Special Topics in Bioinformatics – Fall 2022
MBB 659 (SFU) [BIOF 501A (UBC)]
http://bioinformatics.ubc.ca/MBB659
Instructor: Dr. William Hsiao
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Class time: Thursdays 3-5 PM + 3 VanBUG Seminars (see schedule below)
Class location: Echelon Building 5F, 570 West 7th Ave, Vancouver.

Class schedule:
Classes are every Thursday for 14 weeks:

September 8	Class 1: Course Introduction and Biological Databases
September 15	Class 2: Overview of assignments and Genome Browsers
(VanBUG on September 15th at 6PM)	
September 22	Class 3: Workflow reproducibility + 2 X 25 min presentations
September 29	Class 4: Phylogenetics + 2 X 25 min presentations
October 6	Class 5: Science communication presentations Day 1
October 13	Class 6: Science communication presentation Day 2 + Phylodynamics
October 20	Class 7: DNA Sequence Analysis + 2 X 25 min presentations
(VanBUG on October 20th at 6PM)	
October 27	Class 8: Proteomics Analysis + 2 X 25 min presentations
November 3	Class 9: Microbiome + 2 X 25 min presentations
November 10	Class 10: Machine Learning and AI 2 X 25 min presentations
November 17	Class 11: Networks and Pathways + 2 X 25 min presentations
(VanBUG on November 17th at 6PM)	
November 24	Class 12: Cancer Genomics + 2 X 25 min presentations
December 1	Class 13: Public Health Genomics + 2 X 25 min presentations
December 8	Class 14: Class feedback + 2 X 25 min presentations

Topics are subject to change and will be confirmed closer to the beginning of the term. A detailed breakdown of presentation structure and timings will be provided to the students closer to the beginning of the term.

Grading:
Science communication presentation (15%)
Current paper presentation (25%)
Term project (30%)
Participation (in-class and online discussion forum; peer reviews, attendance) (30%)

Paper selection: Papers relevant to each topic will be selected by the (guest) instructors for the students to present. Science Communication paper will be selected by the students.

Class preparation: Your presentations will be delivered in person in class. Send your presentation to the TA at least an hour before the start of the course as a backup but otherwise come with your own laptop to be connected to the projector for presentation. Please do not go

overtime in your presentation because we have a tight schedule. Everyone (including presenters and instructors/TA) are expected to read all of the papers before each class. Students are also expected to participate in online discussion using Canvas.

Recommended readings:
http://violentmetaphors.com/2013/08/25/how-to-read-and-understand-a-scientific-paper-2/ (Links to an external site.)
https://web.stanford.edu/class/ee384m/Handouts/HowtoReadPaper.pdf (Links to an external site.)
http://collections.plos.org/roots-of-bioinformatics (Links to an external site.)

Useful Links:
http://www.ncbi.nlm.nih.gov/pubmed/ (Links to an external site.)
http://www.pubmedcentral.nih.gov/ (Links to an external site.)