

Practical Music Theory - A Field Guide for Modern Musicians

by JRJP

INTRODUCTION

Music theory is, in essence, the language we use to describe musical ideas. It is not a set of rules, nor a list of do's and don'ts, and certainly not a replacement for music itself - it is simply a spoken and written language designed to precisely communicate ideas from one musician to another.

Like any language, music theory requires a certain level of "fluency" to be of any real use. This fluency takes time and work to develop, and often this step is considered intimidating and can demotivate the learner. While understanding theory is certainly not a requisite for creating amazing music, I believe that a basic understanding of practical music theory is a powerful tool for making quick composition and arrangement choices, and efficiently communicating ideas with collaborators.

In my career I have greatly benefited from my theory knowledge in the world of writing, recording, and performance. In this course I hope to share my particular method and understanding of using music theory in a practical way for modern pop musicians.

Completing this document will likely take roughly 1 hour, and I encourage readers to take their time reading through, or read through in chunks. Music theory knowledge is generally absorbed slowly and incrementally. Being very intentional in using these concepts when you are listening to or creating music will greatly benefit you in truly understanding music theory. Having a piano with note names on the keys will be useful for many readers in completing this mini-course.

The world is full of different cultures and many of them approach music and music theory in wildly different ways. In this course we will be addressing western music and music theory.

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ABOUT THE AUTHOR *(Feel free to skip this part)*

Hi there! My name is Jon Pike, I'm a professional songwriter, producer, artist, singer, multi-instrumentalist, performer, musical director, audio engineer, music educator, yoga teacher, and aspiring philosopher (among many other things!).

In my career I've written/produced songs that have been heard millions of times (my work has over 75 million streams across platforms, has reached top 20 radio in Canada, and been featured on Netflix movies and TV shows). I've performed all around North America as an artist, a performer, tour manager, and engineer. Throughout all of this I've collected a wide variety of skills and esoteric knowledge to improve my technical abilities, and more importantly, more efficiently unlock my creativity!

All of that isn't to say that I'm the most knowledgeable, on the contrary I'm constantly in search of new information to better understand and communicate ideas from across the spectrum of music, art, technology and everything else.

I'm very passionate about understanding complex systems, and about using that understanding to communicate with likeminded people. I designed this course to make music theory more accessible for musicians, whether you're a super-nerd like me, or more casual and just want to get a better practical understanding of how music composition works. I've gained so much from my systems of understanding musical theory and I hope this helps you in unlocking your creativity the same way it's helped me.

Let's get started!

TERMS

One reason that music theory is often avoided, is because the terminology can be very confusing for newcomers (or even experienced musicians). In my opinion, this confusion is primarily due to most music theory terms having **multiple meanings** depending on their context, which often isn't obvious.

Throughout this course I'll try to clearly define any terms used, and for terms with multiple meanings I'll be using visual indicators to help improve clarity.

To avoid confusion in terms/symbols with multiple meanings, in this course:

Note names will be in red

Chord names will be in blue

Chord numbers will be in blue and underlined

Chord types/qualities will be in green

Key signature names will be pink

Scale names will be pink and underlined

Intervals will be in teal

Degrees of scales will be in teal and underlined

Rhythm counts will be in orange

(it's not a bad idea to screenshot this format guide to quickly reference deeper into the course!)

Here's an example of how this can help:

The term "C major" is one we've all heard, but "C major" can be in reference to a "**key signature**", a "**scale**", or a "**chord**". Similarly, saying "C" can be in reference to a "**key signature**", a "**scale**", a "**chord**" or a "**note**".

We could write out "The note C" or "The key of C" or "C chord" or "the C major scale" every time, but to make this a little less painful the formatting guide seems to help!

Another example:

You will also often hear musicians reference "Ones/Twos/Threes/etc.". These can reference either "**chords**", "**intervals**", "**degrees of a scale**", or a "**beat**".

Not all multi-meaning words will have a specific format. I'll try to make it clear in context if non-formatted words (like the following) ever appear:

"Tone" can reference either an **interval** or the 'sound quality of a given sound'.

A "key" can refer to 'an individual note on a piano/keyboard', or a "**key signature**".

This can definitely get confusing. Hopefully using these formats, these terms and their contexts will be clarified sufficiently as we go through this course.

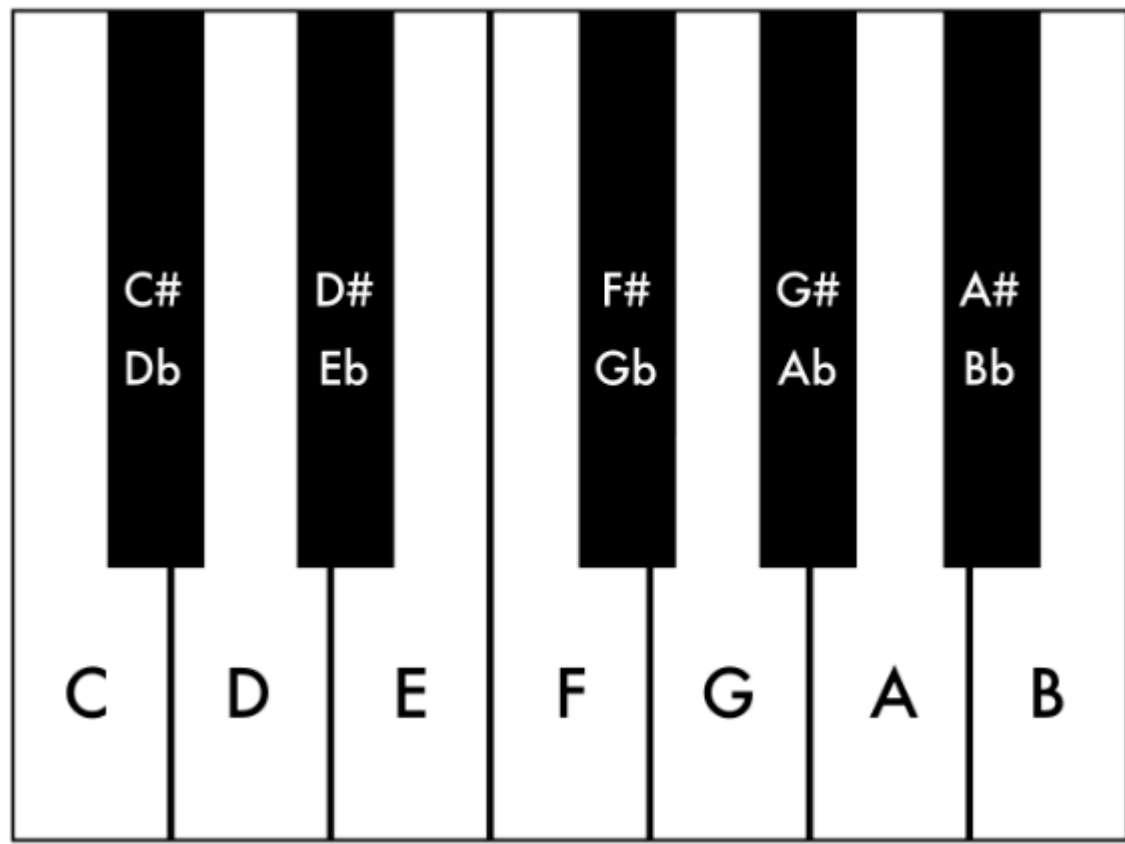
Understanding these distinctions is essential to **utilising** and **communicating** theory effectively.

*When describing the quality of a sound, "tone" generally disregards the pitch and volume of the sound.

NOTES

Notes are the building blocks of all music. When notes are played in succession (but not overlapping), a melody is created. There are 12 notes (**C, C[#], D, D[#], E, F, F[#], G, G[#], A, A[#], and B**) that comprise every piece of music. As you move up “octaves” on the piano, the notes repeat in this order. An octave is the span of 12 notes from one note to its next instance moving up the piano. and notes are sometimes referenced with their octave to indicate the specific range in which to play the note (Generally you can play a given note or chord in any octave you choose, but if, for example, **C3** is written, that would indicate to specifically play the **C** in the middle of the piano).

* The “#” (pronounced “sharp”) symbol indicates a note that is one movement up the keyboard from its note name. Similarly, the “b” (pronounced “flat”) symbol next to a note indicates a note that is one movement down the keyboard from its note name. Generally these are the black keys on a piano. Each black key therefore has multiple names, for example “**F[#]**” may also be called “**G^b**”, “**D^b**” may also be called “**C[#]**”, etc.



INTERVALS

The distance from one note to another on a piano is called an interval. Intervals are measured in steps/tones. A “**tone**” or “**step**” both refer to two movements up the piano, (for example **C** to **D** or **D#** to **F**). Similarly, a “**semitone**” or “**halfstep**” is a single movement up the piano (for example, **C** to **C#** or **A#** to **B**). An octave (ex. **C3** to **C4**) is **6 steps/tones**. We use interval language when describing the distance between notes played in sequence, or simultaneously.

When two notes are played simultaneously, a harmony is created. The nature of a harmony can be described using the interval between the two notes (Ex. Playing **C** and **E** simultaneously creates a **major third** harmony). All intervals in this course are denoted with the colour **teal**.

Some common intervals are:

2nd (+2 semitones) [within a chord, a **2nd** is usually referred to as a “**suspended 2nd**”]

Minor third (+3 semitones)

Major third (+4 semitones)

Fourth (+5 semitones) [within a chord, a **fourth** is usually referred to as a “**suspended 4th**”]

Fifth (+7 semitones)

Minor sixth (+ 8 semitones)

Sixth (+9 semitones)

Dominant 7th (+10 semitones)

Major 7th (+11 semitones)

Octave (+12 semitones)

9th (+14 semitones)

*To avoid confusion, sometimes a “tone” can reference the particular quality of a given sound, instead of an interval of **2 halfsteps**. In this course “tone” will refer to the interval when visually indicated in **teal**.

CHORDS

A chord is a group of notes played simultaneously. Generally consisting of 3 or 4 notes, chords take many different shapes and levels of complexity.

There are several popular types of chords. When reading or writing music, chords are generally denoted by their “root” note, with any modifiers or additions directly after. The “root” is the note around which the chord is built (and generally the lowest note in the chord). By default, chords in modern music are *major*.

For example, if you see “**C**” on a chord sheet, that means the chord is **C major** (played **C E G**), whereas if you see “**Cm**”, that indicates the chord is **C minor** (played **C Eb G**). If you see “**Cm7#11**”, that indicates the chord is **C minor 7 sharp 11** (played **C Eb G Bb F#**). **Chords** in this course will be denoted in **blue**. **Chord types** in this course will be denoted in **green**.

BASIC CHORDS

Below are basic chord types most common in pop music.

Major chords are made of a **major triad** (A “triad” simply means 3 notes). A **major triad** is a **root**, a **major third**, and a **fifth**.

Ex. **C major** is **C E G**

Minor chords are made of a **minor triad**. A **minor triad** is a **root**, a **minor third**, and a **fifth**.

Ex. **C minor** is **C Eb G**

6 (six) chords are made of a **root**, a **major third**, and a **sixth (9 halfsteps)**.

Ex. **C6** is **C E A**

power chords/5 chords (most popularly used with overdriven electric guitars) consist of a **root**, a **fifth** and an **octave**.

Ex. **C power chord**, also called **C5** is **C G C**.

CHORD VARIATIONS

A chord “variation” is a **chord** that has changed its **third** (be it major or minor) from the original triad. For example:

sus2 chords are made of a **root**, a **2nd**, and a **fifth**.

Ex. **Csus2** is **C D G**

sus4 chords are made of a **root**, a **4th**, and a **fifth**.

Ex. **Csus4** is **C F G**.

CHORD EXTENSIONS

A chord “extension” is a chord in which notes are added beyond the basic triad, for example:

add9 chords are made of a **major triad** and a **9th**. (Alternatively, add a **2nd** for a similar effect, as a **9th** is the octave above a **2nd**).

Ex. **Cadd9** is **C E G D**

An alternative to a **sus4** chord that I often use is **add4**. Playing the **root**, a **major third**, AND a **4th**, and a **fifth**. This generally only sounds good on the “**5**” chord as described further on.

Ex. **Cadd4** is **C E F G**

m7 (minor 7) chords are made of a **minor triad** and a **dominant 7th**.

Ex. **Cm7** is **C Eb G Bb**

maj7 (major 7) chords are made of a **major triad** (a root, a **major third**, and a **fifth**) and adding a **major 7th (11 halfsteps)**.

Ex. **Cmaj7** is **C E G B**

7 (seven) chords are made of a **major triad** and a **dominant 7th (10 halfsteps)**.

Ex. **C7** is **C E G Bb**

VOICINGS

While any given chord is made of a specific combination of notes, it is possible to change the feel of a chord with an alternate “voicing”. Standard voicing for a chord means that the root note is the lowest note played, and other notes are played in order of their next instance moving up the piano. Altering the voicing means playing the same notes, but moving one or more notes to different octaves. For example, when playing the chord **C (C E G)**, you could play the **E** note an octave higher (**C G E**), and you would have an alternate voicing. You could also alter the voicing by moving the **E** note up 2 octaves, which would be a fairly non-typical voicing. There are essentially no limits to voicing options. Try playing **C** but adding **G** in three extra octaves! Weird! Fun!

INVERSIONS

A great way to add flavour to chords/chord progressions is through the use of inversions.

An inversion of a chord is a rearrangement of the voicing so that the lowest note is no longer the root note. For example, **C major** is played **C E G**, but the first inversion (alternatively called the “a” inversion) brings the **E** and **G** down an octave, and would be played **E G C**.

The second inversion (“b” inversion) would be **G C E**.

For chords with more than three notes (such as **m7** chords: **root**, **minor third**, **fifth**, **dominant 7**) more inversions are possible, though these often aren’t particularly useful and are more rarely used. Inversions are denoted in parenthesis after any chord extensions or variations, for example **C** first inversion is written as **C(a)**, second inversion is **C(b)**.

CHORD PROGRESSIONS

Now that we have all these different chords and chord types, what do we do with them? Well, in the context of a song, chords usually exist within an ordered and repeated “progression” of different chords. One popular chord progression is **C G Am F**. Classic! Some songs have 1 chord progression from start to finish. Some songs never repeat a chord progression. Commonly, a song has 1-4 chord progressions that will repeat over the course of a song. Different parts of the song often feature different progressions (ex. verse progression **F G Am Em**, chorus progression **C G Am F**, bridge progression **Am F G C**, etc.).

Chord progressions help give a song and melody its harmonic basis, energy, and movement.

CHORD SUBSTITUTIONS

Another way to create memorable moments in your composition, or to spice up a chord progression that doesn't feel quite right, is to use chord substitutions. This can be done many ways, but the most common is to use a chord's relative **major** or **minor**.

This is not the same as relative **major** and **minor key signatures**, but much of the concept carries over. We'll discuss that later!

Consider a song in **D major**. It might have the progression **Bm A D G**, but perhaps the melody feels like it could benefit from an underlying darker energy*. In this case you might try a chord substitution on the fourth chord **G major** (**G B D**) and use **Em** (**E G B**) instead. Now the progression is **Bm A D Em**.

As you may have noticed, the chords **G** and **Em** only have one note different, and therefore often have a similar effect within a chord progression, while potentially impacting the song's energy in radically different ways.

Similarly, a progression using the chord **Em** could often be substituted for **G** to change the feeling of the composition.

Being aware of similar chords like these is a great way to stay malleable with your chord choices and quickly try alternatives to better capture your vision. (Make sure to watch out as whatever you're changing might stray from the **key** of your song!)

***Minor** chords are often considered to bring a sombre or sad energy, while **major** chords often bring lightness and a positive energy. This is a vast generalisation and has many exceptions!

FAMILIES OF NOTES

Now we've seen how **notes** can cooperate either sequentially (melody) or simultaneously (**chords** and harmony), we can further explore what contexts are appropriate for making chords and melodies work together. By understanding **scales** and **key signatures** we'll get an idea of the landscape that underlies a piece of music, and how we can draw from this landscape to add new ideas in a performance or composition, knowing what kinds of **notes** and **chords** tend to sound pleasing together in the context of a song.

SCALES

A **scale** is a sequence of notes with specific **intervals**, spanning one octave. There are lots of different types of scales. The common scales in pop music are major and minor, each consisting of 7 notes. The first note of a scale is the "root" note, being the note the scale is named after (ex. **C** is the root note of the scale of **C major**). In this course **scales** are denoted with **pink and underline**.

Major scales are: **root, 2nd, major third, fourth, fifth, sixth, and major 7th**.

The **C major scale** is **C D E F G A B**.

Minor scales are: **root, 2nd, minor third, fourth, fifth, minor sixth, and dominant 7th**.

The **C minor scale** is **C D Eb F G Ab Bb**.

Musicians will often refer to notes in the scale by their position (also called their "degree"), calling them "**one(1)**" through "**seven(7)**". (This is the first of three ways that "one(1)"/"two(2)"/"three(3)"/etc. is used in this course.)

For **C major scale** the **one(1)** is **C**, the **three(3)** is **E**, the **six(6)** is **A**, etc.

For **C minor scale** the **one(1)** is **C**, the **three(3)** is **Eb**, the **six(6)** is **Ab**, etc.

For those interested, some other popular scales are:

Major Pentatonic: **Root, 2nd, major third, fifth, sixth**

Minor Pentatonic: **Root, minor third, fourth, fifth, dominant 7th**

Harmonic minor: **Root, 2nd, minor third, fourth, fifth, minor sixth, and major 7th**

Blues: **Root, minor third, fourth, flat fifth, fifth, and major 7th**

Knowing scales can be very useful. In both composition and performance being able to quickly find/communicate notes that will work with the piece is a big advantage.

Personally, I find that memorising individual scales is not particularly useful. Instead, understanding how each degree of a scale "sounds/feels" is quite helpful in composition and communication. For example, when songwriting with someone in a major key, saying "Hey, that melody is cool! Could you try ending it on the '**one**' instead of the '**three**'?" is often faster/easier than having to figure out exactly which **key** you are working in and calling for specific **notes**.

Learning what degrees of scales sound/feel like generally takes a lot of practice and will be discussed further.

Speaking of **keys**...

KEY SIGNATURES

A “**key signature**” (or “**key***”) is an indication of the available notes and chords for a composition, corresponding with a respective scale. In pop music we almost exclusively deal with major and minor scales, so there would be 12 major keys and 12 minor keys. (For example, you’ll find some songs in “**D major**”, some in “**G# minor**” some in “**F major**”, “**F minor**”, etc.) Key signatures in this course are denoted with **pink**.

The key of a song is generally determined by finding which set of **notes** (which **scale**) is used for all of the melodies and chords.** The root **chord** to a **key signature** (Ex. **C major** in the key **C major**, **D minor** in the key **D minor**, etc.) is called the **one(1)** or *tonic*. This chord is often described as feeling like “home” to the listener’s ear. The *tonic* chord will often be played at the end of a song as it delivers a feeling of resolution to the composition. One good way to find the **key** of a given song is to find the chord that most feels like it resolves the piece (this takes practice, try it!).

Naming schema: In modern pop music key signatures are major by default. Songs in a minor key must be specifically indicated as minor. (ex. For a song in **A major** you could say “**A major**” or just say “**A**”. Describing a song in **A minor** you would say “**A minor**”,)

Key signatures and **scales** are very tightly connected. I like to think of scales as a sequence, and key signatures as a landscape. Learning to navigate a given scale will help you in navigating its respective key signature, and vice versa!

*A “key” can also refer to an individual key on a piano/keyboard.

This very often works, but is **not a hard rule because as songs become more complex, the chords and melodies often begin to access notes that are outside of any given major or minor scale. (ex. A melody that contains **C**, **C#**, **D**, and **D#**. There is no **scale** (or **key signature**) that contains all four of these notes.). When **notes/chords** are introduced in a song that are outside of the song’s **key**, they are called “non-diatonic”.

RELATIVE MINOR AND MAJOR KEY SIGNATURES

You may have noticed that sometimes two different **key signatures** can contain the same notes as each other.

The primary example of this phenomenon is that of “relative minor” and “relative major” **keys**. Every major key has one “relative minor” key, and every “relative minor” key contains the same notes as its “relative major”; and vice versa.

The key of **C major** follows the **C major scale** (**C D E F G A B**). The key of **A minor** follows the **A minor scale** (**A B C D E F G**). These two keys have the same available notes, just in a different order. They are each other's “relative major” and “relative minor”.

The relative minor key always starts 3 halfsteps below the root note of a major key. So for **A minor** the relative major is **C major**, for **G major** the relative minor is **E minor**, etc.

Because these relative keys **share the same notes**, it can sometimes be uncertain as to whether a song is in a **major** or relative **minor** key. In fact, this is because the resolution to a piece of music is ultimately subjective, so there can be cases where to one listener a song feels like it resolves to the **major** chord (and is therefore in a **major** key) while to another listener the song feels like it resolves to the **minor** chord (and is therefore in the relative **minor** key). What is **C major** to you might be **A minor** to your keyboard player!

For the purposes of practical music theory, I personally ALWAYS reference chords and notes in relation to the **major** or relative **major key**, regardless of whether a song FEELS “**major**” or “**minor**”. This is relevant when using relative chord numbers* (Nashville or Roman numerals), as communicating chords without calling out the specific chord **names** can be confusing if different musicians feel like the key resolves to **minor** or **major**.

For example, given a song that feels like it resolves to **Am**, I will still reference **C major** as the tonic/root chord (“**1**”)*, while traditionally it would be more correct to consider **Am** the tonic/root (“**1-**”) and **C major** the “**3**”* chord. I find this more efficient because feeling like a song is either **major** or **minor** is actually commonly subjective, and it can be frustrating to call out “lets end on the **1!**” while writing/rehearsing, and have two players go to completely different chords because they interpret the resolving chord differently!

My strategy of always referencing the major or relative major eliminates these frustrating moments.

This method is not universal, and therefore occasionally is the cause of confusion; but I personally find it much more useful and easy to explain to collaborators.

*See Relative Chord Numbers Below

RELATIVE CHORD NUMBERS

Those familiar with “transposition”* will know that any given song can be moved from its original key to any other key (often to accommodate the singing range of a vocalist). To take advantage of this ability to move songs from one key signature to another, instead of writing out **chord names**, the chords of a song are often written down referencing their position **within** the key signature. This is done by referencing the position of their root note in the **key’s scale** using numbers one(1)(I) through seven(7)(VII). Generally musicians use either “Nashville numbers” or roman numerals. In this course we’ll be focusing on “Nashville numbers”.

In a major key the chords are written as such (using the **key of C** for example) :

C: 1 (“one” “I” or “tonic”)

Dm: 2- (“two” “ii” or “supertonic”)

Em: 3- (“three” “iii” or “mediant”)

F: 4 (“four” “IV” or “subdominant”)

G: 5 (“five” “V” or “dominant”)

Am: 6- (“six” “vi” or “submediant”)

Bdim: 7° (“seven” “vii°” or “leading tone”)

Naming schema: By default we consider Nashville chords to be **major**, and we add a “-” to indicate a **minor** chord or a “°” to indicate a **diminished** chord. (If using roman numerals, UPPERCASE indicates a **major chord**, lowercase indicates a **minor chord**, “°” to indicate a **diminished** chord). There are also some fancy music theory words like “tonic” and “supertonic” that can be used to describe the **chord position** (these words can also be used to reference the **scale degree**.)

For example, in the key of **G major** the **1** is **G**, the **2-** is **Am**, the **3-** is **Bm**, the **4** is **C**, the **5** is **D**, the **6-** is **Em**, and the **7°** is **F#dim**. Therefore if a song’s chord progression is **G C Em D**, it can be written as **1 4 6- 5**. This can make life much easier if you decide to try the song in a different **key**, for example if after a night of partying if your singer is feeling tired, you could bring this song down a full step (to the key of **F**) and play the chord **F Bb Dm C**, but wouldn’t need to rewrite your chord chart!

*To transpose means to move all elements the same amount, so transposing moves a piece of music from one **key** to another, up or down. If you’ve used a guitar capo before, you’ll get that transposition is the primary function of that kind of device!

TYPICAL CHORD VARIATIONS/EXTENSIONS

The most popular chord variations/extensions in a major key in pop music are:

1maj7 (ex. In **C**, **Cmaj7**)

2-m7 (ex. In **C**, **Dm7**)

3-m7 (ex. In **C**, **Em7**)

4add9 or **4sus2** (ex. In **C**, **Fadd9** or **Fsus2**)

5sus4 (ex. In **C**, **Gsus4**)

6-m7 (ex. In **C**, **Am7**)

DIATONIC VS. NON-DIATONIC

Up to this point we've only covered **notes** and **chords** that are "diatonic". Diatonic means "within the **key signature**". For example, in the key of **C major**, a **chord** or **note** is diatonic if it stays within the notes of the **C major scale**. Most songs stay within the notes of one scale. But there are no rules in art! And certainly no rule that says you have to stay completely within the bounds of a key signature! So let's experiment! For the key of **C (C, D, E, F, G, A, B)**, any chord (or melody) that contains **C#, D#, F#, G#, or A#** is "non-diatonic". These include **D major (D F# A)**, **E major (E G# B)**, **G minor (G A# D)**, and many others! Using non-diatonic chords can be a great way to add flavour to your song, especially to dramatise particular moments in your composition. Largely because the modern ear is trained on the major scale and generally expects notes and chords to be diatonic, these chords often feel like they jump out to the listener.

TYPICAL NON-DIATONIC CHORDS TO PLAY WITH

The five most popular chords to use 'outside' of key are these:

Flat 7 (b7) (ex. **Bb major** in the key of **C**, where the non-diatonic note is **Bb**)

Major two (2) (ex. **D major** in the key of **C**, where the non-diatonic note is **F#**)

Major three (3) (ex. **E major** in the key of **C**, where the non-diatonic note is **G#**)

Minor four (4-) (ex. **F minor** in the key of **C**, where the non-diatonic note is **G#**)

Minor five (5-) (ex. **G minor** in the key of **C**, where the non-diatonic note is **Bb**)

A favourite of mine is to use the **4- (minor four)** for a dramatic moment when resolving to the **1**. Similarly, the **3 (major three)** does a tremendous job of adding tension that pushes towards a resolution to the **6-**. I encourage you to try some of these out and find for yourself how they might impact your compositions, and keep an ear out for them in songs you already know.

COMMON CHORDS CHEAT SHEETS

In case you just want to quickly look for some chords to use in a given key while you're composing or jamming, below are two charts designed for quick reference to explore chord ideas!

THE FOUR PRIMARY POP CHORDS CHEAT SHEET

We've all heard people complain about the "same four chords". Well, these are them. A majority of modern pop music is based on these four chords, and while they are not the SAME four chords according to their root notes, their position within a given **key signature** is what gives them their character. These four main chords are the **1, 4, 5** and **6-** and they are virtually inescapable.

While songs vary on which **key signature** they use, these chords almost always make up a large part (or the entirety) of a pop song's chord structure. Below are the "basic four chords" in each key.

It can be useful to try playing these in order on a piano, one **key signature** after another, to familiarise yourself with the position and feel of these four chords, similar to getting comfortable with the "feel" of each individual **degree** of the major or minor scale.

Key Signature	1	4	5	6-
C major (A minor)	C	F	G	Am
C# major (A# minor)	C#	F#	G#	A#m
D major (B minor)	D	G	A	Bm
D# major (C minor)	D#	G#	A#	Cm
E major (C# minor)	E	A	B	C#m
F major (D minor)	F	Bb	C	Dm
F# major (D# minor)	F#	B	C#	D#m
G major (E minor)	G	C	D	Em
G# major (F minor)	G#	C#	D#	Fm
A major (F# minor)	A	D	E	F#m
A# major (G minor)	A#	D#	F	Gm
B major (G# minor)	B	E	F#	G#m

COMMON DIATONIC CHORDS CHEAT SHEET

The 2- (“two” or “supertonic”), 3- (“three” or “mediant”), and 7° (“seven” “vii” or “leading tone”) are also popular, though the 7° is rarely seen, and usually if it appears it is played as a **minor chord**. Along with the four aforementioned chords, a wide variety of chord progression options are available. (plus many more **outside** the 7 notes of any given **key**, see “Common non-diatonic chords”)

Key Signature	<u>1*</u>	<u>2-**</u>	<u>3-**</u>	<u>4*</u>	<u>5***</u>	<u>6-**</u>	<u>7°</u>
C major (A minor*)	C	Dm	Em	F	G	Am	Bdim
C# major (A# minor*)	C#	D#m	Fm	F#	G#	A#m	Cdim
D major (B minor*)	D	Em	F#m	G	A	Bm	C#dim
D# major (C minor*)	D#	Fm	Gm	G#	A#	Cm	Ddim
E major (C# minor*)	E	F#m	G#m	A	B	C#m	D#dim
F major (D minor*)	F	Gm	Am	Bb	C	Dm	Edim
F# major (D# minor*)	F#	G#m	A#m	B	C#	D#m	Fdim
G major (E minor*)	G	Am	Bm	C	D	Em	F#dim
G# major (F minor)	G#	A#m	Cm	C#	D#	Fm	Gdim
A major (F# minor)	A	Bm	C#m	D	E	F#m	G#dim
A# major (G minor*)	A#	Cm	Dm	D#	F	Gm	Adim
B major (G# minor*)	B	C#m	D#m	E	F#	G#m	A#dim

*common to use **maj7** [diatonic] or **7 (dominant 7)** [non-diatonic]

common to use **m7

***common to use **7 (dominant 7)**

COMMON CHORDS CHEAT SHEET (DIATONIC & NON-DIATONIC)

When performing/composing in any given key, these are the chords I find myself choosing or encountering most often! This is ***NOT*** an exhaustive list and things can get wild and wacky the further you dive into music theory! But that's for another day!

Key	<u>1*</u>	<u>2-**</u>	<u>2***</u>	<u>3-**</u>	<u>3*</u>	<u>4*</u>	<u>4add9</u>	<u>4-**</u>	<u>5***</u>	<u>5sus</u>	<u>5-**</u>	<u>6-**</u>	<u>b7***</u>
C major (A minor*)	C	Dm	D	Em	E	F	Fadd9	Fm	G	Gsus	Gm	Am	Bb
C# major (A# minor*)	C#	D#m	D#	Fm	F	F#	F#add9	F#m	G#	G#sus	G#m	A#m	B
D major (B minor*)	D	Em	E	F#m	F#	G	Gadd9	Gm	A	Asus	Am	Bm	C
D# major (C minor*)	D#	Fm	F	Gm	G	G#	G#add9	G#m	A#	A#sus	A#m	Cm	Db
E major (C# minor*)	E	F#m	F#	G#m	G#	A	Aadd9	Am	B	Bsus	Bm	C#m	D
F major (D minor*)	F	Gm	G	Am	A	Bb	A#add9	A#m	C	Csus	Cm	Dm	Eb
F# major (D# minor*)	F#	G#m	G#	A#m	A#	B	Badd9	Bm	C#	C#sus	C#m	D#m	E
G major (E minor*)	G	Am	A	Bm	B	C	Cadd9	Cm	D	Dsus	Dm	Em	F
G# major (F minor)	G#	A#m	A#	Cm	C	C#	C#add9	C#m	D#	D#sus	D#m	Fm	Gb
A major (F# minor)	A	Bm	B	C#m	C#	D	Dadd9	Dm	E	Esus	Em	F#m	G
A# major (G minor*)	A#	Cm	C	Dm	D	D#	D#add9	D#m	F	Fsus	Fm	Gm	Ab
B major (G# minor*)	B	C#m	C#	D#m	D#	E	Eadd9	Em	F#	F#sus	F#m	G#m	A

*common to use **maj7** [diatonic] or **7 (dominant 7)** [non-diatonic]

common to use **m7

***common to use **7 (dominant 7)**

THIS SECTION IS STILL UNDER CONSTRUCTION
PROCEED WITH CAUTION! 😊

RHYTHM

We now move from harmonic/melodic topics into the world of timing and rhythm! Understanding the world of rhythm is equally, if not more important than knowing key signatures and chords, and can be equally confusing with terms. So let's get started!

Rhythm is often described using some of these following terms:

1/64 note
1/32 note
1/16 note
1/8 note
1/4 note
Beat
Bar (Made up of beats. Usually, but not always, 4 beats make a bar)
Phrase (Made up of bars)
Triplet
Shuffle
Swing
Syncopation
Upbeat
Downbeat
one(1), two(2), three(3), four (4) etc.

TEMPO

Latin for "speed", "tempo" simply describes the speed of a song. Tempos are measured in BPM, which indicates how many **beats** will occur per minute of the composition. A "beat" can be hard to describe, but if you imagine a drummer playing a kick drum steadily to the song "Wake Me Up" by Avicii, each time the bass drum hits is on a beat.

So for example a song at 60BPM will have one **beat** every second, and a song at 120BPM will have one **beat** every half second. Finding the right tempo for your song is extremely important, but luckily it's usually fairly easy to find the right BPM with a little trial and error, usually using a "tap tempo". If different parts of your song require different BPMs, that is okay too! No rules!

TIME SIGNATURES

Time signatures indicate how "beats" interact with "bars".

"Bars" can also be hard to explain, but if you imagine "Wake Me Up" again, every four beats in that song comprises a "bar".

A time signature consists of two numbers: a numerator on top indicating how many **beats** are in each bar; and a denominator on bottom which indicates what each beat represents.

The idea is that each bar consists of $[(\text{numerator}) \times (1/\text{denominator})]$. The most common time signatures are 4/4 and 6/8 (you'll rarely find a pop song that isn't in one of these two). Let's look at time signatures that have 4 as the bottom number first. This 4 in the denominator indicates that each **beat** is represented by "**quarter note**". This is the most common time signature denominator. For a song in 4/4, each bar will have **4 beats** (as indicated by the numerator) which means 4 quarter notes. Songs with a denominator of 4 also indicate that each beat will feel naturally divisible by **2**, into eighth notes, sixteenth notes, 32nd notes, etc. and $[4 \times 1/4 \text{ notes}]$ make up a bar.

Now let's look at time signatures with 8 as the bottom number. An 8 in the denominator means "compound double time"

For a song in 6/8, each bar will have **6 beats** (as indicated by the numerator) and each beat represented by an "**eighth note**" (as indicated by the denominator). In 6/8 the counting emphasis is placed on beats 1 and 4 of every bar. Songs with a denominator of 8 also indicate that each beat will feel grouped by 3 rather than 2. So for the time signature 6/8, $[6 \times 1/8 \text{ notes}]$ make up a bar (this seems weird but don't be scared, it'll be fine!).

Songs will break from these two and use non-typical time signatures sometimes, such as 6/4, 5/4, 7/4, $7/8$, 12/8, $3/4$, etc. These all follow the same rules of the numerator determining the number of **beats**, and the denominator determining each beat's value as well as the intended "feel".

In a 6/8 time signature, a whole note typically represents 6 beats. However, due to the nature of 6/8 time, which is compound duple time (divided into two groups of three eighth notes), it is not common to see a whole note in a bar of 6/8.

A whole note in 6/8 would span across the entire bar, representing all 6 beats.

Given that 6/8 time is usually felt in two groups of three eighth notes each, it is more common to see combinations of eighth notes, quarter notes, and half notes in 6/8 time rather than a single whole note.

While technically you could have a whole note in 6/8, it would not be a standard way to notate rhythms in this time signature due to the emphasis on the compound duple subdivision of the beat.

It's often helpful to divide a bar into halfnotes, quarter notes, eighth notes etc. and to count these at an even rate to find the rhythm that you're looking for. In this course beat counts are denoted in **orange**.

BASIC RHYTHMIC NOTATION & COMMUNICATION

Similar to utilising the language of **notes**, **chords**, **chord types**, **key signatures**, etc., understanding and utilising rhythmic language can greatly improve the collaborative experience. This is the third way that "one"/"two"/"three"/etc. is used in this course. When collaborating, we often want to express ideas for specific moments or timings for melodies, chords, drum patterns, etc. Communicating these ideas can be very hard without rhythmic notation.

Within the context of a 4/4 piece, I often find the "**1-e-&-a**" technique is effective in properly expressing rhythmic ideas. Essentially, this technique breaks down every beat (in 4/4 a beat is a "quarter note") into 4 parts: "**1-e-&-a**". There are four beats in each bar, so every bar can

be divided as such “1-e-&-a-2-e-&-a-3-e-&-a-4-e-&-a” (you might notice there are 16 divisions here... which are, you guessed it, 16th notes!)

Try saying that out loud rhythmically and you'll likely naturally get the idea. When I have an idea for, say, a moment where a chord could be played at a slightly different moment, I sing “1-e-&-a...” in my head to find where I am picturing the new timing and express the moment along with the respective bar.

Generally, people refer to the counts 1 2 3 4 as the ‘downbeats’, and their respective “&”s as the “upbeats”.

For example, if a chord progression is four bars long, with each chord playing for four beats starting on the first beat of each bar; I could suggest “Could we try having the third chord come in on the ‘a’ of ‘4’ in the 2nd bar? I think it coming in a little sooner than we expect makes for a cool groove! And who doesn’t love groove!?”. Communicating it this way, in my experience, is much more effective than saying “what if the third chord came in a little earlier? Like a pickup or something? You know what I mean? Just like... earlier?”

Using specific terminology, very specific rhythms can be tried quickly in order to find exactly the one that works best for your vision. This also works great for percussion ideas, for example “Let’s try the kick drum playing on: beat 1, the “a” of 1, and the “&” of 2 for each bar in this section, with the snare on every beat 2 and beat 4. Then on the fourth bar let’s have the kick drum also play on beat 3, the “a” of 3, and the “&” of 4!” This is a complex idea to communicate, made quick and easy with basic rhythmic notation.

A similar technique can be done with 6/8. However, when working within a denominator of 8, the technique I recite doesn’t include the “e”s and “a”s. So for example in 6/8 I would sing in my head “1-&-2-&-3-&-4-&-5-&-6-&” to find the timing of a rhythmic idea to communicate to a collaborator.

RHYTHM DIVISION CHEAT SHEET

Time Signature	4/4	3/4	6/4	5/4	7/4	6/8	12/8
1/1 notes per bar	1	1	1	1	1	1	1
½ notes per bar	2	1.5	3	2.5	3.5	1.5	3
1/4 notes per bar	4	3	6	5	7	3	6
⅛ notes per bar	8	6	12	10	14	6	12
1/16 notes per bar	16	12	24	20	28	12	24