1. THE VOCAL MECHANISM
   a. Three parts in any instrument: a vibrator, generator and a resonator
      i. Strings: string = vibrator, bow = generator, body = resonator
      ii. Voice: larynx (vocal chords) = vibrator, breath = generator, mouth/pharynx/nasal cavities = resonators
   b. Larynx description & pictures
2. BREATHING: PHYSIOLOGY
   a. Inspiration: diaphragm pivots and pushes abdominal cavity down/out, which expands the lungs and creates a pressure change, therefore air rushes in
   b. Expiration: The inverse – except in singing, we need to control this
      i. Hold fingers against soft spot below breastbone, shout “HEY” and feel the abdominal organs pushed up (expiration)
   c. This is why abdominal strength is important!
3. SOUND PRODUCTION
   a. Intensity (loudness) = amplitude of vibrations on the vocal chords, dependent on force of air moving past them
   b. Timbre = number and ratios of overtones (harmonics), dependent on the resonators
   c. Pitch = frequency of vibrations in vocal chords, dependent on the length, tension, and thickness of vocal chords
   d. Articulators = lips, teeth, tongue, hard/soft palate, and resonator walls to modify tones
4. POSTURE
   a. Good posture is fundamental in correct singing to create a free and vital vocalism.
   b. Tension is not the same as rigidity. Tension is necessary – rigidity is not!
   c. Exercise #1:
      i. Stand with hands on hips, one foot slightly in front of other, feet shoulder width apart.
      ii. Stretch arms above head, reach to the ceiling, bring chest high, keep shoulders relaxed
      iii. Slowly bring arms down to side, maintaining high position of upper chest
      iv. Keep chin level, place left hand on upper chest to feel and remind.
   d. Exercise #2:
      i. Sit on the front half of chairs with head, shoulders, chest in same position as #1
      ii. Lean forward slightly with both feet on floor (one ahead), slight pressure on balls of feet
      iii. Check high chest position – and never cross legs!
5. BREATHING: PRACTICAL
   a. 4 reminders. Good breathing…
      i. …is integrated into posture, enhancing and in turn enhanced.
      ii. …allows the muscles to move freely and naturally
      iii. …allows for maximum lung expansion
      iv. …is sensitive to and responsible for the artistic demands of the music
       b. Four types:
          i. Clavicular – a “breath of exhaustion”. Worthless to us!
          ii. Diaphragmatic – “abdominal everyday”. Good, but not sufficient
          iii. Costal – “auxiliary only”. Helpful but not enough to live
          iv. Diaconstant – “THE WINNER” combines diaphragmatic and costal
       c. Exercise #3:
          i. Take breaths of the first three types and feel for specific expansions with your fingers
          ii. Take diacostal and feel it all with your fingers.
       d. Exercise #4
          i. Lie down on the floor and feel the proper upper chest/shoulders position (back/head flat)
          ii. Stand and feel that same position.
iii. Exhale, then reach for the sky while simultaneously breathing in (feel expansion)
iv. Slowly lower and feel arms floating down.
v. Check high chest position, check soft spot below sternum for expansion

e. Exercise #5: Pant like a winded animal, quickly at first, then gradually slow and maintain position
f. Exercise #6: Hold a lighted candle in front of your mouth – breath in and out without it going out.
g. Exercise #7: Place hands on rib cage where ribs meet abdomen (thumb to back) and breath in each mood: love, joy, surprise, sorrow, anger, and confusion

6. RESONANCE

a. Exercise #8: To create resonance, start a yawn. Don’t complete it – but feel the position in the back of your mouth as you start it. Keep lips and mouth loosely closed
b. Exercise #9: On “Mm” exercises

\[
\begin{align*}
\text{Repeat } & \frac{1}{2} \text{ step higher, etc.} \\
\text{(8) Mn} \\
\end{align*}
\]

\[
\begin{align*}
\text{Repeat } & \frac{1}{2} \text{ step higher, etc.} \\
\text{(8) Mn} \\
\end{align*}
\]

\[
\begin{align*}
\text{Repeat } & \frac{1}{2} \text{ step higher, etc.} \\
\text{(8) Mn} \\
\end{align*}
\]

d. Exercise #3: balancing nasal and oral resonance
   i. Simulate a yawn (the beginning) to raise the soft palate (along with a slight smile)
   ii. Sing the following line:

\[
\begin{align*}
\text{Hee} & \quad \text{Hoh} \\
\text{Hay} & \quad \text{Hoh} \\
\text{Mee} & \quad \text{Moh} \\
\text{May} & \quad \text{Moh}
\end{align*}
\]

iii. Pinch off your nose and sing the same line. Listen for a change in resonance. If there is no change, you were not using nasal resonance. If there is too drastic of a change, you were not using oral resonance. Try to simulate all varieties and focus the resonance.

7. DICTION

a. Vowels
   i. Chart #1: vowels used in English with corresponding words

\[
\begin{align*}
\text{IPA} & \quad \text{SYMBOL} \\
\text{a, o as in } \textit{psalm, sod} & \quad [0] \\
\text{e as in } \textit{set} & \quad [e] \\
\text{i as in } \textit{sit} & \quad [i] \\
\text{e as in } \textit{see} & \quad [i]
\end{align*}
\]
a as in sat, lamb [a] (Note that this is not the flat "a" like the sound of sheep. Rather it is a more intermediate sound, more appropriate for sustained singing.)
a, as in say [ei]
o, u as in soon [u]
o, u as in soot [u]
a, o as in saw [ɔ]
yr, ir, er,
or, ur, as in earth
(without the "r") [ɔ]
o, oo, ou, u
as in sung
[ʌ]
The neutral vowel
as the "a" in sofa [ə]

This vowel occurs only in unstressed syllables, and is not exactly like ʌ since a tinge of the printed vowel is present.

This vowel is neither a broad "aw," nor the diphthong as in so, but it is used in accented syllables as the sustained vowel of this diphthong.

o (in an unstressed syllable)
such as in obey [ə]

Chart #2: Open → Closed and Back to Front Vowels

iii. Exercise #10: experiment with these vowels and their placement

b. Consonants
   i. The Five Types:
      1. Vocal with pitch: m n ng l r v z zh th w y
      2. Voice explosives: b d g j (dg)
      3. Voiceless explosives: p t k
      4. Sibilants: f s sh ch th
      5. Aspirate: h
   ii. Vocal consonants are sung on the same pitch as the vowel on which they are joined. This doesn't always line up with the dictionary: spir-it-u-al is sung spi-ri-tu-al
   iii. The longer the consonant, the more dramatic its impact
   iv. R should never be sung before a consonant. R should never be sung before a pause. R should always be sung (and flipped lightly) before a vowel sound.
   v. Beginning consonants should precede the beat like a grace note. For example, "Praise" should be sung with "Pr" before the beat.

Adapted for the UUCUC Adult Choir from The Choral Experience: Literature, Materials, and Methods by Ray Robinson and Allen Winold.
1. Organs of the vocal mechanism

2. Larynx or voice box

3. Triangular shape of the larynx

4. Vocal cords open

5. Vocal cords closed

6. Diaphragm

7. Diaphragm as floor of thorax and roof of abdomen

8. Action of diaphragm in breathing