

Module Name	Mechanisms of biomineralization	
Module Number	MNF-bioc-255	
Person in Charge	Dr. Nina Keul Phone: +49-(0)431-, E-mail: keul@gpi.uni-kiel.de	
Semester / Duration	2.-4. semester / one semester	Status Optional
Regular Cycle	Summer and winter semester	
Study Programme	Master of Science in Biological Oceanography	
Classes	Class Title (Teaching Form) Lecturers	Contact Time / Group Size
	<u>Mechanisms of biomineralization</u> (Seminar) Dr. Nina Keul	2 hr per week / 40 students
Credit Points / Workload	3 ECTS / 90 hours	
Prerequisites	A bachelor's degree in a biological discipline.	
Completion Module	MNF-bioc-355	
Following Module	None.	
Educational Objectives	The goal of this module is to explore the fundamental mechanisms that underlie biomineralization processes in marine organisms. Special attention will be given to physiological challenges associated with ocean acidification.	
Content Of Teaching	This module will provide a broad overview on general principles of biomineralisation, including basics in cell biology, thermodynamics and ion- and osmoregulation. Coccolithophorides, foraminifera and molluscs (bivalves, gastropods) will serve as model organisms to compare the different strategies employed in biomineralisation. A special focus will lie on the responses of marine calcifiers to ocean acidification and ocean warming.	
Examination	oral presentation (100%)	
Literature	During the first session (Wednesday, 28.10) the student are encouraged to participate in shaping the course content (selection from a list of possible topics to be covered). Current literature and lecture notes will be distributed during the lecture according to the students choices.	
Additional Information	None.	