| week | tuesday | thursday |
|---|---|---|
| 1 | | 1/21: what is sound, music? basic math review |
| 2 | 1/26: music terminology (scales, intervals, …) | 1/28: physics terminology (velocity, acceleration, …) |
| 3 | 2/2: periodic motion, SHM, resonance | 2/4: wave properties, superposition (interference, beats) |
| 4 | 2/9: reflection, refraction, diffraction, Doppler effect | 2/11: standing waves, Fourier analysis and synthesis |
| 5 | 2/16: plucked and bowed strings | 2/18: string instruments |
| 6 | 2/23: oscillating air columns; open and closed tubes | 2/25: wind instruments |
| 7 | 3/2: percussion instruments (inharmonicities) | 3/4: voice (vocal organs, vocal tract, formants, …) |
| 8 | 3/9: speech, singing | 3/11: anatomy of human ear, Fechner’s law, logarithms |
| 9 | 3/16: loudness (SIL, dB) | 3/18: Fletcher-Munson curves (phon, sones) |
| 10 | 3/23: pitch perception (critical band, JND, LFD) | 3/25: missing fundamental, aural harmonics |
| 11 | 3/30: timbre, attack & decay transients; con/dissonance | 4/1: room acoustics (reflections, echoes, resonances) |
| 12 | 4/6: reverberation time; acoustical criteria & design | 4/8: basic electricity (volts, current, energy, power) |
| 13 | 4/13: Faraday’s law (electromagnetic induction) | 4/15: generators & motors; microphones & speakers |
| 14 | 4/20: musical scales and intervals | 4/22: circle of fifths, Pythagorean tuning |
| 15 | 4/27: equal temperament, just tuning systems | 4/29: comparing tuning systems |
| 16 | 5/4: last day of classes | 5/6: no class |