MUS 105  
Course Number
Fundamentals of Music Theory  
Course title

3  
Credits
2 lecture/2 lab  
Hours

Catalog description:
Offers the student with no prior musical training an introduction to the basics of music theory. Topics include notation of pitch and rhythm, scale structure, key signatures in major and minor keys, plus chord construction and voice leading. Also includes a comparison of Western and non-Western scales and rhythms. Fall offering.

Prerequisites: None  
Corequisites: None

Required texts/other materials:

Additional Available Materials:

Last revised: 2016

Course coordinator: Scott Hornick, Assistant Professor of Music – CM 149; (609) 570-3716; hornicks@mccc.edu
Course Goals:
The student will be able to:

1. Demonstrate proficiency in the proper notation of music on treble and bass clefs on the levels of both pitch and rhythm. (MCCC Core Skills A and B)
2. Internalize the layout and structure of the piano keyboard, using it as a cognitive template for the measurement of pitch relationships, intervallic distance, and the proper construction of scalar and chordal configurations. (MCCC Core Skills B)
3. Comprehend and demonstrate a working command of the structural rudiments of tonal music including pitch, intervals, scales, and chords. (MCCC Core Skills B and D)
4. Understand the formal principles that govern the interplay of the structural elements of music in the creation of cohesive musical statements and ideas. (MCCC Core Skills B and D)
5. Understand music as a mode of thought whose elements of expression find coherence through both syntactic and mathematical forms of organization. (MCCC Core Skills B, D and F)

MCCC Core Skills
Goal A. Written and Oral Communication in English. Students will communicate effectively in speech and writing, and demonstrate proficiency in reading.
Goal B. Critical Thinking and Problem-solving. Students will use critical thinking and problem solving skills in analyzing information.
Goal D. Information Literacy. Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.
Goal F. Collaboration and Cooperation. Students will develop the interpersonal skills required for effective performance in group situations.

Academic Integrity Policy
As stated in the student handbook, “A student will be guilty of violating academic integrity if he/she (a) knowingly represents the work of others as his/her own, (b) uses or obtains unauthorized assistance in the execution of academic work, or (c) gives fraudulent assistance to another student.” Students should read the Academic Integrity policy in the MCCC Rights and Responsibilities Handbook.

Academic Dishonesty will result in failure of this course.
Units of Study and Learning Objectives

UNIT I: The Concept of Notation and Pitch
The student will be able to:
1. Understand and articulate the concept of pitch as a discrete tone of specific vibrational frequency that serves as the basic structural unit of melody.
2. Comprehend and explain how tones of different pitch are organized incrementally from "low to high," resulting in the phenomenon of acoustic space.
3. Know the seven letter names (A through G) used to designate pitches and understand that these seven letters are employed as a repeating series to identify the 90 or so pitches that exist in the audible spectrum.
4. Understand the concept and the phenomenon of the octave and explain its structural significance.
5. Execute the proper notation of pitch by placing the appropriate symbols (notes) onto a system of five lines and four spaces (staff) using both the treble and bass clefs.
6. Correctly identify at sight the letter name of any pitch from its symbolic representation in the form of a note.

UNIT II: The Piano Keyboard; Whole Steps and Half Steps
The student will be able to:
1. Understand and explain the patterned configuration of keys on the piano keyboard.
2. Demonstrate a working knowledge of the correspondence between a notated pitch and its location on the piano keyboard.
3. Correctly notate a pitch on staff paper based on its location on the piano keyboard.
4. Comprehend and explain the half steps as the smallest structurally significant increment of pitch change in Western tonal music. (CG3; CSGA)
5. Cite the distance of the half as being represented by the span of two adjacent keys on the piano keyboard. (CG’s 2 and 3)
6. Expand the modifying symbols of sharp, flat, and natural (♯, β, ν) and correctly employ these symbols to indicate directional half step inflections to notes of specific letter names. E.g.: F → F♯, B → B♭, C♯ → C ν (CG’s 1 and 3; Gen. Ed. Goal 2; CSGB)
7. Understand that the whole step constitutes the next most important increment of pitch change in tonal music and comprises the distance of two half steps. (CG3)
8. Notate on staff paper any two pitches separated by a whole step, using the necessary accidentals (#, β, ν).  (CG’s 1 and 3; Gen. Ed. G2; CSGB)

9. Locate the position of any notated whole step on the piano keyboard.  (CG’s 1, 2 and 3)

10. Explain and demonstrate a working knowledge of the concept of enharmonic equivalence, especially as it applies to the identification of black keys on the piano.  E.g.:  G# = A♭, C# = D♭, etc.  (CG’s 1, 2, and 3; Gen. Ed. 2; CSG’s A and B)

11. Notate the chromatic scale, ascending and descending, throughout the range of four octaves and know each note’s location on the piano keyboard.  (CG’s 1, 2 and 3)

**UNIT III:  Rhythmic Notation I**

The student will be able to:

1. Understand that the written musical line consists of a series of notated pitches, each of which bears a specific durational value that is indicated in the notation.  (CG’s 1 and 3; Gen. Ed. G2; CSGB)

2. Comprehend and explain that the rhythmic aspect of notation conveys the duration of a pitch as measured against an underlying, evenly recurring pulse or beat.  (CG’s 1 and 3; Gen. Ed. G2; CSGB)

3. Understand rhythmic symbols as representations of specific composites or subdivisions of beats, each bearing an exact fractional value relative to the unit of pulse.  (CG’s 1 and 3; Gen. Ed. G2; CSGB)

4. Correctly identify, notate, and execute the rhythmic values of whole note, half note, quarter note, and eighth note (ω, η, θ, ε).  (CG’s 1 and 3; Gen. Ed. G2; CSGB)

5. Understand, explain, and execute time signatures that employ the quarter note as the unit of pulse.  E.g.: 4 3 2 6
   4 4 4 4  (CG’s 1 and 3; Gen. Ed. G2; CSGB)

**UNIT IV:  The Major Scale**

The student will be able to:

1. Understand the concept of scale as a logically and incrementally ordered series of pitches that forms the basis of melodic construction.  (CG’s 3 and 4; Gen. Ed. G2)

2. Memorize and articulate the whole step-half step pattern that constitutes the major scale.  (CG’s 3 and 4; Gen. Ed. G2; CSGB)

3. Spell, notate, and play at the piano, the scale of C major and employ it as a template for the construction of other major scales.  (CG’s 2, 3 and 4; Gen. Ed. G2; CSGB)
4. Spell and notate the major scale on each of fifteen starting notes, correctly using
the appropriate accidentals (#, β) necessary to preserve the whole step-half step
template in each transposition. (CG’s 1, 3 and 4; Gen. Ed. G2; CSGB)

5. Memorize and construct the key signature for each of the fifteen major keys,
using the appropriate configuration of accidentals. (CG’s 1, 3, and 4)

6. Memorize the circle of 5th’s and understand its significance as an organizing
principle in tonal music. (CG’s 3, 4 and 5)

7. Transpose simple diatonic melodies notated in a given key up or down to a
specified different key, using the appropriate accidentals needed to preserve the
intervallic profile of the original melody. (CG’s 1, 3, 4 and 5; Gen. Ed. G2; CSGB)

UNIT V: Rhythmic Notation II

The student will be able to:
1. Execute the notation of more minute and complex subdivisions of the beat, such
as sixteenth notes (\(\frac{1}{16}\), \(\frac{3}{16}\)) and dotted notes (\(\frac{3}{4}\), \(\frac{5}{4}\)). (CG’s 1,
3 and 4; Gen. Ed. G2; CSGB)

2. Execute and notate rhythmic figures in time signatures employing note values
other than the quarter note as the basic unit of pulse. E.g.: 2 4 3 6
2 2 8 8 (CG’s 1, 3 and 4; Gen. Ed. G2; CSGB)

UNIT VI: Intervals

The student will be able to:
1. Understand and explain the term “interval” as the distance between any two
pitches measured in terms of the composite of half steps that separate them.
(CG’s 3, 4 and 5; Gen. Ed. G2)

2. Identify the broad-based categories of interval (2nd, 3rd, 4th, 5th, 6th, 7th, octave) as
measured by the number of scale steps separating any two pitches. (CG’s 3, 4 and
5; Gen. Ed. G2)

3. Apply the modifying terms of major, minor, augmented, diminished, and perfect
to achieve a more finely calibrated distinction within each of the broad-based
numerical interval categories (major 3rd vs. minor 3rd, perfect 5th vs. diminished 5th
or augmented 5th, etc.). (CG’s 3, 4 and 5; Gen. Ed. G2; CSGB)

4. Precisely identify the interval between two pitches in terms of both its numerical
value and the appropriate modifier. E.g.: G to E\(\beta\) = minor 6th; D to C\(\beta\) =
diminished 7th (CG’s 3 and 4; Gen. Ed. G2; CSGB)

5. Understand, explain, and apply the concept of interval inversion. (CG’s 3 and 4; Gen.
Ed. G2; CSGA)
UNIT VII: The Minor Scales
The student will be able to:
1. Memorize and articulate the whole step-half step pattern that constitutes the minor scale in each of its three forms—natural, harmonic, and melodic. (CG’s 3 and 4; Gen. Ed. G2)

2. Understand and explain that the three distinct forms of the minor scale are the result of half step modifications of scale degrees 6 and 7. (CG’s 3 and 4; Gen. Ed. G2, CSGA)

3. Cite and identify the melodic conditions under which each, or both, scale degree modifications occur. (CG’s 1, 3 and 4; Gen. Ed. G2; CSG’s A and B)

4. Spell and notate the minor scale in each of its three forms at each of the fifteen levels of transposition, using the appropriate accidentals. (CG’s 1, 2, 3 and 4; Gen. Ed. G2; CSGB)

5. Memorize and construct the key signature for each of the fifteen minor keys. (CG’s 1, 3 and 4)

6. Understand and explain the concept of relative minor, noting that each minor scale is related to a parent scale and is governed by the same key signature. (CG’s 1, 3, 4 and 5)

7. Know and demonstrate the precise intervallic distance between the tonic of any major key and the tonic of its relative minor. (CG’s 1, 3 and 4; Gen. Ed. G2; CSGB)

8. Cite from memory the relative minor of all fifteen major keys. (CG 1 and 3)

9. Execute at the piano keyboard the three forms of the minor scale in a variety of keys. (CG’s 2, 3 and 4)

UNIT VIII: Triads and the Concept of Harmony
The student will be able to:
1. Understand and explain the structure of the triad as a specific intervallic configuration of three pitches that serves as the basic structural unit of harmony. (CG’s 3, 4 and 5; Gen. Ed. G2; CSGA)

2. Identify and define the four classes of triad (major, minor, augmented, and diminished), citing the specific intervallic structure of each. (CG’s 3, 4 and 5; Gen. Ed. G2; CSGA)

3. Spell, notate, and name any triad in each of its four forms from any given root note. (CG’s 1, 3 and 4; Gen. Ed. G2; CSG’s A and B)

4. Construct and play at the piano keyboard any triad proceeding from its name: D♭ major, F minor, C# diminished, etc. (CG’s 1, 2, 3, and 4; Gen. Ed. G2; CSGB)

5. Proceed from a given notated triad and apply the necessary structural modifications to transform it into its other three forms, both on staff paper and at the piano keyboard. (CG’s 1, 2, 3, 4 and 5; Gen. Ed. G2; CSGB)

6. Identify by name any triad as notated in either normal form or spread position, as well as in each of its two inverted forms. (CG’s 1, 3, 4 and 5; Gen. Ed. G2; CSGB)

UNIT IX: The Tonal System and the Functional Hierarchy of Triads within a Key

The student will be able to:

1. Understand and explain the concept of tonality or key as the functional interaction of melody and harmony. (CG’s 3, 4 and 5; CSGA)

2. Understand and demonstrate the derivation of triads from a parent major scale. (CG’s 3, 4 and 5; Gen. Ed. G2; CSG’s A and B)

3. Ascribe a Roman numeral designation to each of seven triads derived from the major scale corresponding to the scale degree from which each is derived and reflecting the quality (major, minor, diminished) of each triad through the use of upper and lower case numerals (I, ii, iii, IV, V, vi, vii♭). (CG’s 1, 3, 4 and 5; Gen. Ed. G2; CSGB)

4. Understand the relative functional strength of each triad and explain the role that each plays in establishing the primacy of the tonic (I). (CG’s 3, 4 and 5)

5. Apply objectives 2, 3, 4 in the context of minor keys noting the additional triads engendered by the chromatic alterations of scale degrees 6 and 7. (CG’s 3, 4 and 5; Gen. Ed. G2; CSG’s A and B)

6. Perform a harmonic analysis on a passage of music using the Roman numeral designations. (CG’s 1, 3, 4 and 5; Gen. Ed. G2; CSG)

7. Ascertain the key implied by a fragmentary chord progression that employs only two or three triads. (CG’s 1, 3, 4 and 5; CSGB)

8. Play at the piano, short progressions of triads in a variety of major and minor keys. (CG’s 2, 3 and 4)
Evaluation of Student Learning
Each student’s attainment of both course level objectives and unit level learning outcomes will be assessed using the following means of evaluation.

<table>
<thead>
<tr>
<th>Evaluation Tools</th>
<th>% of Grade</th>
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<tbody>
<tr>
<td>Completion of and performance on weekly reading and written homework assignments</td>
<td>30%</td>
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<tr>
<td>Periodic quizzes (six to eight) designed to assess the student’s level of mastery of concepts and procedures studied in class</td>
<td>30%</td>
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<tr>
<td>A comprehensive and inclusive final examination</td>
<td>25%</td>
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<tr>
<td>Attendance and participation in class discussion</td>
<td>15%</td>
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MUS105 Topical Outline
WEEK 1  **Pitch Notation**— Treble and bass clef’s, pitch names, and their locations on the staves.

WEEK 2  **The Piano Keyboard**— Layout of the keyboard, location of pitches, notation of sharps and flats, identification of the black keys, enharmonic equivalents.

WEEK 3  **Rhythmic Notation**— Quarter notes and eighth notes, proper notation and execution, quarter rests, meter and time signatures.

WEEK 4  **Whole Steps and Half Steps**— On the staff and on the keyboard, accidentals (naturals, double sharp and double flat).

WEEK 5  a. **Rhythm Continued**— Review of the eighth notes and quarter notes; the eighth rest.  
b. **The Major Scale**— Structure, placement of half steps and whole steps, notation in various keys using accidentals; whole notes, half notes, anacrusis.

WEEK 6  **The Major Scale cont.**— Scale degrees, key signatures, circle of fifths, accidentals, transposition; sixteenth notes, dotted notes and ties.

WEEK 7  **The Major Scale cont.**— Review of key signatures, circle of fifths, accidentals, transposition of melodies.

*At this point student must have circle of fifths memorized, and be conversant with all major keys through five sharps and five flats, and be able to play these scales at the piano.*

WEEK 8  **Intervals**— Counting staff steps, half steps, interval inversion, quality of intervals; ties and dotted notes continued.

WEEK 9  **Intervals cont.**— Natural intervals, adding accidentals, consonance and dissonance; counting and executing sixteenth notes.

WEEK 10  **Minor Scales**— The natural minor scale, concept of relative minor, parallel minor, key signatures; sixteenth notes continued.

WEEK 11  **Minor Scales cont.**— The harmonic and melodic forms of the minor scale; compound meters.

WEEK 12  **Triads**— Major and minor triads in their inversions; compound meters continued.

WEEK 13  **Triads cont.**— Inversions, diminished and augmented triads; triplets.
WEEK 14  **The Harmonic System**— Chords within a key, triads identified by Roman numeral in major and minor keys, harmonic analysis.

WEEK 15  **The Harmonic System cont.**— Chords in minor keys, including the dominant triad and leading tone triad; review for final.

WEEK 16  **In-Class Final Evaluation**— Written portion will include notation of major and minor scales and key signatures, construction and identification of major, minor, and diminished triads, and numerical identification of triads in a variety of major keys.

Keyboard portion will include the playing of selected major scales as well as minor scales in their harmonic and melodic forms, construction and identification of triad types. It will also include the playing of triads in scalar sequence through several major keys and the performance of selected melodies from Scorereader that will demonstrate proficiency in executing a variety of rhythmic figures.

**MUS105 Assignment Schedule**
(some exercises will be completed in class)

<table>
<thead>
<tr>
<th>WEEK 1</th>
<th>Class 1</th>
<th>Workbook: Chapter 1, ex. 1-11</th>
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<tbody>
<tr>
<td>Class 2</td>
<td>Workbook: Chapter 1, ex. 12-18</td>
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<tr>
<th>WEEK 2</th>
<th>Class 1</th>
<th>Workbook: Chapter 2, ex. 1-6 and review exercises from Chapter 1</th>
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<tbody>
<tr>
<td>Class 2</td>
<td>Workbook: Chapter 2, ex. 7-8</td>
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<tr>
<td>Piano:</td>
<td>Play from Workbook and Chapter 1, ex. 18</td>
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<tr>
<th>WEEK 3</th>
<th>Class 1</th>
<th>Rhythm Reader: Chapter 1, ex. 1-9</th>
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<tr>
<td>Class 2</td>
<td>Workbook: Review exercises from Chapter 2</td>
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<tr>
<td>Rhythm Reader: Chapter 2, ex. 1-10</td>
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<tr>
<td>(Ex. 9 to be practiced at the piano- You will be quizzed!)</td>
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<tr>
<td>Scorebook: p. 121 #46 and p 122 #48 -- copy out and name each note. (Do not include lyrics.)</td>
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<tr>
<th>WEEK 4</th>
<th>Class 1</th>
<th>Workbook: Chapter 3, ex. 1-9</th>
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<tr>
<td>Class 2</td>
<td>Workbook: Chapter 3, ex. 10-15 and handout (converting whole steps to half steps and vice versa)</td>
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<tr>
<td>Piano:</td>
<td>Scorebook, p. 107 #3, p. 108 #5</td>
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<tr>
<th>WEEK 5</th>
<th>Class 1</th>
<th>Rhythm Reader: Chapter 3, ex. 1-8</th>
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<tr>
<td>(Ex. 8 at piano - You will be quizzed!)</td>
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<tr>
<td>Scorebook: p. 126 no. 55 - copy out and bracket and identify all whole steps and half steps.</td>
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<tr>
<td>Class 2</td>
<td>Workbook: Chapter 4, ex. 1-5 (hand in ex. 1 using sharps and flats).</td>
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<tr>
<td>And review exercises from Chapter 3.</td>
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<tr>
<th>WEEK 6</th>
<th>Class 1</th>
<th>Workbook: Chapter 4, ex. 6 (hand in written-out transposed versions of each melody) and review exercises from Chapter 4.</th>
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Rhythm Reader: Chapter 4, ex. 1-8 (ex. 1 & 5 at piano)
Piano: G major and F major scales.

Class 2 Workbook: Chapter 5, ex. 4 & 5
Rhythm Reader: Chapter 4, ex. 9 at piano
Piano: Review G major and F major scales.

WEEK 7 Class 1
Workbook: Chapter 5, ex. 6, 7, and 9a (hand in 9a on separate manuscript paper).
Rhythm Reader: Chapter 5, ex. 4, 6 & 7 (ex. 7 at piano)
Piano: D major and B♭ major scales.

Class 2 Workbook: Chapter 5, ex. 9b, c & d (on separate manuscript paper to be handed in).
Rhythm Reader: Review Chapter 5, ex. 7 at piano.
Piano: Review scales C, G, F, D, and B♭ major.

WEEK 8 Class 1
Workbook: Chapter 5, ex. 11 and Review exercises
Rhythm Reader: Chapter 6, ex. 1, 2 & 3 (ex. 2 at piano)

Class 2 MID-TERM EXAM
Rhythm Reader: Chapter 6, ex. 4, 5, 6, and 7 (ex. 7 at piano)

WEEK 9 Class 1
Workbook: Chapter 4, ex. 8-11 and review exercises 5 & 6
Rhythm Reader: Chapter 6, ex. 7 & 8

Class 2 Workbook: Chapter 6, ex. 1-4
Rhythm Reader: Chapter 6, ex. 11 at piano
Piano: A and E♭ major scales

WEEK 10 Class 1
Workbook: Chapter 6, ex. 5-8
Rhythm Reader: Chapter 7, ex. 3 & 4
Piano: Continue A and E♭ major scales.

Class 2 Workbook: Chapter 6 ex. 9-13
Rhythm Reader: Chapter 7, ex. 5-7 (ex. 6 at piano)
WEEK 11  
Class 1  Workbook: Chapter 6, ex. 14 & 15 and review exercises.  
Rhythm Reader: Chapter 7, ex. 8, 9, & 11 (ex. 11 at piano)  
Class 2 Workbook: Chapter 7, ex. 1-5  
Rhythm Reader: Chapter 7 (review ex. 11 at piano)  

WEEK 12  
Class 1  Workbook: Chapter 7, ex. 9-11  
Rhythm Reader: Chapter 8, ex. 1-4  
Class 2 Workbook: Chapter 7, ex. 12  
Rhythm Reader: Review exercises  

WEEK 13  
Class 1  Workbook: Chapter 8, ex. 1-4  
Rhythm Reader: Chapter 8, ex. 10 at piano  
Class 2 Workbook: Chapter 8, ex. 5-8  
Rhythm Reader: Chapter 8, ex. 10 at piano  

WEEK 14  
Class 1  Workbook: Chapter 8, ex. 9 & 10  
Rhythm Reader: Review exercises in Chapter 9, ex. 1-5  
Class 2 Workbook: Chapter 9, ex. 7 and handout  
Rhythm Reader: Chapter 9, ex. 10 at piano  

WEEK 15  
Class 1  Workbook: Complete Chapter 9  
Rhythm Reader: Chapter 9, ex. 10  
Class 2  REVIEW FOR FINAL EXAM