



Linguistic Analysis I: Phonetics, Phonology, Morphology

LIN 103A - Fall 2024 - Week 1 Discussion [Assignment 1 Tips]

Instructor: Dr. Laurie Lawyer, TA: Nick Aoki

Agenda

- 1. Logistics and Assignment Format**
2. Structure of Today's Discussion
3. Assignment Practice
4. Open Floor

Assignment 1 Logistics

- If you navigate to the LIN 103A Canvas page, Assignment 1 can be found by clicking on “Assignments” on the left bar and then “Homework 1”.
- Deadline: Monday, October 7th, 11:59pm PT
- Grades will be released on Wednesday, October 9th at 3pm PT (i.e., right before the first discussion section begins).
- Late assignments accepted until the release of grades, but some points will be deducted (see the syllabus on Canvas for details).
- **You are not allowed multiple attempts on the assignment - make sure that you are confident in your answers when you submit!**
 - But you don't have to complete the entire assignment in one sitting (i.e., you should be able to save your work and go back to the assignment).

Assignment 1 Format

- Covers the Week 1 material (Chapter 1 of the textbook)
- 36 questions total, divided across 7 skills (as listed on your worksheet)
- Each student's quiz will be slightly different - let me explain by showing you the quiz from the instructor's perspective...
- Rest assured that all of the questions are of equal difficulty! This policy is only intended to encourage students to submit their own work.

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Materials for Today's Discussion

- If you navigate to the LIN 103A Canvas page and click “Modules” on the left bar, you should see a Word document within the “Week 1” group titled “LIN 103A - Phonetics - Helpful Charts.docx”. You should have this document open today.
 - Contains consonant + vowel IPA charts for English, a vocal tract diagram, and lists of words for each IPA symbol
 - **For this class, you do not need to memorize these charts!**
- I will now pass out a double-sided worksheet containing an example and 3 practice exercises for each of the 7 skills covered in Assignment 1.

Plan for Today's Discussion

- We will go through each skill one at a time.

1. First, I will provide a demonstration using the provided example.

2. Second, I will give a set amount of time for you to try the practice problems (either on your own or with whoever is sitting next to you!).

- Don't feel pressure to finish all the questions within the time limit! The timing is more for myself, to ensure that I can cover all of the material today.

3. Third, I will call on people to answer the practice problems.

- Don't feel pressure to have the correct answer! Just do the best you can.

4. Finally, I will write down the answers to the practice problems on the blackboard.

- As I noted earlier, **the answers are not written directly on the worksheet** to reward/incentivize in-person attendance!

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3. Assignment Practice

1. Count Segments
2. Odd Vowel Out
3. Sound Description
4. Phonetic Decoding
5. Terminology-Word-Matching
6. Transcription
7. Articulation With Images

Skill 1: Count Segments

- A “segment” just refers to a unique sound.

ex. The word “bat” has 3 segments: [b], [æ], [t]

- **Important: Pay attention to how the word sounds, not the spelling!**

- Let’s practice! How many segments (sounds) do the following words have?

Q1: clock

Q2: exit

Q3: singsong

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Skill 2: Odd Vowel Out

- Essentially, you're being asked which word does not rhyme with the others.
 - **Important: Pay attention to how the word sounds, not the spelling!**
-

- Let's practice! In the following sets of words, the vowel sound is identical in all of them but one. Which word has the different vowel sound (i.e., is the 'odd one out')?
- Q1: cook, soot, boot, good, brook
- Q2: dud, ton, stun, bond, one
- Q3: find, vain, sane, break, feign

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Describing Consonants

- Consonants: sounds produced with narrow or complete closure in the vocal tract
- Recall that we can differentiate consonants with *phonetic features*.
- The relevant features for your assignment are:
 - Voicing, Place of Articulation, Manner of Articulation, Oral/Nasal

Consonant Features

1. Voicing: Are the vocal folds vibrating or not?

- Options: Voiceless (no vibration), Voiced (vibration)

2. Place of Articulation: Where does closure occur in the vocal tract?

- Options: Bilabial, Labiodental, Dental, Alveolar, Postalveolar, Palatal, Velar, Glottal

3. Manner of Articulation: How does airflow circulate through the vocal tract?

- Options: Stop, Nasal, Fricative, Affricate, Approximant, Lateral Approximant

4. Oral/Nasal: Is the velum lowered?

- Options: Oral (velum not lowered, air flows through mouth), Nasal (velum lowered, air flows through nasal cavity)

The Consonant IPA Chart

IPA Consonants for General American English
as used by the Cambridge Online Dictionary

	Place of Articulation ← Front → Back							
<i>numbers refer to positions on articulation diagram</i>	Bilabial (both lips) 8 - 1	Labio-dental (lip + teeth) 8 - 2	Dental (teeth) 11 - 2 11 - 2 + 10	Alveolar (behind teeth) 11 - 3, 4	Post-Alveolar (behind alveolar-ridge) 11 - 4, 5	Palatal (hard palate) 12 - 6	Velar (soft palate) 13 - 7	Glottal (throat) 16
Stop (air is stopped then released)	p • b			t • d			k • g	•
Nasal (air passes through nose)	• m			• n			• ŋ	
Fricative (air is constricted)		f • v	θ • ð	s • z	ʃ • ʒ			• h
Affricate (stop + fricative)					tʃ • dʒ			
Approximant (vowel acts as syllable boundary)				• ɹ		• j	•	
Lateral Approximant (vowel acts as syllable boundary)				• l				

- Each sound has a symbol in the International Phonetic Alphabet (IPA).

- Within Cells: Left = Voiceless, Right = Voiced

- Rows: Manner of Articulation

- Columns: Place of Articulation

- Anything that is not a nasal consonant is an oral consonant.

- ex. [p]: voiceless oral bilabial stop 16

Describing Vowels

- Vowels: sounds produced with little to no closure in the vocal tract
- Recall that we can differentiate vowels with *phonetic features*.
- The relevant features for your assignment are:
 - Height, Frontness (Rounding and Tenseness are also key features, but they don't come up on the assignment or today's worksheet)

Vowel Features

1. Height (“Vertical Tongue Position”): High, Mid, Low
2. Frontness (“Horizontal Tongue Position”): Front, Central, Back
3. Tenseness: How tense are the tongue muscles? (Options: Tense, Lax)
4. (Lip) Rounding: Rounded, Unrounded

The Vowel IPA Chart

front	central	back	
i ɪ		ʊ u	high
e	ə	ɔ	mid
ɛ		ʌ ɔ̃	
æ a		ɑ	low

Skill 3: Sound Description

- Strategy: (1) Identify the underlined sound; (2) Find the IPA symbol corresponding to the sound on page 2 of the charts; (3) Use the IPA chart to write a description.

ex. bath: The underlined sound is “th” ([θ] in the IPA), which is the voiceless oral interdental fricative.

- Let’s practice! For the following words, what are the characteristics of the underlined sound? (Your answer should be in terms of voicing, oral/nasal, place of articulation, and manner of articulation).

Q1: rim

Q2: amend

Q3: shine

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Skill 4: Phonetic Decoding

- Essentially, this is testing your ability to use page 2 of the charts to decode phonetic transcriptions.

ex. The conventional English spelling for [dagz] is “**dogs**”.

Practice: Give the conventional English spelling for the following phonetically transcribed words.

Q1: [fɪkst]

Q2: [hæŋɪŋ]

Q3: [mou̯tɛl]

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Skill 5: Terminology-Word-Matching

- Essentially, this is testing your ability to use both page 2 of the charts and the consonant/vowel IPA charts.

ex. The words “pile”, “bin”, and “message” all begin with bilabials ([p], [b], [m]).

- “mnemonic”, “pneumonia”, “tin”, and “skin” all begin with alveolars ([n], [n], [t], [s])

1. Pick all words ending in a nasal consonant: mine, pig, bring, will, swim, sip, kit
2. Pick all words containing a high vowel: leap, blood, win, spleen, mood, bread, crook
3. Pick all words ending in a voiceless consonant: pith, cats, pins, bathe, tough, pit, hall

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Skill 6: Transcription

- This skill is testing your ability to listen to audio and transcribe sounds in IPA.
- All of the questions on today's worksheet (and on the actual assignment) are nonwords (otherwise, the questions would be too easy!).
- Broad transcription = we only expect you to use the IPA symbols on the charts
- Narrow transcription = writing diacritics to indicate additional features like aspiration, syllabic structure, etc.

THE INTERNATIONAL PHONETIC ALPHABET (revised to 2020)

CONSONANTS (PULMONIC) © 2020 IPA

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill				ʀ					ʁ		
Tap or Flap				ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

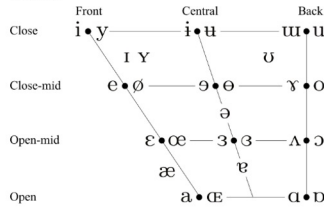
CONSONANTS (NON-PULMONIC)

Clicks	Voiced implosives	Ejectives
◌̥ Bilabial	ɓ Bilabial	ʼ Examples:
◌̦ Dental	ɗ Dental/alveolar	ɓ' Bilabial
◌̧ (Postalveolar)	ɗ̧ Palatal	ɗ' Dental/alveolar
◌̨ Palatoalveolar	ɠ Velar	ɠ' Velar
◌̩ Alveolar lateral	ɠ' Uvular	ɠ' Alveolar fricative

OTHER SYMBOLS

- ʌ Voiceless labial-velar fricative ʑ ʒ Alveolo-palatal fricatives
- ʷ Voiced labial-velar approximant ɺ Voiced alveolar lateral flap
- ɥ Voiced labial-palatal approximant ɥ Simultaneous ʃ and ɣ
- ʜ Voiceless epiglottal fricative
- ʕ Voiced epiglottal fricative Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary.
- ʡ Epiglottal plosive

VOWELS



Where symbols appear in pairs, the one to the right represents a rounded vowel.

SUPRASEGMENTALS

- ˈ Primary stress
- ˌ Secondary stress
- ː Long
- ˑ Half-long
- ˚ Extra-short
- ◌̥ Minor (foot) group
- ◌̦ Major (intonation) group
- ◌̧ Syllable break
- ◌̨ Linking (absence of a break)

TONES AND WORD ACCENTS

- ◌̥ or ◌̦ Extra high
- ◌̧ High
- ◌̨ Mid
- ◌̩ Low
- ◌̪ Extra low
- ↓ Downstep
- ↑ Upstep
- ◌̥̆ or ◌̥̆ Rising
- ◌̥̇ or ◌̥̇ Falling
- ◌̥̈ or ◌̥̈ High rising
- ◌̥̉ or ◌̥̉ High falling
- ◌̥̊ or ◌̥̊ Low rising
- ◌̥̋ or ◌̥̋ Low falling
- ↗ Rising-falling
- ↘ Falling-rising
- ↕ Global rise
- ↔ Global fall

DIACRITICS

◌̥ Voiceless	◌̦	◌̧ Breathily voiced	◌̨	◌̩ Dental	◌̪	◌̫
◌̬ Voiced	◌̭	◌̮ Creaky voiced	◌̯	◌̰ Apical	◌̱	◌̲
◌̣ Aspirated	◌̤	◌̥ Linguolabial	◌̦	◌̧ Laminal	◌̨	◌̩
◌̪ More rounded	◌̫	◌̬ Labialized	◌̭	◌̮ Nasalized	◌̯	◌̰
◌̱ Less rounded	◌̲	◌̳ Palatalized	◌̴	◌̵ Nasal release	◌̶	◌̷
◌̸ Advanced	◌̹	◌̺ Velarized	◌̻	◌̼ Lateral release	◌̽	◌̾
◌̿ Retracted	◌̀	◌́ Pharyngealized	◌̂	◌̃ No audible release	◌̄	◌̅
◌̆ Centralized	◌̇	◌̈ Velarized or pharyngealized	◌̉			
◌̊ Mid-centralized	◌̋	◌̌ Raised	◌̍ (◌̎ = voiced alveolar fricative)			
◌̏ Syllabic	◌̐	◌̑ Lowered	◌̒ (◌̓ = voiced bilabial approximant)			
◌̑ Non-syllabic	◌̒	◌̓ Advanced Tongue Root	◌̔			
◌̔ Rhoticity	◌̕	◌̖ Retracted Tongue Root	◌̗			

Some diacritics may be placed above a symbol with a descender, e.g. ɲ̣̂

You do not need to refer to these diacritics when writing in broad transcription!

Skill 6: Transcription - Practice

- Example: 

- Practice 1: 

- Practice 2: 

- Practice 3: 

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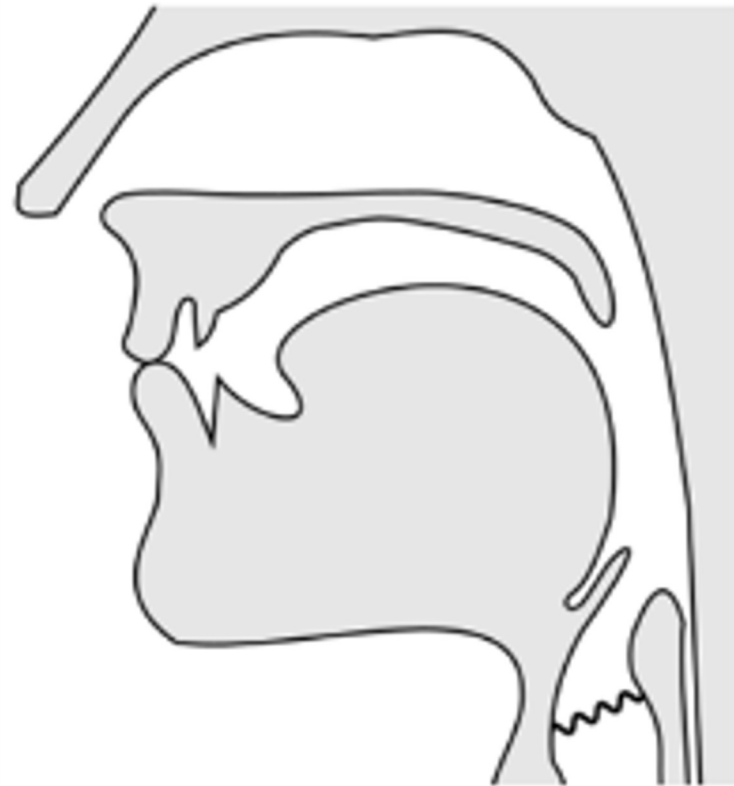
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Skill 7: Articulation

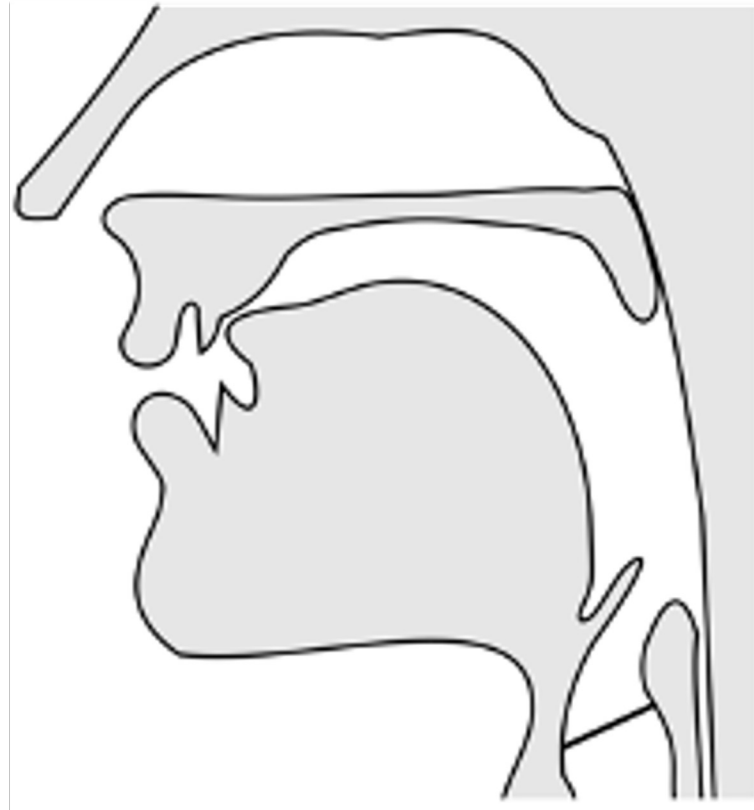
- This skill tests your knowledge of the charts/lists on all pages of the Word document.
- Note that all of the images in today's worksheet (and the actual assignment) depict consonants, not vowels.
- Step 1: Figure out where the closure is occurring (place of articulation).
- Step 2: Figure out the degree of closure and whether the velum is lowered or not (manner of articulation).
- Step 3: Identify the sounds at the start of each word in the list and their corresponding IPA symbols. Then, use the IPA charts to match the image with the sound.

Skill 7: Articulation - Example

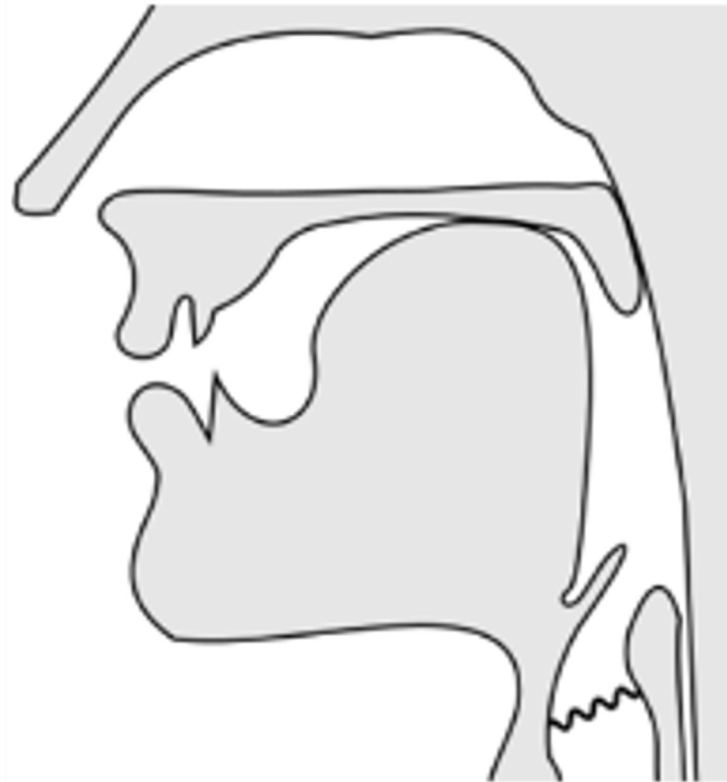


bilabial nasal,
example word: mint

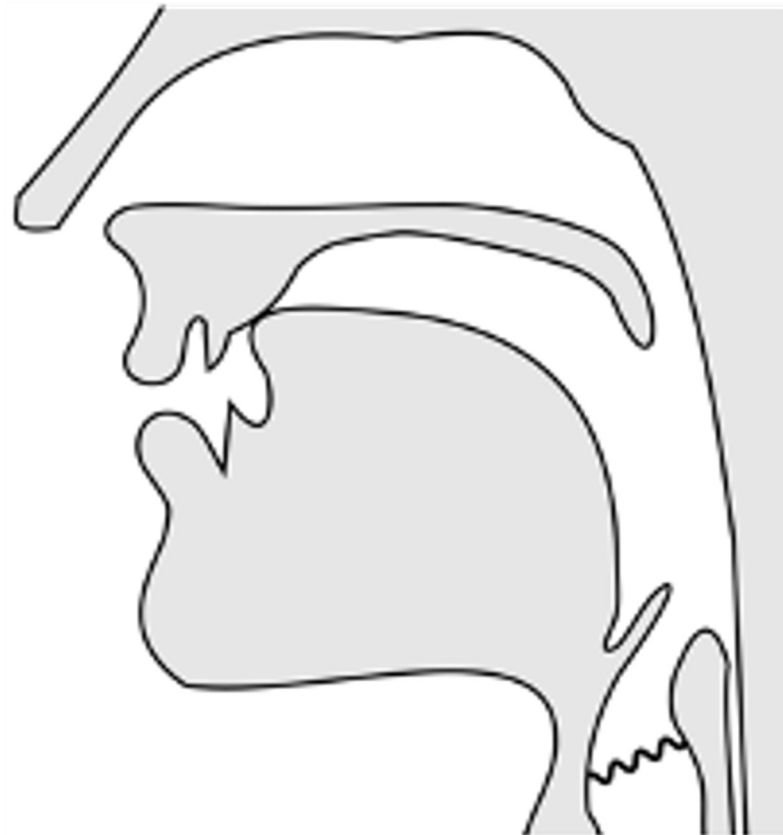
Skill 7: Articulation - Top Right



Skill 7: Articulation - Bottom Left



Skill 7: Articulation - Bottom Right



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Any questions, comments, or concerns?

Office Hours: Tues (10am-1pm), Thurs (1-4pm); Kerr 261

**Homework 1 Deadline: Monday, October 7th, 11:59pm
PT**

Next Week: Review for Homework 2 (Chapters 2 + 3)