

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

[www.lehigh.edu/~inbios21](http://www.lehigh.edu/~inbios21)

# COURSE GOALS AND EXPECTATIONS

Welcome and Introductions

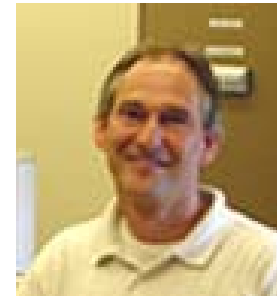
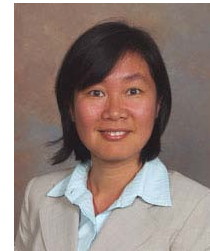
What is this course about?

Course highlights and requirements

Course website: [www.lehigh.edu/~inbios21](http://www.lehigh.edu/~inbios21)

Blackboard site: [www.bb.lehigh.edu](http://www.bb.lehigh.edu)

# Bioscience PLAYBILL: Participating Lehigh Faculty



## **Departments and Programs represented:**

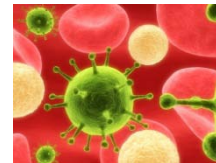
*Biological Sciences, Bioengineering, Chemical Engineering, Chemistry, Computer Science & Engineering, Materials Science & Engineering, Physics*

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- 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

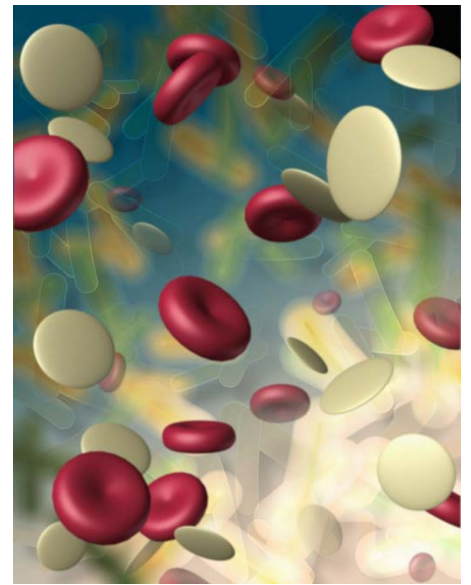
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**First part of course will deal with neuroscience topics:**

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

**[www.vch.ca/abi/brain\\_understand.htm](http://www.vch.ca/abi/brain_understand.htm)**

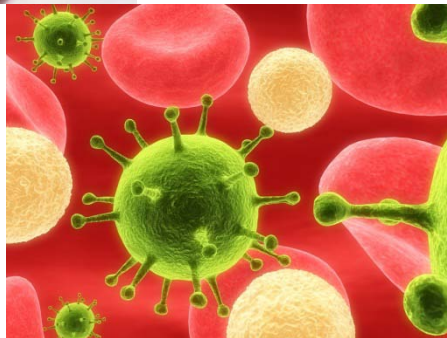
# Infectious Diseases



**HIV**

**Avian Flu**

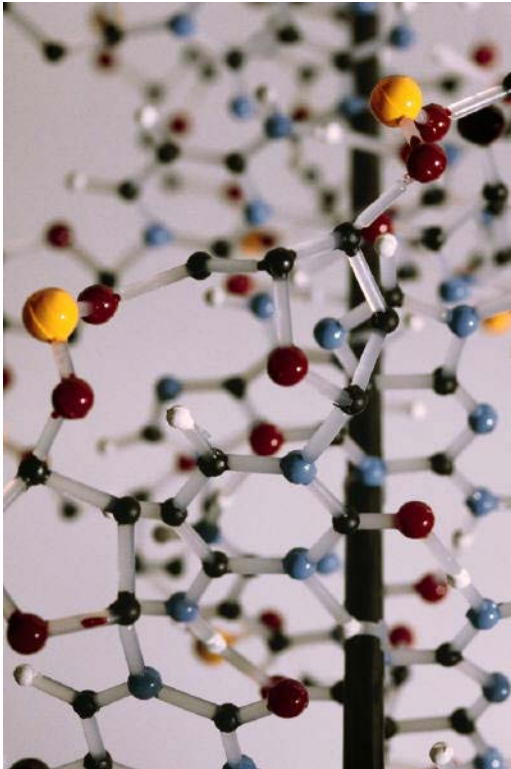
**Methicillin-resistant  
*Staphylococcus aureus* (MRSA)**



**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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