

Table of Contents

Revision History.....	3
Table of Contents	4
Acknowledgements	6
0. Introduction to this Syllabus.....	7
0.1 Purpose of this Document.....	7
0.2 The Certified Foundation Level Performance Testing	7
0.3 Business Outcomes	8
0.4 Examinable Learning Objectives	8
0.5 Recommended Training Times	9
0.6 Entry Requirements.....	9
0.7 Sources of Information	9
1. Basic Concepts – 60 mins.....	10
1.1 Principles of Performance Testing.....	10
1.2 Types of Performance Testing	12
1.3 Testing Types in Performance Testing.....	13
1.3.1 Static testing.....	13
1.3.2 Dynamic testing.....	13
1.4 The Concept of Load Generation	14
1.5 Common Performance Efficiency Failure Modes and Their Causes	15
2. Performance Measurement Fundamentals - 55 mins.....	17
2.1 Typical Metrics Collected in Performance Testing.....	17
2.1.1 Why Performance Metrics are Needed	17
2.1.2 Collecting Performance Measurements and Metrics.....	18
2.1.3 Selecting Performance Metrics	19
2.2 Aggregating Results from Performance Testing.....	20
2.3 Key Sources of Performance Metrics	20
2.4 Typical Results of a Performance Test.....	21
3. Performance Testing in the Software Lifecycle – 195 mins.....	23
3.1 Principal Performance Testing Activities	23
3.2 Categories of Performance Risks for Different Architectures	25
3.3 Performance Risks Across the Software Development Lifecycle	27
3.4 Performance Testing Activities	29
4. Performance Testing Tasks– 475 mins.....	32
4.1 Planning	32
4.1.1 Deriving Performance Test Objectives	32
4.1.2 The Performance Test Plan	33
4.1.3 Communicating about Performance Testing	37
4.2 Analysis, Design and Implementation	38
4.2.1 Typical Communication Protocols	38
4.2.2 Transactions.....	39
4.2.3 Identifying Operational Profiles	40
4.2.4 Creating Load Profiles.....	42

4.2.5	Analyzing Throughput and Concurrency	44
4.2.6	Basic Structure of a Performance Test Script	45
4.2.7	Implementing Performance Test Scripts	46
4.2.8	Preparing for Performance Test Execution	47
4.3	Execution	50
4.4	Analyzing Results and Reporting	51
5.	Tools – 90 mins.....	55
5.1	Tool Support.....	55
5.2	Tool Suitability	56
6.	References	58
6.1	Standards.....	58
6.2	ISTQB Documents	58
6.3	Books	58
7.	Index.....	59