

Fall 2020 Course 3h  
Petra Gruber  
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BIOMIMICRY CERTIFICATE ELECTIVE

BIODESIGN

TEXTILE HYBRIDS

valid for ADVANCED GRAPHIC DESIGN  
open to students from all departments

Visiting Artist  
Svenja Keune

Studio Biomimetic Design Fall 2020 applies principles of biomimetics to artistic and architectural design and prototyping. We will explore textile based biocomposites designed for and with living organisms such as plants, insects and bacteria.

It is an entry level studio design exercise, using nature as a model for creating innovative solutions, at the intersection of biology and design. No specific knowledge is needed to take this course, students from all departments are welcome. The course outcomes are design project representations including graphics, digital or analog models and prototypes.

Harnessing the potentials of living organisms for design and manufacturing is a rapidly expanding field and an approach towards a more sustainable built environment. In this course we will focus on natural textiles, biomaterials and patterns. We will design patterns based on principles from biomimicry which are designed for a chosen organism, compile extrudable substrates from e.g. sand, clay and cellulose, and extrude them onto textile fabrics to create a textile based biocomposite for a spatial application. These structures will be installed in a chosen everyday environment and their transformation and interactions with the environment documented

7100:316-001 Biodesign  
3100:495/695-002 ST Biology  
Tu/Thu 2:00-4:45pm Folk Hall 148  
sophomore status/approval from instructor  
please contact: pgruber@uakron.edu