

# Bioscience in the 21<sup>st</sup> Century

- What biologically-relevant problems confront society?
- What are the strategies for studying these problems?
- What are the prospects for solutions to these problems?

# Tools from different disciplines are useful in solving biological problems

Examples include:

- Collaborations between computer scientists and biologists have catapulted the field of computational biology into the forefront, allowing computational biologists to use the tools of applied mathematics, informatics, statistics, and computer science to solve problems in genomics and protein structure to advance drug development, for example.
- The creativity of the material scientist in developing nanomaterials enables biologists to advance the study of membrane proteins, which are key players in cell communication inside and outside the cell.

# Topics for consideration in BioS 95:

- Neurophysiological processes
- Cancer and novel treatment strategies
- Genomics and bioinformatics
- Stem cell biology and disease treatment prospects
- Advances in engineered biosystems and bioimaging
- Ethical issues in biomedicine
- Infectious diseases