



TOTAL QUALITY MANAGEMENT - I

PROF. RAGHU NANDAN SENGUPTA

Department of Management Studies
IIT Kanpur

PRE-REQUISITES : Probability & Statistics

INTENDED AUDIENCE : Masters in Business Administration, Masters in Economics, Masters in Statistics/Mathematics, Masters in Industrial Engineering, Masters in Operations Research/Operations Management, Phd in related fields as mentioned above

INDUSTRIES APPLICABLE TO : All service, manufacturing industry, government department, any type of private industry

COURSE OUTLINE :

This is the first part of the two part course (TQM-I, TQM-II) and will cover topics ranging from TQM, Kaizen, Elementary concepts related to quality assurance, Basic Statistical Concepts and Control of Accuracy and Precision, Process Capability, SPC, Acceptance Sampling and Quality Management Systems, ISO 9000, etc.

ABOUT INSTRUCTOR :

Prof. Raghu Nandan Sengupta completed his bachelors in engineering in Mechanical Engineering from Birla Institute of Technology Mesra, Ranchi INDIA and his FPM (PhD) from Indian Institute of Management Calcutta, INDIA with specialization in Operations Management. His research interests are in Sequential Analysis, Statistical & Mathematical Reliability, Optimization and its use in Financial Optimization. His research work has been published in journals like Metrika, European Journal of Operational Research, Sequential Analysis, Computational Statistics & Data Analysis, Communications in Statistics: Simulation & Computation, Quantitative Finance, etc. At Indian Institute of Technology Kanpur, INDIA he is a Professor in the Industrial & Management Engineering department and teaches courses like Probability & Statistics, Stochastic Processes & their Applications, Management Decision Analysis, Financial Risk Management, etc. He is also the recipient of IUSSTF Fellowship 2008 and visited Operations Research & Financial Engineering department at Princeton University, USA, ERASMUS MUNDUS Fellowship 2011 to Warsaw University, POLAND, EU-NAMASTE Fellowship 2015 to IST, University of Lisboa, PORTUGAL, DAAD Fellowship 2015 to TU Dresden, GERMANY.

COURSE PLAN :

Week 1: Total Quality Management and Quality Management Philosophies

Week 2: Customer Value Evaluation, Kaizen, Problem Solving and Quality Management

Week 3: Elementary concepts related to 7 Old and 7 New Tools for quality Assurance

Week 4: Basic Statistical Concepts and Control of Accuracy and Precision

Week 5: Process Capability

Week 6: SPC

Week 7: Acceptance Sampling

Week 8: Quality Management Systems, ISO 9000