

The course outline:
Quantum Field Theory I,
Fall 2024.

This is an introductory course on quantum field theory (QFT). QFT is a fundamental requirement in the studies of theoretical high energy physics, particle physics and early universe cosmology. It is a vast and well-established subject with applications in many branches of theoretical physics and cosmology.

There are many textbooks on QFT, old and new. In this course we will mainly follow the book by Peskin & Schroeder (Perseus Books, 1995). This is an excellent book, emphasizing on various aspects of QFT, both at the level of formalisms and applications. There are other useful books which may be consulted as well. For example, the book by Schwartz (Cambridge University Press, 2014) is very useful as well. The QFT book by Steven Weinberg (Cambridge University Press, volume I, 1995) is an excellent reference for deeper understandings of various topics in QFT. However, because of its high level of presentation, it is not suggested as a regular text book for a first time study in QFT.

This is a three-unit course. Our goal is to cover most of part I of Peskin & Schroeder, chapters 1-7.

Time and place of the course:

Sunday and Tuesday, 9:00 - 10:30, IPM, School of Astronomy, Larak garden.

My Contact information

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