New Graduate Course in Computer Science (Fall 2003)

CS 6104: *Computational Systems Biology*

http://www.cs.vt.edu/~murali/teaching/csb.html

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Do you want to find out how the latest research in bioinformatics is shaping our understanding of how the living cell behaves as a system? This new course will introduce students to Computational Systems Biology, a rapidly-growing field that tries to understand the behaviour and function of a living cell as a system of interconnected components and modules.

- What are the properties of the biological networks in a cell?
- How does a biological system behave over time under various conditions?
- How does a cell maintain its robustness and stability?
- How can we modify or construct biological systems with desired properties?

Lectures and presentations of papers from the literature by groups of students will drive the course. We will discuss the latest research in topics such as

- the analysis of DNA microarray data,
- assessing the reliability of high-throughput biological data,
- gleaning evidence of robustness in metabolic pathways,
- determining the basic building blocks of regulatory networks, and
- obtaining biological insights by combining diverse sources of data.

Look at **http://www.cs.vt.edu/~murali/teaching/csb.html** for more information. This graduate course is designed to appeal to students in computer science and to students in the life sciences who do research in bioinformatics or use bioinformatic tools in their research. Come talk to me if you are interested!