EXPLORATIONS IN GENOMIC MEDICINE RESEARCH

Summer 2021 Calendar

Program website:

https://www.med.unc.edu/ppmh/education/explorations-in-genomic-medicine-research/

Week	Day	Date	Topic	Instructor	Housekeeping (3)	Science content (4)	Careers (4)	ELSI (6)	PPMH (2)	Application (10)
1	Mon	5/17	Orientation, introductions, pre-survey	Grace/Sabrina	X					
	Tues	5/18	Science content day 1	Grace/Sabrina		X				
	Wed	5/19	Science content day 2	Grace/Sabrina		X				
	Thu	5/20	Science content day 3	Grace/Sabrina		X				
	Fri	5/21	Introduction to reading a scientific paper	Grace/Sabrina		X				
2	Mon	5/24	PPMH overview	Jonathan Berg					X	
	Tues	5/25	Ethical, Legal, and Social Issues in Genomics: NCGENES and GeneScreen Population screening	Gail Henderson				X		
	Wed	5/26	Henrietta Lacks/ ownership of tissues/biobanking	Jean Cadigan				X		

	Thu	5/27	Careers – genetic counseling	Kim Foss			X			
	Fri	5/28	Professional development/social day	Sabrina/Grace	X					
3	Mon	5/31	Memorial Day holiday	n/a						
	Tues	6/1	Biocuration 1/6	Courtney Thaxton /Jenny Goldstein						X
	Wed	6/2	Biocuration 2/6	Courtney Thaxton /Jenny Goldstein						X
	Thu	6/3	Biocuration 3/6	Courtney Thaxton /Jenny Goldstein						X
	Fri	6/4	Biocuration 4/6	Courtney Thaxton /Jenny Goldstein						X
4	Mon	6/7	Biocuration 5/6	Courtney Thaxton /Jenny Goldstein						X
	Tues	6/8	Biocuration 6/6	Courtney Thaxton /Jenny Goldstein						X
	Wed	6/9	Legal implications of genomic research and clinical care	John Conley				X		
	Thu	6/10	Computational techniques – UCSC genome browser	Corbin Jones						X
	Fri	6/11	Biocuration group presentations	Grace/Sabrina						X
5	Mon	6/14	Family experience of being tested and living with a genetic condition	Marcia Van Riper				X		
	Tues	6/15	Computational methods - RNAseq	Mike Love						X
	Wed	6/16	Careers – academia	Terry Furey			X			

	Thu	6/17	CRISPR & Gene Editing	Eric Juengst				X		
	Fri	6/18	Careers – bioinformatics	Swanthana Rekulapally			X			
6	Mon	6/21	Careers – Industry	Lonna Mollison			X			
	Tues	6/22	Computational methods – pathway analysis	Di Wu						X
	Wed	6/23	Underrepresented minorities and health disparities	Markia Smith				X		
	Thu	6/24	Presentations from SURF students	Lauren Sidelinger & Roger Yu					X	
	Fri	6/25	Post-survey/future plans/social day. Students share what they enjoyed most about this class	Sabrina/Grace	X					
Optional	Tues	7/6	Careers – lab tour of UNC genetics research lab	Langston Harrison		X	X			
Optional	Mon	7/12	Careers – UNC PREP program	Meagan Colie & Cynthia Thomas		X	X			
Optional	Tues	7/13	Careers – UNC IRB	Marina Rampazzo			X	X		

Week 1 Science Content:

Gene structure and function
Chromosome and genome structure

Expression of genes
Inheritance of genes
Genotype and phenotype
Genes and health
Introduction to reading a scientific paper

Biocuration sessions:

The biocuration sessions scheduled from June 1 – June 8 focus on the ClinGen biocuration effort. Students will be learning to read scientific research articles and highlight (annotate) the snippets of text that are relevant for determining gene-disease associations. Courtney Thaxton and Jenny Goldstein will lead these sessions. Here is the outline for the biocuration sessions:

- Class 1: presentation on ClinGen and biocuration.
- Class 2: 1 hour class spent reading the Hypothes.is annotation protocol (how to annotate), reviewing example protocol and annotation.
- Task to complete: Each person should have signed up for a hypothes.is account by the end of the session.
- Class 3: Review the annotation and how to for 30 minutes. Assign papers and begin annotating
- Class 4: Groups annotate, could have breakout rooms, but each person independently annotates, compare results.
- Class 5: Compare annotation results, record similarities and difference in annotation among group members and the biocurators annotations.
- Can also discuss any other items of interest about the paper.
- Class 6: Groups prepare for group presentations on annotation results. Slides could include a (1) background on the disease, (2) Background on the gene, (3) Annotations in common, (4) Annotations missed, (5) tricky areas in the paper or general comments about the process (likes and dislikes).