INTRODUCTIONS

Instructor: Todd Treangen (treangen at cs.umd.edu)
http://www.cbcb.umd.edu/~treangen

Class hours: TR 11-12:15, CSIC 1121
Office hours: Tuesdays 12:30-2pm, AVW 3223

TA: Milad Gholami (mgholami at cs.umd.edu)
Office hours: MW 9-11, AVW 1112

Class webpage:
http://www.cbcb.umd.edu/confcour/CMSC423.shtml

What is bioinformatics?

Biology can be viewed as an information science (e.g. DNA is just a string of letters)

Computers are essential in generating, managing, and analyzing biological data

“Bioinformatics” or “Computational Biology” encompasses all applications of computers to the analysis of biological data

Why study bioinformatics?

Exciting field! Help biologists figure out what life is all about.

Work with people different from you – bio-geeks

Many programmer/software engineer jobs in biotech industry currently filled by biologists – great need for people with CS backgrounds

Overview of course

No knowledge of biology required

Will cover areas of interest in CURRENT bioinformatics research

Overall flow: data management (databases), data generation (sequencing), data analysis (extracting meaning)

Examples based on real data (note: instructor spent 5 years in a biotech research institute)

Policies

Attendance - follow University policy

- written documentation of illness is required (from Dr.)
- if possible inform me prior to the class you will skip

tudents claiming an excused absence must apply in writing and furnish documentary support (such as from a health care professional who treated the student) for any assertion that the absence qualifies as an excused absence. The support should explicitly indicate the dates or times the student was incapacitated due to illness. Self-documentation of illness is not itself sufficient support to excuse the absence. An instructor is not under obligation to offer a substitute assignment or to give a student a make-up assessment unless the failure to perform was due to an excused absence. An excused absence for an individual typically does not translate into an extension for team deliverables on a project.

Additional reasons

- Lectures trump book
- Homework/exam solutions only presented in class
- Other information only provided in class

Policies...cont

Disabilities

- must inform me during the first 2 weeks of the semester if special accommodations necessary
- request letter from Office of Disability Support Service

Any student eligible for and requesting reasonable academic accommodations due to a disability is requested to provide, to the instructor in office hours, a letter of accommodation from the Office of Disability Support Services (DSS) within the first two weeks of the semester.

Religious observance

- must inform me during first 2 weeks of class of any special accommodations
- no additional requests will be accepted after this deadline

Policies...cont

COMMUNICATION IS KEY!

- talk to me about any issues whether covered or not by University policies
- catch me after class, during office hours, or through email

Note: add “CMSC423” to subject of your emails

Grading & workload

Homework (10%)

Goal: small assignments

- exercises from textbook
- small programming assignments
- “discovery” exercises (find something in public databases or using public software)

Programming project (30%)

- will be broken up in small chunks
- overall goal – build a genome assembler

One in-class midterm (25%) & final (35%)

Late project policy: 1 day late – 10 points off; 2 days late – 20 points off; 3 days late – 0 points

Academic Honesty

http://www.studenthonorcouncil.umd.edu/code.html

No cheating on homeworks/projects/exams

No making up data/results

No copying of other people's code

You can work together on homeworks/projects but WRITE THE ANSWER BY YOURSELF

pledge on my honor that I have not given or received any unauthorized assistance on this examination.

Advice: how to do well in the class

Start early on assignments – at least read the assignment after class

Ask questions – during class, exams, office hours, using email (I'm available most time by email)

Be inquisitive – follow up on topics discussed in class: Google, Wikipedia

Be social – get to know some biologists – learn what they do, what they are interested in

Get to know your colleagues

Flu/emergency preparedness

H1N1 flu may have a major impact on us

- illness may make you miss classes, assignments, exams
- if severe epidemic – classes may be canceled.

University resources

- http://www.umd.edu/umnews/h1n1fall09.cfm
- http://www.helpdesk.umd.edu/emergencypreparedness

For class

- Don't come to class if you are sick!!! (wait for 24 hrs after fever/illness ends)
- Inform me as soon as you can that you will miss class/work
- Accommodations will be made so nobody falls behind – alternate homework/exam dates, lectures will be online, special office hours....etc.

Flu...cont

Be prepared: Advil/Tylenol, Sudafed, Gatorade, chicken soup, Purel, tissues

Get the vaccine (if you can, and it might not help...)

Wash hands often (esp. before eating)

If you have a fever (> 100 deg F, 38 deg C) or feel ill/have chills, etc. stay home (no classes, parties,etc.)

See a doctor.

Notify the campus: health@umd.edu

Glue accounts

ssh glue.umd.edu

DIRECTORY:
/afs/glue.umd.edu/class/fall2009/cmsc/423/0101

Try it out and let me know if there are any problems