8.590/20.416J/7.74J

Topics in **Biophysics & Physical Biology**

Prof Nikta Fakhri **Department of Physics**

Prof Mark Bathe

Department of Biological Engineering

Course Description

Provides broad exposure to research in biophysics and physical biology with emphasis on critical evaluation of scientific literature. Weekly meetings include in-depth discussion of scientific literature led by distinct faculty on active research topics. Each session also includes discussion of non-research effective including skills. topics presentation publishing, writing fellowship proposals, choosing scientific research topics, time management, and scientific ethics.

Participating Faculty

- Lydia Bourouiba, Civil & Environmental Engineering
- Arup Chakraborty, Chemical Engineering
- Ibrahim Cisse, Physics
- Cathy Drennan, Biology
- Ashwin Gopinath, Mechanical Engineering
- Anders Hansen, Biological Engineering
- Ankur Jain, Biology
- Gene-Wei Li, Biology
- Tami Lieberman, Civil & Environmental Engineering
- Leonid Mirny, Physics
- Gabriela Schlau-Cohen, Chemistry
- Alex Shalek, Chemistry

Topical Areas

- Chromatin dynamics & gene regulation
- Immunology & pathogen recognition
- Microbiome genetics & evolution
- Photosynthesis & light-harvesting
- RNA phase transitions & transcriptional regulation
- Single-cell transcriptomics & reprogramming
- Synthetic structural biology & DNA origami

Course Format

- G-level; Pre-req: None; Units: 2-0-4 [P/D/F]
- Meets weekly F2:30-4pm in 56-167
- Assigned journal article readings plus two-page NSF GRFP-style research proposal

For Questions or Inquiries Please E-mail

fakhri@mit.edu or mbathe@mit.edu