PERFORM DIAGNOSTIC AND LABORATORY EQUIPMENT MAINTENANCE I

UNIT CODE: 0914451 17 A

TVET CDACC UNIT CODE: ENG/OS/MDE/CR/06/5/MA
UNIT DESCRIPTION:

This unit specifies the competencies required to perform diagnostic and laboratory equipment maintenance. Competencies include: perform vital-signs monitors, microscope and centrifuge maintenance.

ELEMENTS These describe the key outcomes which make up workplace function.	**PERFORMANCE CRITERIA** These are assessable statements which specify the required level of performance for each of the elements. ***Bold and italicized terms are elaborated in the Range.***
1. Perform Vital-Signs Monitors Maintenance	1.1 Health hazards and safety procedures are carried out as per work procedure. 1.2 ***Vital-signs monitors*** are disinfected as per work procedure. 1.3 Vital-signs monitors parts are inspected as per service manual**.** 1.4 Fault diagnosis is carried out as per service manual. 1.5 Vital-signs monitor parts are cleaned as per service manual 1.6 Vital-signs monitors parts are maintained as per manufacturer's specifications. 1.7 Vital-signs monitors faulty parts are maintained as per manufacturer's specifications. 1.8 Vital-signs monitors functionality check is carried out as per service manual. 1.9 Equipment user training is carried out in line with the user manual. 1.10 Vital-signs monitors Service report is prepared as per work procedure.
2. Perform Microscope Maintenance	2.1 Health hazards and safety procedures are carried out as per work procedure.

	2.2 ***Microscope*** is disinfected as per work procedure. 2.3 ***Microscope parts*** are inspected as per service manual**.** 2.4 Fault diagnosis is carried out as per service manual. 2.5 ***Lenses*** and stage are cleaned as per service manual 2.6 Microscope parts are maintained as per manufacturer's specifications. 2.7 Microscope faulty parts are maintained as per manufacturer's specifications. 2.8 ***Microscope*** functionality check is carried out as per service manual. 2.9 Equipment user training is carried out in line with the user manual. 2.10 Microscope Service report is prepared as per work procedure.
3. Perform Centrifuge Maintenance	2.1 Health hazards and safety procedures are carried out as per work procedure. 2.2 ***Centrifuge*** is disinfected as per work procedure. 2.3 ***Centrifuge parts*** are inspected as per service manual. 2.4 Centrifuge fault diagnosis is carried out as per service manual. 2.5 Centrifuge Movable parts are lubricated as per manufacturer's specifications. 2.6 Centrifuge Faulty parts are maintained as per manufacturer's specifications. 2.7 Centrifuge functionality check is carried out as per service manual. 2.8 Equipment user training is carried out in line with the user manual. 2.9 Centrifuge Service report is prepared as per work procedure.

RANGE

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

Variable	**Range**

1. Vital-signs monitors include but not limited to:	• Blood pressure machines • Pulse oximeters • Capnograph machine • Blood gas analysers • EEG machine • ECG machine • Glucometer • Bilirubinometer • Diagnostic set
2. Microsco***pe*** include but not limited to:	• Light • Electron
3. Microscope parts include but not limited to:	• Base • Stage • Lenses • Adjustment knobs
4. Lense***s*** include but not limited to:	• Eye piece • Objective
5. Centrifuge include but not limited to:	• Table top bench top • Haematocrit • Ultracentrifuge • Refrigerated centrifuge

REQUIRED SKILLS AND KNOWLEDGE

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

Required Skills

The individual needs to demonstrate the following skills:

- Use of tools and equipment
- Communication skills
- Troubleshooting skills
- Mechanical skills
- ICT skills
- Installation
- Calibration
- Problem solving
- Critical thinking
- Report writing
- Record keeping
- Interpersonal skills
- Numeracy skills
- Leadership skills

Required Knowledge

The individual needs to demonstrate knowledge of:

- Safety precautions
- Fault diagnosis
- Electrical principles
- Electronics
- Hospital hygiene
- Standards of calibration

EVIDENCE GUIDE

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

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Applied Health hazards and safety procedures as per work procedure. 1.2 Disinfected diagnostic and laboratory equipment as per work procedures. 1.3 Inspected all parts of diagnostic and laboratory equipment as per service manual. 1.4 Performed fault diagnosis of diagnostic and laboratory equipment as per service manuals. 1.5 Cleaned parts of diagnostic and laboratory equipment as per service manual. 1.6 Maintained parts of diagnostic and laboratory equipment as per manufacturer's specifications. 1.7 Maintained faulty parts of diagnostic and laboratory equipment as per manufacturer's specifications. 1.8 Carried out calibration of diagnostic and laboratory equipment as per manufacturer's specifications. 1.9 Performed functionality check of diagnostic and laboratory equipment as per service manual. 1.10 Carried out Equipment user training is in line with the user manual. 1.11 Prepared diagnostic and Laboratory Equipment Service report as per work procedure.
2. Resource Implications	The following resources should be provided: 2.1 Access to relevant workplace where assessment can take place 2.2 Access to medical diagnostic and laboratory equipment which can be used for assessment 2.3 Access to relevant tools which can be used for
3. Methods of Assessment	Competency in this unit may be assessed through: 3.1 Observation

	3.2 Oral questioning 3.3 Written test 3.4 Practical Demonstration 3.5 Interview 3.6 Third party report
4. Context of Assessment	Competency may be assessed individually in the actual workplace or Simulated workplace.
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.