BINF 732 – Genomics

Course Time: Mondays 7:20-10:00 pm
Course Location: Buist Run Hall, Room 248, Prince William Campus
Instructor: Saleet Jafri, 703-993-8420, sjafri@gmu.edu
Office Hours: By appointment in Occoquan Building Room 328G
Course Web Page: http://www.binf.gmu.edu/jafri/binf732/

Prerequisites: Computer knowledge and previous courses in biology, or permission of instructor
Textbook: Discovering Genomics, Proteomics, and Bioinformatics by Campbell and Heyer 2nd Edition

Course Description:
Surveys computational tools and techniques to study whole genomes and explores biological basis of genome analysis algorithms. Topics include genome mapping, comparative genomics, and functional genomics.

Grading Policy:
The course grade will be determined as follows:
90-100  A
80-89.9  B
70-79.9  F

Problem sets will be assigned as homework several times during the semester. They will be due two weeks after they are assigned. The assignments will be posted on the course web page. Late homeworks will not be accepted.

Academic Honesty Policy:
Academic dishonesty will not be tolerated. This includes cheating, plagiarism, and falsification of academic records. That being said, you can help each other out on the homework (this does not mean that you can copy each other's homework).

Important Dates:
Monday, August 25 - First Day of Class
Monday, October 6 - Mid-Term Exam
Monday, October 13 - Class Moved to October 13 due to Columbus Day
Tuesday, October 14 - Class Meeting on Tuesday due to Columbus Day
Wednesday, December 8 - Final Exam

Tentative Course Schedule
Monday, August 25, 2007 - Introduction to Genomics (Jafri) - Chapter 1
Monday, September 1, 2008 - No Class Labor Day
Monday, September 8, 2008 - Sequencing and Annotation (Seto) - Chapter 2
Monday, September 15, 2008 - Sequencing and Annotation (Seto)
Monday, September 22, 2008 - Genomic Variation (Matukumali) - Chapter 4
Monday, September 29, 2008 - Genomic Variation (Matukumali)
Monday, October 6, 2008 - Mid-Term Exam
Monday, October 13, 2008 - No Class Columbus Day - class meets Tuesday
Tuesday, October 14, 2008 - Genome Expression and Microarrays (Jafri) - Chapter 6-7
Monday, October 20, 2008 - Proteomics (Vaisman/Klimov) - Chapter 8
Monday, October 27, 2008 - Comparative Human Genomics (Wilson)
Monday, November 3, 2008 - Phylogeny and Comparative Genomics (Gillevet) - Chapter 3
Monday, November 10, 2008 - Pharmacogenomics and Drug Discovery (Jafri) - Chapter 9
Monday, November 17, 2008 - Metabolomics (Willett)
Monday, November 24, 2008 - Agricultural Genomics (Smith)
Monday, December 1, 2008 - Genome Circuits and Modeling (Jafri) - Chapter 10-11

Monday, December 8, 2008 - No Class Reading Day
Monday, December 15, 2008 7:30-10:15 - Final Exam

Sage Advice: If you want to do well in course: 1) Do all the problem sets. 2) Read the text book and any other assigned reading. 3) Ask questions in class and office hours. 3) If you are having difficulty doing the problem sets, be sure to get help. I encourage the students discussing the course material and problems, but require everyone to do the work - NO COPYING.

Saleet Jafri
Friday August 29, 2008

http://www.binf.gmu.edu/jafri/ism732/syllabus.htm/