

SOFTWARE SYSTEM REQUIREMENTS

ISED UNIT CODE: 0611 451 07A

TVET CDACC UNIT CODE: ICT/CU/SD/CR/01/5/MA

Duration of Unit: 110 Hours

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Establish Software System Requirements

UNIT DESCRIPTION

This unit covers the competencies required to establish software system requirements. It involves gathering user requirements, analyzing user requirements, and planning application deliverables.

Summary of Learning Outcomes

1. To gather user requirements
2. To analyze user requirements
3. To plan application deliverables

Learning Outcomes	Duration (Hours)
1. Gather user requirements	20
2. Analyze user requirements	40
3. Plan application deliverables	50
TOTAL	110

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Gather user requirements	1.1. Key project stakeholders 1.1.1. Project team 1.1.1.1. Team members & their roles 1.1.1.2. Project managers 1.1.2 System users 1.1.1.3. Developers 1.1.1.4. System Analysts 1.1.1.5. End-users 1.1.1.6. System Administrators 1.1.3 Organization management 1.1.1.7. Organization structure 1.2. Data collection tools 1.2.1 Methods of data collection 1.2.1.1. Questionnaires 1.2.1.2. Observations 1.2.1.3. Experimentation 1.2.1.4. Interviews 1.2.1.5. Surveys 1.2.1.6. Case Studies 1.2.3. Preparation of data collection tools 1.2.3.1. Questionnaires 1.2.3.2. Observations checklist 1.2.3.3. Interviews Questions	● Practical Activities ● Project work ● Demonstration ● Group Work ● Role Plays ● Observation ● Third Party report ● Portfolio of Evidence ● Written tests

	1.3. Collection of user requirements data: 1.3.1. Questionnaires 1.3.2. Observations 1.3.3. Experimentation 1.3.4. Interviews 1.3.5. Surveys 1.3.6. Case Studies	
2. Analyze user requirements	2.1. Types of user Requirements 2.1.1. Functional Requirements 2.1.2. Non-Functional Requirements 2.1.3. Technical Requirements 2.1.4. Budget and Timeline 2.1.5. Legal and Regulatory Requirements 2.2. Identification of System application requirements. 2.2.1. Purpose and Goals 2.3. Analysis of system application requirements 2.3.1. Feasibility Analysis: 2.3.2. Requirements Prioritization 2.3.3. Functional Analysis 2.3.4. Non-functional Analysis 2.3.5. Design Analysis 2.3.6. Risk Analysis 2.4. Documenting system application requirements specifications process	● Practical Activities ● Project work ● Demonstration ● Group Work ● Role Plays ● Observation ● Third Party report ● Portfolio of Evidence ● Written tests

	2.4.1. Functional Requirements 2.4.2. Non-Functional Requirements 2.4.3. Design Requirements 2.4.4. Technical Requirements 2.4.5. Assumptions and Constraints 2.4.6. Glossary 2.4.7. Appendices 2.4.8. Reviewing and revising system application requirement specifications.	
3. Plan application deliverables	3.1. System requirement Review Process 3.1.1. Review Criteria: 3.1.1.1. Traceability 3.1.1.2. Change Management 3.1.1.3. Version Control: 3.1.1.4. Testing and Validation 3.1.2. Legal Issues 3.1.2.1. Governing laws and international treaties 3.1.2.2. End-User License Agreement 3.1.3. Dispute resolution 3.1.4. Termination of Contracts 3.2. Creating a Project work plan 3.2.1. Project Scope 3.2.2. Key deliverables 3.2.2.1. Internal deliverables 3.2.2.2. External deliverables	• Practical Activities • Project work • Demonstration • Group Work • Role Plays • Observation • Third Party report • Portfolio of Evidence • Written tests

	3.2.3. Milestones 3.2.4. Timelines 3.2.5. Duties and responsibilities 3.2.6. Quality criteria definition 3.2.7. Constraints and dependencies 3.2.8. Resource sharing 3.2.9. Communication planning 3.3. Project development agreement 3.3.1. Contents 3.3.2. Importance 3.3.3. Sign-off	
--	---	--

Suggested Delivery Methods

- Instructor led facilitation using active learning strategies
- Demonstration by trainer
- Practical work by trainees
- Viewing of related videos
- Field Visits
- Group Work
- Role plays
- Group projects

Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	Learning Materials			
1	Internet connection	✓ For each computer	1	1:1
	Flip charts	A1	1	1:25
	Textbooks	For reference	3	3:25

B	Learning Facilities & infrastructure			
	Theory Room	furnished with 25 Arm-chairs and a suitable trainer's table	1	1:25
C	Consumable materials			
	Printing papers	A4	2 Reams	1:12
	White board markers	Assorted colors	20	4:5
D	Tools and Equipment			
	Computers	✓ Genuine Windows/Linux ✓ Genuine Microsoft office Software ✓ Google Workspace Account ✓ Antivirus Software ✓ MS Project / Ms Visio ✓ Visual Paradigm ✓ Clickup	25	1:1
	External storage media	HDD / SSD / Flash	1	1:25
	Printer	Working printer	2	1:12
	1 Smart-board / Smart TV / Projector (with screen)	Where available	1	1:25
	Whiteboard/Chalkboard	4 X 8 Feet	1	1:25