



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aaticd.co.za · Website: www.aaticd.co.za

COURSE BROCHURE

Requirements Analysis Methods and Techniques

Physical, Mathematical, Computer and Life Sciences / Information Technology and Computer Sciences

Unit Standard 259277 · NQF Level 6 · 25 Credits · 22 Days

COURSE OVERVIEW

This course equips learners with the skills to systematically analyse, document, and validate requirements for business systems and processes. Participants will learn to apply various techniques to elicit, prioritise, and manage requirements effectively, ensuring alignment with organisational goals and stakeholder needs.

Category	Physical, Mathematical, Computer and Life Sciences
Subfield	Information Technology and Computer Sciences
Unit Standard	259277
Accreditation	SAQA Accredited · NQF Level 6 · 25 Credits
Duration	22 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply a range of requirements elicitation techniques to gather stakeholder needs.
- Analyse and prioritise requirements using structured methods such as MoSCoW or Kano.
- Document requirements clearly in formats such as user stories, use cases, or functional specifications.
- Validate requirements through reviews, prototyping, and acceptance criteria.
- Manage requirements changes using a traceability matrix and change control processes.

WHO SHOULD ATTEND

- Business analysts, systems analysts, project managers, and anyone involved in defining or managing requirements for projects or process improvements.

COURSE OUTLINE

Day 1: Introduction to Requirements Analysis

- Overview of systems development lifecycle
- Role and responsibilities of a business analyst
- Stakeholder identification and analysis
- Types of requirements: functional, non-functional, constraints
- Introduction to requirements engineering

Day 2: Requirements Elicitation Techniques - Part 1

- Interviewing techniques: structured, semi-structured, unstructured
- Workshop facilitation: brainstorming, JAD sessions
- Focus groups: planning and execution
- Observation methods: active, passive
- Document analysis: reviewing existing documentation

Day 3: Requirements Elicitation Techniques - Part 2

- Survey and questionnaire design
- Prototyping: throwaway, evolutionary
- Use case diagrams and narratives
- User stories: format and acceptance criteria
- Technique selection criteria

Day 4: Requirements Documentation and Specification

- Requirements writing guidelines: clarity, completeness, consistency
- BRD structure and content
- SRS components: introduction, overall description, specific requirements
- IEEE 830 standard overview
- Requirements traceability matrix

Day 5: Requirements Modeling - Data Modeling

- ERD notation: Chen, crow's foot
- Entities, attributes, keys
- Relationships: one-to-one, one-to-many, many-to-many
- Normalization: 1NF, 2NF, 3NF
- Data dictionary components

Day 6: Requirements Modeling - Process Modeling

- DFD levels: context, level 0, level 1
- Flowchart symbols and conventions
- Activity diagrams in UML
- BPMN basics: events, activities, gateways
- Process decomposition techniques

Day 7: Requirements Modeling - Object-Oriented Modeling

- Class diagram notation: classes, attributes, methods, associations
- Sequence diagram: lifelines, messages, activation bars
- State machine diagrams: states, transitions, events
- UML overview and diagram types

- Case study: modeling a library system

Day 8: Requirements Analysis and Validation

- Requirements analysis criteria
- Validation techniques: peer review, walkthrough, inspection
- Requirements prioritization: MoSCoW, Kano model
- Requirements sign-off process
- Managing requirements changes

Day 9: Requirements Management and Traceability

- Requirements management plan components
- Traceability: forward, backward, bidirectional
- Requirements lifecycle: from elicitation to retirement
- Version control and baselines
- Tools for requirements management

Day 10: Stakeholder Management and Communication

- Stakeholder analysis: power/interest grid
- Communication planning: frequency, channels, formats
- Expectation management techniques
- Conflict resolution: win-win, compromise
- Negotiation skills for requirements

Day 11: Agile Requirements - User Stories and Backlog

- User story format: as a, I want, so that
- INVEST criteria for user stories
- Backlog grooming and prioritization
- Story points and planning poker
- ATDD: writing acceptance tests

Day 12: Agile Requirements - Epics, Themes, and Roadmaps

- Epics vs. user stories
- Themes and release planning
- Product roadmap creation
- User story mapping: activities, tasks, stories
- Case study: e-commerce platform

Day 13: Requirements for Data and Analytics Projects

- Data requirements elicitation: interviews, data profiling
- Data quality dimensions: accuracy, completeness, timeliness
- Reporting requirements: dashboards, KPIs
- Analytics requirements: descriptive, predictive, prescriptive
- Data governance principles

Day 14: Requirements for Integration and Interfaces

- Interface requirements: input/output, protocol, format
- API specification: REST, SOAP
- Service contracts and SLAs
- Data mapping techniques
- Non-functional requirements: performance, security, reliability

Day 15: Requirements for Security and Compliance

- Security requirements: confidentiality, integrity, availability
- Compliance frameworks: POPIA, GDPR, PCI-DSS
- Threat modeling: STRIDE, attack trees
- Authentication: password, MFA, SSO
- Authorization: RBAC, ABAC

Day 16: Requirements for Mobile and Web Applications

- Mobile requirements: device, OS, screen size
- Usability heuristics and UX requirements
- Responsive design: breakpoints, layouts
- Platform constraints: iOS, Android, web
- Accessibility requirements (WCAG)

Day 17: Requirements Testing and Verification

- Testability criteria: unambiguous, measurable
- Acceptance criteria: given/when/then
- Test case design: equivalence partitioning, boundary value analysis
- Requirements traceability to tests
- User acceptance testing (UAT) planning

Day 18: Tools for Requirements Management

- Tool selection criteria: scalability, integration, cost
- JIRA: issues, epics, user stories
- Confluence: pages, templates, macros
- IBM DOORS: modules, links, baselines
- Comparison of tools: pros and cons

Day 19: Advanced Topics - Requirements in DevOps and Continuous Delivery

- DevOps principles and requirements impact
- Continuous validation: automated acceptance tests
- Feature flags: toggling requirements
- A/B testing for requirements validation
- Requirements in CI/CD: versioning, traceability

Day 20: Capstone Project and Course Review

- Capstone project: from elicitation to specification
- Group presentation and peer review
- Feedback integration
- Course summary and key takeaways
- Assessment preparation and Q&A;

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **25 NQF credits** at **NQF Level 6**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 73,300.00	R 73,300.00
1	In-House	R 95,300.00	R 95,300.00
1	On-Campus (Pretoria)	R 109,900.00	R 109,900.00

UPCOMING SESSIONS

No sessions are currently scheduled. Please contact us to arrange a session at a time and location that suits your team.

HOW TO GET A QUOTE OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 259277) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
2. **Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
3. **Apply by phone or WhatsApp:** call **+27 12 004 8389** or WhatsApp **+27 65 077 6310** and we will prepare your quotation and reserve your seats.
4. **Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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