



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Interface Design: Biomimetic Approach

2627-116R-INTERFACE

Titolo

Interface Design: Biomimetic Approach

Docente(i)

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Lingua

English

Breve descrizione

Extraordinary properties of biological materials are often related to interfacial phenomena, which are bound to the particular surface structure of these biological materials: superhydrophobic lotus leaves, drag reducing shark skin and the die and pigment-free, metallic blue coloration of the Morpho butterfly are just some examples. This course (i) investigates the factors that cause biological surfaces to have specific features; (ii) discusses concepts and analysis of thermodynamic and kinetic events occurring on material surfaces and interfaces (adsorption, wetting, crystallization, etc.); (iii) compares Nature's solutions to environmental constraints with engineering synthetic approaches. Furthermore, the class will familiarize the students with lessons learnt from Nature and will encourage them to creatively apply bio-inspired strategies to develop new functional materials and solve engineering

problems.

CFU / Ore

8 hours

Periodo di erogazione

May 2027

Sustainable Development Goals

ENERGIA PULITA E ACCESSIBILE
