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INDUSTRIAL ATTACHMENT

MENTORING TOOL

ELECTRICAL INSTALLATION

LEVEL 5

TRAINEE'S NAME:

ADMISSION NUMBER:

COURSE:

LEVEL:

INSITUTION NAME:

ADRESS:

ATTACHMENT PERIOD FROM:TO:



TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)

MENTORING TOOL

FOR

ELECTRICAL INSTALLATION

LEVEL 5

FOREWORD

This mentoring tool has been developed by TVET Curriculum Development, Assessment and Certification Council (TVET CDACC) in partnership with trainers and industry experts in Electrical Engineering.

Mentoring relationships have demonstrated to be an excellent way of enhancing professional growth. Both the mentor and the mentee give and grow in the mentoring process. The mentee can learn valuable knowledge from the mentor's expertise and past mistakes and competencies can be strengthened in specific areas. Mentees will have the opportunity to establish valuable connections with higher level employees. The success of mentoring will depend on clearly defined roles and expectations in addition to the mentee's awareness of the benefits of participating in the mentoring program.

This mentoring tool is an assessment tool used to assess whether a mentee meets the National Occupational Standards for Electrical Installation Operator Level 5. Where there is no agreement or finite evidence as to how many times this supervised exercise should occur, both the mentor and the mentee should feel confident that the mentee has the necessary knowledge, skills and attitudes (worker behaviors) to work as an Electrical Installation Operator.

The Mentoring will facilitate the experienced mentors in the world of work to share knowledge and experiences with mentees working under them towards a mutually beneficial professional development relationship. Mentors will be helpful in building competencies of mentees in areas of practice.

PROF. KISILU KITAINGE
CEO/COUNCIL SECRETARY

TRAINEE (MENTEE) DETAILS

Name of Trainee (Mentee)	
Registration Code of Trainee (Mentee)	
Trainee's/mentee's Institution Details	Name:
	Physical & postal address:
	Phone and email address:
Date of Commencement of Mentoring Period (dd/mm/yyyy)	
Date of Completion of Mentoring Period (dd/mm/yyyy)	
Organization	Name:
	Physical & postal address:
	Phone and email address:

INFORMATION FOR USERS

Role of a Mentor

A **mentor** is someone who provides support and advice that empowers the mentee to achieve skills, knowledge and attitudes (worker behaviors).

This may be a supervisor, manager or a worker who is an expert in a particular field.

The role of the mentor includes:

- Assisting mentee understand the organisation's requirements
- Assigning mentee tasks
- Observing mentee performance and record areas where the mentee needs improvement
- Assisting the mentee to come up with action plan for areas where he/she needs improvement

Role of Mentee

A **mentee** is a trainee who is on work placement (attachment) or is on-job training in an organization.

The role of the mentee includes:

- Completing the assessment tasks assigned by the mentor and filling out the self-assessment section
- Keeping the company's information confidential
- Being aware that he/she may be working with people from different backgrounds and cultures, so there is a need to respect those differences
- Asking for feedback and giving feedback when required.
- Upholding the organization's standards of work ethics.

Role of Industrial Liaison Officer

The Industrial Liaison Officer (ILO) is the officer in the training institution assigned the responsibility of coordinating activities of industry training based on TVET CDACC and institutions guidelines for industry training. The role of ILO include;

- Sensitizing trainees on their responsibilities during industry training
- Sensitizing mentors on their roles during industry training for trainees
- Coordinate industry training
- Receiving mentoring tools from trainees
- Ensuring mentorship tools are included in each candidate portfolio of evidence
- Upload candidate final mark to TVET CDACC portal

How to use the mentoring tool

- Where a skill, knowledge or attitude is not applicable in a particular workplace, the mentee should indicate not applicable (NA)
- The mentor should ask the mentee oral questions to gauge the knowledge of the mentee
- The mentee should fill the self-assessment section upon self-evaluation
- The mentor should fill the mentor review record upon observing and evaluating the mentee
- Action plan should be filled by the mentee after agreeing with the mentor for any item assessed as needs to improve

Mentoring Period

The attachment period should be at least three months. Mentee should spend at least two thirds of the attachment in planning electrical installation work, performing electrical installation, performing testing of electrical installation, maintaining electrical system and perform electrical system breakdown maintenance. Time spent in each section/department should be documented using form in Appendix A.

Number of Assessments

Three assessments are to be conducted using the mentoring tool: one at the beginning of the attachment where the mentor assesses the mentee to assess their initial level of competence; another assessment will be conducted at the middle of the attachment period to gauge the progress of the mentee and the third one will be conducted at the end of the attachment. However, the assessment outcome is based on the third /final assessment.

Submission of Mentoring Reports

The mentor is required to submit each of the three mentoring reports (in hard or soft copy) to the Industrial Liaison Officer of the respective institution. The Industrial Liaison Officer is required to submit to TVET CDACC offices the three mentor's summary reports (Appendix B). The filled mentoring tools for each trainee are to be kept in the institution and made available to TVET CDACC on request.

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1. PLAN ELECTRICAL INSTALLATION

Mentor and mentee: Please fill information for each of the two sections in the respective columns. Initials should be used as given in the header below.

S/N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation check-list, products, photos and videos of products and processes etc.
	KNOWLEDGE The mentee demonstrates knowledge of:		Self-assessment	Mentor review		
1.	Site survey					
2.	Documentation					
3.	Electrical installation sizing					
4.	Tools, equipment & materials.					
5.	Site logistics					
6.	Work plans					
7.	Communication					
8.	Team work					
9.	Work permits					

S/N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation checklist, products, photos and videos of products and processes etc.
10.	Occupational Safety and Health Act					
	SKILLS The mentee:					
11.	Evaluates site conditions according to the established procedures					
12.	Identifies best location and route for the installation as per the system design					
13.	Conducts load estimation according to set standard					
14.	Determines cable and protective device sizes according to IEE regulations					
15.	Undertakes all work safely as per workplace procedures, National/County regulations and legislative requirements					
16.	Identifies team members according to the task as per organisations procedure.					

Note:

To be declared competent, the mentee must get:

1. 8 of the 16 (50%) items of evaluation correct and
2. Items 12, 13, 14 and 15 correct.

Evaluation	Remarks
Please tick as appropriate The mentee was found to be: Competent ☐ Not Yet Competent ☐ <i>(If not yet competent, please specify in the remarks column which areas the mentee need to improve on)</i>	

2. PERFORM ELECTRICAL INSTALLATION

Mentor and mentee: Please fill information for each of the two sections in the respective columns. Initials should be used as given in the header below.

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of prac- tice	Self- assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with men- tor)	Evidence e.g., marked scripts (written and/oral), obser- vation checklist, products, photos and videos of products and pro- cesses etc.
1.	Different types of electrical installation drawings (Schematic, layout, wiring, single line and block diagrams)					
2.	Functionality of various tools/equipment and their use					
3.	Wiring systems					
4.	Practicing licenses and their scope (EPRA,NCA)					
5.	Housekeeping					
	SKILLS The mentee:					
6.	Observes Safety regulations and occupational health and safety standards.					
7.	Takes measurements as per the expected installation.					

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of prac- tice	Self- assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with men- tor)	Evidence e.g., marked scripts (written and/oral), obser- vation checklist, products, photos and videos of products and pro- cesses etc.
8.	Prepares and interprets working drawings as per the electrical installation design and site conditions					
9.	Prepares lists of tools, equipment and materials needed for the work as per the electrical installation requirements					
10.	Assembles and checks tools, equipment and materials for specifications and functionality as per the standard operating procedure					
11.	Installs cables, conductors, conduits, enclosures and support systems to specifications as per the working drawing and IEE regulations.					
12.	Labels the installation for identification according to IEE regulations					
13.	Follows workplace procedures to deal with any accidents and damage of equipment occurring during the cleaning process as per company's procedure.					

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of prac- tice	Self- assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with men- tor)	Evidence e.g., marked scripts (written and/oral), obser- vation checklist, products, photos and videos of products and pro- cesses etc.
14.	Records and reports activities as per established procedures					

Note:

To be declared competent, the mentee must get:

1. 7 of the 14(50%) items of evaluation correct

Evaluation	Remarks
Please tick as appropriate The mentee was found to be: Competent ☐ Not Yet Competent ☐ <i>(If not yet competent, please specify in the remarks column which areas the mentee need to improve on)</i>	

3. PERFORM TESTING OF ELECTRICAL INSTALLATION

Mentor and mentee: Please fill information for each of the two sections in the respective columns. Initials should be used as given in the header below.

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of prac- tice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), obser- vation checklist, products, photos and videos of products and pro- cesses etc.
	KNOWLEDGE The mentee demonstrates knowledge of:		Self-assessment	Mentor review		
1.	Safety					
2.	Types of tests					
3.	Test tools and equipment					
4.	Inspection					
5.	Testing					
6.	Documentation					
	SKILLS The mentee:					
7.	Observes safety as per OSHA					
8.	Observes precaution in hazardous environment as per EHS					

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of prac- tice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), obser- vation checklist, products, photos and videos of products and pro- cesses etc.
9.	Identifies test points and tests to be carried out as per IEE regulations					
10.	Carries out visual inspection as per established procedures					
11.	Verifies physical conditions of all fittings as per company's procedures					
12.	Assembles test tools and equipment as per established standards					
13.	Decides test sequence as per the test standards					
14.	Carries out tests as per the set standards					
15.	Issues wiring certificate to the relevant parties as per company's procedures					

Note:

To be declared competent, the mentee must get:

1. 8 of the 15 (50%) items of evaluation correct and
2. Items 5, 7, 9, 11 and 15 correct.

Evaluation	Remarks
Please tick as appropriate The mentee was found to be: Competent ☐ Not Yet Competent ☐ <i>(If not yet competent, please specify in the remarks column which areas the mentee need to improve on)</i>	

4. MAINTAIN ELECTRICAL INSTALLATION SYSTEMS

Mentor and mentee: Please fill information for each of the two sections in the respective columns. Initials should be used as given in the header below.

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation checklist, products, photos and videos of products and processes etc.
	KNOWLEDGE The mentee demonstrates knowledge of:		Self-assessment	Mentor review		
1.	Safety standards					
2.	Maintenance techniques					
3.	Inspection of electrical systems					
4.	Tool, equipment and materials					
5.	Testing of electrical system					
	SKILLS The mentee:					
6.	Identifies system to be maintained as per established standards					
7.	Defines type and scope of maintenance as per the system design					

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation checklist, products, photos and videos of products and processes etc.
8.	Refers to service manual as per the organisation's procedure					
9.	Develops maintenance schedule in accordance with the service checklist					
10.	Refers to relevant maintenance procedures as per the established procedures					
11.	Inspects electrical systems as per the established procedures					
12.	Identifies and records defects outside maintenance schedule as per organisation's policy					
13.	Prepares list of tools, equipment and material as per the established procedure					
14.	Prepares maintenance checklist as per the service manual or the company's procedure					
15.	Carries out maintenance activities in the specified sequence, agreed timelines and in consultation with relevant parties as per the organisation's procedure					

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation checklist, products, photos and videos of products and processes etc.
16.	Observes safety and other regulations as per the established standards					

Note:

To be declared competent, the mentee must get:

1. 8 of the 16(50%) items of evaluation correct and

Evaluation	Remarks
Please tick as appropriate The mentee was found to be: Competent ☐ Not Yet Competent ☐ <i>(If not yet competent, please specify in the remarks column which areas the mentee need to improve on)</i>	

5. PERFORM ELECTRICAL BREAKDOWN MAINTENANCE

Mentor and mentee: Please fill information for each of the two sections in the respective columns. Initials should be used as given in the header below.

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation check-list, products, photos and videos of products and processes etc.
	KNOWLEDGE The mentee demonstrates knowledge of		Self-assessment	Mentor review		
1.	Causes of system failure					
2.	Manufacturers' manuals					
3.	Safety					
4.	Troubleshooting					
5.	Repair and maintenance					
6.	System testing					
7.	Documentation					
8.	Waste management					
	SKILLS The mentee:					

S/ N.	Items for evaluation (knowledge and skills)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation checklist, products, photos and videos of products and processes etc.
9.	Refers to system manuals to identify test points as per standard operating procedure					
10.	Conducts system trouble shooting in accordance with standard procedure					
11.	Repairs/ replaces system in accordance with maintenance manual					
12.	Tests repaired/replaced system as per standard operating procedures					
13.	Documents maintenance report as per standard operating procedures					
14.	Disposes waste as per EHS					

Note:

To be declared competent, the mentee must get:

1. 7 of the 15 (50%) items of evaluation correct and
2. Items 7 and 14 correct.

Evaluation	Remarks
Please tick as appropriate The mentee was found to be: Competent ☐ Not Yet Competent ☐ <i>(If not yet competent, please specify in the remarks column which areas the mentee need to improve on)</i>	

6. WORKER BEHAVIOUR

Mentor and mentee: Please fill information for these sections in the respective columns. Initials should be used as given in the header below. The mentee is supposed to demonstrate the following worker behaviour.

S/N.	Items for evaluation (attitudes)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation checklist, products, photos and videos of products and processes etc.
	The mentee is:		Self-assessment	Mentor review		
1.	An effective communicator					
2.	A team player/Impartial					
3.	Tolerant					
4.	Trustworthy					
5.	Respectful					
6.	Emotionally intelligent					
7.	A Problem solver					
8.	Open minded/open to correction and positive criticism					
9.	Self-aware					
10.	Creative and innovative					
11.	Diligent/ thorough					

S/N.	Items for evaluation (attitudes)	Not applicable (NA) To current area of practice	Self-assessment record: Need to improve (NI) Or met (date)	Mentor review record: Need to improve (NI) Or met (initials & date)	Record action plan for any item assessed as needs to improve (as agreed with mentor)	Evidence e.g., marked scripts (written and/oral), observation checklist, products, photos and videos of products and processes etc.
12.	Environmentally conscious					
13.	Time conscious					
14.	Presentable					
15.	Resilient and self-driven					
16.	Discipline and observing organisation code of conduct					
17.	Growth oriented					

NOTE: Note: (instructions for evaluation)

To be declared competent, the mentee must get

1. 75% items of evaluation correct

Evaluation	Remarks
Please tick as appropriate The mentee was found to be: Competent ☐ Not Yet Competent ☐ <i>(If not yet competent, please specify in the remarks column which areas the mentee need to improve on)</i>	

APPENDIX A: SUMMARY OF TOTAL PERIOD OF MENTORSHIP (TO BE FILLED BY MENTEE)

S/N	Section/Department/ Worksite/workstation/workshop/ workplace	Period (Weeks/days)	Mentor's Name
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

APPENDIX B: MENTOR SUMMARY REPORT (TO BE FILLED BY OVERALL SUPERVISOR)

NAME OF TRAINEE: REGISTRATION NUMBER OF TRAINEE: NAME OF TRAINEE'S INSTITUTION: NAME OF MENTOR: DESIGNATION: MENTORING ORGANIZATION: DATE : SIGNATURE AND STAMP:	
Evaluation	Remarks
Please tick as appropriate The mentee was found to be: Competent ☐ Not Yet Competent ☐ <i>(The candidate is competent if s/he gets 50% of the items correct)</i> <i>(If not yet competent, please specify in the remarks column which areas the mentee need to improve on)</i>	

<i>Feedback from mentor (Supervisor):</i>	
<i>Mentor's signature:</i>	<i>Date</i>
<i>Feedback from mentee (trainee):</i>	
<i>Mentee's signature:</i>	<i>Date</i>

APPENDIX C: ADDITIONAL SKILLS ACQUIRED DURING THE MENTORING PERIOD (TO BE FILLED BY MENTEE)

S/N	Additional skill acquired	Description of the task	What new things have you learned from this task
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

APPENDIX D: INDUSTRIAL LIAISON OFFICER FORM (TO BE FILLED BY ILO)

NAME OF INSTITUTION:

NAME OF ILO OFFICER:

DATE :

REMARKS

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SIGNATURE AND STAMP: