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Certified Quality Business Analyst

This Certification Program is developed in line with the quest to achieve standardized competency levels of the business analyst profession. The business analyst is also sometimes called a business process analyst, requirements engineer and business/IT systems analyst.

This Certification Program is designed for individuals having responsibilities in the following areas: Identification of Problem Areas/Business Opportunity, Enterprise Analysis, Requirements Planning & Management, Requirements Elicitation, Requirements Analysis & Documentation, Requirements Communication and Assessment & Validation of Solution Options.

The knowledge areas contained in the curriculum is a combination of the knowledge areas in the Business Analysis Body of Knowledge (BABOK) of the International Institute of Business Analysis (IIBA) and knowledge areas in the Certified Quality Process Analyst (CQPA) of the American Society for Quality (ASQ).

Course Curricula

1. Enterprise Analysis and Domain Modeling
2. Documenting and Managing Requirements
3. Agile Methods in Solutions Development
4. Elicitation Techniques
5. Enterprise Architectural Design
6. Methods in Solution Analysis and Design
7. Performance Metrics in Business Analysis
8. Solution Assessment and Validation

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Certified Quality Business Analyst

International Alliance of Quality Professionals (IAQP)

Certification Levels in Business Analysis

Level 1: Competence Assessed

Title: Certified Quality Business Analyst [CqBA]

A Certified Quality Business Analyst - Level I (CqBA) is an individual who has the necessary competencies in the areas of business need identification, quality process determination, systems thinking, and solutions assessments. A CqBA is a professional who is able to do the following:

1. Identify the responsibilities of a business analyst in business operations and in projects;
2. Apply the necessary and appropriate principles/techniques in business analysis, process analysis, and quality management based on internationally accepted bodies of knowledge; and
3. Prepare standard requirements documentation in business/systems analysis, process analysis, project management, and verification/validation.

Level 2: Principles Applied in a Project

Title: Certified Quality Business Analyst [CQBA]

A Certified Quality Business Analyst - Level II (CQBA) is an individual who has the skills and knowledge of applying business analysis that has a significant impact towards business process improvements of organizations. This professional has achieved a proven track record of assessing, defining, measuring, and improving business processes.

Level 3: Managed Analysts in an Organization

Title: Certified Quality Business Analyst, Fellow [CQBA, Fellow]

A CQBA, Fellow is an individual who has applied in his line of work appropriate knowledge and skills, including, but not limited to the areas of Business Analysis Body of Knowledge (BABOK), and knowledge areas in the Certified Quality Process Analyst (CQPA) of the American Society for Quality (ASQ). This professional has a level of expertise in mentoring, coaching, and providing objective insights towards achieving the strategic goals of an organization.

The Level III certification is intended to those who leads, manages people, and champions business process-improvement initiatives — from small businesses to multinational corporations — that can have regional or global focus in a variety of service and industrial settings.

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COURSE OUTLINES

Business Analysis – Defining Organizational Requirements and Identifying Organizational Solutions
(Enterprise Analysis and Domain Modeling)

Business Analysis enables businesses to do business better. This course is a high-level appreciation of the Business Analysis discipline. It explains how business analysis practices enables change in the over-all organizational context, through the definition of needs and recommending solutions that deliver value to stakeholders. The set of tasks and techniques that are used to perform business analysis discussed in this course are defined in: *A Guide to the Business Analysis Body of Knowledge® (BABOK® Guide).*

In this course, participants will learn how to build real-world models that express complex business requirements to be used as inputs in defining solutions requirements (both functional and non-functional requirements). This course will cover how Business Analysis methods, tools and techniques are being used in the creation or maintenance of Enterprise Architecture.

Training Objectives

At the end of this course, the participants will be able to:

1. Explain the various knowledge areas in business analysis.
2. Distinguish the scope of responsibilities of business analyst working on business development and IT/Technology.
3. Model business workflow using use-case and activity diagrams.
4. Present the distinction amongst level of requirements.
5. Write good business and solution requirements based on international standards and best practices.
6. Align business analysis with Enterprise Architecture practices.

Topics

I. Introduction to Business Analysis
   a) The Business Analysis Body of Knowledge 2.0
   b) Body of Knowledge Relationships
II. Definition of Roles in Business Analysis
III. Concepts and Principles of Requirements
IV. Classification of Requirements based on BABOK 2.0
   a) Business Requirements
   b) Stakeholder Requirements
   c) Solution Requirements
   d) Transition Requirements
V. Business Analysis and Monitoring Processes
VI. Enterprise Analysis Processes
   a) Developing a Business Case
   b) Writing Use-Cases
   c) Using Use-case, Activity, and Class Diagrams
VII. Requirements Analysis Processes
VIII. Requirements Management Processes
IX. Solutions Assessment and Validation Processes
X. Using Business Analysis in the context of Enterprise Architecture

Duration **2** day(s)

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Agile Methods in Solutions Development

Collaboration, openness, dynamic response to change, value-driven development, and team empowerment are recurring themes in agile solutions development. The course aims to equip business analysts, project managers, developers and test professionals with the mindset and skills necessary to apply agile methods in solutions development and testing. Owing to its widespread use and proven effectiveness, the framework for discussing Agile Methods shall be the SCRUM methodology. This course also covers the concepts, practices and implementation of agile software testing. After knowing the standard artifacts needed in testing software projects, participants will learn how to strategize, plan, design and execute tests in short development iterations.

Training Objectives

At the end of the course, the participants will be able to:

1. Apply the concepts of agile development.
2. Use agile test techniques.
3. Describe the agile life cycle.
4. Describe the agile development practices.
5. Strategize testing in an agile environment.

Duration **2** day(s)

Topics

I. Understanding the Agile Mindset
   a) The Agile Manifesto
II. Agile Values
III. Agile Principles
IV. Scrum Roles
V. Scrum Techniques
VI. Commonly Used Agile Artifacts
VII. Agile Testing Strategies
   a) The goals of testing in an Agile environment
   b) The Role of Agile Testers
   c) Agile Testers as part of the project team
   d) Testing in an Agile Environment
VIII. Agile Techniques & Concepts
   a) Refactoring
   b) Test-driven Development (TDD)
   c) Agile Model-driven Development (AMDD)
IX. Testing in the Agile SDLC
X. Testing within an Iteration
XI. Agile Testing Quadrants
XII. Testing during Feature Development
   a) Participation in design reviews
   b) Sequencing of implementation tasks
   c) Developer testing versus user testing
   d) Communication of code changes
   e) Feature unit testing strategies
XIII. Exploratory Testing
   a) Dealing with incomplete specs
   b) Session-Based Exploratory Testing
   c) Ad-hoc vs. Exploratory Testing
   d) Exploratory test objectives: definition and prioritization
   e) What is Chartering?
   f) Elements of a Charter
   g) Recommendations for Good Chartering
   h) Mnemonics for Risk and Coverage Ideas
   i) Risk and Coverage Knowledge Base

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Documenting and Managing Requirements

This course provides practical skills necessary to document, model, analyze and manage user-driven requirements. Participants will have a better understanding on how to represent "what the system shall do" and how to communicate better with business experts, systems analysts, designers and developers. In depth practice of use cases will be discussed. Participants will learn how to identify and translate business goals and needs into system features, and use them to derive both functional and non-functional system requirements.

Training Objectives

At the end of the course, the participants will be able to:

1. Present the distinction among levels of requirements.
2. Explain how to write the business requirements documented in a standard artifact.
3. Use IEEE Standard 830.
4. Write good requirements based on international standards and practices.
5. Describe software requirements classifications based on various sources.
6. Identify and describe the major areas of requirements management.
7. Explain the importance of requirements communication in an organization.

Duration **2** day(s)

Topics

I. Concepts and Principles of Requirements
II. Software Requirements and IEEE Std 830-1998
   a) What is Software Requirement?
   b) Highlights of IEEE Std 830-1998
   c) Standards in writing requirements
III. Classification of Requirements
   a) Classification of Requirements (FURPS+)
   b) Requirement Types Based on Volere
IV. Requirements Management from Lifecycle Perspective
   a) Manage Solution Scope and Requirements
   b) Manage Requirements Traceability
   c) Maintain Requirements for Re-use
   d) Prepare Requirements Package
V. Communication Requirements

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Elicitation Techniques

Eliciting requirements is a key task in business analysis. Elicitation is about bringing out or drawing forth something latent or potential. This course covers the processes in requirements elicitation and how the various techniques in elicitation are put to practical use. This course discusses the appropriate usage of a certain elicitation technique. Role playing and putting into live scenario are the methods employed in this course to effectively learn the techniques.

Training Objectives

At the end of the course, the participants will be able to:

1. Describe the processes in requirements elicitation.
2. Apply the commonly used elicitation techniques.
3. Identify when the elicitation techniques are applicable.
4. Employ the guidelines in eliciting requirements.

Duration

2 day(s)

Topics

I. Elicitation Defined
II. Elicitation Objectives
III. Generally Accepted Elicitation Techniques and Synonyms
    a) Brainstorming
    b) Document Analysis
    c) Focus Group
    d) Interface Analysis
    e) Interviews
    f) Observation
    g) Prototyping
    h) Requirements Workshops
    i) Survey/Questionnaire
IV. Choosing Between Techniques
V. Elicitation Processes
    a) Inputs
    b) Tasks
        i. Prepare for Elicitation
        ii. Conduct Elicitation Activity
        iii. Document Elicitation Results
        iv. Confirm Elicitation Results
VI. Problems with Requirements Elicitation
VII. Guidelines in Requirements Elicitation

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Enterprise Architectural Design (Intro to TOGAF 9.1)

Enterprise Architecture (EA) defines the current capabilities of an organization. Without Enterprise Architecture, an organization employs change in a trial-and-error mode.

This is a two-day course covering essential aspects of Enterprise Architecture, outlines the enterprise architecture roadmap, presents how to design the four domain architectures, namely: Business Architecture, Data Architecture, Application Architecture, and Technology Architecture. This course shall present the relationships and dependencies of each of the four domain architectures and will also explain how enterprise architecture encapsulates system architecture. Prior to selecting domain specific system architecture, it is required to pass through this course to put the right context of architecture and prevent misalignment when integrating architectures.

This course will provide an overview about Enterprise Architecture, which has the following benefits and value:

- You will get an extensive overview about Enterprise Architecture from the business and technology perspective and how it supports the business strategy and finally ensures the success of your organization.
- You will know the composition of Enterprise Architecture, thereby preventing you from designing layers of architecture in silos.
- You avoid expensive and wasteful ad hoc system architecture investments.
- You reduce the risk of failure.

Duration **2** day(s)

Training Objectives

At the end of the course, the participants will be able to:

1. Create a model of the current enterprise architecture.
2. Explain the importance of having a cohesive Enterprise Architecture framework and technology perspectives.
3. Perform enterprise architecture maturity assessment.

Topics

I. The Business Rationale for Enterprise Architecture and TOGAF
II. The TOGAF Architecture Development Method and its deliverables, including Business, Data, Applications and Technology Architecture
III. The Enterprise Continuum
IV. Enterprise Architecture Governance
V. Architecture Principles and their Development
VI. Architecture Views and Viewpoints
VII. An Introduction to Building Blocks
VIII. Architecture Partitioning
IX. Content Framework and Meta Model
X. Capability Based Planning
XI. Business Transformation Readiness
XII. Architecture Repository

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Methods in Solutions Analysis and Design

This course discusses various methods in systems analysis and design covering both structured and object-oriented. It covers how Object Oriented Analysis and Design uses the Unified Modeling Language. The course includes the application of design patterns and how it can be used to optimize system design.

Training Objectives

At the end of the course, the participants will be able to:

1. Differentiate Structured vs. Object-Oriented analysis and design.
2. Apply object-oriented analysis and design principles to software development.
3. Use various UML diagrams and tools to perform Object-Oriented Analysis and Design.
4. Describe Object-Oriented Design Principles in Software Design

Duration **2** day(s)

Topics

I. Structured Systems Analysis and Design
   a) Data Flow Diagram
   b) Entity Relationship Diagram
II. Strengths of Object-Orientation in Systems Analysis
   a) How Object-Orientation Affects the Frame of Mind
   b) Comparison of Structured Analysis vs. OO Analysis (Diagram Perspective)
III. Introduction to Object Oriented Analysis and Design
   a) Overview of the ICONIX Process
   b) Introduction to UML 2.0
   c) UML Diagrams Used with ICONIX
IV. Requirements Analysis
   a) Domain Modeling
   b) Use Case Modeling
V. Analysis and Preliminary Design
   a) Robustness Analysis
   b) Use Case (Analysis vs. Design "Ready")
   c) Preliminary Design Review
VI. Detailed Design
   a) Creating Sequence Diagrams
   b) Using Collaboration and State Diagrams
   c) Updating the Static Model
   d) Critical Design Review
VII. Implementation
   a) Creating Deployment Diagrams
   b) Creating Component Diagrams
VIII. Object-Oriented Design Principles
   a) Characteristics of a Bad Design
   b) OOD Principles: SOLID
   c) Introduction to Design Patterns

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Performance Metrics in Business Analysis

This course is designed to demonstrate how to measure performance and outputs of the business analysis processes and the role that is involved in it – the Business Analyst. This course discusses methods and tools to elicit, analyze and interpret metrics in the business analysis processes and related process areas including project and performance metrics.

Training Objectives

At the end of the course, the participants will be able to:

1. Setup, analyze and interpret quantifiable measures related to business analysis.
2. Define, implement, and monitor a BA measurement program.

Duration **2** day(s)

Topics

I. Metrics and Measurement
   a) Rationale Needed in Measurements
   b) Measure vs. Metrics vs. Indicator vs. KPI
   c) Scales of Measurement
   d) What Should We Measure?

II. Performance Measurement Design Process
   a) Understanding and Mapping Business Structure and Processes
      i. Stakeholder Management Process
   b) Developing Business Performance Opportunities
      i. The Kano Model
      ii. The MoSCoW Model
   c) Understanding the Current Performance Measurement System
   d) Developing Business Performance Indicators
      i. Using Critical To Quality (CTQ) in Deriving Metrics
      ii. Building CTQ Attributes
      iii. Goal-Question-Metric (GQM) Measurement Model
      iv. Input-Process-Output-Outcome (IPOO) Measurement Model
   e) Deciding How to Collect the Required Data
   f) Designing, Reporting and Performance Data Presentation Formats
   g) Testing and Adjusting the Performance Measurement System
   h) Implementing the Performance Measurement System

III. Business Analysis Processes Metrics

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Solution Assessment and Validation

This course presents the building blocks of assessing solutions both for process improvement and IT-enabled solutions. This course is designed in two parts, i.e., assessing business value of a solution based on monetary returns and assessing the effectiveness of a software/system solution.

The first part of the course covers quantifying success of a solution into monetary terms. It shall include the savings declaration of projects and the measuring techniques to quantify improvement value. This is suitable for organizations who run kaizen, reengineering, software development, lean or six sigma projects.

The second part of the course discusses the processes and deliverables of user testing. As business analyst, one of the primary responsibilities is to aid the customers in their acceptance testing prior to system/software acceptance or sign-off.

Training Objectives

At the end of the course, the participants will be able to:

1. Describe Cost of Poor Quality Calculation Techniques and Activity-based Costing/Management.
2. Identify tangible and intangible benefits of solutions.
3. Draft acceptance test plan.
4. Draft test cases based on functional and non-functional requirements.
5. Design test cases including test scenarios and expected results.
6. Use IEEE Std 829 in writing acceptance test plans.
7. Estimate testing costs and schedules using proven techniques.

Topics

Part 1

I. Rationale in Measuring Solution Effectiveness
II. Techniques in Measuring Solutions
III. Activity-Based Costing/Management (ABC/M)
IV. Cost of Poor Quality Techniques

Part 2

I. Structured Testing
   a) The Test Processes
   b) Inputs t Acceptance Test Planning
   c) Roles in Software Acceptance Testing
   d) Levels of Testing
   e) Testing Types
II. Test Design
   a) Test Case
   b) Fundamental Testing Strategies
   c) Deriving Test Cases from Use Cases
   d) Deriving Test Cases for Performance Tests
   e) Deriving Test Cases for Security/Access Tests
   f) Deriving Test Cases for Product Acceptance Test
III. Test Case Design Approaches/Techniques
   a) Validation Methods
   b) Equivalence Partitioning
   c) Boundary Value (BV) Analysis
IV. Test Reporting

Duration **2** day(s)