

## BCB 410 – Applied Bioinformatics – Fall 2009

### Course Information Sheet

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Instructor: Prof. Ryan Lilien

Lectures: Mondays 10am-12noon, location: Sept 14 and 21st in Medical Sciences Building 2394 ; then from Sept 28 onward: Pratt 378.

First Lecture: Monday Sept 14th, 2009

Office Hours: Monday 4-5:30pm – please email first – Pratt 286A

Website: <http://www.cs.toronto.edu/~lilien/BCB410F09>

Talk slides will be available on the course website (generally the morning of the lecture)

Email: [bcb410@cs.toronto.edu](mailto:bcb410@cs.toronto.edu)

To ensure a fast response, please use this address to contact Professor Lilien.

Class related email sent to any other email addresses may not be read in a timely manner.

#### Course Email List:

Course announcements will be made through this list – thus if you are in this course it is important that you are on this list. Please complete the course 'Participant Information Sheet' to ensure that you are added to this list.

#### Marking Scheme:

Attendance and Preparation (10%)

Problem Sets (40%)

Exam (15%)

Topic Presentation (10%) - maybe

Final Project (25%) [more details on the project will be available at a later date]

Assignment Lateness Penalty (Problem Sets and Project): 10% per day

Discussion and Collaboration is fine - but give credit

I.e. "I worked with X on problem Y."

Write-ups should be your own. You should know material.

Use of open source software is fine - but give credit

Use the academic honour code. If in doubt, ask!

If you have any special needs or circumstances please tell the course instructor as soon as possible so arrangements can be made.

#### Course Description:

Practical introduction to concepts, standards and tools for the implementation of strategies in bioinformatics and computational biology. The course will consist of four core units:

Sequence, Structure, Microarrays, and Systems Biology. Key concepts and algorithms will be presented in each area with a focus on both the theoretical and applied components.

Motivational examples will be drawn from real-world problems.

#### Readings:

Course Text: *Protein Bioinformatics: An Algorithmic Approach to Sequence and Structure Analysis*, Eidhammer, Jonassen, and Taylor

Additional Required Readings will be available from course website.

#### Expected Background:

Students should be familiar with algorithms (at least CSC 373 level), basic mathematics, and basic molecular biology.