Statistical Quality and Process Control

Summer 2006

Time: MW 6 - 7:50 pm, twelve-week session: May 15 - July 25
Room: CB 1.124
Instructor: Dr. Michael Baron
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Office hours: MW 5-6 pm in ECSN 3.912; 7:50-8 pm in CB 1.124


Brief Description:

The aim of the course is for you to gain competence in the use of statistical theory and methods in improving the quality of manufactured goods and services from the design stage of a product to its despatch to markets.

The objectives are that at the end of the course you will

- be aware of the range of current statistical techniques of industrial quality control;
- be able to identify appropriate methods for monitoring, evaluating and maintaining quality in particular circumstances;
- be able to perform statistical analysis to set the chosen methods up and maintain them.

The course covers

- philosophy and principles of statistical quality and process control;
- a wide range of quality and process control techniques, from elementary control charts which are in use since 1930s to the modern recently developed sequential methods which gained popularity in the last decade;
- practical implementation of these techniques using various computer packages.

Prerequisites:

Any introductory Calculus-based course in Probability and Statistics. STAT 4351/4352 or CS 3341 or STAT 3360 or STAT 5311 or equivalent is sufficient.