CB2-201 Computational Biology and Bioinformatics
GBSC 703-01E

Computational Biology and Bioinformatics (CB2) course at UAB
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Spring 2015
February 16-27, 2015
9:30 AM – 1:30PM
Volker Hall VH G073

Course Directors
Malay Basu, PhD and Emidio Capriotti, PhD
West Pavilion, Room P220 934-5251 or 975-2928
{malay@uab.edu, emidio@uab.edu}

Week 1: February 16-20, 2015		
2/16	Technical aspects and high-performance computing (HPC) 101	Malay
2/17	Biological Data Sources and File Formats	Emidio
2/18	Sequence Alignment	Emidio
2/19	Homology search – BLAST, HMMER, PSSMs	Malay
2/20	Evolutionary and comparative genomics; molecular evolution	Malay
Week 2: February 23-27, 2015 (NGS)		
2/23	Protein Structure; mutational effects on structure; variant effect predictors.	Emidio
2/24	NGS data quality assessment and preprocessing	Malay
2/25	Alignment to reference; BAM; SAM	Emidio
2/26	Variant Calling, VCF, Tabix	Emidio
2/27	Introduction to RNAseq analysis; RSEM	Malay

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