

13.04.2023

Chapter 3. Forces and Equations of Motion, Section 3.7 Hooke's Law and Simple Harmonic Motion, pages 102-107

Reading

Youtube video https://www.youtube.com/watch?v=gZ_KnZHCn4M
<https://www.youtube.com/watch?v=Z52emur7Rko>

Research [Simple Harmonic Motion](#)
[Hooke's Law and Simple Harmonic Motion](#)
[Harmonic Motion](#)

Task 1 Completed :)

17.04.2023

Chapter 3. Forces and Equations of Motion, Section 3.7 Hooke's Law and Simple

Reading

Youtube videos <https://www.youtube.com/watch?v=g550H4e5FCY&pp=ygUeRm9yY2VzIGFuZCBFcXVhdGlvbnMgb2YgTW90aW9u>
<https://www.youtube.com/watch?v=UNuRhIHthhY>
https://www.youtube.com/watch?v=-l_YDA6au8&pp=ygUqNyBib29r4oCZcyBMYXcgYW5kIFNpbXBsZSBIYXJtb25pYyBNb3Rpb24s
<https://www.youtube.com/watch?v=Gnke2x3vT8&pp=ygUqNyBib29r4oCZcyBMYXcgYW5kIFNpbXBsZSBIYXJtb25pYyBNb3Rpb24s>

Research [hooke-s-law-and-simple-harmonic-motion](#)
[A Harmonic Oscillator Obeys Hooke's Law](#)

Task 2 Completed :)

18.04.2023

Chapter 9. Normal Modes and Waves

Reading

Section 9.3 Fourier Series, pages 319-329
 Section 9.5 Fourier Integrals, pages 331-332, Appendix 9A Complex Fourier Series, Appendix 9B Fast Fourier Transform, pages 353-357)

Youtube videos https://www.youtube.com/watch?v=O_HgMWx4a5w&pp=ygUkZm91cmllciBzZXJpZXMGYW5kIGZvdXJpZXIgaW50ZWdyYWwg
<https://www.youtube.com/watch?v=AhdFs2baY4Y&pp=ygUkZm91cmllciBzZXJpZXMGYW5kIGZvdXJpZXIgaW50ZWdyYWwg>
<https://www.youtube.com/watch?v=h7apO7q16V0&pp=ygUVRmFzdCBmdXJpZXIgdHJhbnNmb3Jt>
<https://www.youtube.com/watch?v=E8HeD-MUrjY&pp=ygUVRmFzdCBmdXJpZXIgdHJhbnNmb3Jt>
<https://www.youtube.com/watch?v=spUNpyF58BY&pp=ygUVRmFzdCBmdXJpZXIgdHJhbnNmb3Jt>

Research <https://math.mit.edu/~gs/cse/websections/cse41.pdf>
<http://physics.bu.edu/~pankajm/PY501/fourier.pdf>
<https://towardsdatascience.com/fast-fourier-transform-937926e591cb>
<https://www.nti-audio.com/en/support/know-how/fast-fourier-transform-fft>

Task 3 & Task 4 Completed :)