BIEN 314. TRANSPORT PHENOMENA IN BIOLOGICAL SYSTEMS 1.

Credits: 3

Offered by: Bioengineering (Faculty of Engineering)

This course is not offered this catalogue year.

Description

Basic concepts in transport phenomena, including fluid dynamics (momentum transport) and heat transfer (energy transport), with applications to biological systems, both medical and non-medical. Topics in fluid dynamics include: properties of Newtonian and non-Newtonian fluids; dimensional analysis; drag; integral/macroscopic balances (Bernoulli's equation and linear momentum theorem); differential/microscopic balances (continuity and Navier-Stokes equations); boundary layer approximations; turbulence. Topics in heat transfer include elements of conduction and convection.

- Prerequisite(s): BIEN 200, MATH 263, BIEN 300 or permission by instructor.
- Restriction: Only for Bioengineering students. Not open to students who have taken CHEE 314

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