

Bioscience in the 21st Century

www.lehigh.edu/~inbios21

COURSE GOALS AND EXPECTATIONS

Welcome and Introductions

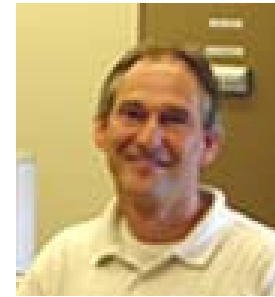
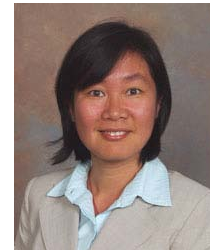
What is this course about?

Course highlights and requirements

Course website: www.lehigh.edu/~inbios21

Blackboard site: www.bb.lehigh.edu

Bioscience PLAYBILL: Participating Lehigh Faculty



Departments and Programs represented:

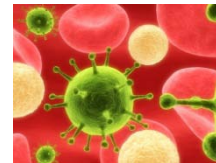
Biological Sciences, Bioengineering, Chemical Engineering, Chemistry, Computer Science & Engineering, Materials Science & Engineering, Physics

Bioscience in the 21st Century

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

Topics for consideration:

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



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Course Schedule

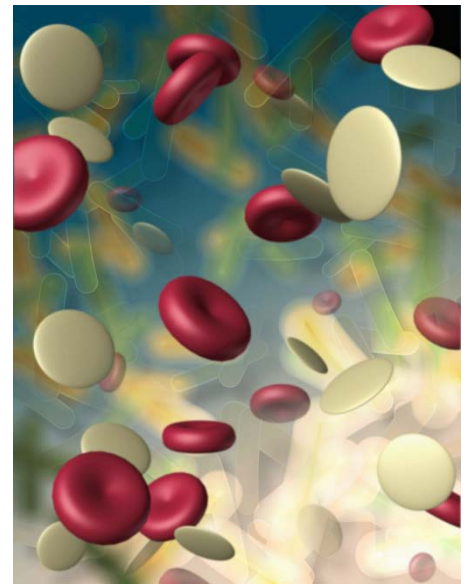
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First part of course will deal with neuroscience topics:

**For “Brain as a Company “diagram
from Vancouver Coastal Health website**

www.vch.ca/abi/brain_understand.htm

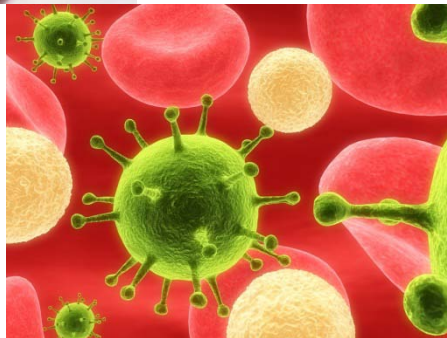
Infectious Diseases



HIV

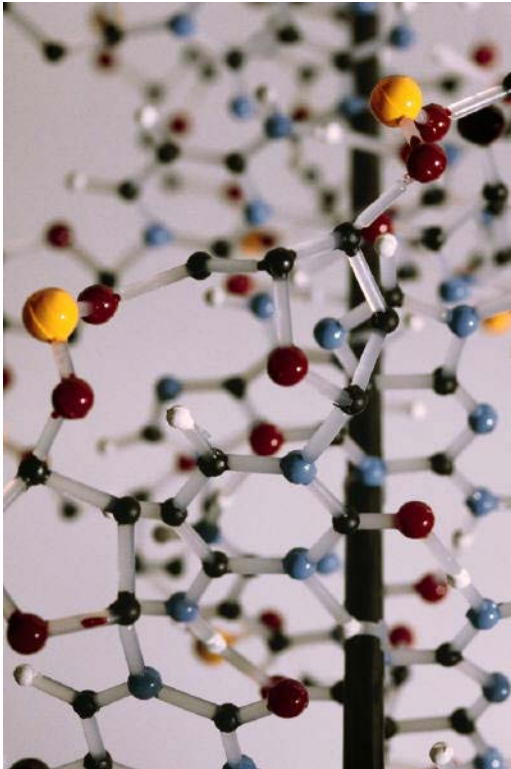
Avian Flu

**Methicillin-resistant
Staphylococcus aureus (MRSA)**



H1N1 Flu

Genomics



**Genome-based medicine :
Using genomics to improve
human health and fight disease**

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Syllabus and Course Requirements

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