The course is an introductory level course on the various aspects of Algorithmic and Quantitative Trading. The course will put significant emphasis on topics related to execution and to greater extent to quantitative trading. The course will put large emphasis on practical consideration in the general area of quantitative trading, and in particular in the equities world. Some of the topics that will be covered. Market participants, the mechanics of trading, order books, exchanges, ATS, ECNs, etc. Market microstructure, routing, rules, market impact, covariance matrix estimation in various time frames, dynamic and optimal trading, statistical arbitrage, portfolio optimization. The course homework will include working with data sets at various frequencies.