
mar454 - Introduction to DNA Sequencing and Sequence Analysis

Module label	Introduction to DNA Sequencing and Sequence Analysis
Modulkürzel	mar454
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	<ul style="list-style-type: none">Master's Programme Marine Environmental Sciences (Master)<ul style="list-style-type: none">> MastermoduleBrinkhoff, Thorsten Henning (module responsibility)Garcia, Sarahi Lorena (Module counselling)
Zuständige Personen	none
Prerequisites	
Skills to be acquired in this module	

The students know how to

- sequence DNA by Sanger sequencing
- assemble DNA sequences
- use internet databases for sequence comparison
- use the various facilities of the NCBI database
- analyze bacterial genomes for presence of specific Genes
- use Genious for genome analysis
- use ARB, databases and literature data
- create phylogenetic trees
- design primers and probes
- present and discuss scientific results
- write a scientific protocol

Module contents

Einführung in die Sequenzierung und Sequenzanalyse

The course starts with a lecture on the first two days. During the following days the participants will give seminar talks about different scientific studies for which DNA sequencing was highly relevant. DNA sequencing will be taught in the lab of the working group. Sequence analysis, introduction into the use of various internet databases, the sequence analysis program Genious and the phylogeny program ARB will be demonstrated by individual use of laptops of the institute.

Literatureempfehlungen	
Links	
Languages of instruction	
Duration (semesters)	
Module frequency	
Module capacity	
Type of module	
Module level	
Teaching/Learning method	

Will be announced

German, English
1 Semester
annually
12 (
Procedure see StudIP
)
Wahlpflicht / Elective
MM (Mastermodul / Master module)
Wahlpflichtbereich Biologie, Ökologie

Blockveranstaltung
PR/Ü Einführung in die DNA-Sequenzierung und Sequenzanalyse
SE Einführung in die DNA-Sequenzierung und Sequenzanalyse

Examination

Prüfungszeiten

Type of examination

Final exam of module

Will be announced by the lecturer at the beginning of the course.

1 graded examination

Portfolio (seminar presentation, written protocol) or internship report or presentation or protocol (75 %), seminar presentation (25 %).

Active participation

Active and documented participation in practical courses (labs, exercises, seminars, field trips) and courses. These include e.g. the delivery of exercises, writing a lab report or seminar presentations according to the advice of the course supervisor.

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Seminar		2	SoSe	28
Exercises		4	SoSe	56
Präsenzzeit Modul insgesamt				84 h