



Theory of Constraints Training: Drum-Buffer-Rope, Throughput Accounting and Critical Chain

8 – 12 August 2027

Jeddah - Corniche four-star



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Introduction:

Theory of constraints training on drum-buffer-rope, throughput accounting and critical chain is a 5-day course for operations, planning, supply, project and finance managers that ends with a TOC Constraint Improvement Workbook. Many organisations spread improvement effort evenly while one constraint still caps output, cash and project delivery, so local efficiency gains never reach the bottom line. Nominees already manage a plant, warehouse network, project group or cost function, and they build working numeric models of constraint schedules, buffers and throughput decisions. CoreConcept Training Center delivers this theory of constraints course.

Course Objectives:

- Locate the physical, policy or market constraint of an operation and run the five focusing steps against it
- Build a drum-buffer-rope release schedule and prioritise orders with buffer management colour zones
- Evaluate product mix, order acceptance and pricing options with throughput accounting instead of allocated unit cost
- Size and resize distribution stock buffers with TOC replenishment and dynamic buffer management
- Plan and monitor critical chain projects with project and feeding buffers, fever charts and multi-project pipelining
- Diagnose chronic conflicts with the current reality tree and evaporating cloud and combine TOC with lean and six sigma work

Target Audience:

- Managers responsible for plant or service operations output and delivery reliability
 - Managers responsible for production and capacity planning across shared resources
 - Managers responsible for distribution, warehousing and finished goods inventory levels
 - Managers responsible for project portfolios, delivery dates and shared specialist resources
 - Finance managers responsible for operational costing, pricing support and investment cases
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Course Outline:

Day 1: TOC Foundations and Constraint Location

- Goldratt Chain Analogy and the Weakest Link Principle
- Five Focusing Steps From Identify to Avoiding Inertia
- Physical, Policy and Market Constraint Classification in Organisations
- Constraint Location Using Queue Build-Up and Load Profiles
- Undesirable Effects Inventory for a Current-State Flow Review

Day 2: Drum-Buffer-Rope, Buffer Zones and Throughput Measures

- Drum-Buffer-Rope Roles of Drum, Time Buffer and Rope
- Simplified Drum-Buffer-Rope With Shipping Buffer for Market Constraints
- Buffer Management Colour Zones and Penetration Priority Rules
- Throughput, Investment and Operating Expense Measurement Definitions
- Throughput Accounting Versus Absorption Cost Accounting Comparison

Day 3: Throughput Decisions, TOC Replenishment and Critical Chain Planning

- Throughput per Constraint Unit Product Mix Ranking
- Order Acceptance and Pricing Tests With Throughput Contribution
- TOC Distribution Replenishment Using Replenishment Time Buffers
- Dynamic Buffer Management for Stock Buffer Resizing
- Critical Chain Aggressive Durations With Project and Feeding Buffers

Day 4: Fever Charts, Thinking Processes and Chronic Conflicts

- Fever Chart Buffer Consumption Tracking for Critical Chain Projects
- Multi-Project Pipelining and Staggering on a Drum Resource
- Current Reality Tree Construction From Undesirable Effects
- Evaporating Cloud Conflict Resolution and Assumption Surfacing
- Future Reality and Prerequisite Trees With Negative Branch Reservations

Day 5: Modelling Build on a Case Plant and Project Portfolio

- Case Plant Constraint Identification and Drum-Buffer-Rope Schedule Build
 - Case Plant Throughput Accounting Product Mix Model
 - Project Portfolio Critical Chain Buffers and Pipelining Plan
 - TOC, Lean and Six Sigma Combined Improvement Roadmap
 - TOC Constraint Improvement Workbook Completion and Peer Challenge
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Skills You Will Gain:

- Constraint Identification
- Drum-Buffer-Rope Scheduling
- Buffer Penetration Analysis
- Throughput Economics
- Stock Buffer Sizing
- Critical Chain Planning
- Logical Thinking Trees
- Integrated Improvement Planning

Why Attend This Course:

- Deliver a TOC Constraint Improvement Workbook to the operations director and the finance lead, with a constraint schedule, buffers and a throughput product mix model
- Decide which orders, products and projects the constraint should serve first using throughput per constraint unit and buffer status
- Avoid investment in non-constraint capacity, excess stock and padded task estimates that add cost without raising throughput
- Coach planners, schedulers and project leads to read buffer colour zones and fever charts in daily and weekly reviews

Conclusion:

Back at work, the participant presents the TOC Constraint Improvement Workbook to the operations director, the planning team and the finance lead. They use it to agree where the constraint sits, how release and stock buffers are set, which product mix and order decisions follow throughput logic, and how project starts are staggered on shared resources. After the first month of use, the team should review buffer penetration records, constraint output and fever chart trends, then adjust buffer sizes and the improvement roadmap.

Frequently Asked Questions FAQ:

What should participants know before the theory of constraints training on drum-buffer-rope, throughput accounting and critical chain?

Participants should already manage an operation, a planning cycle, a project group or a cost function and be comfortable with spreadsheets. No prior TOC knowledge is needed. Bringing anonymised flow, order or project data helps the modelling work on the final day.

How does theory of constraints training differ from a lean manufacturing or project scheduling course?

It manages the whole system through its single constraint, using buffers, throughput economics and logic trees. Lean courses focus on removing waste at every step, and project scheduling courses focus on network logic and float rather than buffer-protected critical chains.

Why does throughput accounting give different answers from standard cost accounting in theory of constraints?

Throughput accounting ranks products by throughput earned per unit of constraint time and treats most labour and overhead as fixed operating expense. Standard costing allocates overhead per unit, which can reject profitable orders and favour products that overload the constraint.

What do participants take back from the theory of constraints training on drum-buffer-rope and critical chain?

Participants take back a TOC Constraint Improvement Workbook holding a constraint location analysis, a drum-buffer-rope schedule, buffer colour rules, a throughput product mix model, a critical chain portfolio plan and a combined TOC, lean and six sigma roadmap.
