

BioStruct - UiB/UiT

PhD Course announcement

Norwegian Graduate school in Structural Biology - A collaboration between 5 universities

MOL910 BIOSTRUCT - Biomolecular Modeling

Department of Molecular Biology, University of Bergen

Time of course: 9. - 13. Mars (UiB) + 13. - 17. April (UiT) 2015

Place: Høyteknologisenteret, UiB and Pharmacy building (computerlab), UiT

ECTS: 10 stp (PhD level course)

Teaching: The course will be taught over two weeks, the first one in Bergen and the second one in Tromsø. The program of both weeks will include lectures and hands-on exercises in computer labs.

Exam: Report on an assignment and oral exam, each accounting for 50% of the final grade. End of April (week 18)

Deadline for registration: 15. February 2015 (Max 15 students)

Contact for registration: Knut Olav Daasvatn (Knut.Daasvatn@mbi.uib.no, Phone: 55 58 45 03)

Contact for accommodation: Bergen: Øyvind Halskau (Oyvind.Halskau@mbi.uib.no), Tromsø: Jennifer A. L. Nunn (biostruct@uit.no)

Course responsible: Nathalie Reuter (nathalie.reuter@mbi.uib.no) and Bjørn Olav Brandsdal (bjorn-olav.brandsdal@uit.no).

The course will provide an introduction to key techniques for modeling of biological molecules with a focus on molecular structure and function. The course is meant for structural biology students. Techniques to analyze and validate computations will also be central in the course. The course focuses on three main areas: i) molecular mechanics: force field origin, composition and evaluation techniques, and simulation techniques; ii) conformational sampling by geometry optimization, molecular dynamics and Monte Carlo simulations; iii) free energy calculations: determination of binding energies using free energy perturbation, linear interaction energy, and simplified scoring approaches.

Invited lecturer: Johan Åqvist (University of Uppsala)

External students must apply for a student guest status at UiB when signing up for the course. For more information, contact Knut Olav Daasvatn

Note! BioStruct covers the costs for travel and accommodation for BioStruct students participating in national courses at Norwegian universities other than the student's home-institution. For information contact Jennifer A. L. Nunn, biostruct@uit.no / 776 25184 / <http://site.uit.no/biostruct>

If the number of applicants exceeds the capacity of the course, 75% of the course admissions will be reserved students attending the PhD school BioStruct.

