

## INTRODUCTION

Recent years have seen a vehement push for the integration of humanities in medical education to develop professionalism, empathy, innovation, communication, and critical reasoning skills.

Ancient Greek and Latin language, literature, and medical practice, which lie at the root of modern Western medical terminology and practice, offer an opportune avenue to the study of medical humanities.

While many undergraduate programs offer courses in medical etymology, few courses in history, culture, and ethics of ancient Greco-Roman medicine exist; those that do are often targeted to students in the field of Classics.

### Purpose

To create a 36-100 student, lower-division, 3-credit course on the ancient roots of modern medicine, including in etymological, historical, cultural, and ethical terms, and targeted to undergraduate, pre-health students at the University of Colorado Boulder.

## METHODOLOGY

### Materials Selection

Textbook: 12 medical etymology textbooks reviewed, rated on a 4-point utility scale. *The Hippocrates Code*<sup>1</sup> (HC) chosen as main textbook and coded by themes derived from content presented.

Supplemental Materials: 13 primary sources (ancient texts) and 49 secondary sources (modern scholarship) reviewed and coded by themes

### Syllabus Creation

Formulated course objectives

Course structures as a 15-week, Monday-Wednesday-Friday, 50-minute class schedule

Mon/Wed dedicated to etymology content

Fri dedicated to discussion of culture, ethics, and history of ancient medicine and the relation to modern Western medicine.

Organized readings into thematic units and selected supplemental readings to fit these units

Composed lesson plans, discussion questions, and learning objectives

Designed weekly quizzes, two midterm exams, and final exam



Fig 1. Tombstone of Athenian physician examining child patient circa 200 BCE, the British Museum.

| Themes                                | Discussion Topics                                |
|---------------------------------------|--------------------------------------------------|
| Conceiving Medicine                   | Narrative and Medicine                           |
|                                       | Myth in Medicine                                 |
|                                       | The Birth of Science in Ancient Greece           |
| The Body & the Ethics of "Knowing"    | Moral Dilemmas in the Acquisition of Knowledge   |
|                                       | Medicine as Arbiter of the Female Form           |
| The Practice of Medicine              | Conceptualizing Health and Disease               |
|                                       | Ancient Diseases and Remedies                    |
|                                       | Parabolizing Plague Then and Now                 |
|                                       | 'Other' Medicine and the 'Othering' of Medicines |
| Professional Identity & The Physician | What Constitutes a Doctor?                       |
|                                       | Codes of Ethics                                  |
|                                       | What Constitutes a Good Doctor?                  |

## COURSE OBJECTIVES

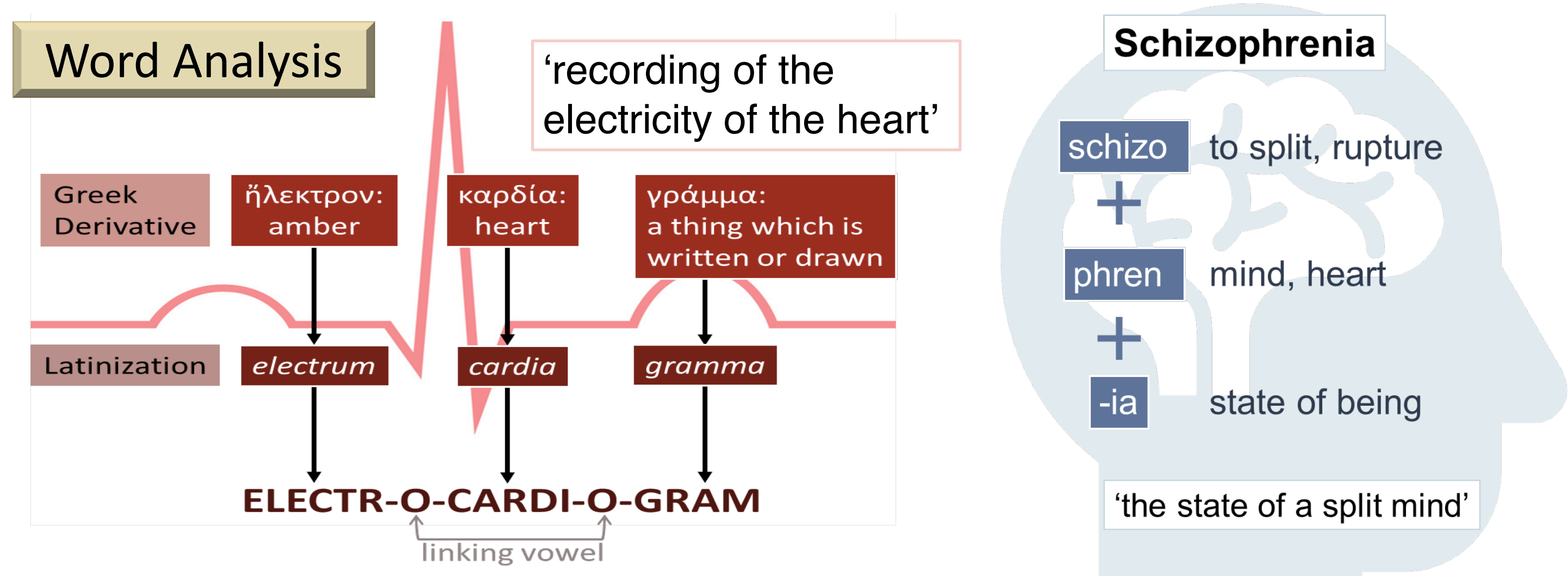
To understand the meaning and use of the **Greek and Latin roots** in modern medical terminology; instead of needing to memorize, you will **learn to decipher** initially challenging medical and biological terminology by recognizing and parsing their **root meanings**.

To gain an appreciation of **ancient Roman and Greek medical history and culture** in their relation to the **modern** practice of **Western medicine** and the **sciences**.

To become familiar with common **ancient bioethical principles** that govern the ancient practice of medicine and the sciences; to learn to appreciate how these principles **inform and influence modern medicine** and the sciences.

To draw parallels between **skills** embodied in and fostered by the **humanities** and their **direct application** to the daily **practice of medicine** and the sciences.

## SAMPLE ETYMOLOGY LESSONS



### Tibia



Fig 2. Boy playing flute

In Latin, *tibia* means 'flute' or 'shinbone.' Early flutes were made of bone. The flute was a double-reeded instrument, just as the shin is a double bone.

### Anatomical Etymologies

The anatomic word for collarbone derives from the Latin *clavicula*, meaning 'little key.'

*clavis*, is (f): key

-culus, -a, -um: diminutive suffix

The Greek word κλείς (*kleis*), as in sternocleidomastoid, means both 'key' and 'collarbone'.

### Clavicle

### Syringe, Syrinx

σύριγξ (*syrinx*) in Greek is 'Panpipe,' a reed instrument mythologically associated with the Greek god Pan.



Fig 3. Pan and pipes

## FURTHER INFORMATION

Approved as a Classics major/minor course under "Literature, Culture and Thought"

Approved as a "Arts and Humanities" General Education Distribution Requirement

Anticipate offering course starting AY2022-23

## ACKNOWLEDGEMENTS

Thank you to  
Prof. Courtney Ann Roby, Cornell Univ.  
&  
Prof. Ralph M. Rosen, UPenn  
for their guidance in our course design and reading materials from their collections.

## SAMPLE DISCUSSION QUESTIONS

### Week 1: Narrative and Medicine



Fig 4. Mosaic of the arrival of Asclepius at Cos, the birthplace of Hippocrates. Asclepius in the center, Hippocrates on the left.

Celsus. *De Medicina*<sup>2</sup>

Heinrich von Staden. "Celsus as Historian?"<sup>3</sup>

Rita Charon. "Narrative Medicine: A Model for Empathy, Reflection, Profession, and Trust"<sup>4</sup>

What is narrative medicine? According to Charon how are the skills used to analyze, discern, and understand narratives applicable to the field of medicine?

If Celsus, as von Staden argues, does not present himself as a historian, then what purpose does recounting the 'history' of medicine serve? In other words, why might Celsus include this account in his medical treatise?

### Week 8: Ancient Diseases and Remedies

Jouanna, Jacques. "The Physician and the Disease."<sup>5</sup>

How did the Hippocratic physicians conceptualize disease and its treatment? How does this compare to today?

What were the classifications of remedies or treatments in the Hippocratic traditions? How do these compare to modern classifications? Which treatments seem reasonable and which stand out as peculiar or even dangerous?



Fig 5. Ancient Greek medical instruments, Archaeological Museum of Epidaurus

### Week 14: What Constitutes a Good Doctor

Galen. "The Best Doctor Is Also a Philosopher"<sup>6</sup>

Kathryn Montgomery. "Phronesis and the Misdescription of Medicine: Against the Medical School Commencement Speech."<sup>7</sup>

What three reasons does Galen provide that a good doctor must also be a philosopher? How does he justify this argument?

What is science? Art/techne? Phronesis? How do these concepts differ and how do they relate to each other? Under which of these categories does the field of medicine fit?



Fig 6. Portrait of Galen, ancient Greek doctor and anatomist.

## LITERATURE CITED

- McKeown, J.C., and J. M. Smith. *The Hippocrates Code: Unraveling the Ancient Mysteries of Modern Medical Terminology*. Indianapolis/Cambridge, 2016.
- Celsus. "Proemium." Trans. Spencer, W.G. *De Medicina*. Vol. I. Cambridge, MA: Harvard University Press, 1971. 2-19.
- von Staden, H. "Celsus as Historian?" *Ancient Histories of Medicine: Essays in Medical Doxography and Historiography in Classical Antiquity*. Brill, 1999. 251-64, 293-4.
- Charon, R. "Narrative Medicine: A Model for Empathy, Reflection, Profession, and Trust." *JAMA* 286.15 (2001): 1897-902.
- Jouanna, Jacques. "The Physician and the Disease." *Hippocrates*, translated by M.B. DeBevoise, Johns Hopkins University Press, 1999, pp. 141-176.
- Galen. "The Best Doctor Is Also a Philosopher." Trans. Singer, P.N. *Galen: Selected Works*. Oxford University Press, 1997. 30-34.
- Montgomery, K. "Phronesis and the Misdescription of Medicine: Against the Medical School Commencement Speech." *Bioethics: Ancient Themes in Contemporary Issues*. The MIT Press, 2002. 57-65.