

ESTABLISH SOFTWARE SYSTEM REQUIREMENTS

ISCED UNIT CODE: 0611 451 07A

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

UNIT DESCRIPTION

This unit covers the competencies required to determine system requirements. It involves gathering user requirements, analysing user requirements, and planning application deliverables.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace functions	These are assessable statements which specify the required level of performance for each of the elements <i>(Bold and italicized terms are elaborated in the range)</i>
1. Gather user requirements	1.1 Key <i>stakeholders</i> are selected as per user requirements. 1.2 <i>Data collection tools</i> are selected and prepared as per workplace procedures. 1.3 User requirements data is collected as per workplace procedures.
2. Analyse user requirements	2.1 <i>System functional requirements</i> are specified as per user requirements. 2.2 <i>System Non-Functional requirements</i> are specified as per user requirements. 2.3 User requirements are validated as per user needs. 2.4 <i>User requirements documents</i> are prepared as per work procedures and user requirements.

3. Plan application deliverables	3.1 Software requirements specifications document is prepared as per workplace procedures 3.2 Project work plan is created as per tasks identified. 3.3 Project development agreement document is prepared.
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RANGE

This section provides a work environment and conditions to which the performance criteria apply. It allows for a different work environment and situations that will affect performance.

Variable	Range
1. Stakeholders may include but not limited to:	1.1 End-users 1.2 Managers
2. Data collection tools may include but not limited to;	2.1 Questionnaire 2.2 Observation 2.3 Forms
3. System functional requirements may include but not limited to:	3.1 Tasks the system should perform, 3.2 Processes 3.3 Business rules
4. System Non-Functional requirements may include but not limited to:	4.1 Performance 4.2 Security 4.3 Scalability 4.4 Reliability 4.5 Usability
5. User requirements documents may include but not limited to:	5.1 Requirements specifications 5.2 User stories 5.3 Use case diagrams 5.4 Process flows

REQUIRED KNOWLEDGE AND SKILLS

This section describes the knowledge and skills required for this unit of competency.

Required knowledge

The individual needs to demonstrate knowledge of:

- System analysis and design principles
- Techniques of system analysis and design
- Software development methodologies
- Program development life cycle
- Project management
- Data collection methods

Required skills

The individual needs to demonstrate the following skills:

- Communications (verbal and written);
- Proficient in ICT;
- Time management;
- Analytical
- Planning;
- Decision making;
- Report writing;

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

1. Critical aspects of competency	1.1 Selected key stakeholders' areas per user requirements. 1.2 Selected and prepared data collection tools are as per workplace procedures. 1.3 Collected user requirements data as per workplace procedures. 1.4 Specified system functional requirements as per user requirements. 1.5 Specified system non-functional requirements as per user requirements. 1.6 Prepared user requirements document as per work procedures and user requirements. 1.7 Created a project work plan as per tasks identified.
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2. Resource implications	The following resources should be provided: 2.1 Access to relevant workplace where assessment can take place. 2.2 Appropriately simulated environment where assessment can take place. 2.3 Resources relevant to the proposed activity or tasks.
3. Methods of assessment	Competency in this unit may be assessed through: 3.1 Observation 3.2 Oral assessment 3.3 Portfolio of evidence 3.4 Interviews 3.5 Third party report 3.6 Written assessment 3.7 Practical assessment 3.8 Projects
4. Context of assessment	Competency may be assessed: 4.1 On-the-job 4.2 In a simulated work environment
5. Guidance information for assessment	5.1 Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.