

**Syllabus for BCH/BIO 519 “Intro. to Bioinformatics” Spring 09
 Tu/Th 9-10:20 SMBS Computer Lab (Cary 231)**

week 1	1/13, 1/15	Intro. to Bioinformatics & Biological Databases	MSH
week 2	1/20, 1/22	Perl/Unix I	ZH
week 3	1/27, 1/29	Perl II	ZH
week 4	2/3, 2/5	Perl III	ZH
week 5	2/10, 2/12	Sequence Alignment I	MSH
week 6	2/17, 2/19	Sequence Alignment II	MSH
week 7	2/24, 2/26	Proteomics	KB
week 8	3/3, 3/5	DNA sequencing	SG
spring break			
week 9	3/17, 3/19	Genome Annotation/DNA motifs	MSH
week 10	3/24, 3/26	DNA motifs II	MSH
week 11	3/31, 4/2	Microarrays I	MB
week 12	4/7, 4/9	Microarrays II	JM
week 13	4/14, 4/16	array CGH	NJN
week 14	4/21, 4/23	Protein structure	JK

Instructors:

MSH: Marc Halfon (BCH)
 ZH: Zihua Hu (CCR)
 MB: Michael Buck (BCH)
 JM: Jeff Miecznikowski (Biostats)
 SG: Steve Gill (Oral Biol)
 NJN: Norma Nowak (BCH, RPCI)
 KB: Ken Blumenthal (BCH)
 GK: Jerry Koudelka (BIOL)

Course Description:

Introduction to Bioinformatics will introduce graduate students to the principals and practices used in computational analysis of DNA and protein sequences, analysis of large scale DNA and protein datasets, statistical analysis of sequence alignments and gene array datasets, proteomics, and protein structure prediction. This 3 credit course will be taught on Tuesdays and Thursdays from 9:00-10:20AM. Typically, the Tuesday session will be a didactic lecture introducing the topic of the week and giving out assignments for completion at or prior to the Thursday lab session. The Thursday lab will focus on practical use of the concepts taught in the Tuesday lecture and will be conducted by either the Tuesday lecturer, another faculty member who is expert in the particular analysis being performed, or both. Assignments completed by the students for the Lab sessions will be graded by the appropriate instructor and used to determine students' grades in the course.