

# Latin and Greek in Scientific Terminology

CLA201H5F

CLASSES    Thursdays, 11 September–27 November 2014, 3:00–6:00 pm

LOCATION    IB 345

INSTRUCTOR    Andrew Dunning, [andrew.dunning@utoronto.ca](mailto:andrew.dunning@utoronto.ca)

OFFICE HOURS    Thursdays during term, 2:00–3:00 pm, NE 272A

TEACHING ASSISTANT    TBA

COURSE WEBSITE    TBA

## COURSE DESCRIPTION

The natural sciences, and the life sciences in particular, employ an enormous vocabulary of technical terms that present a sizeable challenge to the beginning student. The complexity of these terms is owed in part to the fact that many were formed from Greek and Latin words, in order to allow for easier communication within a multilingual scientific community at a time when most of its members learned these languages as a core part of their education. Although most students of the sciences are no longer expected to learn classical languages, a basic exposure to the Latin and Greek elements of scientific language can make it much easier to understand the meaning of technical terms and to expand one's scientific vocabulary.

No previous knowledge of Greek or Latin is expected of students.

## *Learning goals*

- Acquire a working vocabulary of the fundamental Greek and Latin roots, prefixes, and suffixes key to understanding scientific terms.
- Develop competency in using unfamiliar words to communicate and comprehend scientific results in oral and written contexts.
- Gain the skills necessary to identify the Greek and Latin elements of scientific terminology and give their meaning.
- Understand the historical processes leading to the development of current scientific terminology.

## ASSIGNMENTS

Assessment is based on a series of tests, in which you will demonstrate your knowledge of Latin and Greek word forms as applied to scientific terminology, and written assignments, in which you will demonstrate your ability to engage with scientific literature. These are weighted as follows:

- Test I (16 October): 20%
- Test II (20 November): 20%
- Vocabulary Presentation: 10%
- Pre-Lecture Analyses of Article Vocabulary: 5%
- In-Depth Analysis of Article Vocabulary (due 27 November): 10%
- Final Exam: 35%

No late assignments will be accepted without advance permission from the instructor.

### *Tests and final exam*

Two general etymology tests will be given over the course of the term, in which you will analyse a set of words and give the meanings of their elements. The vocabulary for these tests will be drawn entirely from the vocabulary list distributed to the class. The final exam (cumulative) will combine these elements with discussions of terminology in passages from scientific articles, and short-answer questions on the historical development of scientific terminology.

### *Vocabulary presentation*

Each student will be given seven minutes to present part of the vocabulary list to the class, on a date determined at the beginning of the course. For the Latin or Greek prefixes, suffixes, or roots you are given, you will discuss uses of the elements in English scientific vocabulary and, where applicable, in everyday language, with the aim of providing the class with methods of remembering the words in question.

### *Pre-lecture analyses of article vocabulary*

During each lecture, we will dissect the terminology of two peer-reviewed scientific articles. Before class, skim one of the articles (to which links will be supplied on the Learning Portal) and make a list of ten words that you find unusual and appear to you to be based on Greek or Latin. Break down one of these words into its constituent roots based on the etymologies provided in dictionaries (please indicate which you are using). This must be submitted through the Learning Portal **by 11:59 pm the night before each class**. We will analyse these words during class the following day.

### *In-depth analysis of article vocabulary*

This assignment builds on your weekly experience examining vocabulary from journals. Select twenty terms from two recent (2014) articles in peer-reviewed scientific journals, and analyse their etymology and meaning. You should use at least three different dictionaries (or other scholarly sources) to support your findings. As models, you might examine Cascarini (2007) or Cooper and Cascarini (2008). Unlike these articles, however, you must fully cite the dictionaries and other sources used using author-date system of the *Chicago Manual of Style* (used in this syllabus) or another style relevant to your discipline.

## MISSED AND LATE ASSIGNMENTS OR TESTS

Tests and assignments may be excused only in cases of medical or personal emergencies. Within three days of the event, absences must be reported online through ROSI, in addition to notifying me via email. The weight of the excused test or assignment will be added to the weight of the next such item on the schedule. Pre-lecture analyses of article vocabulary may be excused, but not handed in late. The in-depth analysis of article vocabulary will only be accepted after the deadline with prior permission (which must be requested at least two days in advance via email).

## ACADEMIC INTEGRITY

Academic integrity is fundamental to learning and scholarship; for a recent example of its importance to the sciences, see Garner (2014). Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the University of Toronto degree that you earn will be valued as a true indication of your individual academic achievement, and will continue to receive the respect and recognition it deserves. All suspected cases of academic dishonesty will be investigated following the procedures outlined in the University of Toronto's [Code of Behaviour on Academic Matters](#). The consequences for academic misconduct can be severe, including a failure in the course and a notation on your transcript. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. If you have questions about appropriate research and citation methods, seek out additional information from me, or from other available campus resources. If you are experiencing personal challenges that are having an impact on your academic work, please speak to me or seek the advice of your college registrar.

## ACCESSIBILITY

Students with diverse learning styles and needs are welcome in this course. If you have a disability or health consideration that may require accommodations, please feel free to approach me and/or the [AccessAbility Resource Centre](#) as soon as possible. AccessAbility staff (located in DV 2047) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

The [Robert Gillespie Academic Skills Centre](#) is also available to all students, and offers a full range of workshops, seminars and individual consultations.

## QUESTIONS

You may direct any questions or concerns about the lectures or assignments to the instructor either via email or during office hours. Please ensure that the course code (CLA201) is included in the subject line, and that you sign your message with your full name. I will respond to all messages within 48 hours.

## READINGS

There is no required textbook for this course. All readings are available as PDFs through the Learning Portal; these supplement the lectures by providing historical background on the development of scientific terminology and some points of grammar. Questions based on these readings will appear on the tests and final exam.

We will make extensive use of the etymologies found in English and technical dictionaries. The [Oxford English Dictionary](#) is excellent, but often more detailed than what you strictly need for this course. For quick reference, I would recommend Stevenson (2010), available online through [Oxford Dictionaries](#) with recordings of pronunciation (also included with Mac OS X). Venes (2013) is an excellent medical dictionary available in the library's reference collection (and, in theory, [available online through the library](#), but the format is very difficult to use). These titles are available for purchase through the bookstore.

Classical dictionaries are necessary to fill in the details for more obscure terms. Available online through [Logeion](#), [Perseus](#), and various other sources are two of the most comprehensive dictionaries of Greek and Latin, respectively: Liddell, Scott, and Stuart Jones (1940) – for which a 1996 supplement is available in print – and Lewis and Short (1879). Also available in the library's reference collection is Glare (1982), a more recent Latin dictionary.

You may wish to make use of two books on reserve at the UTM Library: Ayers (1972) is the source for most of this course's vocabulary and structure for presenting concepts from Greek and Latin, while Haubrich (2003) is a useful reference tool for examining the origins of medical words.

## SCHEDULE

### *Part I: Scientific terms from Greek*

#### *1. Thursday, 11 September*

- The History of English
- Guide to Reference Tools
- Greek Roots, Prefixes, and Suffixes

READ Dirckx (2006), a summary of basic concepts; Turmezei (2012), an overview of the sources of words in anatomical terminology

#### *2. Thursday, 18 September*

- The Greek Alphabet
- Basic Concepts of Inflected Languages
- Greek Adjective-Forming and Compound Suffixes

READ Džuganová (1998), showing the difference between a prefix and a suffix; Dirckx (1985), on the function of gender in language

#### *3. Thursday, 25 September*

- Greek Noun-Forming Suffixes
- Scientific Use of Greek and Latin

READ Džuganová (2013), explaining current approaches to terminology; Dirckx (2001), on singular and plural terms

#### 4. Thursday, 2 October

- Greek Plurals, Diminutives, and Verb-Forming Suffixes

READ Dirckx (2000a) and Dirckx (2000b), discussing ancient interpretations of plagues; Dirckx (1999), on diminutives

#### 5. Thursday, 9 October

- Evolving Meanings
- Terminology and History

READ Sakai (2007), on the development of anatomical terminology; Kachlík et al. (2008), describing the modern standardization of anatomical terminology; Soutis (2006), on Greek words found in the context of paediatric surgery

#### 6. Thursday, 16 October

- **Test I**
- Figurative Usage

READ Paluzzi et al. (2012), on terms used in neuroanatomy; van Regenmortel (2000), on possible issues with the use of Latin in taxonomy

### *Part II: Scientific terms from Latin*

#### 7. Thursday, 23 October

- Scientific Communication and Peer Review
- Hybrid Words
- Latin Prefixes and Stems

READ Garner (2014), on using scientific terminology to track plagiarism; Dirckx (1977), on the combination of Greek and Latin in a single word; Dirckx (1988; 1990), a list of Latin words in current usage

#### 8. Thursday, 30 October

- Latin Suffixes I
- Medieval Contributions to Scientific Terminology

READ Džuganová (2006), on prefixes and suffixes with a negative meaning; Dirckx (2007), translating Isidore of Seville's *Etymologies*, a medieval approach to word derivations

#### 9. Thursday, 6 November

- Latin Suffixes II
- Early-Modern Contributions to Scientific Terminology

READ Ivanová and Holomáňová (2001), discussing terminology reform by Vesalius; Musil et al. (2014), effects of early-modern scholarship on the nomenclature of the human skeletal muscles

10. Thursday, 13 November

- **Test II**
- Latin Suffixes III
- Latin Nouns

READ Dirckx and Leider (1981), plurals of Latin nouns and adjectives; Lydiatt and Bucher (2010), on the nomenclature of the larynx

11. Thursday, 20 November

- Latin Nouns II
- Latin Declensions and Plurals

READ Davis et al. (2014), on the etymology of the cranial nerves; Dirckx (1987), a list of obsolete medical terminology; Leider and Dirckx (1982), a list of Latin phrases used in scientific writing

12. Thursday, 27 November

- **In-Depth Analysis of Article Vocabulary Due**
- Latin Phrases
- Conclusion

READ Marečková, Šimon, and Červený (2002), on the future of Latin in the sciences; Díez Arroyo (2013), on scientific terminology in advertising

*Final exam: To be announced*

BIBLIOGRAPHY

The following resources are available through the University of Toronto library (links to subscription articles will only work on the campus network). For convenience, PDFs of articles can also be found on the Learning Portal.

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- Cascarini, L. 2007. 'Mandibular Etymologies'. *British Dental Journal* 203 (4): 209–10. doi:[10.1038/bdj.2007.733](https://doi.org/10.1038/bdj.2007.733).
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