

Fundamental of Musicianship I Topical OutlineWeek 1

Basic Properties of Sound: Waves
MAX/MSP Project 1
Aural Training Quiz 1: Rhythm
Literature Module 1
Listening Quiz 1

Week 2

Representing Music I: Notation; Tones/Notes/Scores
Notation Project 1
Aural Training Quiz 2: Rhythm
Literature Module 2
Listening Quiz 2

Week 3

Representing Music II: Pitch; Scales; Interval Sonorities; Onset & Duration; Musical Loudness; Timbre
Mixer Practicum 1
Notation Project 2
Aural Training Quiz 3: Rhythm and Pitch
Literature Module 3
Listening Quiz 3

Week 4

Musical Scales, Tuning, and Intonation I: Equal-Tempered Intervals; Equal Tempered Scale; Just Intervals and Scales; The Cent Scale; Taxonomy of Scales; Scales–Timbre–Proportion
Basic Harmonic Vocabulary 1: Triads, Seventh Chords, Inversions
MAX/MSP Project 2
Aural Training Quiz 4: Rhythm and Pitch
Literature Module 4
Listening Quiz 4

Week 5

Musical Scales, Tuning, and Intonation II: Harmonic Proportion; Pythagorean Diatonic Scale; Transposing Just Scales; Consonance of Intervals; Powers of the Fifth and Octave; Scales and Compromise; Tempered Tuning Systems; Microtonality; Rule of 18; Deconstructing Tonal Harmony; Deconstructing the Octave; Alternative Tunings
Basic Harmonic Vocabulary 2: Diatonic Palette and Harmonic Function
Mixer Practicum 2
Aural Training Quiz 5: Rhythm and Intervals
Literature Module 5
Listening Quiz 5

Week 6

Physical Basis of Sound I: Distance; Dimension; Time; Mass; Density; Displacement; Speed; Velocity
Basic Harmonic Vocabulary 3: Voice-Leading and Nonchord Tones
Notation Project 3
Aural Training Quiz 6: Rhythm and Melodic Intervals
Literature Module 6
Listening Quiz 6

Week 7

Physical Basis of Sound II: Instantaneous Velocity; Acceleration; Relating Displacement, Velocity, Acceleration, and Time; Newton's Laws of Motion; Types of Force; Work and Energy; Internal and External Forces; Work-Energy Theorem; Conservative and Nonconservative Forces
MAX/MSP Project 3
Basic Harmonic Vocabulary 4: Voice-Leading and Nonchord Tones Continued
Aural Training Quiz 7: Rhythm and Melodic Intervals
Literature Module 7
Listening Quiz 7

Week 8

Physical Basis of Sound III: Power; Power of Vibrating Systems; Wave Propagation; Amplitude and Pressure; Intensity; Inverse Square Law; Measuring Sound Intensity

Mixer Practicum 4

Basic Harmonic Vocabulary 5: Voice-Leading and Melodic Construction

Aural Training Quiz 8: Rhythm and Harmonic Intervals

Literature Module 8

Listening Quiz 8

Week 9

Geometrical Basis of Sound: Circular Motion and Simple Harmonic Motion; Rotational Motion; Projection of Circular Motion; Constructing a Sinusoid; Energy of Waveforms

Notation Project 4

Basic Harmonic Vocabulary 6: Voice-Leading and Melodic Construction Continued

Aural Training Quiz 9: Rhythm and Harmonic Intervals

Literature Module 9

Listening Quiz 9

Week 10

Psychophysical Basis of Sound: Signaling Systems I; The Ear; Psychoacoustics and Psychophysics; Pitch; Loudness; Frequency Domain Masking

MAX/MSP Project 4

Basic Harmonic Vocabulary 7: Voice-Leading and Large-Scale Melodic Relationships

Aural Training Quiz 10: Rhythm and Melody

Literature Module 10

Listening Quiz 10

Week 11

Psychophysical Basis of Sound: Signaling Systems II; Beats; Combination Tones; Critical Bands; Duration; Consonance and Dissonance; Localization; Externalization; Timbre

Mixer Practicum 5

Basic Harmonic Vocabulary 8: Secondary Function

Aural Training Quiz 11: Rhythm and Melody

Literature Module 11

Listening Quiz 11

Final Project Distribution

Week 12

Acoustics I: Sound and Signal; A Simple Transmission Model; How Vibrations Travel in Air; Speed of Sound; Pressure Waves; Sound Radiation Models; Superposition and Interference

Notation/Sequencing Project 1

Basic Harmonic Vocabulary 9: Modulation

Aural Training Quiz 12: Rhythm and Melody

Literature Module 12

Listening Quiz 12

Week 13

Acoustics II: Reflection; Refraction; Absorption; Diffraction; Doppler Effect; Room Acoustics

Basic Harmonic Vocabulary 9: Modulation and Binary Form

MAX/MSP Project 5

Aural Training Quiz 12: Rhythm and Modulating Melody

Literature Module 12

Listening Quiz 12

Week 14

Aural and Written Exam Review and Preliminary Feedback on Final Projects

Week 15

Presentation of Final Projects and Mixer Practicum