Cardiovascular Biomechanics

Instructor
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Scope of the Course

- Mechanics and fluid mechanics of the cardiovascular system.
- Why take this course?
  - Bioengineering as applied to the cardiovascular area.
  - Focused examination on the systems level.
  - Understand challenges of some of the most severe health problems.
  - Apply modeling and design principles.
Tentative outline

- Anatomy and Physiology of the Cardiovascular System
- Basic concepts
  - Solid mechanics.
  - Fluid mechanics.
- Blood rheology.
- Blood flow through arteries.
- Cardiac dynamics.
- Microcirculation (if time permits).