



Indian Foundation For
Quality Management

IFQM Academy for Business Excellence



Centre for Innovation Excellence

Learning solutions

1. Taguchi methods for Robust Optimisation (Level 1: Green Belt)
2. Design for Six Sigma (DFSS)



Centre for Innovation Excellence

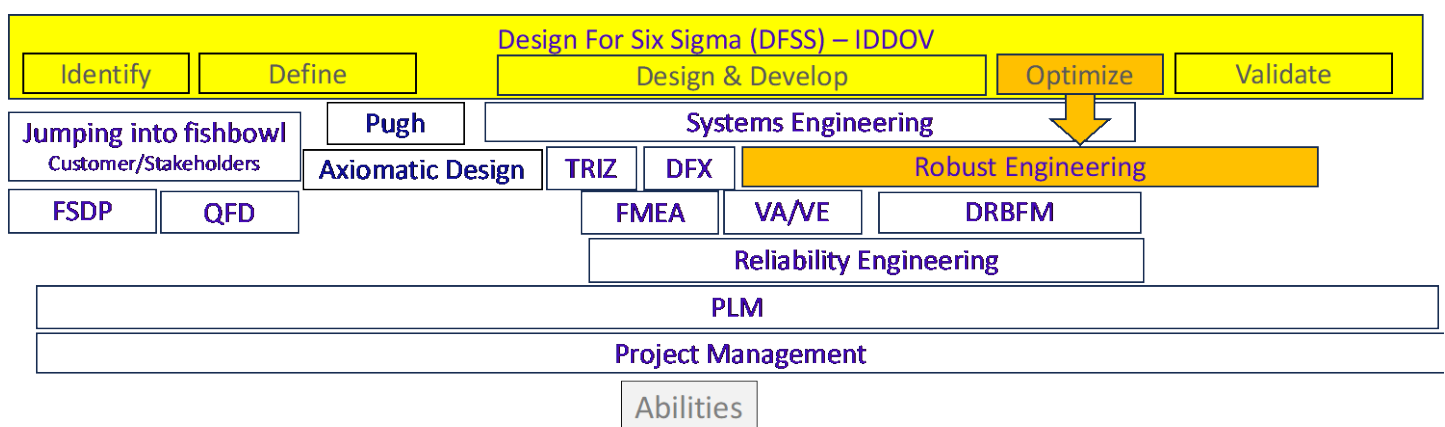
Innovation and Quality are prime drivers of excellence for Indian enterprises to become globally competitive. This requires building organisational capabilities for Innovation and Quality. Organisational capabilities are considered to be unique combination of skills, abilities, processes and technology.

The Mission of the IFQM Academy for Business Excellence is to contribute to organisational capabilities for realising compelling strategy and sustainability of Indian enterprises.

Towards this, IFQM Academy will compliment with L&D functions of IFQM member companies to contribute to capabilities with processes and abilities through powerful learning solutions.

The model below shows the DFSS (Design for Six Sigma) which is a form of an innovation process in which abilities for appropriate use of powerful tools effectively help to increase success rate of innovation.

To start with, IFQM academy offers learning solutions for Taguchi Methods, one of the tools used for optimisation of the product or process proactively followed by DFSS.



Taguchi Methods for Robust Optimisation

Target audience:

Senior professionals in

- Research and development involved in Technology development, Design, Testing, Engineering Analysis for products or solutions.
- Production Engineering: Process and Facility Planning, Manufacturing Systems Engineering.
- Quality Assurance: Design Quality, Manufacturing Quality, Supplier Quality, Customer Quality and Service Quality.

Program outcomes:

At the end of the program on Taguchi Methods, the participants will be able to

1. Sense the opportunities and define projects to optimise product and process design using Taguchi methods
2. Apply the steps for robust optimisation for the given project using simulation and physical experiments
3. Interpret the outcomes of the optimisation and validate results
4. Contribute to optimisation of products and processes for the DFSS projects
5. Formulate design standards and build shelf engineering for current and future products and processes

Taguchi Methods for Robust Optimisation

Faculty:

The program will be conducted by:

Mr. Shin Taguchi, CTO - ASI Consulting Group LLC., Advisor, ITEQ International. Over the past 40 years, he has taught and coached more than 4,000 cases (in about 500 companies) on topics related to robust design using Taguchi Method, mainly in Japan, Europe and the United States.

He is an expert on Robust Engineering (Taguchi Methods), Design for Six Sigma Statistics, Industrial Engineering.

Duration: 6 months

The program will be conducted virtually with 7 seminar sessions of 3.5 Hrs each per week along with 5 – 7 coaching sessions for each team as indicated below:

#	Task	Month 1				Month 2				Month 3				Month 4					Month 5				Month 6			
		Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7	Wk8	Wk9	Wk10	Wk11	Wk12	Wk13	Wk14	Wk15	Wk16	Wk17	Wk18	Wk19	Wk20	Wk21	Wk22	Wk23	Wk24	Wk25
1	Weekly seminars	S	S				S	S			S	S			S											
2	Coaching sessions			C	C	C			C	C			C	C					C	C	C	C				
3	Final exam																	Exam								
4	Project evaluation by Shin San and Panel																								Eva-1	Eva-2
S-Seminar C-Coaching																										

S-Seminar C-Coaching

Milestones prior to start of the program:

- Half day orientation session for CXOs
- Submission of project charters
- Review/Classification of project charters by Mr Shin Taguchi
- Nominations of right members with domain for the project

Taguchi Methods for Robust Optimisation

Pre-requisites:

- Project charter in the prescribed format approved by respective senior manager, reviewed by Mr Shin Taguchi
- Domain expertise (skills) in respective areas of chosen project

No of participants for the project:

Two participants for each identified project

Investment:

Rs 2,65,000 per participant + taxes as applicable

Design for Six Sigma (DFSS)

Design for Six Sigma (DFSS) is a methodology used to design or redesign products, services, or processes to meet customer needs and achieve Six Sigma quality from the start.

DFSS aims to prevent defects and inefficiencies by designing processes that inherently produce high-quality outcomes.

DFSS focuses on understanding customer requirements (Voice of the Customer) to ensure the final product or service meets or exceeds expectations. DFSS ensures quality is built into the design phase using several advanced tools & methods.

IDDOV is one of the frameworks in DFSS that involves Identify, Define, Design, Optimize and Verify focusing on detailed design, optimisation and validation before implementation.

Target audience:

Senior professionals in

- Program/Project manager for Innovation of products, solutions and processes
- Chief engineers/Product leaders responsible for end-to-end design and development of products and solutions
- Lead engineers/Principal engineers/Functional group leaders responsible for advanced technology development

Design for Six Sigma (DFSS)

Program outcomes:

At the end of the program on DFSS, the participants will be able to

1. Develop product concepts from deep understanding of needs including latent ones and translating them into Quality characteristics and engineering specifications
2. Evaluate the concepts and choose most efficient option for development
3. Design the products and sub-systems and verify for target quality
4. Carry out robust optimisation to achieve the target quality with minimising loss function at a system level
5. Validate achievement of target quality targets prior to start of mass production

Faculty:

The program will be conducted by:

Mr. Shin Taguchi, CTO - ASI Consulting Group LLC., Advisor, ITEQ International. Over the past 40 years, he has taught and coached more than 4,000 cases (in about 500 companies) on topics related to robust design using Taguchi Method, mainly in Japan, Europe and the United States.

He is an expert on Robust Engineering (Taguchi Methods), Design for Six Sigma Statistics, Industrial Engineering.

Design for Six Sigma (DFSS)

Duration:

The program will be conducted virtually with 2 seminar sessions of 3.5 Hrs each per week along with 5 coaching sessions as indicated below:

Pre-requisites:

- Green belt certification in Taguchi Methods and other related tools
- Domain expertise (skills) in selective areas of chosen project
- Overall macro level view of product lifecycle

No of participants for the project:

3/4 participants for each identified project

Investment: