

TESTADVANCE TEST-ENGINEERING CURRICULUM - GRADUATE (TTC - TEG)

This document describes testadvance's Graduate Test-Engineering Curriculum

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- **Assessment**
- **Curriculum Alignment**
- **Curriculum Delivery**
- **Evaluation**

Test-Engineering Curriculum Graduate Level

- **Essentials of Test-Engineering**
 - **Implementing Functional Test**
 - **Delivering Test-Solutions**
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- Help new-hires and graduates reach their full potential and productivity – faster and more effectively
 - Further job-satisfaction and motivation
 - Develop competence in line with their operations, projects and schedules

1 General Information

Curricula provide staff, engineers and managers with a short- to mid-term development path. Curricula enable students to achieve a desired skill-set and level in a defined time-frame and budget. A curriculum comprises a range of subject-matter and deliverables within a structured and managed delivery. Curricula can be predefined, tailored or integrated with the client's projects or operations.

Training curricula teach multiple connected subjects in a structured, multi-course and multi-event package. All curricula include defined learning objectives and reviews and a pre-course assessment. Curricula comprise a range of subjects, topics and courses. They utilise courses from our Training Library. Teaching methods and topics are balanced across the curriculum to optimise retention and application of learning's.

Curricula are available predefined or tailored and as an Integrated Curriculum. Tailored curricula are modified versions of a predefined curriculum, e.g. subject matter and practices specific to the client. The Integrated Curriculum incorporates the Training Design service. The IC is designed specifically for the client.

Each curriculum provides a comprehensive course-book and study-guide, assignments and self-tests, study material and references.

The precursory Assessment defines the client's needs, timelines and constraints. Current skills and levels are assessed and the desired learning outcomes, staff, areas and functions concerned are defined. The alternatives of predefined, tailored and integrated curriculum are discussed and weighed and the applicable deliverables defined in the Scope of Engagement (SoE). The SoE is provided prior to a financial commitment from the client.

The Curriculum Alignment ensures the best possible alignment between staff readiness, learning needs and curriculum delivery. Student readiness, skills/levels, work/job-requirements, applicable schedules and the 'available' competence vs. required proficiency is assessed and reviewed with the client. Any possible gaps or adaptation of subject matter, level, methods and evaluations are addressed and as needed implemented. Planning, scheduling and logistics are defined in collaboration with the client and the receiving departments and as needed a delivery plan is defined and communicated. It further provides for change-management procedures and defines a program evaluation as part of the Acceptance of the Curriculum. Any required pre-training assessments, preparatory assignments and studies are defined.

Curriculum Delivery is according to the agreed plan and can involve as feasible client or third-party resources. Delivery is typically on-site and typically ranges from 5 – 20 training-days. It can be delivered en bloc, in segments e.g. for key project stages, or as individual events over a period, e.g. for ongoing development.

2 Description – Test-Engineering Curriculum Graduate Level

The curriculum provides a consistent and structured development from graduate engineer to professional Test-Engineer. Students complete this course with a comprehensive and working competence in test-engineering that is based on real-life experience and expertise.

2.1 Structure and Topics

1. Track 1: Essentials of Test-Engineering

- Why Test?
- Test in the Product Life-Cycle
- Understanding Test-Requirements
- Understanding Test-Results
- Introduction to Test Systems
- Introduction to Test Plans
- Basics of Functional Test Design

2. Track 2: Implementing Functional Test

- Functional Test & Test Systems
- RF Functional Test Systems
- Structured Test Engineering
- The Measurement Sub-System
- The Measurement Interface
- The Instrument & Control Sub-System
- System Interfaces
- System Infrastructure
- Basics of Test Plans
- Basics of Test Routines
- Automating Test

3. Track 3: Delivering Test-Solutions

- The Solution Life-Cycle
- Project Management for Test Engineers
- The Investigation Phase
- The Specification Phase
- The Design Phase
- Design of Test Systems
- Design of Test Plans, Sequences and Routines
- Design for Outcomes
- The Build Phase
- Test System Build
- Test SW Build
- Test System Integration & Verification
- Deployment & Acceptance
- Test System Ramp-Up
- Test System Operation & Maintenance