#### Course venue

The course will take place at Runde Auditorium at Domus Medica (see <u>map</u>). Both lectures and practical exercises will take place in the auditorium.

#### Teachers

-Ørnulf Borgan, Department of Mathematics, University of Oslo.

-Håkon Gjessing, Norwegian Institute of Public Health.

-Morten Valberg, Oslo Centre for Biostatistics and Epidemiology, Oslo University Hospital.

-Odd O. Aalen, Oslo Centre for Biostatistics and Epidemiology, Institute of Basic Medical Sciences, University of Oslo.

Most shorter breaks are not given in the program, but will be announced along the way.

## Monday

9.30-9.50: Registration

9.50-10.00: Opening of the course

10.00-11.00: Introduction to the course and basic concepts (Aalen)

11.15-12.00: Statistical methods for one and more samples: Kaplan-Meier and Nelson-Aalen estimators, log-rank type tests (Gjessing)

12.00-13.00: Lunch

13.00-14.00: Statistical methods for one and more samples, continued (Gjessing)

14.00-14.30: Introduction to R (Borgan)

14.30-16.00: Practical exercises on statistical methods for one and more samples

## Tuesday

9.00-11.00: Competing risks and multistate models (Gjessing)

- 11.00-12.30: Practical exercises on competing risks and multistate models
- 12.30-13.30: Lunch
- 13.30-15.00: Cox regression (Borgan)
- 15.00-16.00: Practical exercises on Cox regression

## Wednesday

- 9.00-10.30: Cox regression, continued (Borgan)
- 10.30-12.00 Practical exercises Cox regression
- 12.00-13.00: Lunch

13.00-14.30: Cox regression with high dimensional covariates (Borgan) 14.30-16.00: Practical exercises for high dimensional covariates

#### Thursday

9.00-10.00: Analysis of nested case-control and case-cohort data
(Borgan)
10.00-11.00: Practical exercises for nested case-control and case-cohort data
11.00-12.30: Unobserved heterogeneity in survival analysis (Valberg)
12.30-13.30: Lunch
13.30-15.00: Frailty models for recurrent events and clustered data
(Valberg)
15.00-16.00: Practical exercises recurrent events and clustered data

#### Friday

8.30-10.30: Alternative regression models: Poisson regression and additive hazards regression (Gjessing)

10.30-11.30: Practical exercises for alternative regression models 11.30-12.30: Lunch

12.30-14.30: Causality and causal inference for survival data (Aalen)

14.30-15.00: Closure of the course and information on the exam project (Valberg)

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