

# ADVANCED STATISTICAL PROCESS CONTROL (SPC)



## Introduction

Statistics is an extremely powerful and useful technique to achieve, sustain and improve the quality of product. Massive volumes of data have been collected at the increasing rate in the future. The ability to handle, interpret and use data is therefore critical to the success in business in terms of decision making.

Normal Statistical Process Control can handle some of these data but not all the data. To achieve more efficient result of analysis, additional techniques for more advanced level shall be needed to make the decision making more meaningful. This course will help you to go beyond the level you have so as to get the result more efficiently. On top of this, it shows you superiority in analysing and interpreting the data than other people.

## Objectives

This course will enable the participants to:

- Analyse the data more effectively.
- Interpret data in more thoroughly than other.
- Extract valid and useful information for effective decision making.
- Incorporate the philosophy of Total Quality Management through “Do it right the first time and every time”.

## Duration

2 days | 9am – 5pm | 14 hours

## Who should attend

This course is suitable for technical professionals such as managers, engineers, engineering assistants and those who are involved in design, development, production, manufacturing, quality, and maintenance of the product.

## Entry Requirement

Participants should have basic knowledge of statistics.



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## Course Contents

### Introduction

- Description Statistics
- Normal Distribution
- Test of Normality

### Hypothesis Testing

- Step of Hypothesis Testing
- Test of Means
- Confidence Interval
- Test of Variance
- Test of Proportion

### Other Types of Hypothesis Testing

- Chi-squared Test
- Goodness-of-fit Test

### Regression Analysis

- Linear regression
- Least Square Estimate
- Study of Correlation
- Multiple Regression
- Testing of Independent Variables
- Sum of squares (SS) and F-statistics

### Analysis of Variance (ANOVA)

- Variance of Sample Means
- Sample F Statistics
- Performing ANOVA
- Exercise

## Course Fees

Member: S\$560.46

Non-Member: S\$602.64

*Registration Fee of S\$17.28 apply*

*SDF funding & SkillsFuture applicable*

*All fees stated are inclusive of 8% GST*

## Award of Certificate

Certificate of Completion will be issued to participants who have attended at least 75% of the course.



Please refer to this URL  
<https://www.sqi.org.sg/courses/>  
or QR Code for soft copy  
and updated training schedule

### Membership Application

Register membership online at **[www.sqi.org.sg/membership-join/](https://www.sqi.org.sg/membership-join/)** or contact us to get the membership application form.

Membership Categories:

- ~ Organisation membership
- ~ Individual membership

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