

OLLI Illinois Spring 2030: Suggested References for “The Sound of Music”

References for SoM (roughly in order of relevance)

1. John Powell, *How Music Works: The Science and Psychology of Beautiful Sounds, from Beethoven to the Beatles and Beyond*, Little Brown, 2010 (264pp) Rock artist turned physicist describe the science of sound from a humorous musical perspective, at a readable but fairly superficial level.
2. Daniel Levitin, *This is Your Brain on Music: The Science of a Human Obsession*, Penguin Plume, 2007 (322pp) Rock artist and music producer turned cognitive scientist explores the music-brain connection, in a chatty style.
3. Oliver Sacks, *Musicophilia: Tales of Music and the Brain*, Vintage Random House, 2008 (425pp) If you like Sacks, you’ll find his anecdotes a lot of fun.
4. Gerald Langner, *The Neural Code of Pitch and Harmony*, 1st Edition, Cambridge University Press, 2015 (241pp). Not yet available cheaply, but available on-line from UIUC library. Good up-to-date picture of the subject in depth.
5. Rossing, Moore & Wheeler, *The Science of Sound*, 3rd Edition, Pearson, 2014 (764pp) The most modern and comprehensive undergraduate level text on sound and music, with minimal math. Highly readable, but rather expensive.
6. Arthur Benade, *Fundamentals of Musical Acoustics*, 2nd Edition, Dover, 1990 (596pp)
7. Hermann Helmholtz, *On the Sensations of Tone*, 2nd English Edition, Dover, 1954 (Original German Edition 1877) Surprisingly readable tome from the Steampunk era of acoustic science. Many, but not all, of Helmholtz’s ideas have stood the test of time.
8. Harry Olson, *Music, Physics and Engineering*, 2nd Edition, Dover, 1967 (460pp)
9. N.H. Fletcher & T.D. Rossing, *The Physics of Musical Instruments*, 2nd Edition, Springer, 1998. A deep dive into the nitty-gritty details of a wide variety of musical instruments, how they work, and the sounds they produce.
10. Stuart Isacoff, *Temperament: How Music Became a Battleground for the Great Minds of Western Civilization*, Vintage Random House, 2003 (277pp). One salvo in the Temperament wars, on the Equal Temperament side.
11. Ross Duffin, *How Equal Temperament Ruined Harmony (and Why You Should Care)*, Norton, 2007 (196pp) A returning salvo from the anti-ET side.
12. J. M. Barbour, *Tuning and Temperament: A Historical Survey*, Dover, 2004 (based on the author’s 1932 Cornell dissertation) (228pp)
13. Nicolas Carter, *Music Theory from Absolute Beginner to Expert*, 3rd Edition, Self-published, 2018 (224pp). A unique introduction in pictures and words to standard Western music theory, almost without recourse to standard notation.
14. Benjamin, Horvit & Nelson, *Techniques and Materials of Music*, 7th Edition, Thomson Schirmer, 2008 (308pp) Very spare outline of highly detailed elements of musical composition, for advanced music students.
15. Matthew Ellul, *How to Read Music in 30 Days: Music Theory for Beginners*, SchoolOfComposition.com, 2017 (206pp) One of many introductory books on standard musical notation.
16. Nicolas Carter, *How to Read Music for Beginners*, Self-published, 2017 (xxxpp). Another of the many available books introducing standard musical notation.

17. Daniel Levitin, *The World in Six Songs: How the Musical Brain Created Human Nature*, Penguin Plume, 2009 (358pp) An extension of ideas in Levitin's *This is Your Brain on Music*.
18. H. White and D. White, *Physics and Music: The Science of Musical Sound*, Holt Rinehardt, 1980 (433pp). Highly readable undergrad text, minimal math. A bit dated.
19. Gareth Loy, *Musimathics: The Mathematical Foundations of Music, Vols 1 & 2*, MIT Press 2007 (Vol 1 482pp, Vol 2 562pp). For serious musicians, but fairly heavy duty, as name implies. Lots of math.
20. F.A. Everest & K.C. Pohlmann, *Master Handbook of Acoustics, 6th Edition*, McGraw Hill, 2015 (622pp). Latest version of a classic of architectural acoustics and sound reproduction engineering, with limited material specific to music. Useful for serious audiophiles.