



“Applied Biology”

“Science of Living Systems”

“Biology For Engineers”

Introduced in 2008

Revision 1: 2013/14?

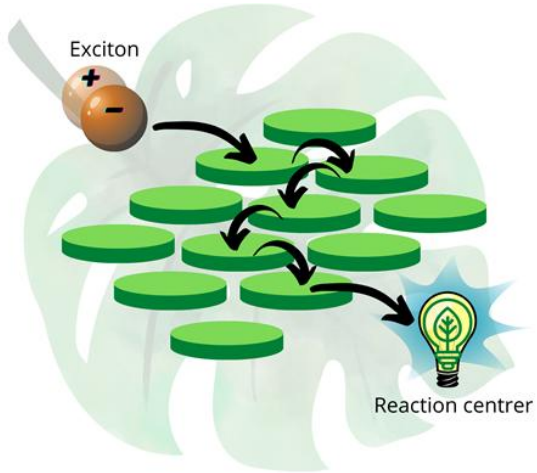
Revision 2: 2019

Key Features of handling the course:

- 1. Intelligent **organization of course structure** catering to interdisciplinary needs
- 2. Evolutionarily acquired on **information processing** and **Energy conversions** in living systems
- 3. Livings systems as **Models of Optimization** in-
 - A. Physics of strength, endurance
 - B. Chemical reactions
 - C. Architecture and Design and so on...
- 4. **Emergence of complex functionalities** in living systems as lessons for Engineers



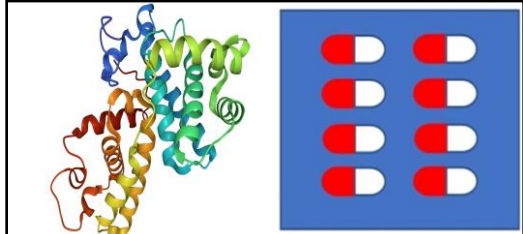
- A. muscles
- B. Enzymes, Signaling in Brain
- C. Shape and Physical adaptations



Energy Conversions at Quantum level



Communication in neuronal cells;
inset-Sensors



In silico drug design



Bionic and Prosthetic limbs

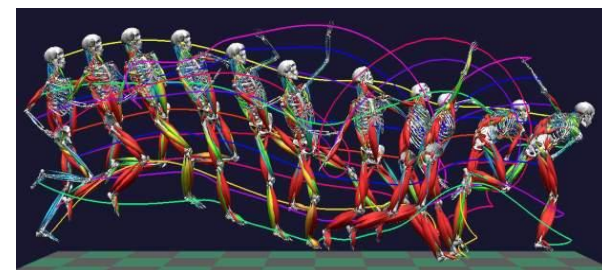
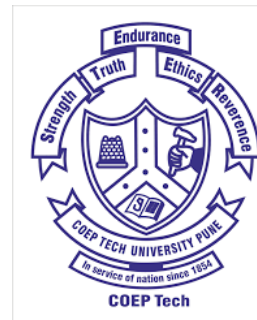


Bioelectricity based waste water treatment plant

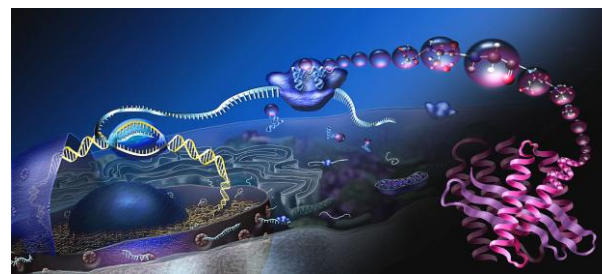


Biology Engineering interface: Place where innovation resides!

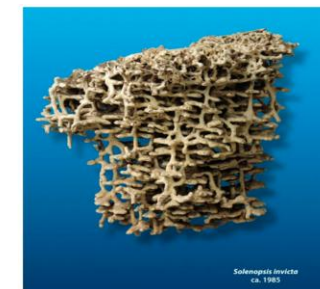
1. Engineering for Living systems
2. Biologically inspired Technologies



Biomechanics of movements



Protein manufacturing in cell



Anthills- lessons for Civil Engineers



Sharklets- biomaterials for floor design

