Summary

Quality is a relative term and it is generally used with reference to the end product. The quality of a product can be evaluated in many ways referred to as dimensions of quality.

Performance - Will the product do the intended job?
Reliability - How often does the product fail?
Durability - How long does the product last?
Serviceability - How easy is it to repair the product?
Aesthetics - What does the product look like?
Features - What does the product do?
Perceived quality - What is the reputation of the company or its product?
Conformance to standards - Is the product made exactly as the designer intended?

The traditional definition of quality is based on the view point that products and services must meet the requirements of those who use them. Hence quality takes the definition ***fitness for use***. Quality is also understood to be inversely proportional to variability implying that the quality of a product increases if the variability of the product decreases.

Quality control (QC) is a systematic process of maintaining and managing various factors that affect the quality of the product. QC can also be defined as the tools, device(s) or skills through which quality activities are carried out. QC majorly depends on - material, machine, types of labour, working conditions, measuring instruments, etc. Thus the process, through which we establish and meet standards to achieve Quality of Conformance, is commonly termed as Quality Control.

Quality improvement (QI) is the reduction of variability in processes and products. One goal of this course is to learn how to implement statistical tools that can be used to improve quality.