HEB 50

Premed:
Biology w/ lab
Anatomy & Physiology

Harvard FAS
Fall 2026
4.9.26

Human Metabolism

This course investigates human metabolism through several levels of organization and uses evolutionary theory to explore the unique metabolism of our species.

We will establish the foundations of molecular and cellular metabolism, integrate that knowledge into an organismic model, and tie in ecology and the evolution of metabolism within primates and the human lineage.

Throughout the course we will make connections to metabolic dysfunction and disease, and their rising salience in modern health.

Background of at least one semester of introductory biology and chemistry stongly recommended; introductory physics is also useful.

WHEN DO WE MEET?
Tuesday 1:30-2:45pm
Thursday 1:30-2:45pm
3-hour lab section

Sectioning will happen after registration; register for the placeholder

HOW AM I GRADED?

Cellular Exam	20%
Organismic Exam	20%
Ecological Exam	20%
Final Exam*	20%
Lab assignments	20%

You may take scored midterm exams home and revise your answers for up to 1/2 credit back

You may skip the final exam if you are satisfied with your three revised midterm grades

		TUESDAY	THURSDAY	LAB
W1		**<none>**	Introduction	***<none>***
W2	CELLULAR	Reactions & Energy	Glycolysis	***<none>***
W3	CELLULAR	Citric Acid Cycle	OxPhos	*Metabolism Methods*
W4	CELLULAR	Fuels	Intermediates	*Calorimetry of Fuels*
W5	CELLULAR	Cellular Regulation	**Cellular Exam**	*Size Effects*
W6	ORGANISMIC	Energy Balance	Intake	*Temperature Effects*
W7	ORGANISMIC	Work	Waste	*Resting I*
W8	ORGANISMIC	Storage	Organismic Regulation	*Resting II*
W9	ORGANISMIC	Growth & Aging	**Organismic Exam**	*Movement I*
W10	ECOLOGICAL	Energy Flow Models	Nutrition	*Movement II*
W11	ECOLOGICAL	Physical Activity	Variation	*Activity Tracking I*
W12	ECOLOGICAL	Environments	Evolution	*Activity Tracking II*
W13	ECOLOGICAL	**Ecological Exam**	**<Thanksgiving>**	***<none>***
W14		Metabolic Disease	Future of Metabolism	***<none>***



Dr. Andrew Yegian
Human Biology, Behavior, and Evolution
ayegian@fas.harvard.edu
Calendly.com/ayegian

HBBE req.: Anat. & Phys subfield