

BTRY 4830/6830: Quantitative Genomics and Genetics **Fall 2014**

Time: Tuesday, Thursday 8:40 am - 9:55 am
Room: 224 Weill Hall (Cornell, Ithaca) or Main Conference Room, Dept. of Genetic Medicine (WCMC)

Jason Mezey
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Biological Statistics and Computational Biology (BSCB)
101 Biotechnology Building
Department of Genetic Medicine and
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Cornell TA: Amanda Guo
101 Biotechnology Building
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Weill TA: Jin Hyun Ju
101 Biotechnology Building
jj328@cornell.edu

Course Times and Locations

Lectures: T/Th 8:40-9:55AM.

Cornell, Ithaca: 224 Weill Hall

WCMC: Conference Room, Dept. Genetic Medicine

Computer lab: Th 5-6PM

Cornell, Ithaca: B30A Mann Library (Amanda)

WCMC: Conference Room, Dept. Genetic Medicine (Jin)

MAKE-UP Computer lab (by permission only)

Cornell, Ithaca: 101 Biotechnology Suite

WCMC: Conference Room, Dept. Genetic Medicine

Help Sessions

Jason's Office Hours: Day/Time Thurs. 3-5PM

Cornell, Ithaca: 101 Biotechnology Suite,

WCMC: Conference Room, Dept. Genetic Medicine

Amanda's Office Hours: Day/Time Tues. 3-5PM (Ithaca only!)

Jin Office Hours: None

Note that individual help sessions with Jason (Cornell or WCMC), Amanda (Cornell), or Jin (WCMC) may be set up by appointment.

Course Website

The official course website will be located on my website:

<http://mezeylab.cb.bscb.cornell.edu/Classes.aspx>

Suggested Prerequisites

Introductory genetics. Introductory probability and statistics.

Course Work/Grading Policy

Exams: A single mid-term and a final exam. The final exam will be cumulative. Both of these will be take-home exams.

Problem Sets: There will be a short problem set handed out on Tues. or Weds. approximately every week. You will have a week to complete.

Class Project: A single class project, involving analysis of real data, will be assigned during the second half of the semester (~2.5 weeks of time).

Grades: your grades will depend on the course work listed above with the following weights: mid-term (20%), final (30%), Problem Sets (20%), Project (25%), Computer Lab (5% - attendance). A letter grade will be determined from these components. For S/U grading, a letter grade of C- or above is required for an "S".

Note that graduate and undergraduate students will be graded separately.

Learning Outcomes (by the end of this course)

1. You will be able to analyze data using R.

2. You will understand how to build and apply a (generalized) linear statistical model for inference applications.
3. You will understand the genetic analyses conducted in fields that study complex genetic traits.

All learning outcomes will be applied while completing your class project!!