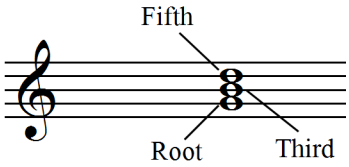
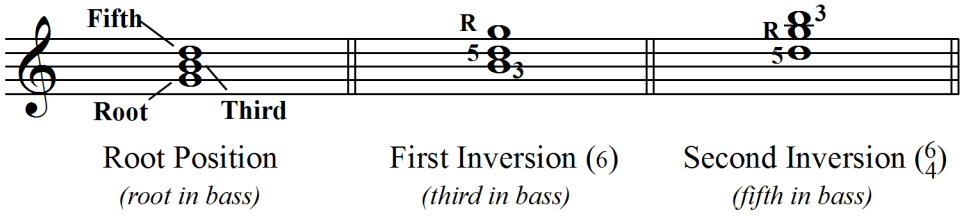
CHORDS AND HARMONY

1. Chords.
    a. A chord is any group of three or more notes that sound at the same time.
    b. Three notes sounding together are called a triad. Chords with four or more notes are possible, but for MUSC 9 we will deal with triads only, and I will use "triad" and "chord" interchangeably.
    c. In the Common Practice period, our Western harmony was tertian – meaning that chords are groups of notes that are spelled in thirds (C-E-G, for example). In the 20th century, many other types of harmony (based on seconds, or fourths, for example) were used. Also, non-Western musical styles do not necessarily use tertian harmony.
    d. In the natural alphabet, thirds are found between every other letter of the alphabet: A-C-E-G-B-D-F-A (skipping every other letter).

2. Spelling of Triads.
    a. The three notes of a triad have names: the root, the third, and the fifth. When the chord is spelled in thirds as shown above (with no extra space between notes), the root is the bottom note of the chord. The third is a 3rd above the root; the fifth is a 5th above the root.

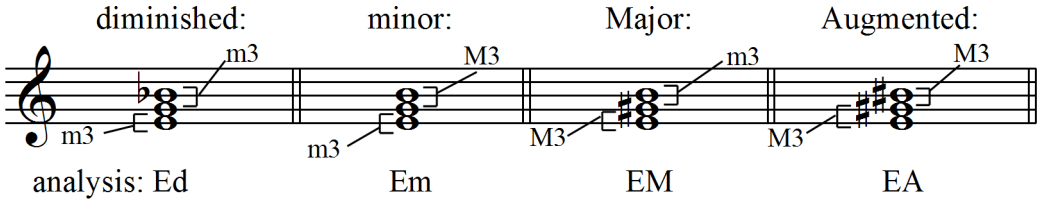


    b. **Inversions**. Chords can be inverted, just like intervals – simply take the lowest sounding chord note and move it up an octave. This can be done twice, since there are three notes in the triad.
        i. When the root is the lowest note (we say it is "in the bass"), the chord is in root position. We assume most chords are in root position, and so we don't label it.
        ii. When the third is in the bass, the chord is in first inversion. In harmonic analysis, this is shown by adding a superscript ^{6} to the right of the chord symbol, because the new inversion has a sixth above the bass.
        iii. When the fifth is in the bass, the chord is in second inversion. This is shown by adding $^{6}_{4}$ to the right of the chord symbol, because this inversion has both a sixth and a fourth above the bass (note: *these numbers should be on top of each other; MS Word won't do that, but see below*).



        iv. When a chord is inverted, it still has the same name, root and quality – the only thing that has changed is the order the notes appear in. To determine the chord's inversion, you only need to know which member of the chord is in the bass – the other notes can appear in any order and with any number of octaves in between.
            1. When there is no extra space between notes, the chord is in close position; when there is extra room between notes, the chord is in open position. This is separate from the chord's inversion, and is not labeled.

c. Naming triads.
   i. A chord's name comes from its root (no matter what inversion is used) and its quality.
   ii. The quality of a chord is determined by the quality of the thirds the chord contains (see image below). When the chord is in root position:
      1. diminished triad: m3 between root and 3rd; m3 between 3rd and 5th.
      2. minor triad: m3 between root and 3rd; M3 between 3rd and 5th.
      3. Major triad: M3 between root and 3rd; m3 between 3rd and 5th.
      4. Augmented triad: M3 between root and 3rd; M3 between 3rd and 5th.

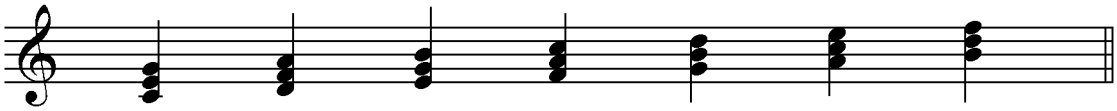


3. Analyzing triads.
   a. Root-and-Quality analysis: the simplest way to analyze a chord is to just label its root and quality – this is the chord's identity. We do this with a capital letter for the chord's root, and a letter for quality (A, M, m, d) like we did for intervals (see image above).
      i. For example, the triad C-E-G is a C Major triad, and would be labeled "CM".
      ii. Root and quality analysis does <u>not</u> show inversions.

   b. Harmonic analysis: this type of analysis uses Roman numerals to show the chord's root, quality, and its harmonic function (purpose). Harmonic function depends on the chord's position in the key – what scale degree its root is. Not all chords are equally important – some have weaker functions and some have stronger functions.
      i. The CM chord mentioned above will always be a CM chord – its identity doesn't change. But, if we place it into different keys (harmonic contexts), its purpose or function changes because the root (C) is now on a different scale degree.
      ii. We will cover the specifics of harmonic function next semester.
      iii. Roman numerals work like this:
         1. The Roman numeral comes from the scale degree of the chord root. So, if we are in C Major, a CM triad will get the Roman numeral for 1, since C is the tonic of the key (the first scale degree).
            - Diminished chords use lower-case Roman numerals, with a degree symbol ° to show diminished quality. Example: ii°
            - Minor chords use just a lower case Roman numeral: ii
            - Major chords use a capital Roman numeral: II
            - Augmented chords use a capital Roman numeral, with a plus sign to show Augmented quality: II+
         2. MS Word won't do this, but your handwritten capital Roman numerals need to have horizontal lines capitalizing them on top and bottom, unlike the examples above and below.
         3. Roman numeral analysis <u>does</u> show the chord's inversion: ii^6

4. Diatonic triads
    a. All Major keys will have the following chords: I, ii, iii, IV, V, vi, vii°
    b. All minor keys will have the following chords, from natural minor: i, ii°, III, iv, v, VI, VII
        i. Using melodic/harmonic minor, the 6th and 7th scale degree can be raised, giving these additional chords: ii, III+, IV, V, vi°, vii°
        ii. All of these chords are considered diatonic, even though they require accidentals.
        iii. Remember, the only changes you can make to a minor key is to raise the 6th or 7th.

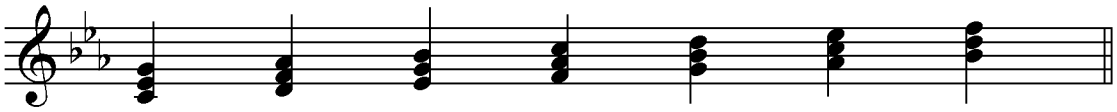
Diatonic Triads in all Major Keys (Example: C Major)



Quality:	M	m	m	M	M	m	d
Function:	I	ii	iii	IV	V	vi	vii°

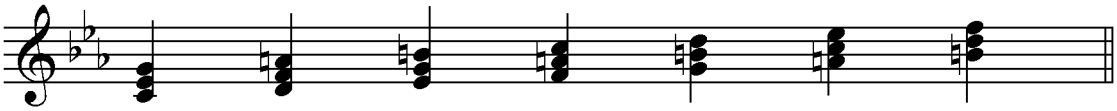
Diatonic Triads in all Minor Keys (Example: C minor)

"Natural" Minor:



Quality:	m	d	M	m	m	M	M
Function:	i	ii°	III	iv	v	VI	VII

"Harmonic" and "Melodic" Minor (raised 6th and 7th scale degrees):



Quality:	m	m	A	M	M	d	d
Function:	i	ii	III+	IV	V	vi°	vii°

5. Non-chord tones
    a. For our purposes this semester, all notes that sound at the same time will be part of the chord. However, in the real world some notes are not part of the harmony. These are called "non-chord tones" or "non-harmonic tones" and are used to add interesting dissonances to our music and to make the melodic lines smoother. Next semester you will learn to identify the different types of non-chord tones – don't worry about it for now.