



## 210 – Toyota Kata, The Scientific Method to Problem Solving

Onsite – 3 Days, 8 Hours/day – Optimum class size, 4 teams of 5 students

### Training Description:

The KATA exercise combines a practical scientific pattern (the "Improvement Kata") with techniques of deliberate practice, to help make scientific thinking a teachable skill that anyone can learn. Teams of students (a) establish a baseline, (b) face a Challenge, (c) develop a next Target Condition on the way to achieving a goal and (d) conduct experiments towards meeting the Target Condition. While the students are engaged in a challenging game they are simultaneously being introduced to a scientific method of problem solving.

### Training Objective:

A Kata is a routine you practice, so it's pattern that becomes an automatic habit giving trainees new skills. The objective of this training will consist of:

- Introduction of a four-step Improvement Kata pattern that is scaled to be utilized again as a working pattern or overlay for project-type assignments throughout organization.
- Participants will learn where to apply the four-step work pattern of the Improvement Kata to meet challenges in their workplace.
- Students experience, through a hands-on approach, the initial practicing of a scientific, cross-curricular, "life skill" routine that can be used to achieve challenging goals in a variety of situations.

### Skill Attainment:

KATA teaches universal skills for documenting and achieving challenging goals. Participants will enhance their thinking skills including: problem solving, decision making, critical thinking, job task planning and organization. Students will learn:

- Scientific & Creative Thinking – A process to generate and refine solutions to obstacles through experimentation.
- Collaboration – How to work as a team to accomplish a next goal on the way to a larger challenge.
- Communication – How to organize thoughts, document data & findings, and share them effectively throughout the organization.

These skills are transferable within the company, industry and are highly desirable by any manufacturer.



## Training Agenda:

### Day 1

#### Morning Training

- Introduction to the Scientific method (2 hours)
- Toyota Kata – Hands on exercise to develop teamwork and demonstrate experimentation (2 hours)

#### Afternoon Training

- Collaboration – How to work as a team to accomplish a next goal on the way to a larger challenge.
- Communication – How to organize thoughts, document data & findings, and share them effectively throughout the organization.

### Day 2

#### Morning Training

- Introduction to Project Selection – How to:
- Establish a baseline,
- Select a Challenge,
- Develop a next Target Condition
- Design experiments towards meeting the Target Condition

#### Afternoon Training

- Perform Kata Process on a selected opportunity developing thinking skills including:
- Problem solving
- Decision making
- Critical thinking
- Job task planning

### Day 3

#### Morning Training

- Review Team projects, experiments, documentation and critique process.
- Create Standard Work visuals and formulate implementation plan.
- Job Instruction, teach employees how to correctly, safely and conscientiously perform the tasks developed during the training.

#### Afternoon Training

- Deliver an effective training plan to the organization
- Brief management on results.
- Present implementation plan