

Module Name Seminar Computational Biology						
Type of Module ○ Basic Module				Module Code Computational Seminar		
Identification Number	Workload	Credit Points	Term	Offered Every	Start	Duration
MN-B-C 2	180 h	6 CP	1 st term of studying	Winter term	Winter term only	1 term
1	Course Types Seminar (incl. Project work)		Contact Time 56h		Private Study 124 h	
2	Module Objectives and Skills to be Acquired Students who successfully completed this module <ul style="list-style-type: none"> • are able to perform simple bioinformatic analyses and related tasks on personal computers running the Linux operating system. • have acquired practical skills in the use of common bioinformatic algorithms, computational sequence analysis tools as well as biological databases, and have acquired skills in the statistical evaluation of bioinformatic results. • know the kind of biological problems that can be solved with bioinformatic tools, can choose appropriate methods and judge the statistical and biological significance of the results. • can independently carry out small scientific projects related to the topic of the module. • have learned how to present research results in oral and written form and to critically discuss scientific publications related to the topic of the module on a professional level. 					
3	Module Content <ul style="list-style-type: none"> • Computer operating system Linux • Programming with shell scripts and the statistical programming language R and Rstudio • Use of biological databases • Organization of bioinformatics/computational biology experiments • Application of bioinformatic software to biological problems • Studying, presenting and discussing scientific literature related to the topic of the module • Writing of protocols and/or seminar papers 					
4	Teaching Methods <ul style="list-style-type: none"> • Project work; Seminar; Group discussions; Computer exercises; Training on presentation techniques in oral and written form 					
5	Prerequisites (for the Module) Enrollment in the Master´s degree course “Master of Science in Computational Biology”; Simultaneous participation in the lecture module Computational Biology					
6	Type of Examination Portfolio (100 % of the total module mark)					

Seminar Computational Biology (MN-B-C 2) continued

7	Credits Awarded Regular and active participation; Portfolio at least "sufficient"
8	Compatibility with other Curricula None
9	Proportion of Final Grade 7.5 %
10	Module Coordinator Prof. Dr. Thomas Wiehe, phone 470 1588, e-mail: twiehe@uni-koeln.de
11	Further Information Participating faculty: Prof. Dr. A. Beyer, Prof. Dr. K. Hofmann, Prof. Dr. T. Wiehe Literature: <ul style="list-style-type: none">Information about textbooks and other reading material will be given on the ILIAS representation of the course (see https://www.ilias.uni-koeln.de/ilias/goto_uk_cat_2815610.html) General time schedule: Mon/Wed/Fri 2:00-4:00 pm; Weeks 1-14: Tue. and Thu. from 2:00 to 4:00 p.m. Introduction to the module: Monday 09.October 2023, 9:00, Lecture hall COPT building. Updates to the schedule will be posted in ILIAS