

Creating Vocabulary Lists Using Bridge Tools and a Spreadsheet

These instructions will show you how to:

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General Information

Bridge Tools was developed by Bret Mulligan, Jack Raisel, James Faville, and Andy Janco with the generous support of Haverford College.

bmulliga@haverford.edu
haverford.edu/classics

An on-line version of Bridge Tools will be available soon at:

<http://bridge.haverford.edu/lemmatizer>

The Python scripts for Bridge Tools are available on Github:

<https://github.com/HCDigitalScholarship/bridge-tools>

Lemmatization data for the textbooks and core lists in The Bridge are available on Github:

<http://github.com/GitClassical/Bridge>

I. Auto-lemmatize Your Passage Using Bridge Tools

You can lemmatize your own texts using Bridge Tools. These instructions will walk you through auto-lemmatizing your text using Haverford's *Bridge Tools* suite, an easy-to-use interface for the CLTK (Classical Language Toolkit) Lemmatizer. You can also use the Python scripts available on Github. Instructions for using the command-line scripts is available in the Readme file on GitHub.

Step 1. Before you Start: Suggestions for Transcription

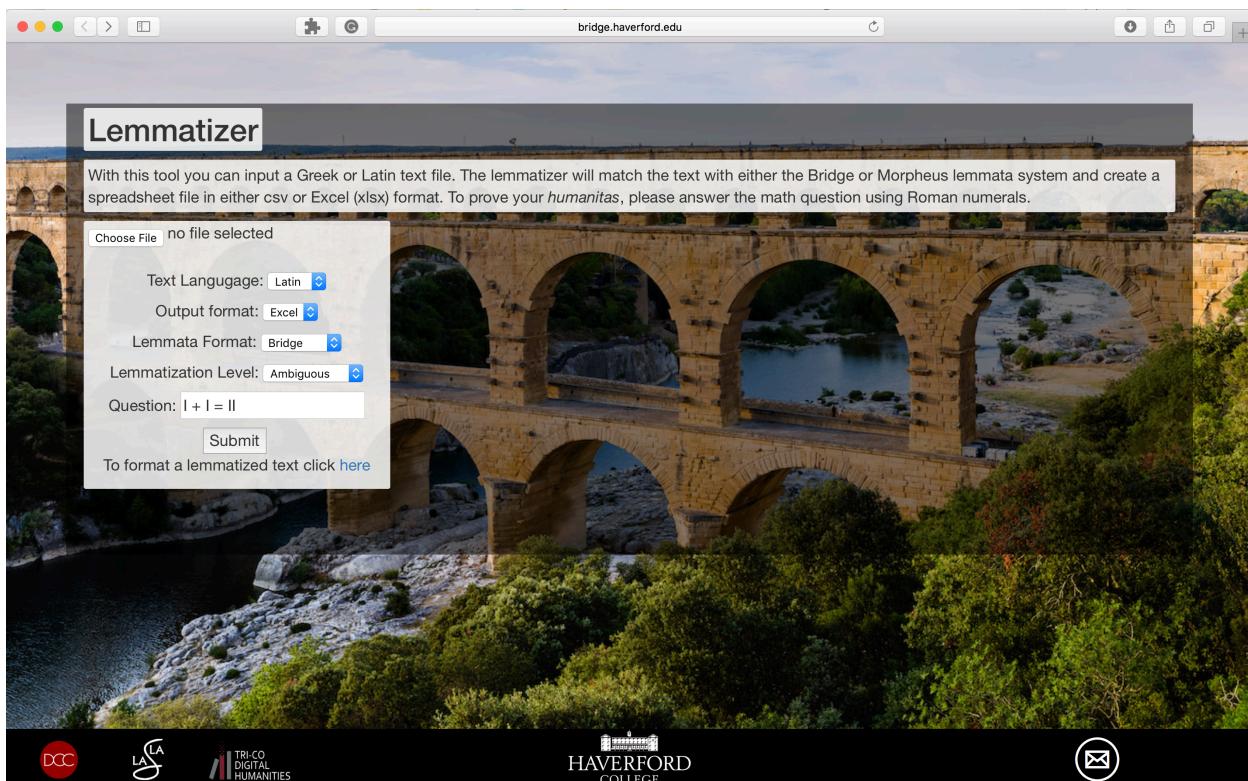
If you are preparing a text for lemmatization, note that your file must be **plaintext** (i.e. it must end in .TXT; not RTF or .doc)

You may or may not be able to copy/paste from a PDF. OCR applications will have more or less success with Latin and Greek. Be sure to proofread your passage thoroughly before you begin.

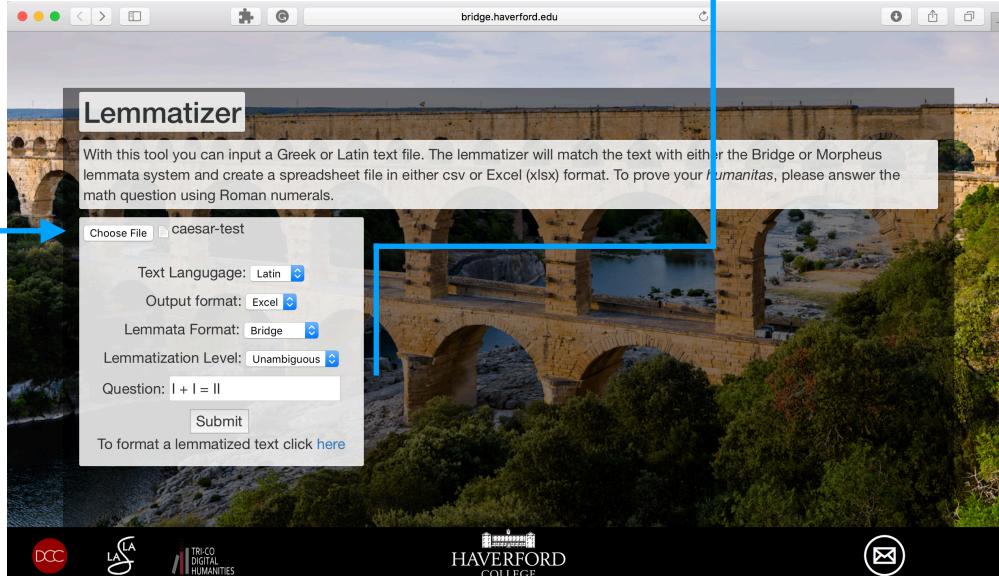
Latin texts must not have macrons.

You would be well served to use a simple text editor for your transcription rather than Word, Pages, etc. Word processors have a tendency to... process (auto-correct and other tomfoolery). UseTextEdit if you have a Mac; Notepad on a PC.

Step 2. Open Bridge Tools at bridge.haverford.edu/lemmatizer



Step 3. Upload Your File and Select Your Settings and Submit



Select your **Language** and **Output Format** and **Lemmata Format** and **Lemmatization Level**.

Language: Greek or Latin

Output Format: Excel or CSV (if you plan to import into another application; if you are working with Greek, you might need to export as a CSV file and then import into Excel, being sure to indicate the proper text-encoding, UTF-8, or else you will see gibberish).

Lemmata Format: Bridge or Morpheus

Bridge is the custom lemmata scheme used by The Bridge. Its strength is that it is designed to best match real-world encounters with vocabulary rather than more refined morphological distinctions; e.g. it differentiates the preposition *cum* and the conjunction *cum* but groups together the preposition *post* and the adverb *post*.

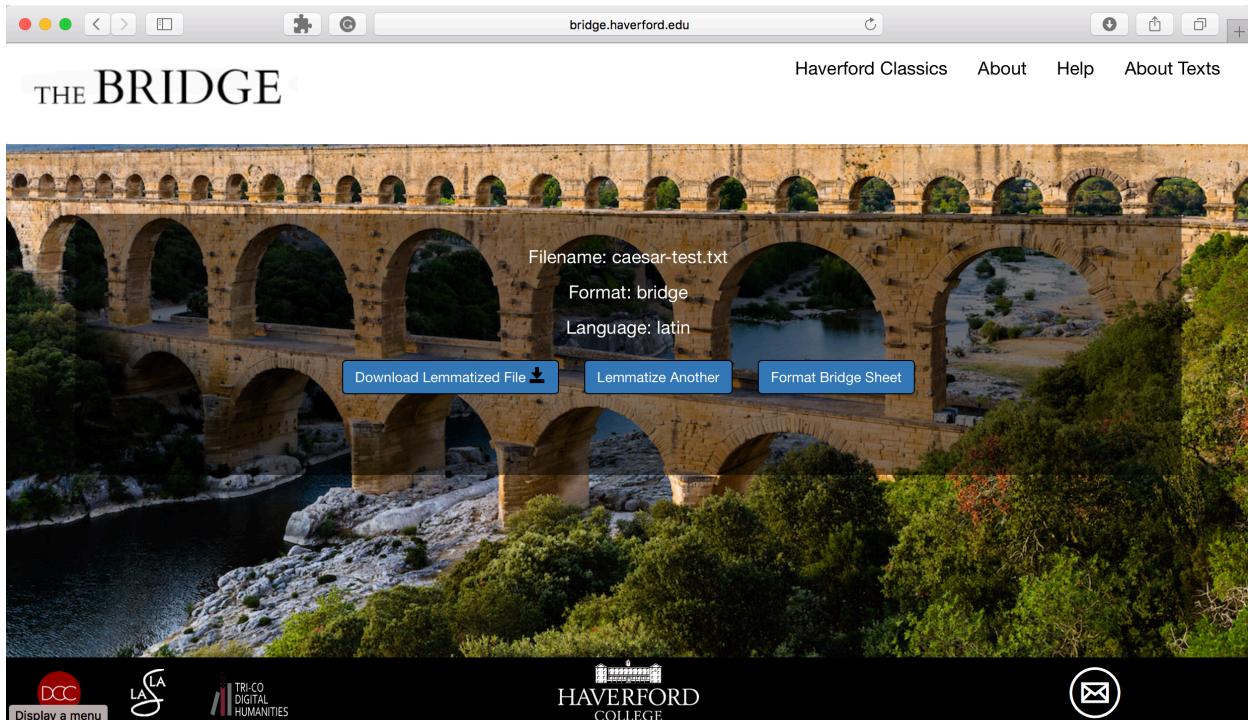
Morpheus is a popular lemmatization scheme, based on the original Perseus lemmata. The default lemmatization scheme of the CLTK lemmatizer, it enables easier matching to, e.g. Perseus or Logeion.

Lemmatization Level: Unambiguous or Ambiguous

Unambiguous: only returns a lemma if the form is not a homonym. **Strongly suggested** as it avoids mislemmatizing (almost all) words.

Ambiguous: the lemmatizer will make its best guess at every form; **caveat:** at present, the CLTK lemmatizer is relatively "dumb" and will tend to pick the first option. Thus *est* will always be lemmatized as a *edo* not *sum*.

Step. 4. Download Your File or Lemmatize Another Text



Once you have lemmatized your file, you will need to download it by selecting the **Download Lemmatized File** button. On this page you can also **Lemmatize Another** (file) or **Format Bridge Sheet**.

Nota Bene: this is your one and only chance to download your new file. If you lemmatize another or format a sheet, your lemmatized file will not be saved.

Format Bridge Sheet: this tool allows you to take your completed lemmatization sheet (see below for more) and prepare it for submission into The Bridge. You should not contemplate this until your text is completely lemmatized.

When you click **Download Lemmatized File** your file will be downloaded to the default download location on your computer. It will have a randomized title that looks something like this: **tmpc3nQH_.xlsx**.

You will be able to open this file directly in Excel; but before you do so, I suggest renaming it with a more intelligible title.

II. Complete the Lemmatization of Your Passage

Now you have a lemmatized text in a spreadsheet. This spreadsheet contains a lemmatized version of your text.

The screenshot shows a Microsoft Excel spreadsheet titled "tmpc3nQH_". The spreadsheet has four columns: "TITLE", "TEXT", "LOCATION", and "RUNNING COUNT". The "TITLE" column contains unique IDs for each word. The "TEXT" column contains the original inflected words from the text. The "LOCATION" column contains the row number where each word appears. The "RUNNING COUNT" column contains the cumulative count of each word's appearance. The spreadsheet is currently on the "Home" tab and shows rows 1 through 23. A green bar at the bottom indicates "LEMMA MATCH".

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	TITLE	TEXT	LOCATION	RUNNING COUNT										
2	morpheus: litt	litteris	1	1										
3	morpheus: c	c	2	2										
4	morpheus: ca	Caesaris	1	3										
5	CONSVL	consulibus	1	4										
6	REDDO	redditis	1	5										
7	AEGRE	aegre	1	6										
8	AB	ab	1	7										
9	HIC/1	his	1	8										
10	morpheus: im	imperaturam	1	9										
11	morpheus: es	est	1	10										
12	SVMMA	summa	1	11										
13	TRIBVNVS	tribunorum	1	12										
14	morpheus: pl	plebis	1	13										
15	CONTENTIO/1	contentione	1	14										
16	VT/4	ut	1	15										
17	IN	in	1	16										
18	SENATVS	senatu	1	17										
19	RECITO/1	rectilarentur	1	18										
20	VT/4	ut	1	19										
21	VERO/3	uero	1	20										
22	EX	ex	1	21										
23	morpheus: litt	litteris	1	22										

Description of Columns

TITLE: the unique ID for the word in the text

TEXT: the word as it appears in your text

LOCATION: the location of the word in your text

RUNNING COUNT: the order of the words as they appear in your text

Your text runs down the page in the TEXT Column (C). In Column (B), the inflected words in the text are matched to a dictionary headword or lemma. Unambiguous words (i.e. words with no homonyms) have been automatically added to the spreadsheet by the lemmatizing program. Auto-lemmatization is highly accurate; but it is recommended that you audit auto-lemmatized words as you go.

If you selected Bridge format for lemmata, these TITLEs be in ALL CAPS in Column (B).

Words that (1) could be lemmatized but are ambiguous or (2) have been lemmatized but that were not able to be converted to a proper Bridge TITLE will be prefaced by "morpheus: " in Column (B). It is very likely that these words are in The Bridge Dictionary.

Words that could not be handled at all will have "morpheus: none" in Column (B). There will likely be few such words.

The key to lemmatization is to connect the words in your text to the proper lemma or unique ID or TITLE by adding the correct TITLE in Column (B) for every word. You will replace the unlemmatized or ambiguous entries in Column (B) with the proper title.

Readyng Your Sheet for Human Lemmization

Before you start lemmatizing your text, you will probably want to add some capabilities and information to your sheet.

Step 1. Add a local copy of the BRIDGE DICTIONARY to your sheet

Download a copy of the Bridge-Vocab-[Language]-Vocab-Master.xlsx on <http://github.com/GitClassical/Bridge>.

The screenshot shows a GitHub repository page for 'The Bridge: Lemmatizer'. The repository has 1 star and 0 forks. A file named 'Bridge-Vocab-Latin-Vocab-Master.xlsx' is listed, uploaded by 'bmulligan3' 7 days ago. The file size is 2.89 MB. There are 'Download' and 'History' buttons. Below the file preview, it says '(Sorry about that, but we can't show files that are this big right now.)'

Open the file and copy the DICTIONARY sheet to your text's spreadsheet.

The image shows two Excel spreadsheets side-by-side. The left spreadsheet is titled 'tmpc3nQH_'. It has a 'DICTIONARY' sheet with columns: TITLE, TEXT, LOCATION, and RUNNING COUNT. The right spreadsheet is titled 'Bridge-Vocab-Latin-Vocab-Master'. It also has a 'DICTIONARY' sheet with columns: TITLE, DISPLAY LEMMA, SIMPLE, and SHORTDEF. Both sheets contain numerous entries, such as 'IVRA/N' with 'lūra –ae m.' and 'iure' respectively, and 'IVS1' with 'iūs iūris n.' and 'iūs iūris n.'. The bottom of the right spreadsheet shows tabs for 'DICTIONARY', 'Sheet3', 'Sheet1', 'Match Correction', 'Sheet2', 'Removed; To Add to Converter', and 'Not in conv; not removed'.

Screenshot of Microsoft Excel showing a comparison between two tables of Old Norse words. The left table (A) lists words from E7522, and the right table (B) lists words from E7522. Both tables have columns A, B, C, and D.

	A	B	C	D		A	B	C	D
1	TITLE	DISPLAY LEMMA	DISPLAY	SIMPLE	SHORT	1	TITLE	DISPLAY LEMMA	DISPLAY
7515	IVRA/N	iūra –ae m.	iura –ae m	iura	a chai	7515	IVRA		
7516	IVRE	iūre	iure	iūre	rightly	7516	IVRE		
7517	IVRGIVM	iurgium –ī n.	iurgium –i	iurgium	alterc	7517	IVRG		
7518	IVRISDICTIO	iūrisdictiō iūrisdictiōnis f.	iurisdictio	iurisdictio	jurisdi	7518	IVRIS		
7519	IVRISPERITVS	iūrisperitus –a –um	iurisperitu	iurisperitu	experi	7519	IVRIS		
7520	IVRO	iūrō iūrāre iūrāvī iūrātus	iuro	iurare	iuro	7520	IVRO		
7521	IVSIVRANDVM	iūs iūrandum iūris iūrandī n.	ius	urandi	ius	7521	IVSIV		
7522	IVS/1	iūs iūris n.	ius	iuris n.	ius	7522	IVS/1	right,	
7523	IVS/2	iūs iūris n.	ius	iuris n.	ius	7523	IVS/2	broth,	
7524	IVSSIO	iussiō –ōnis f.	iussio	–oni	iussio	7524	IVSSI		
7525	IVSSVM	iūssum iūssi n.	iussum	ius	iussum	7525	IVSSV		
7526	INIVSSVS/1	iūssus –ūs m.	iussus	–us	iussus	7526	INIVS		
7527	IVSSVS	iūssus iūssūs m.	iussus	iuss	iussus	7527	IVSSV		
7528	IVSTIFICATIO	iustificatiō –ōnis f.	iustificatio	iustificatio	justific	7528	IVSTI		
7529	IVSTIFICVS	iustificus –a –um	iustificus	–	iustificus	7529	IVSTI		
7530	IVSTINVS/N	lustinus –ī m.	lustinus	–i	lustinus	7530	IVSTI		
7531	IVSTITIA	iūstitia –ae f.	iustitia	–ae	iustitia	7531	IVSTI		
7532	IVSTITIVM	iustitium –(i)ī n.	iustitium	–	iustitium	7532	IVSTI	a cess	
7533	IVSTITVM	iūstitium –(i)ī n.	iustitium	–	iustitium	7533	IVSTI	justice	

You could repeat this process to add a local copy of the DCC or another core list or vocabulary from your textbook.

Screenshot of Microsoft Excel showing a local copy of the DCC added to the spreadsheet. The table has columns A through F.

	A	B	C	D	E	F
77	AT/2	74	but, but yet	1	Conjunctions/Adverb	
78	CORPVS	75	body	1	The Body	
79	QVOQVE	76	also, too	1	Conjunctions/Adverb	
80	ALIQVIS	77	some, any; si	1	Pronouns/Interrogative	
81	TOTVS	78	whole, entire	1	Measurement	
82	SIC	79	in this manner	1	Conjunctions/Adverb	
83	HIC/2	80	here; hinc: fr	1	Place	
84	ISTE	81	that, that of	1	Pronouns/Interrogative	
85	VRBS	82	city	1	The City	
86	PETO	83	seek, aim at	1	Motion	
87	IVBEO	84	bid, order	1	Justice	
88	VIR	85	man	1	People	

Add helpful information to your text's spreadsheet.

In the **LEMMATA MATCH** sheet, **add headers for data that interest you**. For example:

	A	B	C	D	E	F	G	H	I	J	K	L
1	CHECK	TITLE	TEXT	LOCATION	SECTION	RUNNING COI	DISPLAY LEMI	SHORTDEF	LONGDEF	LOCALDEF	DCC	PROBLEM
2	#N/A	morpheus: litteris	Litteris	1	1							

Description of Columns

CHECK: verifies that the TITLE in Column (B) is valid (in the DICTIONARY)

TITLE: the unique ID for the word in the text

TEXT: the word as it appears in your text

LOCATION: the location of the word in your text

RUNNING COUNT: the order of the words as they appear in your text (allows you to resort by text-order)

DISPLAY LEMMA: the principal parts for the TITLE, drawn from the DICTIONARY

SHORTDEF: the core definition of the TITLE, drawn from the DICTIONARY

LONGDEF: a more extensive definition of the TITLE, drawn from the DICTIONARY

LOCALDEF: the best definition of the word as it appears in your text

DCC: Is the word in the DCC Core List?

Problem: a place to note problems with the text and/or lemmatization

If you look at the bottom of the spreadsheet you will see three sheets: LEMMATA MATCH (the sheet you'll be working in), DICTIONARY (a local copy of The Bridge Dictionary) and DCC (a list of the DCC Latin Core). If you wish to exclude other vocabulary (e.g. the vocabulary in a textbook) you may add additional sheets to the spreadsheet).

The screenshot shows a Microsoft Excel spreadsheet with the title bar "tmpc3nQH_.xlsx". The active sheet is "LEMMATA MATCH". The table structure is as follows:

	A	B	C	D	E	F	G	H	I	J	K	M	N
1	CHECK	TITLE	TEXT	LOCATION	SECTION	RUNNING COI	DISPLAY LEMI	SHORTDEF	LONGDEF	LOCALDEF	DCC	PROBLEM	
2	#N/A	morpheus: litteris	Litteris	1	1								
3		morpheus: c	c	1	2								
4		morpheus: caesaris	Caesaris	1	3								
5		CONSVL	consulibus	1	4								
6		REDDO	redditis	1	5								
7		AEGRE	aegre	1	6								
8		AB	ab	1	7								
9		HIC/1	his	1	8								
10		morpheus: impetratum	impetratum	1	9								
11		morpheus: est	est	1	10								
12		SVMMA	summa	1	11								
13		TRIBVNVS	tribunorum	1	12								
14		morpheus: plebis	plebis	1	13								
15		CONTENTIO/1	contentione	1	14								
16		VT/4	ut	1	15								
17		IN	in	1	16								
18		SENATVS	senatu	1	17								
19		RECITO/1	recitarentur	1	18								
20		VT/4	ut	1	19								
21		VERO/3	uero	1	20								
22		EX	ex	1	21								

The tabs at the bottom are "LEMMATA MATCH", "DICTIONARY", "DCC", and a "+" button. The status bar shows "Ready" and "100%".

Step 1. Use Formulae to pull in lexical information into your sheet.

I suggest using the CHECK column to verify that you have selected a valid TITLE. Add this formula to cell A2:

```
=VLOOKUP(B2,DICTIONARY!A:E,1,TRUE)
```

Then copy the formula to the rest of the rows in Column (A)

	A	B	C	D	E	F	G	H
1	CHECK	TITLE	TEXT	LOCATION	SECTION	RUNNING CO	DISPLAY LEMI	SHORTDEF
2	#N/A	morpheus: litteris	Litteris	1		1		
3	#N/A	morpheus: c	C	1		2		
4	#N/A	morpheus: caesaris	Caesaris	1		3		
5	CONSLV	CONSLV	consulibus	1		4		
6	REDDO	REDDO	redditis	1		5		
7	AEGRE	AEGRE	aegre	1		6		
8	AB	AB	ab	1		7		
9	HIC/1	HIC/1	his	1		8		
10	#N/A	morpheus: impetratum	impetratum	1		9		
11	#N/A	morpheus: est	est	1		10		
12	SVMMA	SVMMA	summa	1		11		
13	TRIBVNVS	TRIBVNVS	tribunorum	1		12		
14	#N/A	morpheus: plebis	plebis	1		13		
15	CONTENTIO/1	CONTENTIO/1	contentione	1		14		
16	VT/4	VT/4	ut	1		15		
17	IN	IN	in	1		16		
18	SENATVS	SENATVS	senatu	1		17		

If a the TITLE and CHECK columns match, you have successfully lemmatized the word to a known quantity. If you see "#N/A" that means the value in TITLE is not in the DICTIONARY (either because the word has not yet been added or because, in the example, the word has not yet been properly lemmatized).

Step 2. Add principal parts and definitions and presence in DCC, etc. as needed.

You can use VLOOK formulae to pull all the relevant information. I provide samples here:

DISPLAY LEMMA =VLOOKUP(B2,DICTIONARY!A:E,2,TRUE)

SHORTDEF =VLOOKUP(B2,DICTIONARY!A:E,4,TRUE)

LONGDEF =VLOOKUP(B2,DICTIONARY!A:E,5,TRUE)

DCC =VLOOKUP(B2,DCC!A:A,1,TRUE)

You can pull other information from DICTIONARY or DCC or another sheet by changing the range and value in the formula.

Lemmatize your passage by identifying each word and adding new vocabulary to your local dictionary.

Lemmatizing requires you to add the correct TITLE to the TITLE Column (C). A TITLE is either a Known Lemma or an Unknown Lemma. First we will discuss Known Lemmas, then how to handle New Lemmas.

At the start you'll need to find the correct TITLEs in the DICTIONARY sheet. When you start typing in a cell in Column C, possibilities will be suggested if that TITLE already appears in the TEXT sheet.

Note that TITLES follow a standard orthography and format:

- TITLES are always ALL-CAPS
- u's are v's; j's are i's; e.g., the TITLE for "abjuro" is ABIVRO.
- homonyms are distinguished by suffixes /1, /2, etc.
- Homonym suffixes usually follow a set order: nouns (ordered by declension), adjectives, numbers, pronouns/demonstratives/interrogatives, verbs (ordered by conjugations), adverbs, prepositions; e.g. ADEO/1 is the verb adeō adīre and ADEO/2 is the adverb.
- There are a few other suffixes to distinguish homonyms; e.g., /N for proper names; /A for proper adjectives.
- Most prefixes are euphonized: e.g. the TITLE for adsequor is ASSEQVOR; adlevō is ALLEVO/1 (lift, raise) or ALLEVO/2 (make smooth)
- Most numbers are resolved by to the cardinal form; e.g. the title for decimus is DECEM
- Regular adverbs are resolved back to their adjective; e.g. clare is CLARVS

After a short time you'll have a sense of what form a TITLE may take and the process can move quite quickly through your text.

Read through every entry, manually checking those words that have been lemmatized and lemmatizing the ambiguous forms that were not auto-lemmatized.

You can find complete instructions for lemmatizing your text for inclusion in The Bridge at <http://iris.haverford.edu/bridge/collaboration-tools/>

Note that the DICTIONARY contains over 20,000 TITLES. If you are lemmatizing a word that is not a hapax or a proper name there is a very good chance that it is already in the DICTIONARY. But...

If your word is not in the DICTIONARY or the TITLE lacks definitions...

NEW TITLE: If the word does not appear in the DICTIONARY, you should add it **at the bottom** of the DICTIONARY SHEET.

MODIFICATION OF EXISTING TITLE: if a word appears in the DICTIONARY but without any other information (i.e. the TITLE is there, but it lacks dictionary entries and definitions), you can add the information in the DICTIONARY sheet.

If you need to add dictionary entries, the fastest and most accurate way to do so is to copy them from LaNe which is available on [Logeion](#).¹

The screenshot shows the Logeion interface with the search term 'femina' entered. On the left, a sidebar lists various Latin words starting with 'fem'. The main content area displays several sections for 'femina': 'LatinShortDefs' (defining it as 'femur, the thigh, upper part of the thigh'), 'FriezeDennisonVergil' (mentioning 'femur, , oris, and (from obso. fenen), feminis, n.: the thigh, 10.344; 788.'), and 'LewisShort' (providing a detailed etymological note). To the right, there are 'Frequencies' and 'Collocations' tables, and at the bottom, a 'DuCange' section with a note about 'FEMUR'.

If you want to use customized definitions, place these in LOCALDEF. Make sure that the LOCALDEF for each word is the best definition for the word. Modify these as needed.

[Logeion](#) is also a great place to find/copy definitions. But be thoughtful about this; make sure that you include definitions relevant to your text.

¹ LaNe = Woordenboek Latijn/Nederlands, 6th revised edition 2014, a Latin-Dutch translation dictionary, originally based on Pons Globalwörterbuch Lateinisch-Deutsch (Klett) but with full coverage of all entries also contained in the Oxford Latin Dictionary. It is the current gold standard for Latin vowel quantities.

III. Add Formula to Create a Pre-Formatted Vocabulary List

Step 1. In your spreadsheet, add a header “HTML” in Column (M).

	J	K	L	M
F	LOCALDEF	DCC	PROBLEM	HTML
A		#N/A		
A		#N/A		

Step 2. Use a formula to combine DISPLAY LEMMA and SHORTDEF (or LONGDEF or LOCALDEF) into a single web-ready string.

Paste this formula in cell M2

= ""&G2&": "&H2

This will yield a result like this:

Chrauttius –ī m.: Chrauttius (name)

Which will look like this on-line:

Chrauttius –ī m.: Chrauttius (name)

Step 3. Copy-paste or drag-copy the formula for the rest of your text.

At this point you could create a full vocabulary list for your text by copying the HTML in Column M and pasting it into any HTML editor (e.g. Wordpress).

In what follows I will show you how to create filtered lists...

IV. Filter Vocabulary By Words in the DCC (or another) Core

Step 1. In your spreadsheet, add a header “DCC” in Column (K)

	J	K	L	M
F	LOCALDEF	DCC	PROBLEM	HTML
A		#N/A		
A		#N/A		

Step 2. Use a VLOOKUP formula to check whether the TITLE appears in the DCC Core.

Paste this formula into cell L2

=VLOOKUP(B2,DCC!A:B,2,FALSE)

Then copy-paste or drag-copy the formula for the rest of your text.

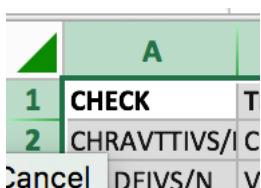
This formula will return the TITLE for words in the DCC Core. If a word does not appear in the DCC Core, the cell in Column L will display “#N/A”.

If you are interested in the frequency ranking of the words in the Core, change the formula from “,1,” to “,2.”

If you would like to filter out other vocabulary—for example from a textbook—add a Sheet to your spreadsheet and add your words in Column (A). Core lists are available at github.com/GitClassical/Bridge

Step 3. Add FILTERS to the spreadsheet.

Select the entire sheet by clicking on the cell in the extreme top left of sheet (between A and 1). Note: never “select all” in Excel (Command-A or Control-A), as any gap in your data will result in you selecting a sub-set of your data.



Engage filters in the top-menu or the ribbon.

ECK	TITLE	TEXT FORM	LOCATION	SECTION	RUNNING	H	I	J	K	L
RAVITIVS/I	CHRAVTIVS/I	Chrauttius	Vindolanda 310		1	DEF	LONGDEF	LOCALDEF	DCC	
DEVS/N	VELDEIVS/N	Ueldeio	Vindolanda 310		1	his (name)	Chrauttius (name)		#N/A	
/S	SVVS	suo	Vindolanda 310		1	s (name)	Veldeius (name)		#N/A	
TER	FRATER	fratri	Vindolanda 310		1	its own	Veldeius (name); its (own); their (own)		27	
TVTBERNA	CONTYBERNA	contubernali	Vindolanda 310		1	brother			225	
TIQVVS	ANTIQUVS	antiquo	Vindolanda 310		1	comrade-in-arms, tentmate, comrade-in-arms			#N/A	
LTVS	MVLTVS	plurimam	Vindolanda 310		1	old, ancient, old-time, former			617	
VS	SALVS	salutem	Vindolanda 310		1	many			43	
2	ET/2	et	Vindolanda 310		1	safety, health			549	
GO	ROGO	rogo	Vindolanda 310		1	and			1	
TV	te		Vindolanda 310		1	to ask (for)			551	
DEIVS/N	VELDEIVS/N	Ueldei	Vindolanda 310		1	tū tui tibi tē tē	you		9	
						11. Veldelus -ii m.	Veldeius (name)		#N/A	
						12. Veldeius (name)	Veldeius (name)		#N/A	

A small down triangle will now appear at the right of every header cell.

Step 4. Filter DCC Column (I) to show only non-core vocabulary by clicking on the small down arrow in the cell of the header row, deselect the "(Select All)" checkbox, scroll down and select "#N/A".

You are now displaying only those words in your text that do not also appear in the DCC Core.

V. Remove Duplicate Entries²

It is common practice in running lists for a short text or selection to remove repeated entries. This step will show you a foolproof way to do so.

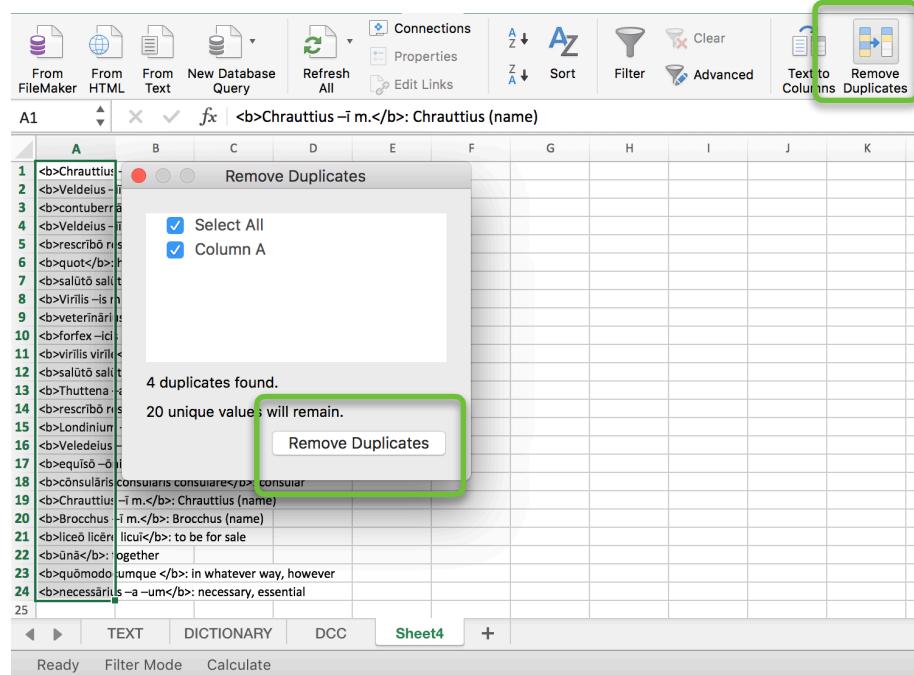
Step 1. Copy HTML Column to a new sheet

A	B	C	D	E	F	G
1	Chrauttius –ī m.: Chrauttius (name)					
2	Veldeius –ī m.: Veldeius (name)					
3	contuberralis –is m./f.: tentmate, comrade-in-arms					
4	Veldeius –ī m.: Veldeius (name)					
5	rescribō rescribere rescriptī rescriptum: to rewrite, reply (to)					
6	quot: how many, as many as (undeclinable)					
7	salūtō salūtāre salūtāvi salūtātus: to greet					
8	Virilis –is m.: Virilis (name)					
9	veterināri is –ii m.: veterinarian (name)					
10	forfex –ici m. or f.: scissors					
11	virilis virile: manly					
12	salūtō salūtāre salūtāvi salūtātus: to greet					
13	Thuttena –ae f.: Thuttena (name)					
14	rescribō rescribere rescriptī rescriptum: to rewrite, reply (to)					
15	Londinium –ī n.: Londinium (name)					
16	Veledēius –ī m.: Veledēius (name)					
17	equīsō –ō is m.: a groom, stableboy					
18	cōnsulāris cōnsulāris cōnsulāre: consular					
19	Chrauttius –ī m.: Chrauttius (name)					
20	Brocchus –ī m.: Brocchus (name)					
21	liceō licēre: to be for sale					
22	ūnā: together					
23	quōmodo umque: in whatever way, however					
24	necessārius –a –um: necessary, essential					
25						

² If you are using Google Sheets, there is a free add-on that will allow you to Remove Duplicates: <https://chrome.google.com/webstore/detail/remove-duplicates/bckmhokpcdnhhjldhhfpelhdipmlbog>

Step 2. Remove duplicate entries within the running list.

Select Column A and click the REMOVE DUPLICATES in the toolbar or top menu.



Select “Remove Duplicates” in the pop-up dialog box.

You have now produced a running list without duplicates in your section.

If you wish you can SORT this list to produce an alphabetical list, just SORT by Column (A). Note that once you sort by Column (A) you will not be able to restore the order to a running list. If you wish to be able to sort by alphabetical and running order, add a RUNNING COUNT in Column (B), e.g. B1 = 1, B2 = 2, B3 = 3, etc.

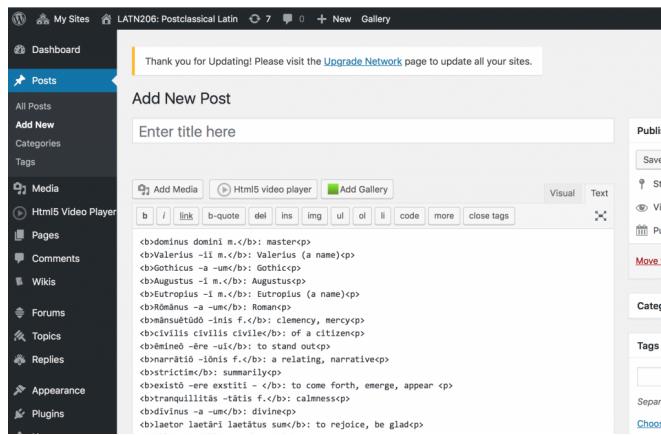
	A	B	C	D	E	F	G
1	Chrauttius -i m.; Chrauttius (name)						
2	Veldelius -i m.; Veldelius (name)						
3	contuberralis -is m./f.; tentmate, comrade-in-arms						
4	Veldelius -i m.; Veldelius (name)						
5	rescribo riscribere rescripti rescriptum; to rewrite, reply (to)						
6	quot how many, as many as (undeclinable)						
7	salutü salutü salutü salutatus; to greet						
8	Virillis -i n.; Virilis (name)						
9	veterinari -is i m.; veterinarian (name)						
10	forfex -icu m. or f.; scissors						
11	virillis virili manly						
12	salutü salutü salutü salutatus; to greet						
13	Thuttena -ae f.; Thuttena (name)						
14	rescribo riscribere rescripti rescriptum; to rewrite, reply (to)						
15	Londinium -i n.; Londinium (name)						
16	Veldeleius -i m.; Veledeleius (name)						
17	equisü -o is m.; a groom, stableboy						
18	consularis consularis consulaire; consular						
19	Chrauttius -i m.; Chrauttius (name)						
20	Brocchus -i m.; Brocchus (name)						
21	liceo liceni licui; to be for sale						
22	unüa together						
23	quomodo umque ; in whatever way, however						
24	necessarilis -a -um; necessary, essential						
25							

VI. Create a Copyable, Formatted List

Step 1. In Wordpress, create a new post and paste it in the TEXT pane of the editor.

Remove "HTML" from the first row if you have not done so already already.

N.B. Copying and posting your entire list at once for a large text may cause your computer to grind to a halt; if it does, copy and paste your list in sections.

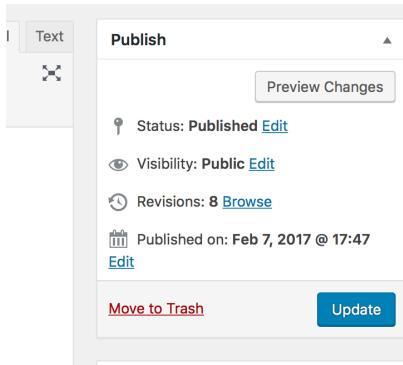


Your list is now ready to be displayed on-line.

Step 2. Move into the VISUAL pane of the text editor and copy the text into a word processor document (e.g. Word or TextEdit)

The screenshot shows the WordPress dashboard with the 'Posts' menu selected. A new post is being created, titled 'Add New Post'. The 'Visual' tab is active, showing the same text as the previous screenshot. To the right, a Microsoft Word ribbon interface is visible, indicating the text is being edited in a Word document. The text in the Word document is identical to the one in the TEXT editor.

Once you have copied your text from Wordpress, be sure to move the page to the trash.



Step 3. Format Your List.

In your document, add a header indicating your text and selection, format text as you wish and save as a doc or PDF.

A screenshot of a Microsoft Word document titled "Vocabulary for Eutropius, Book 1". The document contains the following text:

dominus dominī m.: master
Valerius –īi m.: Valerius (a name)
Gothicus –a –um: Gothic
Augustus –ī m.: Augustus
Eutropius –ī m.: Eutropius (a name)
Römānus –a –um: Roman
mānsuētūdō –inis f.: clemency, mercy
cīvīlis cīvīlis cīvīle: of a citizen

At the bottom of the screen, the Word ribbon and various toolbars are visible, along with the status bar showing "Page 1 of 2" and "147 Words".

VII. To Produce a Core List

To produce a list that includes only the core list in a text or passage, deselect only "#N/A" in DCC (or other Core) and repeat steps above.

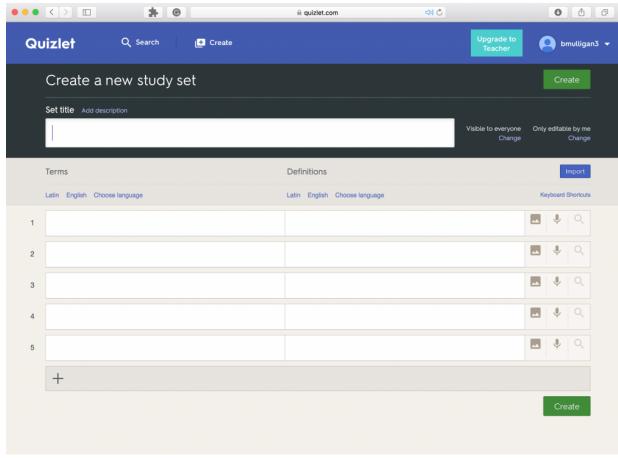
VIII. Create a Quizlet Set Using your Lemmatized Vocabulary

The instructions below are for [Quizlet](#) but most digital flashcard programs work along similar lines.

Step 1. Login to Quizlet (make an account if you need to) and select "Create".

A screenshot of the Quizlet website homepage. At the top, there's a search bar, a 'Create' button, and a 'Upgrade to Teacher' button. Below the header, there's a sidebar with 'Latest Activity', 'Your Study Sets', 'Settings', 'Your Classes' (with 'Scrinium Haverfordie' listed), and 'Create a class'. The main content area shows study sets: 'Weak Demonstrative: Is, Ea, Id' (17 terms) and 'Reviewing Adjectives (LNM 1: Chapters 1 to 20)' by bmulligan3 (38 terms). Below these, there's a section for 'In December 2016' and 'In November 2016'.

Step 2. Select "Import" (blue box to the right).

A screenshot of the 'Create a new study set' page on Quizlet. It has fields for 'Set title' and 'Add description'. Below these, there are tabs for 'Terms' and 'Definitions', both with 'Import' buttons. There are also language selection dropdowns for Latin, English, and 'Choose language'. The main area shows five rows for input, each with a text field and an 'Import' button. A 'Create' button is at the bottom right.

Step 3. Filter Your Vocabulary (Core? Non-Core?)

Step 4. Copy the DISPLAY LEMMA and LOCALDEF columns.

**N.B. Do not include the header;
include only the vocabulary entries.
Copy both columns are the same time,
not separately.**

A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	CHIRP	TITLE	TE	LOCATION	SECTION	RUNNING	DISPLAY LEMMA	LOCATEDEF	SHARED DEF	RECO	HTML		
2	DOMINUS	DOMINUS				0							
3	VALERIUS/N	VALENTIN	UALENTI	0	0.2		Valerius → i.m. Valerius (a name)	Valerius (a name)	N/A				
4	GOTHICVS/A	GOTHICVS/A	GOTHICO	0	0.3		Gothic → a=Gothic	Gothic	N/A				
5	MAGNVS	MAGNVS	MAXIMO	0	0.4		magnus → a=great	MAGNVS					
6	PERPETIVVS	PERPETIVVS	PERPETUO	0	0.5		perpetuus → a=continuous	PERPETIVS	N/A				
7	AVGVSTVS/N	AVGVSTVS/N	AUGUSTO	0	0.6		Augustus → i.m. Augustus (a name)	Augustus	N/A				
8	EVROPSVN/ DETHROPSVN	EVROPSVN/ DETHROPSVN	EVROPTO	0	0.7		Europus → Autroplus (a name)	Europus (a name)	N/A				
9	VIR		U	0	0.8		vir viri m. man	VIR					
10	CLARVS	CLARVS	C	0	0.9		clarus → a=um clear, distinguished	CLARVS					
11	MAGISTER	MAGISTER	MAGISTER	0	0.10		magister magi master, chief, teacher	MAGISTE					
12	MEMORIA	MEMORIA	MEMORIAE	0	0.11		memoria memoria memory	MEMORIA					
13	RES		Res	0	0.12		Res re I thing	RES					
14	ROMANVS/A	ROMANVS/A	Romanus	0	0.13		Romanus → i.m. Roman	Roman	N/A				
15	EX		ex	0	0.14		ex out of, from	EX					
16	VOLUNTAS	VOLUNTAS	uoluntatis	0	0.15		voluntas voluntus desire	VOLUNTAS					
17	MANSVETDO/MANSETVDO		Mansuetudis	0	0.16		mansuetudo – clemency, meekness	MANSVETDO					
18	TVVS	TVVS	Tutu	0	0.17		tuus → i.um TVVS	TVVS					
19	AB	AB	ab	0	0.18		ab abe from, by	AB					
20	VRBS	VRBS	urbe	0	0.19		urbo urbis f. city	VRBS					
21	COND	COND	condita	0	0.20		condō condere to build, store up	COND					

Step 5. Remove Duplicates. See Section V above.

Step 6. Paste the vocabulary into the Quizlet import page.

If you have done this correctly, Quizlet will automatically parse the dictionary entries and definitions into the "front" and "back" of cards.

The screenshot shows the Quizlet import interface. At the top, there's a text area containing Latin-Germanic pairs, followed by a preview section showing how they appear as cards. Below the preview are settings for importing tabs or commas, and an 'Import Terms' button.

Parsed Data Preview:

Term	Definition
dominus dominī m.	master
Valerius –ī m.	Valerius (a name)
Gothicus –a –um	Gothic
Augustus –i m.	Augustus
Eutropius –i m.	Eutropius (a name)
Rōmānus –a –um	Roman
mānsuētūdō –inis f.	clemency, mercy
civiliς civiliς civile	of a citizen
ēmineō –ēre –ui	to stand out
narratiō –iōnis f.	a relating, narrative
st̄rictiō –iōnis f.	a stricture, a severity

Step 7. Select Import, chose the languages for the dictionary entries and definitions, and then add a title and click the green "Create" button in upper right.

The screenshot shows the Quizlet study set creation page. It displays the imported vocabulary with terms in Latin and definitions in English. The 'Create' button is visible at the top right.

Study Set Details:

- Title: Vocabulary for Eutropius, Book 1
- Visibility: Visible to everyone
- Editability: Only editable by me

Vocabulary List:

Term	Definition	Actions
1 dominus dominī m.	master	[Image] [Speaker] [Search]
2 Valerius –ī m.	Valerius (a name)	[Image] [Speaker] [Search]
3 Gothicus –a –um	Gothic	[Image] [Speaker] [Search]
4 Augustus –i m.	Augustus	[Image] [Speaker] [Search]
5 Eutropius –i m.	Eutropius (a name)	[Image] [Speaker] [Search]