

Quality Improvement Using Statistical Methods:

Quality improvement cannot be achieved when actions are based solely upon *perception* - we need to *study* the process and get some *facts*.

Only hard evidence provided by *data* and extracted by *statistical analysis* can point us in the direction of *continuous quality improvement*.

What is SPC (statistical process control)?

SPC is a technique employed to control the system of causes and their variability in a process. The characteristic to be controlled is the variability in the process, which can be measured and evaluated. To do this, data is collected at critical control points for each process and analyzed through statistical methods. The continuous analysis of process control data helps diagnose and correct problems which otherwise would go unnoticed and become part of the final product.

SPC I Workshop

Tuesday, April 23 and
Wednesday, April 24, 2002
8:00 a.m. to 4:30 p.m.

WHO SHOULD ATTEND?

Individuals who have never had formal training on the concepts and tools for Process Improvement using statistics, or those who need a refresher.

WORKSHOP AGENDA

1. The Relationship of Quality to Productivity
2. Customer and Supplier Relationship
3. Process and System; Type of Data; Variation
4. Seven Tools for Process Improvement
 - (1) Flow Chart
 - (2) Cause and Effect Diagram
 - (3) Pareto Chart
 - (4) Histogram
 - (5) Check Sheet and Location Plot
 - (6) Run Chart and Control Charts
 - (7) Scatter Plot



SPC II Workshop

Tuesday, May 21 and
Wednesday, May 22, 2002
8:00 a.m. to 4:30 p.m.

WHO SHOULD ATTEND?

Individuals who have had basic training (such as SPC I) on the seven tools for Process Improvement.

WORKSHOP AGENDA

1. Chance and Distribution (Averages and Proportions)
2. Control Charts (including hands-on exercises)
 - (1) Basic Concepts
 - (2) Variables Charts - X-bar and R Charts
 - (3) Attributes Charts - p, np, C, and U Charts
 - (4) Control Chart Patterns
3. Limits: Tolerance, Specification and Control
4. Process Capability
5. Rational Subgroups
6. Advanced Control Chart Techniques
 - (A) CUSUM Chart
 - (B) EWMA Technique

or more information or to register, please contact the Manitoba Quality Network at (204) 949-4999
or visit the QNET website at www.qnet.mb.ca

Quality Improvement Using Statistical Methods...

Statistical Process Control Workshop I
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 8:00 a.m. to 4:30 p.m.

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Statistical Process Control Workshop II
 Tuesday, May 21 and Wednesday, May 22, 2002
 8:00 a.m. to 4:30 p.m.

Presented by the Manitoba Quality Network (QNET) and WORKFORCE Manitoba, Manitoba Education, Training & Youth

Presenter Biographies

Over the last 14 years Dr. Macpherson and Dr. Cheng have teamed up to give over 80 workshops on Quality Improvement Techniques, Statistical Process Control, Basic Statistical Techniques, Total Quality Management and Design of Experiments to more than 20 companies and organizations in the manufacturing, service, and government sectors.

Brian D. Macpherson, Ph.D.

Dr. Macpherson is a Professor in the Department of Statistics at the University of Manitoba and the Coordinator of the Statistical Quality Control Research and Applications Group within the Department of Statistics. He has served as Associate Dean of the Faculty of Science and as Acting Secretary of the University of Manitoba Senate. He is a member of the American Statistical Association, the American Society for Quality, and of the Statistical Association of Manitoba. He is currently writing a book on "Statistical Process Control for the Short-run Manufacturer."

Smiley Cheng, Ph.D.

Dr. Cheng is a methodologies professor and Head of the Department of Statistics at the University of Manitoba, and has served as Associate Head and Acting Head of the Department. He was President of the International Chinese Statistical Association and the Managing Editor of *Statistica Sinica*, one of the top statistical journals in the world.

Dr. Cheng has given a special workshop on SPC and TQM (Total Quality Management) in China, has been an invited speaker at the World Quality Congress in Helsinki and at the Joint Statistical Meetings in Toronto. Dr. Cheng is heavily involved in the research of statistical quality control (SQC), which propels him in excelling in research, teaching, consulting and training.

Registration Form Or Register Online - www.qnet.mb.ca

***** Limited Seating - Register Early. Fee includes workshop manual and lunch. *****

SPC I Workshop Registration:

QNET Members: _____ x \$285.00 = \$ _____

Non-Members: _____ x \$315.00 = \$ _____

SPC II Workshop Registration:

QNET Members: _____ x \$285.00 = \$ _____

Non-Members: _____ x \$315.00 = \$ _____

Sub-total = \$ _____

Add: G.S.T. (7%) = \$ _____

TOTAL = \$ _____

Contact Name : _____

Organization: _____

Address: _____

City: _____ Province: _____

Post Code: _____ E-mail: _____

Phone: _____ Fax: _____

Names of Registrants: _____ SPC I SPC II

_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>

GST Registration # 899755334RT

Cancellations must be in writing, received by QNET at least 7 full business days prior to the event.

Please mail or fax registration & cheque to:

Manitoba Quality Network (QNET), Suite 454, 167 Lombard Avenue, Winnipeg, MB R3B 0T6
 Phone: (204) 949-4999 / Fax: (204) 949-4990 / Email: mail@qnet.mb.ca / Website: www.qnet.mb.ca

To register online for these sessions, return to the QNET website and click on "Register Online for QNET Events"