BIMM 194 Modern Human Evolution
Fall 2020 (D00)

Instructor: Goran Bozinovic
Lectures: Th 4-5:20 PM
Location: *via* **Zoom:**
https://ucsd.zoom.us/j/96842688798?pwd=TWpjcEtqcWZrc3ZybIFBQzBLbmlrdz09
Passcode: **339051**
Course website: http://canvas.ucsd.edu
There is NO textbook required for this course; course materials (video links, articles, and .pdf peer-reviewed manuscripts) will be provided via Canvas in weekly modules

Course Description: This **journal club-type discussion course** will explore primary scientific literature to discuss modern humans' evolutionary challenges, focusing on development, metabolism, immunity, and environmental stressor. The emphasis will be placed on human gene-environment interactions and public health outcomes affecting human and environmental health.

Goals: Familiarize students with primary literature relative to modern human evolution, help them to critically assess peer-revied manuscripts, and to effectively communicate relevant evolutionary biology concepts and ideas via journal-club discussions, research proposal and presentation.

Prerequisites: BIMM100

Contact Information
Email: gbozinovic@ucsd.edu
Office hours: by appointment *via* Zoom

Course Website – CANVAS:
- For class-related materials, please access CANVAS at http://canvas.ucsd.edu using your username and password.
- Make sure to log in often and check for announcements and posted materials.

Discussion: Attend lecture discussions *via* Zoom. Use the following link to attend lectures on Thursdays 4-5:20 pm
Link: https://ucsd.zoom.us/j/96842688798?pwd=TWpjcEtqcWZrc3ZybIFBQzBLbmlrdz09
Meeting ID: 968 4268 8798
Passcode: **339051**

Course discussions will be held live *via* Zoom beginning Thursday, Oct 1. You can access the Zoom lecture log-in on Canvas or by using the link above. Discussions will be held during the time listed in the schedule of classes, and recordings of each zoom meeting and relevant materials (.pdf) will be available throughout the quarter on Canvas. You are expected to attend "live" course discussion and actively participate during meetings, as the course format is interactive. Per UCSD course description, "students are expected to actively participate in course discussions, read, and analyze primary literature". You are expected to come to each discussion prepared by viewing / reading relevant material posted on CANVAS Weekly Modules. Details will be provided during the course introduction in Thursday, Oct 1.

Online Classroom Zoom Etiquette: You may unmute your line during classes discussion at any time and contribute to discussion. If you have a particular question and do not wish to interrupt an ongoing discussion, you may post it in the zoom chat. Discussions will be attended by graduate students from my lab who will monitor the chat and do their best to answer questions in "real-time". Enabling your video is optional during lectures.
- Please ask questions! Student discussion during lectures is vital to course effectiveness. Use the "Raise Hand" option on zoom to notify me that you have a question. Discussion will be "paused" periodically to allow for your questions and/or clarification.
- When discussing / commenting, please be considerate of class time and yield to your peers who have not had a chance to speak.
- If you wish to continue discussion post-regularly scheduled time, I will be happy to accommodate for additional 10-15'. Note, however, that, to be fair to students with conflicting schedules or other obligations, such short post-meeting discussions will not have bearing on your course "participation assessment".

GRADING

There are NO exams or quizzes in this course. Students will be evaluated based on their discussions participations, 2-page research proposal due at the end of the course, and individual (pending enrollment → 5-10') presentation. Details about an individual research proposal guideline and presentation format will be provided after Week 3.

Discussion Participation	30 pts
Research Proposal	40 pts
Presentation	30 pts
Total Points possible	**100**

Here are ***guidelines for the minimum grade*** you will receive based on point totals, including extra credit:

≥ 92 _____	A	80-81 _____	B-
90-91 ____	A-	78-79 ____	C+
88-89 ____	B+	70-77 _____	C
82-87 ____	B	60-79_____	C-

**The points / grade scale maybe adjusted based on the overall class performance.*

Course Structure:
This should be a fun, intellectually challenging, non-threatening learning experience. You are NOT competing for grades here, you are discussing interesting, personally relevant concepts, reading fun science papers and exchanging ideas. The course structure is to mimic graduate-level research and professional discussion / idea developing environment. After the course introduction on Oct 1, we will discuss relevant molecular biology concepts and one or two peer-reviewed manuscript(s) during each meeting (Week 1-7; note that our first meeting is "week 0"). Your research proposal is due on Week 9 (Dec 4) and you will present your research proposal during last two weeks of the course. Topics for each week are listed in the Journal Club Schedule at the end of the Syllabus. Conceptual background information and .pdf file of the manuscript to-be-discussed will be listed at least one week prior to discussion and periodically updated. Pending enrollment, each student will be assigned to a group of 3-4 students, and each discussion question will be led/moderated by a particular group. Discussion questions will be provided by an instructor one week prior. Although this may prove to be challenging in a virtual discussion setting, all students are expected to participate in the discussions thoughtout the quarter. Please always be courteous and respectful to your peers

during the course. Polite disagreements and intellectual challenges are welcome (often preferred) if they are delivered in a factual, sensible, and respectful manner.

How to do well in this course:

- View / read ALL posted material in CANVAS weekly modules BEFORE the discussion → you are expected to significantly contribute, so be prepared.
- Attend live zoom discussions
- Turn your research proposal on time
- Take your own notes – active note taking is the key to effective learning
- Actively participate in discussion sections
- Ask questions

ACADEMIC DISHONESTY

Please carefully review the "**Policy on Integrity of Scholarship**" at:
http://senate.ucsd.edu/manual/appendices/app2.htm
Academic dishonesty (aka cheating) will not be tolerated in this class. According to UCSD policy, academic dishonesty includes:

copying another student's work; allowing another student to copy your work

Journal Club Schedule: **TENTATIVE**, subject to change

Week	Topic	Material
0 Oct 1	Course Introduction Sci Sources of Information How to Read Science Papers	Syllabus Canvas Week 1 Module: How to Read / Write Sci Papers (supplements)
1 Oct 8	When Ideas Have Sex: Human Evolution and Trade Revising Human Mutation Rates	Week 2 Module: Matt Ridley Talk Nature Genetics Review 2012
2 Oct 15	Metabolism: Are we born to Run? The cost of our Birth Metabolism then and now: what is food and why am I so tired?	1. Christopher McDougal Talk 2. Human Metabolism and Altriciality – PNAS 2011 3. Metabolic Cost of Brain Development – PNAS 2012
3 Oct 20	Human Molecular Evolution on 2 Levels: ORF vs. cis / trans	
4 Oct 29	Neutral Theory of Molecular Evolution Motoo Kimura – Molecular Darwin	
5 Nov 5	Post-Industrial Evolution: Modern Environment and Endocrine Disruption	
6 Nov 12	Immunity and Autoimmunity Evolution Redefined? The Age of COVID and "Superbugs"	
7 Nov 19	Can my brain keep up? Modern demands on information processing: mental health consequences?	
8 Nov 26	No meeting - Happy Thanksgiving	
9 Dec 4	TBD: Your Show 2-page Research Proposal Due	
10 Dec 11	TBD: Your Show 2-page Research Proposal Due	