

Fulbright Professorin

Jennifer Rose Weiser

from New York City, U.S.

The Cooper Union - Department of Chemical Engineering

Summer term 2025

VU 643.090, 2 ECTS

Biomaterials – Tissue Interactions

every Thursday from 6th March 2025, 3:30 p.m.

Course overview:

This course is a study of both natural and synthetic materials and how they interact with the human body. Topics covered include mechanical properties, design considerations, biocompatibility, the immune response, potential for allergic response and carcinogenic ramifications, mechanical compatibility, effects of long-term implantation, and government regulations. Students will develop a vocabulary for different classes of biomaterials and explore how atomistic properties influence larger scale morphology and macroscopic behavior inside the human body.



Link tugonline:

https://online.tugraz.at/tug_online/wbLv.wbShowLVDetail?pStpSpNr=545044

VU 643.091, 2 ECTS

Drug Formulation and Delivery

every Wednesday from 12th March 2025, 4:15 p.m.

Course overview:

This course covers the fundamentals of drug formulation and drug delivery systems in the context of current therapeutics on the market and the process in which they were developed. Specific topics include traditional drug formulation, mechanisms and kinetics of pharmaceutical stability, controlled-release devices, transdermal delivery, intravenous delivery, oral drug delivery, pulmonary delivery, and targeted drug delivery. The course is designed to cover specific drug delivery topics that are expanded upon with student driven discussions of primary literature assigned by the professor.



Link tugonline:

https://online.tugraz.at/tug_online/wbLv.wbShowLVDetail?pStpSpNr=545042

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