

Human Ecology I, 2017

Masahiro UMEZAKI umezaki@humeco.m.u-tokyo.ac.jp

Shoko KONISHI moe@humeco.m.u-tokyo.ac.jp

Satoko KOSAKA satoco@humeco.m.u-tokyo.ac.jp

[Schedule]

April 14	“Human Biology: An Evolutionary and Biocultural Perspectives” (on the basis of Chapter 1) [Lecture] A topic in Human Ecology “Demographic Problems in Japan and developing countries”	Dr Masahiro UMEZAKI
21	“Human Life Cycle” (Chapter 11)	Dr Shoko KONISHI
28	“Human Energetic” (Chapter 8)	Dr Satoko KOSAKA
May 12	“Human Nutritional Evolution: the basics” (Chapter 7)	Dr Masahiro UMEZAKI
19	“Human Nutritional Evolution: the case studies” (Chapter 7)	Dr Masahiro UMEZAKI
26	“Population Dynamics” (Chapters 14 and 15)	Dr Masahiro UMEZAKI
June 16	Special lecture: “Human Ecology, Ecohealth and Global Health”	Prof Kazuhiro MOJI (Nagasaki University)

[Notes]

*Presentation should be made in 10 minutes with 10 slides maximum.

*You can download reading materials by logging-in to our account in Google Drive. The materials should be used for lecture purposes only; do not share them with your friends who do not take this lecture.

For sending an invitation to the Google Drive folder, please provide your gmail address to Dr Konishi.

*Presentation slides should be uploaded in the Google Drive folder that indicates your presentation date (e.g., April 21).

*Your presentation file should be named as “your name_date of presentation”.ppt/pdf (e.g., umezaki_14April2017.ppt)

[Course content]

April 21 "Human Life Cycle" (Chapter 11)

- Reading assignments & presentations
 - Introduction / Human growth and human biology / Growth and evolution / Basic principles of human growth and development (pp.515-519) 1 person
 - Stages in the life cycle (pp.520-545) [each student can read by yourself]
 - Prenatal development ~ Epigenetics
 - Birth ~ Infancy
 - Childhood ~ Late life stage
 - Human postnatal growth in comparative perspective (pp.547-551) 1 person
 - Why do new life stages evolve? (pp. 551-573) 3 persons
 - Life cycle trade-offs and risks for children, adolescents, and postmenopausal women (pp.574-576) 1 person
 - Chapter summary (p.576) 1 person

a short lecture on fertility and longevity

April 28 "Human Energetics" (Chapter 8)

- Reading assignments & presentations
 - Introduction /Anthropology and energetics /Basic principles of energetics (p.325-332)
 - Energy expenditure (p.333-339)
 - Measurement of energy parameters (p.340-354)
 - Energetics and human evolutionary history /Energetics and health (p.354-356, 366-371)
 - Energetics and adaptation among contemporary human populations (p.356-366)
- Measuring physical activity with accelerometer
- Double burden of malnutrition and an example in Indonesia

May 12 "Human Nutritional Evolution: the basics" (Chapter 7)

- ❖ Reading assignment & presentations
 - Fundamentals of nutrition (p. 252-265)
 - Comparative nutrition (p.265-272)

- Evolutionary changes in brain and body size in hominins: dietary implications (p. 272-275)
- ❖ Lecture: Methods of nutritional survey
 - Dietary survey: 24-h recall, food frequency questionnaire, dietary record, direct weighing
 - Food composition table
 - Anthropometry
- ❖ Homework: answer to the following questions (p. 251)
 - 1. What are the key nutrients essential for human life?
 - 2. What are the factors that influence variation in human nutritional requirements?
 - 3. How do we determine individual requirement for key nutrients?
 - 4. How do humans compared to other primates and other mammals in their

May 19 "Human Nutritional Evolution: the case studies"

- Interpopulation variation in nutrition and metabolism I (p. 275-285)
 - Interpopulation variation in nutrition and metabolism II (p. 285-292)
 - Interpopulation variation in nutrition and metabolism III (p. 292-300)
 - Interpopulation variation in nutrition and metabolism IV (p. 300-307)
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- ❖ Lecture: Low protein adaptation in Papua New Guinea
 - ❖ Discussion:
 - 1. How can we use information from "traditional" societies to better understand human nutritional needs?
 - 2. How can we use information from "traditional" societies to formulate recommendation for healthy human diets and activity patterns?
 - 3. What are some of the distinctive cultural practices used by human populations to improve the nutritional quality of staple food items?
 - 4. What are the ecological factors that shaped the development of these practices?
 - 5. What are some key examples of "nutritional adaptation" in recent human evolution?
 - 6. What were the selective factors that promoted the evolution of "nutritional adaptation"?
 - 7. How have diet and lifestyle changes in modern industrialized societies promoted such "diseases of civilization" as hypertension, diabetes, and

obesity?

May 26 "Population Dynamics" Details will be announced later.