001.2.0021 Biomimetic innovation approaches (3 credits)

Lectures (hrs/week)	Exercise (hrs/week)	Laboratory	Field Trip
2		2	

Aims:
To observe natural systems as a basis for designing potentially useful functional devices. To gain a general understanding and deep appreciation of natural systems and design principles observed in nature as a foundation for innovation.

Course contents:
Contents will focus on, but not be limited to, water, and water-related processes, such as superhydrophobicity (eg. lotus leaf), biomembranes and protein pores, pore-forming antibiotics, water collection systems, antifouling control or desalination systems. The course will consist of lectures, literature reading and a practical laboratory project.

Grade and Requirements:
The final grade will be based on a laboratory assignment, in which results will be summarized in a written report, and one oral presentation. Optimally, the student's research focus should potentially have elements that are relevant for biomimetic approaches.

Literature: References will be given during the course

Lecturer: Dr. Christopher Arnusch