

# Notes on Standard Model

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July 1, 2025



# Author's Note and Disclaimer

This is a collection of notes on the Standard Model of Particle Physics. All contents of this work will mainly follow the chosen textbook references. I do not claim to present any new discoveries in this work, but I will do my best to provide my personal insights on each topics to be included in this work.

First, we try to digest the discussions presented in *A Standard Model Workbook* by *Thomas A. Moore*, starting with the 4th chapter of the workbook. Then, we will built upon this to dive deeper on the presented topics using different textbooks such as *Modern Particle Physics* by *Mark Thomson*, *Quantum Field Theory for the Gifted Amateur* by *Stephen Blundell* and *Tom Lancaster*.

This will surely take me  $n$ -years to finish. Wish me luck.

I am open to possible discussions and more than willing to accept guidance in this lifelong endeavor.



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# Chapter 1

## A Classical Scalar Field





## Chapter 2

# The Klein-Gordon Equation

