The Standard Model of particle physics has been a very successful framework to describe physics around TeV scale. However, there are reasons to believe that the SM is not a complete description of nature. For instance, the existence of dark matter, matter–antimatter asymmetry and dark energy are not accommodated by the SM. Consequently, there could be further particles and interactions at the higher energy scales. There are many models proposed for new physics, so it is useful to introduce a model-independent approach. If the scale of the new physics is accessible at the current experiments,then the new degrees of freedom naturally can be produced at high energy colliders. But if the new degrees of freedom are heavier than our energy scale in the experiments, the heavy particles can be integrated out and their effects can be parameterized through higher-dimension operators. This approach is called Effective Lagrangian approach. In this talk, after a short review on Effective Lagrangian approach, its applications at the LHC will be presented with some examples in top and Higgs Physics.