

## COURSE OUTLINE: DEMOGRAPHIC METHODS

Instructor: Alyson van Raalte

Start date: Nov. 11, 2019

End date: Nov. 15, 2019

### Course description

This course covers the most commonly used demographic methods in studying fertility, mortality and migration with population-level data. Techniques covered in the course include age standardization, Lexis diagrams, life table construction, fertility and reproduction, single and multiple decrement processes, and decomposition techniques.

### Organization

Five morning lectures (10:30 - 12:00) will consist of a general introduction to each of the methods. Five afternoon sessions (14:00 – 16:00) will consist of a guided implementation of these methods using the open-source R statistical program.

### Course prerequisites

A basic command of R, including data handling, for-loops, and writing basic functions, is a prerequisite. If you have never used R in your research work, please make sure you have sufficient knowledge before the course starts, e.g. by attending a free online course such as <https://www.coursera.org/course/rprog>. Alternatively or additionally you can also use the tutorial website from UCLA (<http://www.ats.ucla.edu/stat/r/>) or any other R-tutorial which goes into sufficient detail.

Students could either use their own laptops or the desktop computers provided by the MPIDR.

### Examination

Successful completion of the afternoon tasks.

### General readings

Preston, Samuel H, Patrick Heuveline and Michel Guillot. (2001). Demography: Measuring and Modeling Population Processes. Oxford: Blackwell Publishers.