



**ForBio course: Diversification in Time & Space**

The course is given as a remote (online) course in the period 25 January – 4 April 2016:  
<https://www.ntnu.edu/studies/courses/BI3810>

**Recommended course credits:** 5 ECTS for ForBio PhD students (This course is offered through NTNU and NABIS as a Masters level course for 10 ECTS).

**Level:** PhD-level course

**Language of instruction:** English

**Admission deadline:** 18.01.2016: Apply by sending email with name and affiliation to [maria.capa@ntnu.no](mailto:maria.capa@ntnu.no)

**Prerequisites:** Advanced courses in genetics and/or phylogenetics is an advantage.

**Course materials:** R Nielsen & M Slatkin "An Introduction to Population Genetics" (2013), Sinauer  
Various texts on molecular dating, biogeography and multispecies coalescent provided online.

**Course content:** This course deals with how patterns of biological diversity changes over time and processes causing these changes. Focus will be on understanding micro- and macro-evolutionary processes, how these change species diversity and species distributions, and how to obtain knowledge of species histories. Emphasis will be placed on understanding methods used in analyses of micro- and macro- evolutionary diversification in time and space, and in particular coalescent theory as tool for understanding population genetic processes and inferring phylogenetic patterns.

**Teaching program:** Teaching will be in the form of online lectures, online discussions and exercises.

**PhD students Learning outcomes:** The course will give an overview of theory and tools to be used in studies of species histories and historical biogeography.

**Final evaluation:** A one-day online exam will be held by the end of the course. Grade: pass/fail. Submitted results on exercises and written project report must be approved and will be used in grading. ForBio certificate will be provided if passed.

**Teachers:**

Hans K. Stenøien, NTNU, course leader [stenoien@ntnu.no](mailto:stenoien@ntnu.no)

Stephan Nylander, Swedish Museum of Natural History

Bengt Oxelman, University of Gothenburg

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