

FYS100.HH.F14

Prof. John Oksanish
Class Hours / Location
Office Hour / Location
Instructor's Email:*

STEM-Societies in Greco-Roman Antiquity

email: oksaniijm@wfu.edu
2:00-3:15 MW, Tribble A302
Mon 3:30-4:30, Tribble C304; or by appt.; Mailbox Tribble C301
oksaniijm@wfu.edu Checked during business hours or at my discretion.

Course Description

This course takes its lead from the contemporary public debate with the so-called STEM fields (i.e., fields that touch on science, technology, engineering, and mathematics) and interrogates several, historically significant theories and practices of "technical" knowledge from Greco-Roman antiquity. Contemporary public discussions of STEM tend both to imply the objective sufficiency and basic permanence of the STEM categories (e.g., "science") and generally imply the ideological neutrality of STEM, a result of its scientific basis. And yet, just as conceptions of *what is knowable* or of the *social utility* of technology have changed over time, no discussion of knowledge is truly stable or free of ideology. By examining the ancient discussions of the ancient categories on which our modern transliterations and translations thereof are based (e.g., *scientia*, *techne*, *ingenium*, *mathemata*, *disciplina*), this course demonstrates the inherent instabilities and ideologies in "scientific" knowledge-systems in various texts from Greek and Roman antiquity. We will explore ancient science and technology both on its own terms and on ours, with special attention to the role allotted to different kinds of knowledge in the two societies. How does craft (*techne*) relate to nature (*physis*)? Ultimately, the seminar aims to problematize many of the presumptions on which current interest in STEM is based. The problem is not that science (in our terms) fails to speak accurately about the world, but that STEM in its most popular sense reflects an ideology that may foreclose the truths and ways of thinking that scientists and mathematicians value and pursue.

Goals. Students will interpret and discuss ancient texts with attention to the themes above, while recognizing the importance of generic, historical, social, and other contexts. They will learn about new technological developments that are helping to reveal heretofore unreadable texts and ancient devices (e.g., the so-called Archimedes codex and Antikythera mechanism), while at the same time considering what role ancient knowledge, technical or otherwise, has to play in our society.

Required Textbooks.

At the bookstore:

Homer, *Iliad* tr. Butler
Homer, *Odyssey* tr. Palmer
Early Greek Philosophy tr. Barnes
Aeschylus, *The Persians and Other Plays*
Plato: *Gorgias* tr. Hamilton and Emlyn-Jones
Frankenstein: The Modern Prometheus

In Classics Department, Tribble C301

Course-pack.

Order Online (hard copy if available)

Vitruvius¹ *On Architecture* 978-0141441689
The Archimedes Codex ISBN 978-0306817373

NB. No knowledge of Latin or Greek is required for this course, but you should be willing to engage in (and be prepared for) discussion of Latin and Greek terms from time to time. (E.g., *techne*, *ars*, *episteme*, etc.) Similarly, no knowledge of Roman history is explicitly required. I recommend that everyone bookmark the *Oxford Classical Dictionary* (see ZSR Research Guide for Classical Studies) in your browsers for frequent reference.

¹ Readings from Vitruvius *On Architecture* (and other, supplementary passages from Plutarch and Lucian) will explicitly address ancient ethical and political implications of altering the natural landscape. The

seminar will consider to what extent this can be compared with modern discourse surrounding sustainability.

Assessment at-a-glance%

Attendance, preparation, and contribution	20
Timely and thoughtful completion of weekly reading journal	20
Two, one-page papers	20 (=2 x 10)
One, 5-7 page paper and related deadlines	15
Final, 10-12 page seminar paper and related deadlines	25

Assessment in detail

*Attendance, * preparation and contribution (*N.B. repeated tardiness = absence.) (20%)*

A central tenet of studying Classics is that “slow” and “close” readings of a text lead to a unique grasp of its content. Yet there are caveats to this time-honored approach. First, its success depends on our mutual investment of time and energy into both aspects. This is why your thorough preparation for class—and generous contribution to it—are essential. Be ready with **observations upon** and **questions about** assigned readings when we meet; I expect you to have something thoughtful to say about everything we read. To that end, complete your reading journals (discussed below) with diligence and reflection. Similarly, read actively: take notes (keyed to passage and page numbers) and mark up your own texts either electronically or with pencil. Read introductions when available for each work before you begin and/or after you finish.

For this seminar to function properly, it is important to foster a sense of intellectual generosity. Your principle should be to esteem and respect all ideas and contributions, even (indeed especially) if you do not agree. The arts of elaborative agreement and of respectful counter-argument are to be cultivated: they foment discussion, and will serve you well beyond your formal education. Ask questions in class about anything; the past is a foreign country.

Mundane but important. Attendance is required. All absences are considered *unexcused* unless accompanied by a note from Student Health indicating your incapacitation. Unexcused absences in excess of **one** will reduce your **final course grade** by 5% per absence. Notify me of special circumstances (e.g., you are sick over several days in the same week) if they arise. Students are encouraged to send email and/or attend the instructor’s office hour if they have questions that cannot be answered during a class meeting. Do not use your phone in class.

Timely and thoughtful completion of weekly journal (20%)

The reading journal (we will use Google Docs, details TBA) will be a way for you to synthesize your thoughts, usually on our readings. I will email each of you a link to a Google doc that you will use for your journal. Entries will regularly be due once per week except during the week when the five-page paper is due. (Journals are due **before** class on Wednesdays.) Entries should address one or both readings from the week unless otherwise indicated.

As a genre of writing, the journal entry (as I conceive of it) involves a fairly long leash. It should, however, go beyond mere “note-taking” and “brainstorming,” and should:

- attempt to characterize, analyze, challenge, question, etc., what the source says and what s/he means in reasonably thoughtful ways.
- engage the central questions of the seminar as outlined above and as they develop over the course of the semester. I may, from time to time, provide you with questions to catalyze your reflections.
- adapt and apply lines of inquiry or methodologies from previous classes (or indeed from another course) to your own readings
- seek to make connections with your own areas of interest and expertise
- above all, **imagine the entries as possible kernels for your final paper and/or jumping-off points for our in-class discussions.**

I will read the entries and will occasionally comment; I will assess and comment on these at least twice per student throughout the semester (at random), though timely completion is always required.

Although your register (i.e., of prose) should be mature and deliberate, there is no need for excessive formality or for theses, arguments, etc. (though you may find writing in such terms helpful): as Cicero said, “the pen is the best and most outstanding producer and teacher of speaking” (*stylus optimus ac praestantissimus dicendi effector et magister*). Quantity will vary, and there is no strict rule: fewer than 300 words per entry will probably not allow the desired degree of sustained reflection; anything more than 1000 might become a burden.

Finally, this class will involve a lot of reading, but you can do it. (Plus, the seminar will only be good *if* you do it well.) I will touch base from time to time to make sure that remains the case.

1-page, 5-7 page, and 10-12 page papers (includes meeting draft and other, internal deadlines, TBA)
(60% total)

These papers constitute the *telos* (i.e., end) toward which this course strives: writings that meaningfully engage our readings and themes of discussion. Your peers and I will work with you along the way: *process* will be paramount, and it will be important to pursue secondary literature beyond what we have read for class for the final paper, at least. Details and deadlines will follow.

Important Dates

Weds	1 September	First journal entry due; address initial questions, reactions, and points of interest re: readings and course.
Weds	24 September	First, close-reading assignment due (1 page)

First assignments (extended schedules forthcoming)

Monday, September 1.

Homer, *Iliad*. Pp. **1-21** [= *Il.* 1; 2.1-493]; pp. **96-108** [*Il.* 9]; pp. **225-229** [= *Il.* 18.478-608];
Odyssey Pp. **1-18; 80-90**; [=1-2, 9].