

ANALYTICAL THINKING AND PROBLEM SOLVING



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TRAINING CENTER



Introduction

Organizations rely on employees who can break down complex issues and design workable solutions under real constraints. The Analytical Thinking and Problem Solving Training Course equips professionals with structured methods to diagnose problems, generate options, and select the most effective course of action. Participants explore practical tools such as the fishbone diagram, decision trees, and the PDCA cycle to build confidence in tackling operational challenges. Furthermore, the course addresses brainstorming techniques, risk evaluation, and structured decision-making approaches. Through case studies and hands-on exercises, attendees strengthen their ability to move from problem identification to practical implementation. As a result, participants leave equipped to solve challenges systematically and drive measurable improvements.

Analytical Thinking and Problem Solving Course Objectives

- Apply structured problem-solving models to define issues clearly and accurately.
- Use the fishbone diagram to map contributing causes of a problem.
- Apply the PDCA cycle to plan, test, and refine solutions.
- Generate creative solutions through structured brainstorming techniques.
- Use decision trees to evaluate alternative courses of action.
- Assess risks and trade-offs associated with proposed solutions.
- Apply cost-benefit analysis to prioritize solution options.
- Distinguish between symptoms and underlying problems in business scenarios.
- Develop implementation plans that assign clear ownership and timelines.
- Monitor solution outcomes and adjust approaches based on results.

Course Methodology



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- Interactive lectures introducing problem-solving models and decision tools.
- Group exercises applying the fishbone diagram to workplace scenarios.
- Hands-on practice with decision trees and cost-benefit analysis.
- Structured brainstorming sessions to generate creative solutions.
- Case study reviews of successful and unsuccessful problem-solving efforts.
- Practical templates, including action plans and PDCA worksheets.

Who Should Take This Course

- Team leaders and supervisors managing daily operational challenges.
- Project coordinators tasked with resolving process bottlenecks.
- Quality and operations staff seeking structured improvement methods.
- Analysts supporting decision-making with data and evaluation tools.
- Managers responsible for implementing workplace solutions.
- Professionals aiming to strengthen their problem-solving confidence.

Analytical Thinking and Problem Solving Course Outlines

Day 1: Defining the Problem

- Introduce structured problem-solving models and their business value
- Distinguish between symptoms and underlying problems
- Apply techniques to define problems clearly and precisely
- Gather relevant data to support problem definition
- Identify stakeholders affected by the problem
- Practice framing problem statements through group exercises



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- Review case studies on effective problem definition

Day 2: Analyzing Root Causes

- Apply the fishbone diagram to map contributing factors
- Use the 5 Whys technique to identify underlying causes
- Distinguish correlation from causation in data analysis
- Evaluate multiple potential causes systematically
- Apply Pareto analysis to prioritize significant causes
- Practice root cause analysis through case studies
- Discuss common pitfalls in cause identification

Day 3: Generating and Evaluating Solutions

- Apply structured brainstorming techniques to generate options
- Use decision trees to evaluate alternative solutions
- Apply cost-benefit analysis to compare options
- Assess risks and trade-offs of proposed solutions
- Prioritize solutions based on feasibility and impact
- Practice solution evaluation through group exercises
- Review examples of effective solution selection

Day 4: Implementing Solutions

- Apply the PDCA cycle to plan and test solutions
- Develop implementation plans with clear ownership
- Set timelines and milestones for solution rollout
- Anticipate implementation barriers and resistance



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- Assign resources and responsibilities effectively
- Practice implementation planning through case studies
- Discuss lessons learned from real implementation efforts

Day 5: Monitoring and Continuous Improvement

- Monitor solution outcomes against defined success criteria
- Adjust approaches based on performance data and feedback
- Apply continuous improvement principles to sustain results
- Document lessons learned for future problem-solving efforts
- Build a personal toolkit for ongoing analytical thinking
- Prepare a personal action plan for workplace application
- Conclude with group presentations and open discussion

Conclusion

By successfully completing the Analytical Thinking and Problem Solving Training Course, participants will have acquired practical skills in root cause analysis, solution evaluation, and structured implementation planning. Furthermore, they will gain confidence in applying tools such as the fishbone diagram and the PDCA cycle to real workplace challenges. As a result, attendees return to their organizations equipped to solve problems systematically, reduce recurring issues, and drive continuous improvement. Gentex Training Center remains committed to delivering practical, results-driven professional development programs across diverse industries.

FAQs





Q1 What is the "Analytical Thinking and Problem Solving" course about?

This course covers structured methods for diagnosing problems, generating solutions, and implementing effective actions. Participants learn practical tools, including the fishbone diagram and PDCA cycle, to move systematically from problem identification to measurable resolution.

Q2 What are the key benefits of the "Analytical Thinking and Problem Solving" course?

Participants gain faster, more accurate problem diagnosis and stronger decision-making confidence. These benefits translate into reduced recurring issues, more effective solutions, and improved operational efficiency across daily workplace challenges.

Q3 What skills will I gain from the "Analytical Thinking and Problem Solving" course?

Attendees develop root cause analysis, solution generation, decision evaluation, and implementation planning skills. These core competencies enable professionals to address complex problems systematically and deliver practical, results-oriented solutions.

Q4 What tools, methods, or standards are covered in the "Analytical Thinking and Problem Solving" course?

The course introduces the fishbone diagram, the 5 Whys technique, decision trees, cost-benefit analysis, and the PDCA cycle. These practical tools help participants analyze causes and implement solutions systematically.

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Q5 How is the "Analytical Thinking and Problem Solving" course applied in real-world practice?

Participants apply root cause analysis and the PDCA cycle to real workplace scenarios through case studies and group exercises. This practical approach helps professionals design solutions, plan implementation, and monitor results effectively.

