

## **First-year Seminar, Fall 2019**

### **Meals, Medicine, and Money**

**Karl S. Roth, M.D.**

---

#### ***1. Sample syllabus***

##### ***Course goals***

By encouraging free-ranging curiosity among course participants, the overarching goal of the course is to broaden the students' historical perspectives on the interplay of agriculture and domestication of farm animals, health and the economic development of Europe, while touching upon the influences thereon of Middle Eastern and Asian nations. Participants will evaluate the premise that these factors are inextricably related, and largely responsible for the present state of nutrition, health and economic stability in the Western World today. Assigned readings and discussions will enable students to explore this complex relationship and it has contributed to the quality of life they enjoy in the present time. The classroom discussions are expected to enrich the students' college experience, both within and outside their major, and to result in an understanding of the relevance of the past to the present.

##### ***Content***

We have selected a number of relevant subjects (e.g. evolution from hunter-gatherer to grower, wild animal domestication, state of nutrition in various historic time periods, source of zoonotic organisms, international trade), all of which affected the others and the humans who lived through those times. Their mutual interactions eventually lead to the development of key historic events, far reaching in scope. Students will be encouraged to use their imagination to place themselves in each period under study, and to imagine life as it would have been for each of them. To imagine oneself as a common peasant during the Black Plague, for example can bring a special relevance to our present-day

concepts of public health. Navigating the path from the ignorance of the Neolithic man, through the Renaissance to the present will enable students to demonstrate for themselves the holistic nature of human endeavors.

### ***Meeting times***

Fridays, 3:00 to 3:55 PM, 773 Biological Sciences Building, 484 West 12<sup>th</sup> Avenue

### ***Weekly outline of topics***

Each seminar session will involve discussion of a specific topic, taking into account various factors elaborated below (see *Listing of assignments*). Here is a tentative list of the subjects that we plan to discuss.

1. Aug 23 - Introductory session; Social impact of transition from hunter-gatherer to grower
2. Aug 30 - State of Neolithic agriculture; Neolithic nutrition; Ice Man
3. Sept 6 - Climate Change, Medieval Agriculture and Nutrition, Emergence of Social Classes
4. Sept 13 Animal Domestication and Disease
5. Sept 20 Tartar Invasion of Crimea and Import of Plague
5. Sept.27 Social, Economic and Medical impact of Plague
5. Oct. 4 Medieval Medicine in Europe and Middle East
6. Oct. 11 **Fall Break (no classes)**
7. Oct.18 Emergence of Renaissance Trade Routes, Early Discovery of Vitamins and impact on Economic Developments
8. Oct.25 European Colonization, Economic, Social and Medical Implications
9. Nov.1 American Colonial Agriculture, Nutrition and Healthcare

- 10. Nov.8 Post-Revolution Agriculture and Its Economic Role
- 12. Nov.15 Agriculture, Frontier Medicine and the Flexner Report
- 13. Nov 22 Final wrap-up session
- 14. **Nov 29 Thanksgiving break (no classes)**
- 15. Dec. 6 Papers Due

### ***List of assignments***

Students will have access via Canvas/Carmen to a reading list that includes short biographical details, synopses of the historical events of the period under consideration, and how a chain of these events led to changes in Western European society. Students will be expected to prepare for each session by reading the assigned material and by familiarizing themselves with contemporary historical events in order to better understand the impacts of nutrition, health and economics on each other. They will also be expected to explore source material largely to explain the details of the relationships of nutrition, the health of the population and how the two factors affected the economies of Western Europe, and finally, early American society.

### ***Required textbooks or reading assignments***

While no textbooks are required, students will have to read articles posted on the course website. As stated, students will have access to weekly postings of relevant articles from various sources of literature.

### ***Grading***

Students will be graded S/U, based on their participation in active discussion, as well as their evident initiative in reading assigned and other source materials (i.e. their curiosity). No more than two excuses will be allowed barring medical exigencies. Students will be assessed as follows: attendance (25%), classroom participation (25%), and end-of-

semester essay (50%). Students will submit a two-page essay (Helvetica font size 11, one-inch margins, and 1.5 line spacing) that focuses on any subject of their choice and highlights how each of the factors considered during the discussions influenced the others. A cumulative score above 75% will be scored as Satisfactory (S).

### ***Instructor***

Karl S. Roth, Visiting Scientist, Department of Chemistry & Biochemistry (703 BioSci, 484 W 12<sup>th</sup> Ave); Email Address: roth.620@osu.edu

### ***Academic integrity***

Students are required to read OSU's Code of Student Conduct ([oaa.osu.edu/coam](http://oaa.osu.edu/coam)), and submit a signed statement that they have read and understood OSU's academic misconduct policy. Key facets of this policy are reproduced here *verbatim* from [oaa.osu.edu/coam](http://oaa.osu.edu/coam).

*"Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct may constitute "Academic Misconduct."*

*The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination."*

### ***Disability services***

Students are encouraged to arrange a private meeting to discuss accommodation options if he/she believes that such steps are necessary to overcome academic obstacles caused by a disability. The following statement is reproduced verbatim from <http://www.ods.ohio-state.edu/faculty-staff/syllabus-statement/>:

**The University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](http://slds.osu.edu); 098 Baker Hall, 113 W. 12<sup>th</sup> Avenue.**

### ***Biographical statements***

**Karl S. Roth:** Following completion of my residency training, I began my teaching career at University of Pennsylvania as a Fellow in Genetics and Metabolism. In this role, I was responsible for providing teaching seminars for medical students and residents. In addition, I was involved in an outreach program to local high schools in the Philadelphia area, providing lectures on the nature of genetic disorders. After moving to the Medical College of Virginia, I served as co-director of the Guaranteed Medical Admissions Program, which enlisted outstanding high school seniors heading for medical careers. In this position, I interviewed students and parents, as well as providing regular, biweekly basic lectures on various medically-related subjects to these students as they moved through their undergraduate years. In addition, I served as a co-mentor for students in this program during their four undergraduate years, and in some cases, while in medical

school. I also served on the Admissions Committee of the medical school for 12 years, in the process interviewing senior undergraduates and, again, in some cases continuing as their advisor upon entering.

I am greatly interested in the history of science and of medicine, in particular; over the past 40 years, it has become clear to me that medicine is but one discipline that has benefited from multiple human endeavors, as have many others. It is this holistic view of the results of human endeavor that I would like to convey to undergraduates, with the expectation of broadening their world-views and enriching their educational experience.

During the autumn 2018 semester, I led a seminar, entitled *“Curiosity and the Human Experience”*, which I greatly enjoyed. Apparently, many of the students did as well, since at their request we are meeting weekly on an informal basis in order to continue our discussions during Spring 2019. Of the greatest satisfaction to me is that, in the process of these discussions, both the students and I learn and grow our world views.