Distant Training in TRIZ, Systematic Innovation and Creativity

TRIZ-based Systematic Innovative Problem Solving in Technology and Engineering: Essentials and Practice

Number of assignments: 7
Certificates: - TRIZ Practitioner, Basic Level; MATRIZ Certificate Level 1.

SYNOPSIS

This course provides interactive distant training on Basic TRIZ and Systematic Innovation for Technology and Engineering. This form of training does not require a participant to travel to the course location.

TRIZ-based Systematic Innovation is a technology of practical use of modern TRIZ (acronym for the "Theory of Solving Inventive Problems"), which resulted from many years of training and consulting various organizations from academy to industry worldwide. It introduces a number of processes and techniques which enable the practical use of TRIZ in everyday professional activities to generate new innovative solutions and produce new intellectual property in a systematic and structured way.

This unique course developed by Valeri Souchkov has gained worldwide recognition and offers intensive and practical training of those who are willing to solve difficult problems quickly and effectively, generate new ideas in a systematic way, and incorporate systematic innovative skills to the everyday use.

The course was successfully performed at a number of world-leading companies, as well as for medium and small enterprises in many countries. At several organizations this course triggered implementation of TRIZ to turn innovation to systematic and predictable process to stay ahead of competition and being able to innovate on demand.

The course also introduces the latest TRIZ techniques which already have been proven at hundreds of real projects within different organizations, and which make learning of TRIZ faster and its application more effective.

The course targets at acquiring practical skills in basic TRIZ-based Systematic Innovation and combines intensive learning with working on real-life projects brought by the course participants. Such integration brings extra added value to our customers. In many cases, finding solution concepts during our training courses immediately compensates the course fees and generates new intellectual property.

The advantage of online training is flexibility. A student can choose his own dates and times of learning and scheduling interactive online sessions with a trainer.

Each training package includes video lectures, slides, course guides, individual interactive sessions with a trainer, assignments performed by a course participant, evaluation, interactive feedback sessions, online communication.

TARGET AUDIENCE

R&D professionals, engineers, designers, manufacturing professionals, new product development professionals, technology and business development managers, technology and engineering students, lecturers and consultants on quality and innovation. No previous experience with TRIZ is required.

GOALS OF THE TRAINING COURSE

- **Understanding TRIZ and Systematic Innovation:** The participants learn background and philosophy of TRIZ and Systematic Innovation which help them to understand and accept the major shift in the paradigm of innovative problem solving and systematic solution concepts generation.
- **Learning the technology of problem solving:** Basic problem analysis and solving techniques are presented and explained in detail.
- **Mastering practical skills:** The participants acquire and master practical skills by working with educational problems as well as real-life problems.

OUTCOME

- Understanding of the TRIZ and Systematic Innovation methodology by the participants.
- Ability to use the learned techniques by the participants independently in their everyday activities.
- A number of new directions, recommendations and solution concepts related to solving the participants' problems generated during the training sessions.

THE COURSE CONTENTS

Level 1 TRIZ and Systematic Innovation for Technology and Engineering

- Introduction to the background and overview of modern TRIZ and Systematic Innovation.
- Sources of innovation. Barriers of innovation. Psychological Inertia.

- Basic concepts of TRIZ: Ideality, Ideal Final Result, Resources, Systematic Technology Evolution.
- Innovative Problem. Contradictions. Types of contradictions.
- Fighting psychological inertia.
- Multi-Screen Diagram of Thinking.
- Resources.
- *Practice with Multi-Screen Diagram, Contradictions, Ideal Final Result.*

- Basic TRIZ Process: steps, techniques, income, outcome.
- TRIZ Tools.
- A roadmap to TRIZ-based Systematic Innovation.
- Innovation Situation Questionnaire.
- Root Conflict Analysis (RCA+): technique to present and decompose complex inventive situations, extract contradictions, and create problem maps.
- *Practice with Innovation Situation Questionnaire and Root Conflict Analysis.*

- Generating new innovative ideas by resolving contradictions.
- 40 Inventive Principles for solving problems by eliminating contradictions and conflicts.
- Contradiction Matrix.
- *Practice with Contradiction Matrix and 40 Inventive Principles.*

- Evaluation of obtained ideas and Ideas Landscaping.
- *Practice with Evaluation of obtained ideas and Ideas Landscaping.*

The program and contents might slightly deviate according to latest updates.

COURSEWARE

The courseware includes:

- Video lectures.
- Course slides.
- Course book "Guide to TRIZ and xTRIZ Techniques".
- Set of documents with practical cases and examples illustrating the use of the techniques used during the course.

CERTIFICATES

Upon successful completion of the course, a student receives uniquely numbered certificates from the TRIZ Training International Centre and the International TRIZ Association MATRIZ (Level 1).

LANGUAGE

The official training language is English.

TRAINER

Training is delivered by Valeri Souchkov, certified TRIZ Master with experience of delivering services related to TRIZ and Systematic Innovation worldwide since 1991. He was certified as TRIZ Specialist by the founder of TRIZ G. Altshuller and as TRIZ Master by the International TRIZ Association (MATRIZ). Currently he heads ICG Training & Consulting located in Enschede, The Netherlands and teaches TRIZ at the University of Twente and TIAS Business School. Valeri is also currently the Chief Consultant TRIZ Association of Asia. Among his customers are Capgemini, DSM, DuPont, General Electric, LG Electronics, Océ, Oracle, Philips, POSCO, Shell, Siemens, as well as various academic and governmental organizations. In total, he participated in 100 innovative projects and trained more than 5000 people in TRIZ. He is a co-founder of the European TRIZ Association (ETRIA), member of Global TRIZ R&D Council of the International TRIZ Association (MATRIZ) and founder of the TRIZ Training International Centre. Valeri Souchkov is a developer of several TRIZ and Systematic Innovation techniques and the author of this course.

MAINTENANCE AND SUPPORT

- The course fee includes 3 months of free "Questions and Answers" support by ICG T&C / TAA by phone/fax/e-mail.

USE LICENSE

If granted a certificate, a student is also granted the rights to use all the techniques learned in his practice as well as for any customer of a student including consulting activities. However the use of the course material as a whole or any it's part for training purposes requires permission from ICG Training & Consulting.