

TRIZ □ Theory of Inventive Problem Solving

Kigali (Rwanda)

4 - 8 August 2025

UK Training

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TRIZ □ Theory of Inventive Problem Solving

Code: PS28 From: 4 - 8 August 2025 City: Kigali (Rwanda) Fees: 3300 Pound

Introduction

TRIZ Theory of Inventive Problem Solving is a powerful methodology for systematic innovation and inventive problem-solving, developed from studying patterns in over 2 million patents. This course introduces TRIZ tools and techniques to help participants solve both technical and non-technical problems creatively and efficiently. The course aims to empower participants to use TRIZ methodologies to overcome challenges and foster innovation in various fields.

Course Objectives

By the end of the course, participants will be able to:

- Understand the core principles and logic behind TRIZ.
- Use TRIZ tools to solve real-world problems systematically.
- Identify and eliminate contradictions in designs or systems.
- Apply TRIZ in engineering, business, and innovation projects.
- Improve the quality of ideas and reduce time to innovation.

Course Outlines

Day 1: Introduction to TRIZ & Systematic Innovation

- History and Philosophy of TRIZ.
- Introduction to Innovation Patterns.
- Overview of TRIZ Tools and Methodology.
- TRIZ vs Traditional Problem-Solving Methods.
- Understanding Systems and the Ideal Final Result IFR.

Day 2: Contradictions & the 40 Inventive Principles

- What are Technical & Physical Contradictions?
- Tools for Eliminating Contradictions.
- The 40 Inventive Principles - Concepts & Real Examples.
- Contradiction Matrix - How to Use It.
- Workshop: Applying Inventive Principles to Real Problems.

Day 3: Functional Analysis & Root Cause Analysis SFA, RCA

- Functional Analysis - Identifying Useful & Harmful Functions.
- Trimming and Function Modeling.
- Root Cause Analysis Using TRIZ Logic.
- Substance-Field Su-Field Modeling.

A graphic of a chessboard with several chess pieces (a king, a pawn, and a knight) on it. The text 'UK Training PARTNER' is overlaid on the board.

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- Case Study: Using SFA to Solve Technical Challenges.

Day 4: Patterns of Evolution & Inventive Standards

- Technology Evolution Trends in TRIZ.
- 9 Windows Tool - Analyzing Time and Space Dimensions.
- Standard Solutions Inventive Standards.
- ARIZ - Algorithm for Inventive Problem Solving Intro.
- Group Exercise: Using Patterns to Forecast System Evolution.

Day 5: Applying TRIZ in Practice

- TRIZ in Product Design, Manufacturing, & Services.
- Combining TRIZ with Six Sigma, Lean, and Agile.
- Solving Business & Management Problems with TRIZ.
- Final Project: Solving a Real or Simulated Problem with TRIZ Tools.
- Review, Feedback, and Certification.

Why Attend This Course: Wins & Losses!

- Learn TRIZ as an innovative methodology to solve problems systematically, both technical and non-technical.
- Gain the ability to eliminate contradictions in systems or designs, fostering more creative solutions and innovation.
- Analyze root causes and tackle issues deeply using TRIZ logic.
- Apply TRIZ in engineering, business, and innovation projects to accelerate innovation and reduce time to solution.
- Develop skills in forecasting system evolution using TRIZ patterns.

Conclusion

The TRIZ course offers a powerful methodology for solving problems creatively and systematically. In this course, you will learn how to apply TRIZ to solve both technical and non-technical problems, improve idea quality, and accelerate innovation. By using TRIZ tools in product design, manufacturing, and business management, you will be able to address complex challenges and achieve optimal outcomes in your future projects.

The course will equip you with the knowledge and skills necessary to drive effective innovation and develop new solutions in a rapidly evolving business environment.

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