



**STANDARD KEMAHIRAN PEKERJAAN KEBANGSAAN
(NATIONAL OCCUPATIONAL SKILLS STANDARD)**

**STANDARD PRACTICE & STANDARD CONTENT
FOR**

SPORT FACILITY MAINTENANCE SERVICES

LEVEL 3



**Jabatan Pembangunan Kemahiran
Kementerian Sumber Manusia, Malaysia**



Department of Skills Development (DSD)

Ministry of Human Resources

62530 PUTRAJAYA, MALAYSIA

**STANDARD KEMAHIRAN PEKERJAAN KEBANGSAAN
(NATIONAL OCCUPATIONAL SKILLS STANDARD)**

FOR

**SPORT FACILITY MAINTENANCE SERVICES
LEVEL 3**

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STANDARD PRACTICE
NATIONAL OCCUPATIONAL SKILLS STANDARD (NOSS) FOR
SPORT FACILITY MAINTENANCE SERVICES
LEVEL 3

1. INTRODUCTION

The NOSS document specifies the competencies required to perform sport facility and equipment serviceability. It can be used by industry as a guideline for job description, performance appraisal and also for personnel career development. Training centres can use this document as the curriculum for Malaysia Skills Certificate (Level 3) in sport industry.

Sport Facility Maintenance Level 3 is developed to train the personnel to maintain and provide periodic inspections, preventive maintenance measures, and service that directly contribute to the safe operation of sport facility and equipment. The early detection of facility problems and the expedited response by these staff may directly influence the success of all academic and athletic personnel. To ensure the sport facility are adequately maintained, the authority should develop and implement scheduled preventive and reactive strategic maintenance plans for all its facilities. Records of completed preventive maintenance work and the dates completed should be maintained and securely recorded.

Sport activities can be categorised into three activities which are ground sports, water sports and air borne sports. Sport facility includes football field for competitions, running track for athletics, boards and throwing circles, football ground for training purposes and multipurpose field with synthetic or natural grass.

A sports complex is a combination of sports facilities either indoor/outdoor providing a venue for athletes to compete and train, for example, synthetic track and football field, baseball diamonds, swimming pools, and gymnasiums. Outdoor sport facilities include football and athletic fields, tennis courts, basketball courts, volleyball courts etc. are an important part of the community which public and private managers should pay particular attention to. Young and old people who want to have healthy lifestyle and enjoy friendly competition may benefit from using well maintained sport facilities. Outdoor sports facilities must also consider the facilities suitable not only to young generation, but also to older generation who are using the facilities

Public sports facilities in Malaysia are part of government assets built with large allocations. Due to the nature and needs of each game, the facility was built in such a way as outlined by international rules of the game. Sports facility was also built in every state and district in order to meet the government's aspiration to promote healthy lifestyle in the community. Nevertheless, the facilities provided should be well maintained in order to be beneficial to the community and not to impede the government's efforts to encourage community sports. The issue of poor maintenance does not only involve sports facilities, but also on how to upgrade the available facilities.

Regulatory requirement

- Labour Act 1955 (Act 265)
- Industrial Relation Act 1967
- Factories And Machinery Act 1967
- Workers Healthness and Safety Act 1994
- Environment Quality Act 1974 (Akta 127)
- Town Planner Act 1972
- Act of The City Counsel 1971

Regular inspection of sports facility is the law most often governed by the authority bodies and must be inspected by certified inspectors according to a mandated schedule. In Malaysia, regulations for sport facilities capabilities are covered by

- Malaysia Youth and Sport Ministry
- Malaysia Education Ministry
- Department of Environment (DOE)
- Department of Occupational Safety and Health (DOSH)
- Kementerian Kesejahteraan Bandar, Perumahan & Kerajaan Tempatan
- Sport Complex City Council

2. OCCUPATIONAL STRUCTURE

a. Occupational Structure (OS)

Sector	EDUCATION & TRAINING			
Sub-sector	SPORT AND RECREATION			
Area	OUTDOOR AND INDOOR SPORT AND RECREATION			
Sub Sub-area / Level	Indoor Sport and Recreation	Outdoor Sport & Leisure	Adventure & Travel	Sport Facilities Maintenance
L5	Sport & Recreation Manager			Sport Facilities Maintenance Manager
L4	Recreational & Sport Activity Master Trainer	Outdoor Recreational Operations Executive	Specialist Sport & Recreation Guide	Sport Facilities Maintenance Executive
L3	Recreational & Sport Activity Trainer	Outdoor Recreational Supervisor	No Level	Sport Facilities Maintenance Supervisor
L2	Recreational & Sport Activity Coach	Outdoor Recreational Coordinator	No Level	Sport Facilities Maintenance Technician
L1	No Level	No Level	No Level	No Level

Figure 1.1 Occupational Area Structure (OAA) for sport and recreational industry for sub-sector sport and education in Malaysia

Occupational Area Structure (OAS)

Sector	EDUCATION & TRAINING			
Sub-sector	SPORT AND RECREATION			
Area	OUTDOOR AND INDOOR SPORT AND RECREATION			
Sub Sub-area / Level	Indoor Sport and Recreation	Outdoor Sport & Leisure	Adventure & Travel	Sport Facilities Maintenance
L5	Sport & Recreation Management			Sport Facilities Maintenance Management
L4	Recreational & Sport Activity Administration	Outdoor Recreational Operations Control	Specialist Sport & Recreation Guiding	Sport Facilities Maintenance Administration
L3	Recreational & Sport Activity Supervision	Outdoor Recreational Supervision	No Level	Sport Facility Maintenance Services
L2	Recreational & Sport Activity Coordination	Outdoor Recreational Coordination	No Level	Embedded
L1	No Level	No Level	No Level	No Level

Figure 1.2 Occupational Area Structure (OAS) for sport and recreational industry for sub-sector sport and education in Malaysia

3. DEFINITION OF COMPETENCY LEVELS

The NOSS is developed for various occupational areas. Candidates for certification must be assessed and trained at certain levels to substantiate competencies. Below is a guideline of each NOSS Level as defined by the Department of Skills Development, Ministry of Human Resources, Malaysia.

Level 1:	Competent in performing a range of varied work activities, most of which are routine and predictable.
Level 2:	Competent in performing a significant range of varied work activities, performed in a variety of contexts. Some of the activities are non-routine and required individual responsibility and autonomy.
Level 3:	Competent in performing a broad range of varied work activities, performed in a variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required.
Level 4:	Competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present.
Level 5:	Competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources features strongly, as do personal accountabilities for analysis, diagnosis, planning, execution and evaluation.

4. AWARD OF CERTIFICATE

The Director General shall award, to any person upon completing successfully the NOSS program following skills level qualifications:

- a) Malaysia Skills Certificate / Sijil Kemahiran Malaysia (SKM) Level 1, 2 & 3
- b) Malaysia Skills Diploma / Diploma Kemahiran Malaysia (DKM) Level 4
- c) Malaysia Skills Advanced Diploma / Diploma Lanjutan Kemahiran Malaysia (DLKM) Level 5
- d) Statement of Achievement / Penyata Pencapaian (PC)

No person shall be awarded a Certificate unless he / she satisfy the requirements set by Malaysia Skills Certification System.

5. JOB COMPETENCIES

Sport Facility Maintenance Services Level 3 personnel are competent in performing the following Core Competencies:

- Sport Track & Field Facilities & Equipment Maintenance Services
- Sport Natural Grass Field Maintenance Services
- Sport Synthetic/Artificial Grass Field Maintenance Services
- Sport Equipment Storage & Maintenance Services
- Indoor/Outdoor Sport Facilities & Equipment Maintenance Services
- Fitness Centre Facilities & Equipment Maintenance Services
- Swimming Pool Facilities & Equipment Maintenance Services
- Scoreboard And Spot Light Maintenance Services
- Communication & Pa System Maintenance Services
- Recovery Centre Maintenance Services

Optionally competent in performing, Sport Facility Maintenance Services Level 3 Elective Competencies in:-

- Water Sport Facilities & Equipment Maintenance Services
- Air Sport Facilities & Equipment Maintenance Services
- Shooting Range Facilities & Equipment Maintenance Services

6. WORKING CONDITIONS

Generally they work under normal working hour from morning to evening depending on organisation nature of business. They may be required to work extra hours to fulfil internal and external requirement. In this matter, they may be needed to work at long hours to accommodate sport event or tournament. They need to use / wear appropriate attire and Personal Protective Equipment (PPE) during the commencement of their jobs. They may work individually or in a modular group. The occupation requires high level of physical fitness & alertness, good communication skill, cooperative and ability to understand & execute work instructions from superior.

7. EMPLOYMENT PROSPECTS

There are excellent prospect in private sectors due to shortage of hands-on expert in Sport Facility Maintenance Level 2 trained under this training program is eligible to be employed in the equipment and facility maintenance sector. This area has a very good job market potential abroad for skilled personnel due to shortage of such highly skilled personnel in this region.

Other related occupation with respect to employment opportunities are:

- Sport maintenance Instructor/ Trainer
- Sport Equipment Sales & Trading
- Sport Servicing and Maintenance Contractor &Sub-contractor
- Sport Store Keeper
- Pool Live Safer and Maintenance Services

Other related industries with respect to employment opportunities are:

- Education sport complex
- Kompleks Sukan Negara Shah Alam
- Selangor Golf Club
- Bukit Kiara Sport Centre
- Kelab Aman Sport Complex, Ampang
- Fitness Centre Services
- Government Linked Companies (GLC) Sport Centre

8. CAREER ADVANCEMENT

Career path in sport facilities servicing and maintenance depends on the type and size of organisation. In general, there will be more career development opportunities with larger employers. Employment may start with lower level of assistant sport facility technician (L1). Depending on qualification and years of experience employee may be promoted to sport facility technician (L2) and sport facility senior technician/ supervisor(L3). Highly competent and experienced employee would have the opportunity to be promoted at managerial level as maintenance assistant engineer (L4) and maintenance engineer (L5).

9. SOURCES OF ADDITIONAL INFORMATION

LOCAL

a. **Kementerian Belia & Sukan Malaysia**

No 27 Persiaran Perdana, Presint 4, 62570 Putrajaya

Tel: 603 – 8871 2333

Fax: 603 – 8888 8700

Email: Info.webmaster@kbs.gov.my

- b. **Majlis Sukan Negara Malaysia**
Kompleks Sukan Negara, Bukit Jalil 57000
Sri Petaling, Kuala Lumpur
Tel : 03-89929600
Faks : 03-89967400

- c. **Institut Sukan Negara**
Kompleks Sukan Negara,
Bukit Jalil,
57000 Kuala Lumpur
Tel : +60389914400
Fax : +60389968748

- d. **Perbadanan Stadium Malaysia**
Aras 1, Stadium Nasional,
Kompleks Sukan Negara Bukit Jalil,
57700 Sri Petaling, Kuala Lumpur
Tel: 03-8992 0888
Faks : 03-8994 4663
Emel : admin[at]stadium.gov.my

- e. **Majlis Sukan Negeri Malaysia**

- f. **Perbadanan Stadium Negeri**

- g. **Department of Environment (DOE)**
Aras 1-4, Podium 2, 3 Wisma Sumber Asli No 25,
Persiaran Perdana, 62574, Putrajaya
Phone: 03-8871 2000

- h. **Kementerian Pendidikan Malaysia**
Bahagian Sukan, Sektor Pengajian Tinggi
Aras 1 & 7, Blok E13, Parcel E,
Pusat Pentadbiran Kerajaan Persekutuan
62604 Putrajaya
Malaysia

- i. **Department of Occupational Safety and Health (DOSH)**
Aras 2, 3 & 4, Blok D3, Kompleks D
Pusat Pentadbiran Kerajaan Persekutuan
62530 W. P. Putrajaya

10. ACKNOWLEDGEMENT

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2	En Khairul Anuar Bin Che Ani	Perbadanan Stadium Malaysia
3	En Mustaza Bin Ahmad	Pusat SukanUiTM
4	En Fajar Bin Kassim	Institut Sukan Negara
5	Dr Hasnul Faizal Hushin Amri	Fakulti Sains Sukan dan Rekreasi

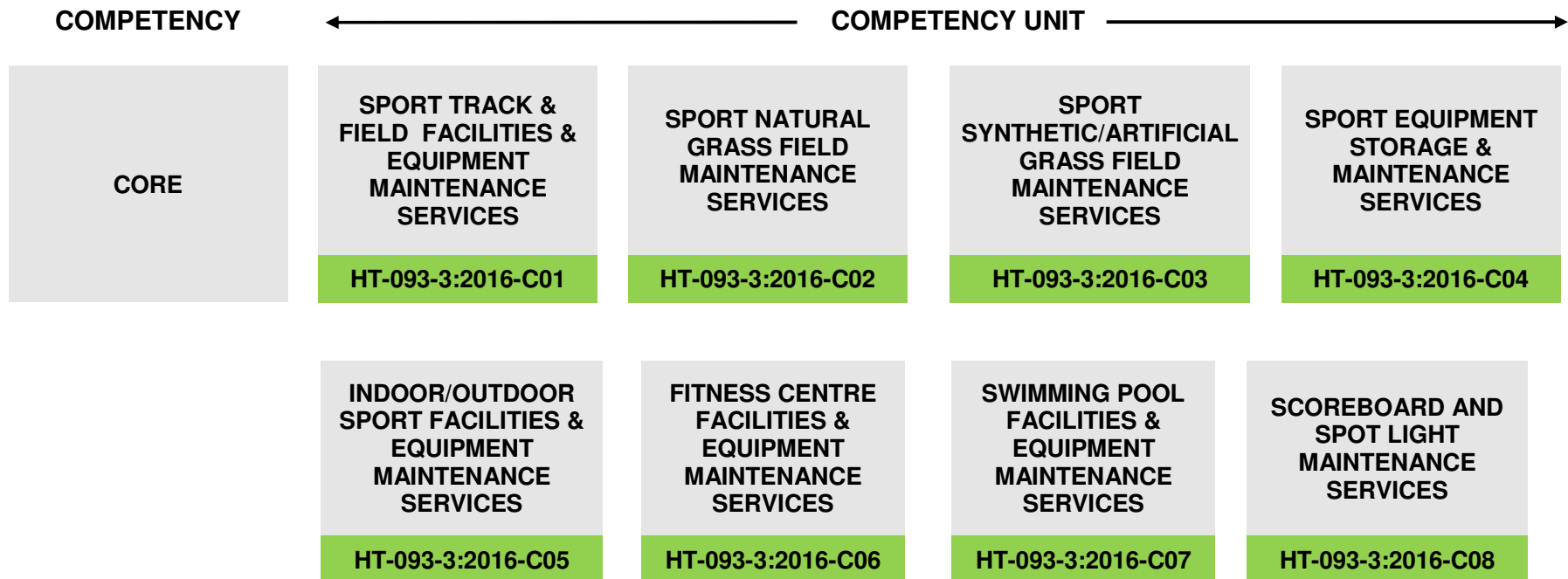
**11. COMMITTEE MEMBERS FOR DEVELOPMENT OF STANDARD PRACTICE (SP),
COMPETENCY PROFILE CHART (CPC), COMPETENCY PROFILE (CP) AND
CURRICULUM of COMPETENCY UNIT (CoCU)**

SPORT FACILITY MAINTENANCE SERVICES – LEVEL 3

PANEL		
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8.	Mohamad Razizi Bin Midin	Pegawai Belia dan Sukan Kanan Universiti Putra Malaysia, Serdang
9.	Mohd Ikhwan Zaini B Mohd Ilias	Sports Secretary Maybank Investment Bank Berhad (KL)
FACILITATOR		
1.	Mohamad Yamin bin Abdul Wahab	Edusure Sdn Bhd

COMPETENCY PROFILE CHART (CPC)

SECTOR	EDUCATION & TRAINING		
SUB SECTOR	SPORT AND RECREATION		
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION		
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES		
JOB LEVEL	THREE (3)	NOSS CODE	HT-093-3:2016



**COMMUNICATION &
PA SYSTEM
MAINTENANCE
SERVICES**

HT-093-3:2016-C09

**RECOVERY
CENTRE
MAINTENANCE
SERVICES**

HT-093-3:2016-C10

ELECTIVE

**WATER SPORT
FACILITIES &
EQUIPMENT
MAINTENANCE
SERVICES**

HT-093-3:2016-E01

**AIR SPORT
FACILITIES &
EQUIPMENT
MAINTENANCE
SERVICES**

HT-093-3:2016-E02

**SHOOTING RANGE
FACILITIES &
EQUIPMENT
MAINTENANCE
SERVICES**

HT-093-3:2016-E03

COMPETENCY PROFILE (CP)

SECTOR	EDUCATION & TRAINING			
SUB SECTOR	SPORT AND RECREATION			
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION			
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES			
LEVEL	THREE (3)	NOSS CODE	HT-093-3:2016	
CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
1. Sport Track & Field Facilities & Equipment Maintenance Services	HT-093-3:2016-C01	<p>Sport track & field facilities & equipment maintenance services is the competency to perform preventive, periodic and corrective maintenance routine for track & field event such as running, jumping and throwing game.</p> <p>The person who is competent in sport track & field facilities and equipment maintenance services shall be able to prepare track & field facilities and equipment maintenance schedule, perform track & field facilities and equipment maintenance activities, set up track & field facilities and equipment based on sport event and inspect track & field event facilities and equipment utilization.</p> <p>The outcome of this competency is to ensure that track & field facilities equipment are maintained in good</p>	1. Prepare track & field facilities and equipment maintenance schedule	<p>1.1 Type and scope of track & field facilities and equipment maintenance determined</p> <p>1.2 Softness, compactness of soil, water stand and uneven of surface level checked according fields standard specification</p> <p>1.3 Numbers and type of defect equipment for maintenance determined according to equipment maintenance report</p> <p>1.4 Track lines, side lines and spot line condition checked and assessed according to standard maintenance requirement</p> <p>1.5 Facilities and equipment maintenance references and manual identified and selected</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>condition, events run smoothly and to prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).</p>	<p>2. Perform track & field facilities and equipment maintenance activities</p> <p>3. Set up track & field facilities and equipment based on sport event</p>	<p>for maintenance schedule preparation</p> <p>1.6 Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p> <p>1.7 Maintenance type, frequency and location of equipment schedule produced according maintenance requirement</p> <p>2.1 Track & field surface level inspected and measured according to standard levelling specification</p> <p>2.2 Line, side-lines and marking spot of track & field condition inspected according to track & field standard specification</p> <p>2.3 Defect line repaint as per track & field and line specification</p> <p>2.4 Running, jumping and throwing event equipment serviced and repaired according to equipment servicing manual</p> <p>2.5 Track & field maintenance record updated and submitted within time frame</p> <p>3.1 Running event facilities determined and properly</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>4. Inspect track & field event facilities and equipment utilization</p>	<p>arranged according event standard guideline</p> <p>3.2 Jumping event facilities and equipment determined and properly arranged according event standard guideline</p> <p>3.3 Throwing event facilities determined and properly arranged according event standard guideline</p> <p>3.4 Track & field bench seating arranged and safety signage placed according to event standard guide line</p> <p>3.5 Manual score board and PA system functionality tested and placed according to event standard guide line and lay out plan</p> <p>3.6 Safety adherence on track & field facilities set up applied according to safety regulation procedure</p> <p>3.7 Track & field facilities and equipment handed over to user as per user requirement</p> <p>4.1 Condition and position of facilities and equipment checked according event lay out plan</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>4.2 Misused of facilities and equipment monitored and rectified according sport facilities and equipment by laws</p> <p>4.3 Safety adherence of user during facilities and equipment utilization monitored according safety regulation procedure</p> <p>4.4 Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>4.5 Type, numbers and condition of returned facilities and equipment recorded according to inventory procedure</p>
2. Sport Natural Grass Field Maintenance Services	HT-093-3:2016-C02	<p>Sport natural grass field maintenance services is the competency to perform preventive, periodic and corrective maintenance routine which keeps the natural grass field in healthy grown and maintain in standard measurement, wetness condition and maintain standard speed of ball movement.</p> <p>The person who is competent in sport natural grass field maintenance services shall be able to prepare natural grass field maintenance schedule, perform</p>	1. Prepare natural grass field maintenance schedule	<p>1.1 Type and scope of natural grass field maintenance determined according sport facilities and sport activities requirement</p> <p>1.2 Type and species of natural grass determined according to previous maintenance record</p> <p>1.3 Requirement for grass cutting, fertilizing and irrigation determined according to type and species of grass</p> <p>1.4 Required maintenance equipment and material</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>natural grass field cutting work, perform natural grass field fertilizing work and perform field irrigation activities.</p> <p>The outcome of this competency is to ensure that natural grass field are grown healthily, greenish evenness maintained and to prevent athlete from physical injury according to field standard specification data.</p>	<p>2. Perform natural grass field cutting work</p>	<p>identified according type of maintenance</p> <p>1.5 Frequency of maintenance activities identified according to natural grass specification</p> <p>1.6 Required manpower identified Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p> <p>1.7 Natural grass maintenance schedule produced and disseminated</p> <p>2.1 Method of grass cutting selected according actual condition and area cutting</p> <p>2.2 Height of grass measurement determined according to fields standard specification.</p> <p>2.3 Cutting equipment / machine set according height of grass measurement</p> <p>2.4 Grass cutting activities carried out according to maintenance schedule</p> <p>2.5 Grass cutting waste (clipping) collected and disposed according to local regulatory requirement</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Perform natural grass field fertilizing work</p>	<p>3.1 Grass growth rate and density level checked according to growing grass standard.</p> <p>3.2 Fertilizer requirement determined according to species and condition of grass</p> <p>3.3 Organic / chemical fertilizer selected according to fertilizing requirement</p> <p>3.4 Manual or machine fertilizing method determined according size of fertilizing area</p> <p>3.5 Fertilizing rate determined according to manufacturer's recommendation</p> <p>3.6 Suitable PPE applied according fertilizing safety procedure</p> <p>3.7 Pitching work executed based on grass defect condition</p> <p>3.8 Fertilizing work executed based on maintenance schedule</p> <p>3.9 Pest control work executed based on maintenance schedule</p> <p>3.10 Grass fertilizer maintenance report produce and submitted within time frame</p> <p>4.1 Field irrigation requirement determined according to species and condition of grass</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			4. Perform field irrigation activities	4.2 Method of field irrigation determined according to size of field 4.3 Outlet indicator, piping, valve, filtration system and silt traps of drainage system determined based on drainage operation manual 4.4 Fix or mobile of sprinkling plant system operation monitored according field irrigation requirement 4.5 Drainage system operation monitored according to field drainage design 4.6 Grass wetness condition, checked according to fields standard specification 4.7 High pressure water, flushing and blowing method applied based on blockage area 4.8 Maintenance report produced and submitted within time frame
3. Sport Synthetic/Artificial Grass Field Maintenance Services	HT-093-3:2016-C03	Sport synthetic/artificial grass field maintenance services is the competency to perform preventive, periodic and corrective maintenance routine which keeps the surface safe for use, extends its	1. Prepare synthetic/artificial grass field maintenance schedule	1.1 Type and scope of synthetic/artificial grass field maintenance determined according sport facilities and sport activities requirement

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>life and alleviates common problems such as dust forming a crusty layer on the turf surface, granules compacting to form a hard surface, wetness condition and maintain standard speed of ball movement.</p> <p>The person who is competent in sport synthetic/ artificial grass field maintenance services shall be able to prepare synthetic/artificial grass field maintenance schedule, perform synthetic/artificial grass field top dressing (granules), perform synthetic/artificial grass field replacement work and maintain field water sprinkle system</p> <p>The outcome of this competency is to the ability to maintain synthetic/artificial grass field as to ensure shock absorption, durability, reaction and tensile strength and protect athlete from physical injury according field standard specification data.</p>	<p>2. Perform synthetic/artificial grass field top dressing (granules)</p>	<p>1.2 Type and material of synthetic/artificial grass determined according to previous maintenance record</p> <p>1.3 Required maintenance equipment and material identified according type of maintenance</p> <p>1.4 Frequency of maintenance activities identified according to synthetic/artificial grass specification</p> <p>1.5 Required manpower identified according to job specification</p> <p>1.6 Facilities and equipment safety precaution arranged and assessed according to HSE requirement.</p> <p>1.7 Synthetic/artificial grass maintenance schedule produced and disseminated</p> <p>2.1 Uneven density, wear and tear, condition of artificial grass checked as per artificial grass actual condition</p> <p>2.2 Top dressing material spread to grass surface as per spreading technique</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Perform synthetic/artificial grass field replacement work</p>	<p>2.3 Artificial grass blew and groomed evenly according to artificial grass condition</p> <p>2.4 Artificial grass trimmed until top dressing material cleared on grass surface</p> <p>2.5 Trimmed artificial grass compacted according to artificial grass manufacturer standard requirement</p> <p>2.6 Artificial grass top dressing areas cleaned and waste collected according to cleaning requirement</p> <p>2.7 Safety and regulation adhered according top dressing safety</p> <p>2.8 Artificial grass top dressing maintenance report prepared and submitted within time frame.</p> <p>3.1 Pit off, torn and uneven colour of artificial grass determined according to inspection finding</p> <p>3.2 Replacement tools and materials arranged according to replacement activity</p> <p>3.3 Effected areas and size determined according to inspection finding</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>4. Maintain field water sprinkle system</p>	<p>3.4 Defect artificial grass removed according to removing guideline</p> <p>3.5 New artificial grass replaced according to artificial grass replacement requirement</p> <p>3.6 New artificial grass installation quality assessed according to fields standard specification</p> <p>3.7 Unused artificial grass disposed according to disposal requirement</p> <p>3.8 Safety and regulation adhered according new artificial grass replacement safety procedure</p> <p>3.9 Artificial grass replacement report prepared and submitted within time frame</p> <p>4.1 Sprinkler system functionality checked according to operation manual</p> <p>4.2 Malfunction of sprinkle system equipment rectified and replaced according to equipment manual</p> <p>4.3 Rectified sprinkle system tested and evaluated according to standard operation requirement</p> <p>4.4 Grass wetness condition checked and assessed</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>according to fields standard specification</p> <p>4.5 Sprinkle system maintenance activity recorded and report produced</p>
4. Sport Equipment Storage & Maintenance Services	HT-093-3:2016-C04	<p>Sport equipment storage & maintenance services is the competency to perform preventive, periodic and corrective maintenance routine which keeps the equipment in good condition, preserving or prevents trouble from arising and maintains capabilities of equipment.</p> <p>The person who is competent in sport equipment storage & maintenance services shall be able to inspect sport facilities & equipment condition, perform sport facilities & equipment preservation, propose sport facilities & equipment for disposal and coordinate facilities & equipment storage.</p> <p>The person who is competent in sport equipment storage & maintenance services shall be able to keep facilities and equipment in good condition and available for sports event as per company's Standard Operating Procedure (SOP).</p>	<p>1. Inspect sport facilities & equipment condition</p> <p>2. Perform sport facilities & equipment preservation</p>	<p>1.1 Equipment physical appearance and functionality checked and assessed according equipment manual</p> <p>1.2 Defected and malfunction equipment segregated for maintenance activity</p> <p>1.3 Facilities and equipment safety precaution arranged and assessed according to HSE requirement'</p> <p>1.4 Stock ledger, equipment log book, quantity of stock and procurement record updated according store keeping procedure</p> <p>2.1 Sport equipment to be preserved determined according inspection result</p> <p>2.2 Tools and materials for preservation activity identified according preservation method</p> <p>2.3 Sport equipment wrapped and packed according to sport</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Propose sport facilities & equipment for disposal</p> <p>4. Coordinate facilities & equipment storage</p>	<p>equipment preservation requirement</p> <p>2.4 Preserved sport equipment marked and stored according to storage procedure</p> <p>3.1 Causes of equipment for disposal identified according to disposal procedure</p> <p>3.2 Equipment for disposal segregated and recorded</p> <p>3.3 Application for equipment disposal submitted for approval</p> <p>3.4 Approved equipment for disposal arranged for disposal according disposal procedure</p> <p>3.5 Disposed equipment record updated according to inventory procedure</p> <p>4.1 Sport facilities and equipment placement areas identified according storage floor plan</p> <p>4.2 Sport facilities and equipment transportation arranged according to sport event requirement</p> <p>4.3 Movement of sport facilities and equipment monitored and recorded according to sport</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>event requirement and storage procedure</p> <p>4.4 Safety of facilities and equipment monitored during movement activities</p>
<p>5. Indoor/Outdoor Sport Facilities & Equipment Maintenance Services</p>	<p>HT-093-3:2016-C05</p>	<p>Indoor/Outdoor sport facilities & equipment maintenance services is the competency to perform preventive and periodic, corrective maintenance routine for sport event such as event gymnasium, platform/stage and indoor/outdoor game's court.</p> <p>The person who is competent in sport indoor/outdoor facilities and equipment maintenance services shall be able to prepare indoor/outdoor facilities & equipment maintenance schedule, perform indoor facilities & equipment maintenance activities, perform outdoor facilities & equipment maintenance activities, set up indoor/outdoor sport facilities & equipment based on sport event and inspect indoor/outdoor sport facilities & equipment utilization.</p> <p>The outcome of this competency to ensure that equipment are kept in good working order, event run</p>	<p>1. Prepare indoor/outdoor facilities & equipment maintenance schedule</p>	<p>1.1 Type and scope of indoor/outdoor facilities and equipment maintenance determined</p> <p>1.2 Numbers and type of defect facilities and equipment for maintenance determined according to maintenance report</p> <p>1.3 Court/ field lines, surface and equipment condition of indoor/outdoor sport facilities checked and assessed according to standard maintenance requirement</p> <p>1.4 Equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.5 Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).	2. Perform indoor facilities & equipment maintenance activities	1.6 Type, frequency and location of equipment maintenance schedule produced according maintenance requirement 2.1 Gymnasium event type identified according to user requirement 2.2 Court event typed according to user requirement 2.3 Gymnasium and court event equipment condition inspected according to equipment manual 2.4 Gymnasium and court surface level inspected and measured according to standard levelling specification 2.5 Gymnasium and court line, side-lines and marking spot condition inspected according to indoor event standard specification 2.6 Defected gymnasium and court line repaint as per court and gymnasium line specification 2.7 Gymnasium and court event equipment serviced and repaired according to equipment servicing manual 2.8 Gymnasium and court facilities and equipment serviced and repaired according to equipment servicing manual 2.9 Gymnasium and court maintenance record updated

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Perform outdoor facilities & equipment maintenance activities</p> <p>4. Set up indoor/outdoor sport facilities & equipment based on sport event</p>	<p>and submitted within time frame</p> <p>3.1 Outdoor court event type identified according to user requirement</p> <p>3.2 Outdoor court event equipment condition inspected according to equipment manual</p> <p>3.3 Outdoor court surface level inspected and measured according to standard levelling specification</p> <p>3.4 Outdoor court line, side-lines and marking spot condition inspected according to outdoor event standard specification</p> <p>3.5 Defected outdoor court line repaint as per court line specification</p> <p>3.6 Outdoor court event equipment serviced and repaired according to equipment servicing manual</p> <p>3.7 Outdoor court facilities and equipment serviced and repaired according to equipment servicing manual</p> <p>3.8 Outdoor court maintenance record updated and submitted within time frame</p> <p>4.1 Indoor/outdoor sport court facilities and equipment arranged and assessed</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>according event standard guideline</p> <p>4.2 Sport field facilities and equipment arranged and assessed according event standard guideline</p> <p>4.3 Sport gymnastic facilities and equipment arranged and assessed according event standard guideline</p> <p>4.4 Sport weighting event facilities and equipment arranged and assessed according event standard guideline</p> <p>4.5 Sport wrestling event facilities and equipment arranged and assessed according event standard guideline</p> <p>4.6 Sport martial art event facilities and equipment arranged and assessed according event standard guideline</p> <p>4.7 Indoor/outdoor sport bench seating arranged and assessed according to event standard guide line</p> <p>4.8 Manual score board and PA system functionality tested and placed according to event standard guide line and lay out plan</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>5. Inspect indoor/outdoor sport facilities & equipment utilization</p>	<p>4.9 Safety adherence on indoor/outdoor sport facilities set up applied according to safety regulation procedure</p> <p>4.10 Indoor/outdoor event facilities and equipment handed over to user as per user requirement</p> <p>5.1 Condition and position of facilities and equipment checked according event lay out plan</p> <p>5.2 Misused of facilities and equipment utilization monitored and rectified as per sport facilities and equipment by laws</p> <p>5.3 Safety adherence of user during facilities and equipment utilization monitored according safety regulation procedure</p> <p>5.4 Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>5.5 Type, numbers and condition of returned facilities and equipment recorded according to inventory procedure.</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
6. Fitness Centre Facilities & Equipment Maintenance Services	HT-093-3:2016-C06	<p>Fitness centre facilities & equipment maintenance services is the competency to perform preventive, periodic and corrective maintenance routine for fitness centre such as cardio, free weighting, athlete endurance test, free hand and musical exercise</p> <p>The person who is competent in fitness centre facilities and equipment maintenance services shall be able to prepare fitness centre facilities & equipment maintenance schedule, perform fitness centre facilities & equipment maintenance activities and set up fitness centre facilities & equipment.</p> <p>The outcome of this competency to ensure that fitness facilities and equipment are kept in good working order, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).</p>	<p>1. Prepare fitness centre facilities & equipment maintenance schedule</p> <p>2. Perform fitness centre facilities & equipment maintenance activities</p>	<p>1.1 Type and scope of sport fitness facilities and equipment maintenance determined</p> <p>1.2 Numbers and type of defect fitness facilities and equipment for maintenance determined according to equipment maintenance report</p> <p>1.3 Facilities and equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.4 Maintenance type, frequency and location of equipment schedule produced according maintenance requirement</p> <p>1.5 Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p> <p>2.1 Sport fitness facilities and equipment condition and functionality inspected according to equipment manual</p> <p>2.2 Fitness facilities and equipment serviced and repaired according to equipment servicing manual</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Set up fitness centre facilities & equipment</p>	<p>2.3 Fitness facilities and equipment default setting set according to manufacturer setting</p> <p>2.4 Fitness equipment & facility for calibration arranged according equipment maintenance schedule</p> <p>2.5 Fitness maintenance record updated and submitted within time frame</p> <p>3.1 Fitness sport event identified according to event requirement</p> <p>3.2 Fitness centre facilities and equipment checked and tallied according event requirement</p> <p>3.3 Fitness centre facilities and equipment set up and functionality tested according event requirement</p> <p>3.4 Fitness facilities and equipment handed over to user as per user requirement</p> <p>3.5 Fitness centre facilities and equipment usages monitored and guided according to fitness centre rules and regulation</p> <p>3.6 Safety adherence of user during facilities and equipment utilization monitored according safety regulation procedure</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>3.7 Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>3.8 Type, numbers and condition of returned facilities and equipment recorded according to inventory procedure</p>
7. Swimming Pool Facilities & Equipment Maintenance Services	HT-093-3:2016-C07	<p>Swimming pool facilities & equipment maintenance services is the competency to perform preventive and periodic, corrective maintenance routine for water pool event such as swimming, diving, synchronise gymnastics and water polo game.</p> <p>The person who is competent in sport swimming pool facilities and equipment maintenance services shall be able to prepare swimming pool facilities & equipment maintenance schedule, perform pool cleaning works, set up pool sport facilities & equipment based on sport event, coordinate pool water circulation system maintenance and coordinate electrical supply maintenance.</p> <p>The outcome of this competency to ensure that swimming pool and its water is safe and clean, pool event run smoothly and to prevent</p>	1. Prepare swimming pool facilities & equipment maintenance schedule	<p>1.1 Type and scope of swimming pool facilities and equipment maintenance determined</p> <p>1.2 Numbers and type of defect facilities and equipment for maintenance determined according to maintenance report</p> <p>1.3 Swimming pool floor, floats lane rope, deck surface, lighting, pool shower and pool accessories condition checked and assessed according to standard maintenance requirement</p> <p>1.4 Facilities and equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.5 Type, frequency and location of equipment maintenance</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>4. Coordinate pool water circulation system maintenance</p>	<p>3.3 Pool facility equipment set up and functionality tested according event requirement</p> <p>3.4 Pool facilities and equipment handed over to user as per user requirement</p> <p>3.5 Pool facilities and equipment usages monitored and guided according to fitness centre rules and regulation</p> <p>3.6 Safety adherence of user during facilities and equipment utilization monitored according safety regulation procedure</p> <p>3.7 Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>3.8 Type, numbers and condition of returned facilities and equipment recorded according to inventory procedure</p> <p>3.9 Buoy & mounting fitting and live saver equipment checked for wear & tear</p> <p>4.1 Pool maintenance schedule interpreted</p> <p>4.2 Water pump circulating system, pool drainage and water pressure outlet & inlet</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			5. Coordinate electrical supply maintenance	<p>indicator checked for functionality</p> <p>4.3 Wear & tear condition of pipe line, water valve, fitting & jointing, coupling and pump filter monitored as per pump system manufacturer manual</p> <p>4.4 Required servicing of water circulation system proposed to superior for third party servicing</p> <p>4.5 Third party servicing arranged according to type of defect</p> <p>5.1 Electrical maintenance schedule interpreted</p> <p>5.2 Electrical parts and component functionality monitored</p> <p>5.3 Required servicing of electrical supply system proposed to superior for third party servicing</p> <p>5.4 Third party servicing arranged according to type of defect</p>
8. Scoreboard And Spot Light Maintenance Services	HT-093-3:2016-C08	<p>Scoreboard and spot light maintenance services is the competency to perform preventive and periodic and corrective maintenance routine which keeps the equipment in working order or prevents trouble from arising and maintains capabilities of equipment.</p> <p>The person who is competent in sport scoreboard facilities and</p>	1. Prepare scoreboard and spot light maintenance schedule	<p>1.1 Type and scope of scoreboard and spot light maintenance determined</p> <p>1.2 Numbers and type of defect scoreboard and spot light maintenance determined according to maintenance report</p> <p>1.3 Scoreboard component & fitting accessories condition checked</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>equipment maintenance services shall be able to prepare scoreboard and spot light maintenance schedule, perform scoreboard system maintenance activities, set up scoreboard system and component based on sport event and coordinate spot light defective bulb replacement</p> <p>The outcome of this competency to ensure that equipment are kept in good condition, event information displayed in order and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).</p>	<p>2. Perform scoreboard system maintenance activities</p>	<p>and assessed according to standard maintenance requirement</p> <p>1.4 Scoreboard system maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.5 Type, frequency and location of scoreboard maintenance schedule produced according maintenance requirement</p> <p>1.6 Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p> <p>2.1 Scoreboard component condition and functionality inspected according to equipment manual</p> <p>2.2 Scoreboard component serviced and repaired according to equipment servicing manual</p> <p>2.3 Scoreboard component default setting set according to manufacturer setting</p> <p>2.4 Scoreboard component maintenance record updated and submitted within time frame</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Set up scoreboard system and component based on sport event</p> <p>4. Coordinate spot light defective bulb replacement</p>	<p>3.1 Manual/ fitted scoreboard determined and selected according sport event</p> <p>3.2 Scoreboard equipment set up and functionality tested according event requirement</p> <p>3.3 Safety adherence of user during scoreboard system application monitored according event schedule</p> <p>3.4 Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>3.5 Type, numbers and condition of returned facilities and equipment recorded according to inventory procedure</p> <p>4.1 Spot light maintenance schedule interpreted</p> <p>4.2 Spot light bulb checked for functionality</p> <p>4.3 Required bulb for replacement proposed to superior for third party servicing</p> <p>4.4 Third party servicing arranged according to type of defect</p> <p>4.5 Lighting stage, lux reading and current supply meter of spot</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				light system checked and assessed according sport event
9. Communication & PA System Maintenance Services	HT-093-3:2016-C09	<p>Communication & PA system maintenance services is the competency to perform preventive, periodic and corrective maintenance routine which keeps the equipment in working order or prevents trouble from arising and maintains capabilities of equipment.</p> <p>The person who is competent in sport communication & PA system maintenance services shall be able to prepare communication & PA system maintenance schedule, perform communication & PA system maintenance activities and set up communication & PA system component based on sport event</p> <p>The outcome of this competency is to ensure that equipment are kept in good working order, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).</p>	1. Prepare communication & PA system maintenance schedule	<p>1.1 Type and scope of communication & PA system maintenance determined</p> <p>1.2 Numbers and type of defect communication and PA system maintenance determined according to maintenance report</p> <p>1.3 Communication and PA system component & fitting accessories condition checked and assessed according to standard maintenance requirement</p> <p>1.4 Communication and PA system equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.5 Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p> <p>1.6 Type, frequency and location of communication and PA system maintenance schedule</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>2. Perform communication & PA system maintenance activities</p> <p>3. Set up communication & PA system component based on sport event</p>	<p>produced according maintenance requirement</p> <p>2.1 Sport complex communication and PA system component condition and functionality inspected according to equipment manual</p> <p>2.2 Communication and PA system component serviced and repaired according to equipment servicing manual</p> <p>2.3 Communication and PA system component default setting set according to manufacturer setting</p> <p>2.4 Communication and PA system component maintenance record updated and submitted within time frame</p> <p>3.1 Manual/ fitted communication & PA system determined and selected according sport event</p> <p>3.2 Communication & PA system equipment set up and functionality tested according event requirement</p> <p>3.3 Safety adherence of user during scoreboard system application monitored according event schedule</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>3.4 Communication & PA system component condition after usage inspected and stored according to storage procedure</p> <p>3.5 Type, numbers and condition of returned component recorded according to inventory procedure</p>
10. Recovery Centre Maintenance Services	HT-093-3:2016-C10	<p>Recovery centre maintenance services is the competency to perform preventive, periodic and corrective maintenance routine for recovery centre condition such as sauna, SPA/Jacuzzi and ice bath activities.</p> <p>The person who is competent in sport recovery centre facilities and equipment maintenance services shall be able to prepare recovery centre facilities & equipment maintenance schedule, service sauna facilities & equipment, service SPA/Jacuzzi facilities & equipment, service ice bath facilities & equipment and perform recovery treatment room cleaning work.</p> <p>The outcome of this competency to the ability to ensure that recovery centre room is kept in good condition so that treatment and recovery from muscle soreness</p>	1. Prepare recovery centre facilities & equipment maintenance schedule	<p>1.1 Type and scope of recovery centre facilities and equipment maintenance determined</p> <p>1.2 Numbers and type of defect facilities and equipment for maintenance determined according to maintenance report</p> <p>1.3 Sauna , SPA/Jacuzzi, and ice bath for recovery centre condition checked and assessed according to standard maintenance requirement</p> <p>1.4 Equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.5 Facilities and equipment safety precaution arranged and</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		and/or fatigue of athletes can be carried out effectively in accordance with maintenance instruction manual and athlete's recovery operation procedure.	2. Service sauna facilities & equipment.	<p>assessed according to HSE requirement</p> <p>1.6 Type, frequency and location of equipment maintenance schedule produced according maintenance requirement</p> <p>2.1 Sport sauna facilities and equipment condition and functionality inspected according to equipment manual</p> <p>2.2 Sauna facilities and equipment serviced and repaired according to equipment servicing manual</p> <p>2.3 Sauna facilities and equipment default setting set according to manufacturer setting</p> <p>2.4 Sauna facilities and equipment checked and tallied according sauna lay out plan</p> <p>2.5 Sauna facilities and equipment set up and functionality tested according sauna operation manual</p> <p>2.6 Sauna facilities and equipment usages monitored and guided according to sauna centre rules and regulation</p> <p>2.7 Safety adherence of user during facilities and equipment</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Service SPA/Jacuzzi facilities & equipment</p>	<p>utilization monitored according safety regulation procedure</p> <p>2.8 Sauna maintenance record updated and submitted within time frame</p> <p>3.1 SPA/Jacuzzi facilities and equipment condition and functionality inspected according to equipment manual</p> <p>3.2 SPA/Jacuzzi facilities and equipment serviced and repaired according to equipment servicing manual</p> <p>3.3 SPA/Jacuzzi facilities and equipment default setting set according to manufacturer setting</p> <p>3.4 SPA/Jacuzzi facility and equipment checked and tallied according sauna lay out plan</p> <p>3.5 SPA/Jacuzzi facilities and equipment set up and functionality tested according sauna operation manual</p> <p>3.6 SPA/Jacuzzi facilities and equipment usages monitored and guided according to SPA/Jacuzzi operation rules and regulation</p> <p>3.7 Safety adherence of user during facilities and equipment</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>4. Service ice bath facilities & equipment</p>	<p>utilization monitored according safety regulation procedure.</p> <p>3.8 SPA/Jacuzzi maintenance record updated and submitted within time frame</p> <p>4.1 Ice bath equipment & facilities condition and functionality inspected according to equipment manual</p> <p>4.2 Ice bath facilities and equipment serviced and repaired according to equipment servicing manual</p> <p>4.3 Ice bath facilities and equipment default setting set according to manufacturer setting</p> <p>4.4 Ice bath facilities and equipment checked and tallied according sauna lay out plan</p> <p>4.5 Ice bath facilities and equipment set up and functionality tested according sauna operation manual</p> <p>4.6 Ice bath facilities and equipment usages monitored and guided according to operation rules and regulation</p> <p>4.7 Safety adherence of user during facilities and equipment</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			5. Perform recovery treatment room cleaning work	<p>utilization monitored according safety regulation procedure. Ice bath maintenance record updated and submitted within time frame</p> <p>5.1 Cleaning activities determined according maintenance schedule</p> <p>5.2 Cleaning material and tools identified</p> <p>5.3 Recovery cleaned according actual condition and maintenance schedule</p> <p>5.4 Cleaned recovery condition assessed according recovery standard guideline</p>
11. Water sport facilities & equipment maintenance services	HT-093-3:2016-E01	<p>Water sport facilities & equipment maintenance services is the competency to perform preventive, periodic and corrective maintenance routine for water sport event such as boating, paddling, parasailing, rowing, sailing, scuba diving, snorkelling, surfing, swimming, wakeboarding, water-skiing and windsurfing event.</p> <p>The person who is competent in sport water sport facilities and equipment maintenance services shall be able to prepare water sport facilities & equipment maintenance schedule, perform water sport</p>	1. Prepare water sport facilities & equipment maintenance schedule	<p>1.1 Type and scope of water sport equipment maintenance determined</p> <p>1.2 Numbers and type of defect equipment for maintenance determined according to equipment maintenance report</p> <p>1.3 Equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.4 Facilities and equipment safety precaution arranged and</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>equipment maintenance activities and set up facilities and equipment based on water sport event.</p> <p>The outcome of this competency to ensure that water sport platform are kept in good working order, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).</p>	<p>2. Perform water sport equipment maintenance activities</p> <p>3. Set up facilities and equipment based on water sport event</p>	<p>assessed according to HSE requirement</p> <p>1.5 Maintenance type, frequency and location of equipment schedule produced according maintenance requirement</p> <p>2.1 Water sport platform condition inspected and assessed according to standard platform specification</p> <p>2.2 Water sport equipment and machine serviced and repaired according to equipment servicing manual</p> <p>2.3 Water sport facilities support serviced and repaired according to equipment servicing manual</p> <p>2.4 Water sport safety equipment and accessories checked and replaced according to water sport event and platform lay out plan</p> <p>2.5 Water sport maintenance record updated and submitted within time frame</p> <p>3.1 Water sport equipment and machine determined and properly arranged according eventstandard guideline</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>3.2 Water sport support facilities determined and properly arranged according event standard guideline</p> <p>3.3 Manual score board and PA system functionality tested and placed according to event standard guide line and lay out plan</p> <p>3.4 Water sport facilities and equipment handed over to user as per user requirement</p> <p>3.5 Condition and position of facilities and equipment checked according water sport event requirement</p> <p>3.6 Misused of facilities and equipment monitored and rectified according sport facilities and equipment by laws</p> <p>3.7 Safety adherence of user during facilities and equipment utilization monitored according safety regulation procedure</p> <p>3.8 Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>3.9 Type, numbers and condition of returned facilities and</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				equipment recorded according to inventory procedure
12. Air sport facilities & equipment maintenance services	HT-093-3:2016-E02	<p>Air sport facilities & equipment maintenance services is the competency to perform preventive, periodic and corrective maintenance routine for track & field event such as aerobatics, aero modelling, ballooning, gliding, hang gliding, human powered aircraft, parachuting and power kites event</p> <p>The person who is competent in air sport facilities and equipment maintenance services shall be able to prepare air sport facilities & equipment maintenance schedule, perform air sport facilities & equipment maintenance activities and set up air sport facilities & equipment based on air sport event.</p> <p>The outcome of this competency to ensure that air sport platform are kept in good working order, sport tournament or event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).</p>	<p>1. Prepare air sport facilities & equipment maintenance schedule</p> <p>2. Perform air sport facilities & equipment maintenance activities</p>	<p>1.1 Type and scope of air sport equipment maintenance determined</p> <p>1.2 Numbers and type of defect equipment for maintenance determined according to equipment maintenance report</p> <p>1.3 Equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>1.4 Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p> <p>1.5 Maintenance type, frequency and location of equipment schedule produced according maintenance requirement</p> <p>2.1 Air sport platform condition inspected and assessed according to standard platform specification</p> <p>2.2 Air sport equipment and machine serviced and repaired according to equipment servicing manual</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Set up air sport facilities & equipment based on air sport event</p>	<p>2.3 Air sport facilities support serviced and repaired according to equipment servicing manual</p> <p>2.4 Air sport safety equipment and accessories checked and replaced according to air sport event and platform lay out plan</p> <p>2.5 Air sport maintenance record updated and submitted within time frame</p> <p>3.1 Air sport equipment and machine determined and properly arranged according event standard guideline</p> <p>3.2 Air sport support facilities determined and properly arranged according event standard guideline</p> <p>3.3 Manual score board and PA system functionality tested and placed according to event standard guide line and lay out plan</p> <p>3.4 Air sport facilities and equipment handed over to user as per user requirement</p> <p>3.5 Condition and position of facilities and equipment checked according air sport event requirement</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				<p>3.6 Misused of facilities and equipment monitored and rectified according sport facilities and equipment by laws</p> <p>3.7 Safety adherence of user during facilities and equipment utilization monitored according safety regulation procedure</p> <p>3.8 Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>3.9 Type, numbers and condition of returned facilities and equipment recorded according to inventory procedure</p>
13. Shooting range facilities & equipment maintenance services	HT-093-3:2016-E03	<p>Shooting range facilities & equipment maintenance services is the competency to perform preventive, periodic and corrective maintenance routine for shooting event such as handgun, shotgun and air gun shooting game</p> <p>The person who is competent in shooting range sport facilities and equipment maintenance services shall be able to prepare shooting range facilities and equipment maintenance schedule, perform shooting range facilities and</p>	1. Prepare shooting range facilities and equipment maintenance schedule	<p>1.1 Type and scope of shooting sport equipment maintenance determined</p> <p>1.2 Numbers and type of defect equipment for maintenance determined according to equipment maintenance report</p> <p>1.3 Equipment maintenance references and manual identified and selected for maintenance schedule preparation</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
		<p>equipment maintenance activities and set up shooting range platform facilities and equipment based on shooting event.</p> <p>The outcome of this competency to ensure that shooting range platform are kept in good condition, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP).</p>	<p>2. Perform shooting range facilities and equipment maintenance activities</p>	<p>1.4 Facilities and equipment safety precaution arranged and assessed according to HSE requirement</p> <p>1.5 Maintenance type, frequency and location of equipment schedule produced according maintenance requirement</p> <p>2.1 Shooting event platform condition inspected and assessed according to standard platform specification</p> <p>2.2 Handgun equipment and machine serviced and functionality test according to equipment servicing manual</p> <p>2.3 Shotgun equipment and component serviced and functionality test according to equipment servicing manual</p> <p>2.4 Air gun equipment and component serviced and functionality test according to equipment servicing manual</p> <p>2.5 Required calibration of shooting gun proposed to superior for third party servicing</p> <p>2.6 Third party calibration servicing coordinated according to type of shooting gun</p> <p>2.7 Shooting event facilities support serviced and repaired</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
			<p>3. Set up shooting range platform facilities and equipment based on shooting event</p>	<p>according to equipment servicing manual</p> <p>2.8 Shooting range maintenance record updated and submitted within time frame</p> <p>3.1 Sport shooting event identified according to event requirement</p> <p>3.2 Shooting range facility and equipment checked and tallied according shooting event requirement</p> <p>3.3 Shooting platform facilities and equipment set up and functionality tested according event requirement</p> <p>3.4 Shooting platform facilities and equipment handed over to user as per user requirement</p> <p>3.5 Shooting platform facility equipment usages monitored and guided according to fitness centre rules and regulation</p> <p>3.6 Safety adherence of user during facilities and equipment utilization monitored according safety regulation procedure</p> <p>3.7 Facilities and equipment condition after usage inspected and stored according to storage procedure</p>

CU Title	CU Code	CU Descriptor	CU Work Activities	Performance Criteria
				3.8 Type, numbers and condition of returned shooting facilities and equipment recorded according to inventory procedure

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	SPORT TRACK & FIELD FACILITIES AND EQUIPMENT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The person who is competent in sport track & field facilities and equipment maintenance services shall be able to ensure that equipment are maintained in good condition, events run smoothly and to prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare track & field facilities and equipment maintenance schedule • Perform track & field facilities and equipment maintenance activities • Set up track & field facilities and equipment based on sport event • Inspect track & field event facilities and equipment utilization 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C01	LEVEL	3	TRAINING DURATION	110	SKILL CREDIT	11
Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare track & field facilities and equipment maintenance schedule	i. The objective of track & field facilities and equipment maintenance ii. Types of track & field equipment such as <ul style="list-style-type: none"> • Running equipment • Jumping equipment • Throwing equipment 	i. Identify track & field equipment maintenance requirement ii. Identify numbers and type of maintenance facilities and equipment defect	<u>Attitude:</u> i. Resourceful in preparing track & field facilities and equipment maintenance schedule	24	Lecture 6 Demonstration & Observation 18	i. Type and scope of track & field facilities and equipment maintenance listed out and explained ii. Softness,	

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	iii. Types of track & field facilities such as <ul style="list-style-type: none"> • Seating bench • Safety fence • Divider • Toilet and shower • Changing room • Safety Signage iv. Surface level condition such as <ul style="list-style-type: none"> • Softness • Compactness • Uneven surface v. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) vi. Facilities and equipment maintenance references and manual <ul style="list-style-type: none"> • Fields standard 	iii. Select facilities and equipment maintenance references and manual iv. Produce track & field facilities and equipment maintenance schedule	<u>Environmental:</u> i. Practice paperless documentation			compactness of soil, water stand and uneven of surface level checking demonstrated according to fields standard specification iii. Numbers and type of defect equipment for maintenance listed out and explained iv. Track lines, side lines and spot line condition checking demonstrated v. Equipment maintenance references and manual selection explained vi. Facilities and equipment maintenance

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	specification <ul style="list-style-type: none"> • Servicing manual • Manufacturer operation manual • Maintenance logbook • Previous maintenance report vii. Facilities and equipment maintenance safety procedure viii. Track & field facilities and equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					safety precaution arranged and explained vii. Maintenance type, frequency and location of equipment schedule produced

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform track & field facilities and equipment maintenance activities	i. Standard track & field surface condition such as <ul style="list-style-type: none"> • Surface material • Uneven level • Water stand areas ii. Track & field lines condition such as <ul style="list-style-type: none"> • Type of line • Type of side line • Size of line • Colour of line • Type of paint/colour iii. Track & field equipment servicing method such as <ul style="list-style-type: none"> • Equipment cleaning services • Preservation procedure • Lines painting procedure • Storage procedure iv. Track & field maintenance report content such as <ul style="list-style-type: none"> • Maintenance report template/ format 	i. Inspect track & field surface level condition ii. Inspect track & field lines condition iii. Carry out track & field line painting work iv. Service defective track & field equipment event v. Prepare track and field maintenance report	<u>Attitude</u> <ol style="list-style-type: none"> i. Focus in assessing maintenance work outcome ii. Responsible in field lines and spot marking cleanliness preparation <u>Safety</u> <ol style="list-style-type: none"> i. Follow safety rule in servicing and repairing of sport equipment ii. Adhere safety signage notification <u>Environmental</u> <ol style="list-style-type: none"> i. Maintains environment safety and health status and complied to safety instruction 	24	Lecture 6 Demonstration & Observation 18	i. Track and field surface level condition assessed and explained according to standard levelling specification ii. Line, side-lines and marking spot of track & field condition assessed and explained according to track & field standard specification iii. Defect and track and field line paint touch up and demonstrated iv. Running, jumping and throwing event equipment servicing and repairing demonstrated according to equipment servicing

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> Compliance works procedure Spare usage Storage location Remarks 					v. manual Track and field maintenance record updating applied and explained
3. Set up track & field facilities and equipment based on sport event	<p>i. Running event set up plan such as</p> <ul style="list-style-type: none"> Type of running game Specification of running event equipment Type of facility related to running even Running event standard guideline <p>ii. Jumping event set up plan such as</p> <ul style="list-style-type: none"> Type of jumping event Specification of jumping event equipment Type of facility related to jumping even Jumping event 	<p>i. Arrange running event facility and sport equipment event set up</p> <p>ii. Arrange jumping event facility and sport equipment event set up</p> <p>iii. Arrange throwing event facility and sport equipment event set up</p> <p>iv. Arrange bench seating and safety signage placement</p> <p>v. Arrange score board and PA system installation</p> <p>vi. Check track & field safety prevention preparation</p>	<p><u>Attitude:</u></p> <p>i. Focus in checking of equipment specification data</p> <p>ii. Adhere to sport safety regulation compliance procedure</p> <p><u>Safety:</u></p> <p>i. Used safe side area signage before performing set up work</p> <p><u>Environmental:</u></p> <p>i. Maintains environment cleanliness</p>	30	Lecture 8 Demonstration & Observation 22	<p>i. Running event facilities arrangement demonstrated and explained according event standard guideline</p> <p>ii. Jumping event facilities arrangement demonstrated and explained according event standard guideline</p> <p>iii. Throwing even facilities arrangement demonstrated and explained according event standard</p>

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>standard guideline</p> <p>iii. Throwing event set up plan such as</p> <ul style="list-style-type: none"> • Type of throwing event • Specification of throwing event equipment • Type of facility related to throwing even • Throwing event standard guideline <p>iv. Track & field seating bench and safety signage placement such as</p> <ul style="list-style-type: none"> • Bench seating plan (umpire chair, coaches and player chair) • Fix sport facilities (e.g. hammer cage) empire chair, coaches and player chair) • Safety precaution display plan <p>v. Score board operation</p>					<p>guideline</p> <p>iv. Track & field bench seating d and safety signage placement checked and explained according to event standard guide line</p> <p>v. Manual score board and PA system functionality checked and explained according to event standard guide line and lay out plan</p> <p>vi. Track & field facilities and equipment handing over to user monitored and explained as per user requirement</p>

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>handling such as</p> <ul style="list-style-type: none"> • Manual or fitted scoreboard • Actual event progress result • Scoreboard handling procedure <p>vi. Type of PA system</p> <ul style="list-style-type: none"> • PA system pre-installation checklist • PA system component functionality. • PA system testing protocol and procedure <p>vii. Track and field safety regulation based on IAAF standard</p>					<p>vii. Safety adherence on track & field facilities set up applied and explained according to safety regulation procedure</p>

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Inspect track & field event facilities and equipment utilization	i. Facilities and equipment handing over such as <ul style="list-style-type: none"> Type of equipment's Type of facilities Event schedule Handing over procedure ii. Facilities and equipment condition such as <ul style="list-style-type: none"> Inspection checklist Event lay out plan Equipment log book iii. Facilities and equipment by law <ul style="list-style-type: none"> Equipment handling procedure Safety rules and regulation iv. Sport support facilities record content such as <ul style="list-style-type: none"> Type of support facilities Maintenance record Sport support accessories v. Inventory record content such as <ul style="list-style-type: none"> Type equipment 	i. Hand over equipment's and facilities to user as per requirement ii. Inspect condition and position of facilities and equipment lay out iii. Monitored misused of facilities and equipment handling iv. monitored safety adherence of user during facilities and equipment utilization v. Inspected facilities and equipment condition after usage for storage vi. Update facilities and equipment inventory record	<u>Attitude</u> <ul style="list-style-type: none"> i Focus in equipment testing progress ii Responsible in sport equipment performance test <u>Safety</u> <ul style="list-style-type: none"> i Ensure safety site and safety area signage preparation ii Adhere to safety rules and regulations at all time. <u>Environmental</u> <ul style="list-style-type: none"> i Maintain cleanness of working areas 	32	Lecture 8 Demonstration & Observation 24	i. Condition and position of facilities and equipment checked and explained according event lay out plan ii. Misused of facilities and equipment monitored and explained iii. Safety adherence of user during facilities and equipment utilization monitored and explained according safety regulation procedure iv. Facilities and equipment condition after usage for storage

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Numbers of equipment • Condition of equipment • Type of ledger • Inventory procedure 					<p>checked explained according to storage procedure</p> <p>v. Type, numbers and condition of returned facilities and equipment record updating explained according to inventory procedure</p>

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Track & field layout plan	1:5
2. Grass species (sample)	As required
3. Surface material (sample)	As required
4. Historical grow data (sample)	1:1
5. Maintenance schedule (sample)	1:1
6. Maintenance report (sample)	1:1
7. Work schedule (daily)	1:1
8. Clearance permit of contractor (sample)	1:1
9. Maintenance kits ,	1:1
10. Cleaning materials}	1:1
11. Turf glue (sample)	As required
12. Inspection checklist	1:1
13. Equipment manual specification	1:1
14. Field lay out plan	1;5
15. Painting equipment	1:5
16. Safety Signage	As required
17. Ledger (sample)	1:1
18. Lay out for sport event (sample)	1:1
19. Manual score board (sample)	1:25
20. PA system	1:25

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CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	SPORT NATURAL GRASS FIELD MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The person who is competent in sport natural grass field maintenance services shall be able to ensure that natural grass field are grown healthily, to maintain greenish evenness and to prevent athlete from physical injury according to field standard specification data. Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare natural grass field maintenance schedule • Perform natural grass field cutting work • Perform natural grass field fertilizing work • Perform field irrigation activities 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C02	LEVEL	3	TRAINING DURATION	130	SKILL CREDIT	13
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare natural grass field maintenance schedule	i. The objective of natural grass field maintenance ii. Types of natural grass fields maintenance such as <ul style="list-style-type: none"> • Grass cutting • Grass fertilizer and pest control • Grass irrigation 	i. Identify natural grass field equipment maintenance requirement ii. Identify numbers and type of maintenance equipment and facilities defect iii. Select equipment and	<u>Attitude:</u> i. Resourceful in preparing natural grass fields maintenance schedule ii. Adhere to sport field maintenance regulation and compliance procedure	26	Lecture 6 Demonstration & Observation 20	i. Type and scope of natural grass field maintenance determined and explained according sport facilities and sport activities	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	iii. Maintenance record content such as <ul style="list-style-type: none"> • Type of grass species • Maintenance schedule record • Manpower utilization factor • Safety precaution procedure iv. Surface level condition such as <ul style="list-style-type: none"> • Softness • Compactness • Uneven surface v. Natural grass field maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) vi. Natural grass field maintenance references and manual	facilities maintenance references and manual iv. Produce natural grass field equipment and facilities maintenance schedule	iii. Alert in sport field maintenance signage and risk information <u>Environmental:</u> i. Practice paperless documentation			requirement ii. Type and species of natural grass determined and explained iii. Requirement for grass cutting, fertilizing and irrigation method selected and explained iv. Required maintenance equipment and material selected and explained v. Frequency of maintenance activities listed out and explained according to natural grass specification vi. Required manpower utilization selected and explained

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Fields standard specification • Servicing manual • Manufacturer operation manual • Maintenance logbook • Previous maintenance report <p>vii. Faculties equipment safety maintenance by laws</p> <p>viii. Natural grass field maintenance schedule content such as</p> <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					<p>according to job specification</p> <p>vii. Natural grass maintenance schedule produced and disseminated</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform natural grass field cutting work	i. Field grass cutting method such as <ul style="list-style-type: none"> Manual cutting procedure Machine cutting procedure Natural grass field location ii. Natural grass actual condition such as <ul style="list-style-type: none"> Type of natural grass species historical data Standard height measurement Field standard specification (lay out plan) iii. Grass cutting equipment or machine setting procedure <ul style="list-style-type: none"> Manual equipment cutting Machine cutting method iv. Waste handling procedure <ul style="list-style-type: none"> Clipping collecting method 	i. Select natural grass cutting method ii. Inspect natural grass field condition iii. Carry out natural grass equipment or machine cutting setting iv. Arrange grass cutting waste (clipping) disposal v. Prepare natural grass maintenance report	<u>Attitude</u> <ul style="list-style-type: none"> Focus in grass cutting machine set up Responsible in waste (clipping) disposal method <u>Safety</u> <ul style="list-style-type: none"> Follow safety rule in natural grass cutting work <u>Environmental</u> <ul style="list-style-type: none"> Practice 3R concept (reused, recycle, reduce) 	32	Lecture 8 Demonstration & Observation 24	i. Method of grass cutting selection explained according actual condition and area cutting ii. Height of grass measurement level assessed and explained according to field's standard specification. iii. Cutting equipment / machine set up and demonstrated iv. Grass cutting activities carried out and demonstrated according to maintenance schedule v. Grass cutting waste (clipping) disposed and demonstrated

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Disposal procedure v. Field maintenance report content such as <ul style="list-style-type: none"> • Quality of growing grass • Growth rate • Recommend of renew equipment • Report format and procedures 					

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Perform natural grass field fertilizing work	i. Natural grass field condition <ul style="list-style-type: none"> Type of natural grass field Growth standard level chart Type of grass and character ii. Grass fertilizer work requirement such as <ul style="list-style-type: none"> Grass fertilizer maintenance schedule Fertilizer methods Fertilizing equipment and tools iii. Field grass fertilizer material such as <ul style="list-style-type: none"> Type of organic fertilizer Chemical fertilizer Pest control routine scheduling Chemical contain level iv. Manual or machine fertilizing method such as <ul style="list-style-type: none"> Manual handling 	i. Measure natural grass field growth level ii. Identify natural grass fertilizing requirement iii. Prepare field natural grass fertilizer material iv. Prepare grass fertilizer machine and equipment v. Execute field weeds control work vi. Execute natural grass insect pest control vii. Execute grass fertilizer work progress viii. Produce field grass fertilizer maintenance report	<u>Attitude:</u> <ol style="list-style-type: none"> Adhere to sport field maintenance regulation and compliance procedure Focus in fertilizing machine setting and chemical handling <u>Safety:</u> <ol style="list-style-type: none"> Used safe side area signage before performing daily work Comply with fertilizing natural grass field maintenance safety precaution <u>Environmental:</u> <ol style="list-style-type: none"> Practice 3R concept (reused, recycle, reduce) 	32	Lecture 8 Demonstration & Observation 24	i. Grass growth rate and density level checked and explained according to growing grass standard. ii. Fertilizer requirement listed out and explained according to species and condition of grass iii. Organic / chemical fertilizer selected and demonstrated according to fertilizing requirement iv. Manual or machine fertilizing method determined and explained according size of fertilizing area

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Machine handling v. Weeds control such as <ul style="list-style-type: none"> • Type of weeds • Fertilizer rate • Manual method • Machine method • Weeds handling procedure vi. Pest control handling control such as <ul style="list-style-type: none"> • Type of insect • Fertilizer rate • Manual method • Machine methods • Pest control handling procedure vii. Fertilizing work such as <ul style="list-style-type: none"> • Fertilizer rate • Manual method • Machine method • Natural grass field location • Fertilizing procedure viii. Produce field fertilizer maintenance report content such as <ul style="list-style-type: none"> • Quality of growing grass condition • Fertilizer usage 					<ul style="list-style-type: none"> v. Suitable PPE application selected and demonstrated according fertilizing safety procedure vi. Weeds handling control executed and demonstrated vii. Pest control work executed and demonstrated as per pest control procedure viii. Fertilizing work executed and demonstrated ix. Grass fertilizer maintenance report produce and submitted within time frame

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Perform field irrigation activities	<p>i. General drainage cleaning method</p> <ul style="list-style-type: none"> • Water or air pressure cleaning method • Cleaning material (agent) • Water jet or air blow cleaning tool • Field drainage system layout • Drainage chemical cleaning procedure. • Filtration and silt trap cleaning procedure <p>ii. Drainage system component inspection such as</p> <ul style="list-style-type: none"> • Outlet indicator reading • Piping and fitting • Type of water valve, filtration system • Silt traps condition <p>iii. Sprinkler system condition inspection</p> <ul style="list-style-type: none"> • Fitted system • Portable system 	<p>i. Identify field irrigation requirement</p> <p>ii. Identify field irrigation method</p> <p>iii. Check field irrigation system functionality</p> <p>iv. Monitor natural grass field irrigation work</p> <p>v. Monitor field drainage system functionality</p> <p>vi. Check natural grass field wetness level</p> <p>vii. Inspect drainage system component pass thru</p> <p>viii. Produce field irrigation work report</p>	<p><u>Attitude:</u></p> <p>i. Adhere to sport field maintenance regulation and compliance procedure</p> <p>ii. Ensure field drainage pass-thru water level</p> <p><u>Safety:</u></p> <p>i. Used safe side area signage before performing daily work</p> <p>ii. Comply with field irrigation maintenance safety precaution</p> <p><u>Environmental:</u></p> <p>i. Practice 3R concept (reused, recycle, reduce)</p>	40	<p>Lecture 10</p> <p>Demonstration & Observation 30</p>	<p>i. Field irrigation requirement determined and explained according to species and condition of grass</p> <p>ii. Method of field irrigation selected and explained according to size of field</p> <p>iii. Outlet indicator, piping, valve, filtration system and silt traps of drainage system condition assessed and explained</p> <p>iv. Fix or mobile of sprinkling plant system operation assessed and demonstrated according field irrigation requirement</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Manual handling • Automatic sprinkler, iv. Irrigation drainage system condition inspection <ul style="list-style-type: none"> • Manual operating • Automatic sprinkler • Mobile method v. Natural grass field wetness condition <ul style="list-style-type: none"> • Outlet indicator • Water flow condition • Water drainage duration vi. Drainage system blockage handling such as <ul style="list-style-type: none"> • Flushing method • High water pressure • Air pressure blowing • Filtration cleanliness • Stumbling block confirmation • Field hollow tinning functionality • Field drainage system pass-thru vii. Field irrigation work report content such as 					<ul style="list-style-type: none"> v. Drainage system operation assessed and demonstrated according to field drainage design vi. Grass wetness condition, checked and explained according to fields standard specification vii. High pressure water, flushing and blowing method applied and demonstrated based on blockage area viii. Maintenance report produced and submitted within time frame

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Quantity of drainage pass-thru • Water pressure level in range • Cost of maintenance • Recommend of renew equipment 					

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Sport field layout plan	1:5
2. Safety Signage	1:5
3. Grass species (sample)	As required
4. Maintenance schedule (sample)	1:1
5. Maintenance report (sample)	1:1
6. Work schedule (daily)	1:1
7. Clearance permit of contractor (sample)	1:1
8. Maintenance kits	1:1
9. Cleaning materials	1:1
10. Measuring tools	As required
11. Inspection checklist	1:5
12. Makers specification data	1:1
13. Field lay out plan	1:5
14. Ledger (sample)	1:5
15. Set up plan (sample)	1:1

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6. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	SPORT SYNTHETIC/ARTIFICIAL GRASS FIELD MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The person who is competent in sport synthetic/artificial grass field maintenance services shall be able to maintain shock absorption, durability, reaction and tensile strength of artificial grass and protect athlete from physical injury according field standard specification data. Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare synthetic/artificial grass field maintenance schedule • Perform synthetic/artificial grass field top dressing (granules) • Perform synthetic/artificial grass field replacement work • Maintain field water sprinkle system 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C03	LEVEL	3	TRAINING DURATION	130	SKILL CREDIT	13
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental		Training Hours	Delivery Mode	Assessment Criteria
1. Prepare synthetic/artificial grass field maintenance schedule	i. The objective of synthetic/artificial grass field maintenance ii. Types of synthetic/artificial grass fields maintenance such as <ul style="list-style-type: none"> • Top dressing (granules) • Artificial grass blow 	i. Identify synthetic/artificial grass field equipment maintenance requirement ii. Identify numbers and type of maintenance equipment and facilities defect iii. Select equipment and	<u>Attitude:</u> i. Resourceful in preparing natural grass fields maintenance schedule ii. Adhere to sport field maintenance regulation and compliance procedure		26	Lecture 6 Demonstration & Observation 20	i. Type and scope of synthetic/artificial grass field maintenance listed out and explained according sport facilities and sport activities

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	grooming <ul style="list-style-type: none"> • Artificial grass trimmed • Artificial grass replacement • Sprinkler system iii. Maintenance record content such as <ul style="list-style-type: none"> • Type of grass species • Maintenance schedule record • Manpower utilization factor • Safety precaution procedure iv. Surface level condition such as <ul style="list-style-type: none"> • Softness • Compact city • Uneven surface v. Synthetic/artificial grass fields maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance 	facilities maintenance references and manual iv. Produce synthetic/artificial grass field equipment and facilities maintenance schedule	iii. Alert in sport field maintenance signage and risk information <u>Environmental:</u> i. Practice paperless documentation			requirement ii. Type and material of synthetic/artificial grass selected and explained according to maintenance record iii. Required maintenance equipment and material selection listed out and demonstrated iv. Frequency of maintenance activities listed out and explained v. Required manpower utilization selected and explained according to job specification vi. Synthetic/artificial

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>(scheduled)</p> <ul style="list-style-type: none"> • Predictive maintenance (time based) <p>vi. Synthetic/artificial grass fields maintenance references and manual</p> <ul style="list-style-type: none"> • Fields standard specification • Servicing manual • Manufacturer operation manual • Logbook • Maintenance report <p>vii. Equipment and facilities maintenance safety procedure</p> <p>viii. Synthetic/artificial grass fields maintenance schedule content such as</p> <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					<p>al grass maintenance schedule produced and disseminated</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform synthetic/artificial grass field top dressing (granules)	<ul style="list-style-type: none"> i. Artificial grass field top dressing content such as <ul style="list-style-type: none"> • Type of artificial grass field grass • Blowing method • Trimming method • Type of surface synthetic rubber • Top soil material ii. Field surface condition <ul style="list-style-type: none"> • Wear and tear • Uneven density • Pit off iii. Turf grass dressing activities such as <ul style="list-style-type: none"> • Blowing method • Grooming method • Trimming method • Cleaning method iv. Waste handling procedure <ul style="list-style-type: none"> • Granules collecting method • Storage or disposal method v. Safety regulation content such as <ul style="list-style-type: none"> • General application 	<ul style="list-style-type: none"> i. Select synthetic/artificial grass top dressing method ii. Inspect field surface condition iii. Prepare top dressing equipment or machine setting iv. Execute synthetic/artificial grass field blowing and grooming v. Execute synthetic/artificial grass field trimming vi. Prepare natural grass maintenance report 	<p><u>Attitude:</u></p> <ul style="list-style-type: none"> i. Focus in checking of equipment specification data ii. Alert in safety signage and risk information in maintenance planning <p><u>Safety:</u></p> <ul style="list-style-type: none"> i. Used safe side area signage before performing maintenance work ii. Follow safety signage and precaution in equipment handling <p><u>Environmental:</u></p> <ul style="list-style-type: none"> i. Practice 3R concept (Reused, Recycle, Reduce) 	40	<p>Lecture 10</p> <p>Demonstration & Observation 30</p>	<ul style="list-style-type: none"> i. Uneven density, wear and tear, condition of artificial grass listed out and explained ii. Top dressing material spread to grass surface demonstrated iii. Artificial grass blowing and grooming method demonstrated iv. Artificial grass trimming methods assessed and explained surface v. Trimmed artificial grass compacting assessed and demonstrated vi. Artificial grass top dressing areas cleaned and waste

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Structural and technical measures • Operation sport measures • Prohibition approach procedure vi. Artificial grass dressing work report content such as <ul style="list-style-type: none"> • Quantity of dressing (granules) material • Even of colour • Compact city condition • Cost of maintenance 					collected according to cleaning requirement vii. Safety and regulation adhered according field's standard regulation viii. Artificial grass top dressing maintenance report prepared and submitted within time frame.

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Perform synthetic/artificial grass field replacement work	<p>i. Synthetic/ artificial grass field material condition such as</p> <ul style="list-style-type: none"> • Torn off • Pit off • Uneven colour • Damage turf <p>ii. Synthetic grass replacement equipment and materials such as</p> <ul style="list-style-type: none"> • Type of installation equipment • Type of installation materials • Type of artificial grass field <p>iii. Removing method such as</p> <ul style="list-style-type: none"> • Physical removal • Sheet covering method • Solarisation method <p>iv. Installation method such as</p> <ul style="list-style-type: none"> • Site preparation • Standard installation method • Safety Surface inspection 	<p>i. Inspect artificial grass field material condition</p> <p>ii. Arrange artificial grass field replacement tools and equipment</p> <p>iii. Identify artificial grass effected areas and size</p> <p>iv. Remove defect of artificial grass field material</p> <p>v. Install new artificial grass field material</p> <p>vi. Produce field synthetic grass maintenance report</p>	<p><u>Attitude</u></p> <p>i. Details information of collecting data for artificial grass replacement</p> <p>ii. Responsible in artificial grass field material and equipment inspection</p> <p><u>Safety</u></p> <p>i. Follow safety rule in equipment handling</p> <p><u>Environmental</u></p> <p>i. Maintains environment safety and cleanliness</p> <p>ii. Practice 3R concept (Reused, Recycle, Reduce)</p>	32	<p>Lecture 8</p> <p>Demonstration & Observation 24</p>	<p>i. Pit off, torn and uneven colour of artificial grass listed out and explained</p> <p>ii. Replacement tools and materials selected and demonstrated</p> <p>iii. Effected areas and size located and explained</p> <p>iv. Defect artificial grass removal method applied and demonstrated according to removing guideline</p> <p>v. New artificial grass replacement method assessed and demonstrated</p> <p>vi. New artificial grass installation</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	v. Artificial grass replacement work report content such as <ul style="list-style-type: none"> • Quantity of artificial grass • Seamless condition • Even of colour • Compact city condition • Cost of maintenance 					quality assessed and explained according to fields standard specification vii. Unused artificial grass disposal method explained viii. Safety and regulation adhered according new artificial grass replacement safety procedure ix. Artificial grass replacement report prepared and submitted within time frame

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Maintain field water sprinkle system	i. Field sprinkler system <ul style="list-style-type: none"> • Automatic sprinkler • Manual handling • Fitted system • Mobile system ii. General field water sprinkle servicing method <ul style="list-style-type: none"> • Filtration cleaning • Silt trap cleaning • Valve and fitting • Sprinkle nozzle iii. Artificial grass field wetness condition <ul style="list-style-type: none"> • Outlet indicator • Water flow condition • Water drainage duration iv. Sprinkler system maintenance report content such as <ul style="list-style-type: none"> • Cleanness of trunk, filter and silt trap • Water surface level condition • Stumbling block confirmation • Field hollow tinning functionality 	i. Check field sprinkle component wear & tear ii. Arrange malfunction sprinkler component rectification or repair iii. Assesses sprinkle component functionality iv. Monitor artificial grass field wetness condition v. Produce sprinkle system maintenance report	<u>Attitude:</u> i. Adhere to HSE regulation and Control compliance procedure <u>Safety:</u> i. Used safe side area signage before performing work ii. Complied safety signage and precaution in irrigation handling <u>Environmental:</u> i. Practice 3R concept (Reused, Recycle, Reduce)	32	Lecture 8 Demonstration & Observation 24	i. Sprinkler system functionality checked according to operation manual ii. Malfunction of sprinkle system equipment rectified and replaced according to equipment manual iii. Rectified sprinkle system tested and evaluated according to standard operation requirement iv. Grass wetness condition checked and assessed according to fields standard specification

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Quantity of drainage pass-thru • Water pressure level in range 					v. Sprinkle system maintenance activity recorded and report produced within time frame

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Sport field layout plan	1:5
2. Safety Signage	1:5
3. Type of surface material (sample)	As required
4. Type of turf (sample)	As required
5. Historical grow data (sample)	1:1
6. Maintenance schedule (sample)	1:1
7. Maintenance report (sample)	1:1
8. Work schedule (daily)	1:1
9. Maintenance kits	1:1
10. Cleaning materials	1:1
11. Measuring tools	1:1
12. Ground based structure	1:1
13. Seam construction	1:1
14. Inspection checklist	1:1
15. Makers specification data	1:1
16. Safety Signage	1:1
17. Ledger (sample)	1:5
18. Set up plan (sample)	1:1
19. Dressing material granules	As required

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CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	SPORT EQUIPMENT STORAGE & MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The person who is competent in sport equipment storage & maintenance services shall be able to keep facilities and equipment in good condition and available for sports event as per company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Inspect sport facilities & equipment condition • Perform sport facilities & equipment preservation • Propose sport facilities & equipment for disposal • Coordinate facilities & equipment storage 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C04	LEVEL	3	TRAINING DURATION	120	SKILL CREDIT	12
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Inspect sport facilities & equipment condition	i. The objective of maintaining equipment storage serviceability ii. Storage equipment information such as <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Inventory record 	i. Physical check equipment storage ii. Segregate malfunction or defective equipment for maintenance iii. List out equipment defect description for submission	<u>Attitude:</u> i. Adhere to store maintenance regulation and compliance procedure ii. Alert in store maintenance signage and risk information	24	Lecture 6 Demonstration & Observation 18	i. Equipment physical appearance and functionality assessed and explained ii. Defected and malfunction equipment	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Type of maintenance iii. Equipment malfunction or defective segregation such as <ul style="list-style-type: none"> • Apparels • Wear & tear • Stock defective or • Malfunction equipment iv. Faculties equipment safety maintenance by laws v. Type of equipment for maintenance proposal such as <ul style="list-style-type: none"> • Defect equipment • Stock ledger • Equipment log book • Stock procurement 	iv. Update equipment storage record	<u>Safety:</u> <ol style="list-style-type: none"> i. Used safe side area signage before performing daily work ii. Comply store maintenance safety precaution <u>Environmental:</u> <ol style="list-style-type: none"> i. Practice paperless documentation ii. Practice 3R concept (reused, recycle, reduce) 			segregation listed out and explained for maintenance activity iii. Stock ledger, equipment log book, quantity of stock and procurement record updated according store keeping procedure

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform sport facilities & equipment preservation	i. Preservation method such as <ul style="list-style-type: none"> • Equipment quantity • Type of preservation ii. Preservation equipment and material such as <ul style="list-style-type: none"> • Type of preservation equipment • Preservation material iii. Preservation method such as <ul style="list-style-type: none"> • Cleaning method • Oily method • Wrapping technique • Packaging method iv. Equipment storage record such as <ul style="list-style-type: none"> • Type of defect • Quantity • Stock requisition • Storage procedure 	i. Identify sport equipment for preservation ii. Prepare tools and materials for preservation activity iii. Carry out sport equipment wrapping and packing iv. Storage preservation sport equipment	<u>Attitude</u> i. Responsible in preservation equipment and material preparation <u>Safety</u> i. Follow safety rule in preservation of sport equipment ii. Follow storage area safety regulation <u>Environmental</u> i. Maintains environment safety and health status and complied to printing safety instruction	24	Lecture 6 Demonstration & Observation 18	i. Sport equipment preservation methods determined and explained ii. Tools and materials for preservation activity selected and explained iii. Sport equipment wrapping and packaging method applied and demonstrated iv. Preserved sport equipment storage marking assessed and demonstrated

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Propose sport facilities & equipment for disposal	i. Stock disposal procedure <ul style="list-style-type: none"> • Inspection method • Type of inspection • Inspection checklist • Inspection procedure ii. Stock life span record iii. Sport equipment description defect <ul style="list-style-type: none"> • Type of stock • Type of defect • Quantity of stock • Equipment specification data iv. Disposal sport equipment report <ul style="list-style-type: none"> • Raw material • Defective stock 	i. List out stock disposal equipment ii. Segregate storage equipment for disposal iii. Arrange sport equipment for disposal iv. Update disposal equipment record	<u>Attitude:</u> i. Focus in checking of equipment specification data <u>Safety:</u> i. Ensure safety precaution in equipment disposal method <u>Environmental:</u> i. Practice 3R concept (Reused, Recycle, Reduce)	32	Lecture 8 Demonstration & Observation 24	i. Causes of equipment for disposal listed out and explained ii. Equipment for disposal segregation listed out and explained iii. Application for equipment disposal submitted for approval iv. Approved equipment for disposal arranged and demonstrated v. Disposed equipment record updated according to inventory procedure

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Coordinate facilities & equipment storage	i. Stock directory management <ul style="list-style-type: none"> • Stock ledger • Storage code • Updating procedure • Stock directory plan ii. Storage movement requirement such as <ul style="list-style-type: none"> • Type of transportation • Type Material Handling Equipment (MHE) iii. Stock movement procedure and safety precaution <ul style="list-style-type: none"> • Material handling procedure • Stock location specification • Safety handling procedures • Safety, Health and Environmental (SHE) requirements 	i. Identify equipment and facilities storage area. ii. Arrange equipment and facilities transportation and material handling equipment iii. Monitor equipment and facilities storage movement iv. Monitor safety precaution during movement activates	<u>Attitude</u> <ul style="list-style-type: none"> i Focus in equipment handling progress ii Responsible in sport equipment movement handling <u>Safety</u> <ul style="list-style-type: none"> i Ensure safety site and safety area signage preparation ii Adhere to equipment safety precaution iii Comply material safety handling procedures <u>Environmental</u> <ul style="list-style-type: none"> i Maintain cleanness of handling areas 	40	Lecture 10 Demonstration & Observation 30	i Sport equipment & facility placement areas located and explained according storage floor plan ii Sport equipment & facility transportation and MHE arranged according to storage and movement requirement iii Movement of sport equipment & facility monitored and recorded iv Safety of equipment & facility monitored during movement activities

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Sport equipment store layout plan	1:5
2. Safety Signage	1:5
3. Maintenance schedule (sample)	1:1
4. Maintenance report (sample)	1:1
5. Work schedule (daily)	1:1
6. Clearance permit of contractor (sample)	1:1
7. Maintenance kits ,	1:1
8. Cleaning materials	1:1
9. Measuring tools	1:5
10. Makers specification data	1:1
11. Painting equipment	1:1
12. Changing room (simulation)	1:1
13. Safety Signage	1:5
14. Ledger (sample)	1:1
15. Store floor plan	1:5
16. Set up plan (sample)	1:5

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5. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	INDOOR/OUTDOOR SPORT FACILITIES & EQUIPMENT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to ensure that equipment are kept in good working order, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare indoor/outdoor facilities & equipment maintenance schedule • Perform indoor facilities & equipment maintenance activities • Perform outdoor facilities & equipment maintenance activities • Set up indoor/outdoor sport facilities & equipment based on sport event • Inspect indoor/outdoor sport facilities & equipment utilization 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C05	LEVEL	3	TRAINING DURATION	150	SKILL CREDIT	15
Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare indoor/outdoor facilities & equipment maintenance schedule	i. The objective of indoor/outdoor facilities & equipment maintenance ii. Types of indoor/outdoor equipment such as <ul style="list-style-type: none"> • Type of indoor sport equipment 	i. Identify indoor/outdoor facilities & equipment maintenance requirement ii. Identify numbers and type of maintenance facilities & equipment defect	<u>Attitude:</u> i. Resourceful in preparing indoor/outdoor equipment and facilities maintenance schedule	24	Lecture 6 Demonstration & Observation 18	i. Type and scope of indoor/outdoor facilities & equipment maintenance listed out and explained	

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Type of outdoor sport equipment • Track lines and marking spot • Surface ground structure iii. Types of indoor/outdoor facilities such as <ul style="list-style-type: none"> • Seating bench • Safety fence • Divider • Toilet and shower • Changing room • Safety Signage iv. Surface level condition such as <ul style="list-style-type: none"> • Softness • Compact city • Uneven surface v. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance 	iii. Select facilities & equipment maintenance references and manual iv. Produce indoor/outdoor facilities & equipment maintenance schedule	<u>Environmental:</u> i. Practice paperless documentation			ii. Numbers and type of defect facilities & equipment for maintenance listed out and demonstrated according to maintenance report iii. Court/ field lines, surface and equipment condition of indoor/outdoor sport facilities assessed and demonstrated according to standard maintenance requirement iv. Equipment maintenance references and manual listed out and explained for maintenance schedule

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • (time based) vi. Facilities & equipment maintenance references and manual <ul style="list-style-type: none"> • Fields standard specification • Servicing manual • Manufacturer operation manual • Maintenance logbook • Previous maintenance report vii. Facilities and equipment safety maintenance by laws viii. Indoor /outdoor facilities & equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					<ul style="list-style-type: none"> preparation v. Type, frequency and location of equipment maintenance schedule produced according maintenance requirement

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform indoor facilities & equipment maintenance activities	i. Standard indoor surface condition such as <ul style="list-style-type: none"> • Surface material • Uneven level • Water stand areas ii. Indoor lines condition such as <ul style="list-style-type: none"> • Type of line • Type of side line • Size of line • Colour of line • Type of paint/colour iii. Indoor equipment servicing method such as <ul style="list-style-type: none"> • Equipment cleaning services • Preservation procedure • Lines painting procedure • Storage procedure iv. Indoor maintenance report content such as <ul style="list-style-type: none"> • Maintenance report template/ format • Compliance works procedure • Spare usage 	i. Inspect indoor surface level condition ii. Inspect indoor lines condition iii. Carry out indoor line painting work iv. Service defective indoor equipment event v. Prepare indoor maintenance report	i. Focus in inspecting surface level condition ii. Responsible in field lines and spot marking cleanliness <u>Safety</u> i. Follow safety rule in servicing and repairing of sport equipment ii. Adhere safety signage notification <u>Environmental</u> i. Maintains environment cleanliness	24	Lecture 6 Demonstration & Observation 18	i. Indoor court event type identified according to user requirement ii. Indoor court event equipment condition inspected according to equipment manual iii. Indoor court surface level inspected and measured according to standard levelling specification iv. Indoor court line, side-lines and marking spot condition inspected according to indoor event standard

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Storage location • Remarks 					<p>specification</p> <p>v. Defected indoor court line repaint as per court line specification</p> <p>vi. Indoor court event equipment serviced and repaired according to equipment servicing manual</p> <p>vii. Indoor court facilities serviced and repaired according to equipment servicing manual</p> <p>viii. Indoor court maintenance record updated and submitted within time frame</p>

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Perform outdoor facilities & equipment maintenance activities	i. Standard outdoor surface condition such as <ul style="list-style-type: none"> • Surface material • Uneven level • Water stand areas ii. Outdoor lines condition such as <ul style="list-style-type: none"> • Type of line • Type of side line • Size of line • Colour of line • Type of paint/colour iii. Outdoor equipment servicing method such as <ul style="list-style-type: none"> • Equipment cleaning services • Preservation method • Lines painting procedure • Storage procedure iv. Outdoor maintenance report content such as <ul style="list-style-type: none"> • Maintenance report template/ format • Compliance works procedure • Spare usage 	i. Inspect outdoor surface level condition ii. Inspect outdoor lines condition iii. Carry out outdoor line painting work iv. Service defective outdoor equipment event v. Prepare outdoor maintenance report	<u>Attitude</u> <ul style="list-style-type: none"> i. Focus in inspecting surface level condition ii. Responsible in field lines and spot marking cleanliness <u>Safety</u> <ul style="list-style-type: none"> i. Follow safety rule in servicing and repairing of sport equipment ii. Adhere safety signage notification <u>Environmental</u> <ul style="list-style-type: none"> i. Maintains environment cleanliness 	32	Lecture 8 Demonstration & Observation 24	ix. Outdoor court event type identified according to user requirement x. Outdoor court event equipment condition inspected according to equipment manual xi. Outdoor court surface level inspected and measured according to standard levelling specification xii. Outdoor court line, side-lines and marking spot condition inspected according to outdoor event standard

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Storage location • Remarks 					<p>specification</p> <p>xiii. Defected outdoor court line repaint as per court line specification</p> <p>xiv. Outdoor court event equipment serviced and repaired according to equipment servicing manual</p> <p>xv. Outdoor court facilities serviced and repaired according to equipment servicing manual</p> <p>xvi. Outdoor court maintenance record updated and submitted within time frame</p>

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Set up indoor/outdoor sport facilities & equipment based on sport event	i. Court event set up plan such as <ul style="list-style-type: none"> Type of court event Specification of court event equipment Type of facilities related to court even Court event standard guideline ii. Field event set up plan such as <ul style="list-style-type: none"> Type of field event Specification of field event equipment Type of facilities related to field even Field event standard guideline iii. Gymnastic event set up plan such as <ul style="list-style-type: none"> Type of gymnastic event Specification of gymnastic event equipment Type of facilities related to gymnastic even 	i. Arrange court event facilities and sport equipment event set up ii. Arrange field event facilities and sport equipment event set up iii. Arrange gymnastic event facilities and sport equipment event set up iv. Arrange weighting event facilities and sport equipment event set up v. Arrange wrestling event facilities and sport equipment event set up vi. Arrange martial art event facilities and sport equipment event set up vii. Arrange bench seating and safety signage placement viii. Arrange score board and PA system installation ix. Check track & field safety prevention	<u>Attitude:</u> i. Focus in checking of equipment specification data ii. Adhere to sport safety regulation compliance procedure <u>Safety:</u> i. Used safe side area signage before performing set up work <u>Environmental:</u> i. Maintains environment cleanliness	30	Lecture 8 Demonstration & Observation 22	i. Indoor/outdoor sport court equipment arrangement listed out and demonstrated according event standard guideline ii. Sport field equipment arrangement listed out and demonstrated according event standard guideline iii. Sport gymnastic equipment arrangement listed out and demonstrated according event standard guideline iv. Sport weighting event equipment arrangement

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Gymnastic event standard guideline iv. Weight lifting event set up plan such as <ul style="list-style-type: none"> • Type of weighting event • Specification of weighting event equipment • Type of facilities related to weighting even • Weighting event standard guideline v. Wrestling event set up plan such as <ul style="list-style-type: none"> • Type of wrestling event • Specification of wrestling event equipment • Type of facilities related to wrestling even • Wrestling event standard guideline vi. Martial art event set up plan such as <ul style="list-style-type: none"> • Type of martial art 	preparation				<ul style="list-style-type: none"> listed out and demonstrated according event standard guideline v. Sport wrestling equipment arrangement listed out and demonstrated according event standard guideline vi. Sport martial art equipment arrangement listed out and demonstrated according event standard guideline vii. Indoor/outdoor sport bench seating arrangement listed out and demonstrated viii. Manual score board and PA system

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> event • Specification of martial art event equipment • Type of facilities related to martial art even • Martial art event standard guideline vii. Indoor/outdoor seating bench and safety signage placement such as <ul style="list-style-type: none"> • Bench seating plan (empire chair, coaches and player chair) • Fix sport facilities (e.g. Netting, goal post and court stand) empire chair, coaches and player chair) • Safety precaution display plan viii. Score board operation handling such as <ul style="list-style-type: none"> • Manual or fitted scoreboard • Actual event 					<ul style="list-style-type: none"> functionality tested and placed according to event standard guide line and lay out plan ix. Indoor/outdoor facilities & equipment handing over to user monitored and explained as per user requirement x. Safety adherence on indoor/outdoor sport facilities set up applied according to safety regulation procedure

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>progress result</p> <ul style="list-style-type: none"> • Scoreboard handling procedure <p>ix. Type of PA system</p> <ul style="list-style-type: none"> • PA system pre-installation checklist • PA system component functionality. • PA system testing protocol and procedure <p>x. Indoor/outdoor regulation such as</p> <ul style="list-style-type: none"> • General application • Structural and technical measures • Operation sport measures • Prohibition approach procedure 					

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
5. Inspect indoor/outdoor sport facilities & equipment utilization	i. Facilities & equipment handling over such as <ul style="list-style-type: none"> Type of equipment's Type of facilities Event schedule Handing over procedure ii. Facilities & equipment condition such as <ul style="list-style-type: none"> Inspection checklist Event lay out plan Equipment log book iii. Event equipment missed use handling <ul style="list-style-type: none"> Equipment handling procedure Safety rules and regulation Weather condition iv. Storage equipment information such as <ul style="list-style-type: none"> Quantity item Equipment specification data Transportation requirement Storage procedure v. Inventory record content such as	i. Hand over equipment's and facilities to user as per requirement ii. Inspect condition and position of facilities & equipment lay out iii. Monitor misused of facilities & equipment handling iv. Monitor safety adherence of user during facilities & equipment utilization v. Inspect facilities & equipment condition after usage for storage vi. Update facilities & equipment inventory record	<u>Attitude</u> <ul style="list-style-type: none"> i Focus in equipment testing progress ii Responsible in sport equipment performance test <u>Safety</u> <ul style="list-style-type: none"> i Ensure safety site and safety area signage preparation ii Adhere to safety rules and regulations at all time. <u>Environmental</u> <ul style="list-style-type: none"> i Maintain cleanness of working areas 	40	Lecture 10 Demonstration & Observation 30	i. Condition and position of facilities & equipment checked and explained according event lay out plan ii. Misused of facilities & equipment monitored and explained iii. Facilities & equipment condition after usage for storage checked explained according to storage procedure iv. Type, numbers and condition of returned facilities & equipment record updating explained

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger • Inventory procedure 					according to inventory procedure

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Indoor layout plan	1:5
2. Type of surface material (sample)	As required
3. Maintenance schedule (sample)	As required
4. Maintenance report (sample)	1:1
5. Work schedule (daily)	1:1
6. Clearance permit of contractor (sample)	1:1
7. Maintenance kits ,	1:1
8. Cleaning materials}	1:1
9. Type of turf glue	1:1
10. Inspection checklist	1:1
11. Equipment makers manual specification	1:1
12. Surface lay out plan	1:1
13. Painting equipment	1;5
14. Safety Signage	1:5
15. Ledger (sample)	As required
16. Sport set up plan (sample)	1:1
17. Manual score board	1:5
18. PA system	1:5

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CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	FITNESS CENTRE FACILITIES & EQUIPMENT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to ensure that fitness facilities and equipment are kept in good working order, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare fitness centre facilities & equipment maintenance schedule • Perform fitness centre facilities & equipment maintenance activities • Set up fitness centre facilities & equipment 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C06	LEVEL	3	TRAINING DURATION	90	SKILL CREDIT	9
Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental		Training Hours	Delivery Mode	Assessment Criteria
1. Prepare fitness centre facilities & equipment maintenance schedule	i. The objective of fitness centre facilities & equipment maintenance ii. Types of fitness centre facilities & equipment such as <ul style="list-style-type: none"> • Type of fitness equipment • Rest bench 	i. Identify fitness centre equipment maintenance requirement ii. Identify numbers and type of maintenance facilities & equipment defect iii. Select facilities & equipment maintenance	<u>Attitude:</u> i. Resourceful in preparing fitness centre maintenance schedule <u>Environmental:</u> i. Practice paperless documentation		22	Lecture 6 Demonstration & Observation 16	i. Type and scope of fitness centre fitness facilities & equipment maintenance listed out and explained ii. Numbers and type of defect facilities & equipment for

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Counter service • Entertainment facilities • Toilet and shower • Changing room <p>iii. Type maintenance such as</p> <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) <p>iv. Facilities & equipment maintenance references and manual</p> <ul style="list-style-type: none"> • Servicing manual • Manufacturer operation manual • Maintenance logbook • Previous maintenance report <p>v. Faculties & equipment safety maintenance by laws</p>	<p>references and manual</p> <p>iv. Produce fitness centre facilities & equipment maintenance schedule</p>				<p>maintenance listed out and demonstrated according to maintenance report</p> <p>iii. Equipment maintenance references and manual listed out and explained for maintenance schedule preparation</p> <p>iv. Type, frequency and location of equipment maintenance schedule produced according maintenance requirement</p>

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	vi. Fitness centre facilities & equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform fitness centre facilities & equipment maintenance activities	i. Fitness facilities & equipment condition such as <ul style="list-style-type: none"> • Fitness equipment • Fitness machine • Rest bench • Toilet and shower • Changing room ii. Surface and material fixing method <ul style="list-style-type: none"> • Synthetic material • Cement ground base • Carpet • Wood material • Fixing procedure iii. Fitness facilities & equipment servicing method such as <ul style="list-style-type: none"> • Equipment cleaning services • Preservation procedure iv. Fitness centre default setting such as <ul style="list-style-type: none"> • Fitness centre floor plan • Fitness equipment lay out arrangement 	i. Inspect fitness equipment & facilities condition and functionality ii. Service fitness equipment & facilities iii. Carry out fitness equipment default setting iv. Arrange fitness equipment calibration v. Prepare fitness equipment & facilities maintenance report	<u>Attitude:</u> <ol style="list-style-type: none"> i. Focus in inspecting surface level condition ii. Responsible in field lines and spot marking cleanliness <u>Safety</u> <ol style="list-style-type: none"> i. Follow safety rule in servicing and repairing of sport equipment ii. Adhere safety signage notification <u>Environmental</u> <ol style="list-style-type: none"> i. Maintains environment cleanliness 	30	Lecture 8 Demonstration & Observation 22	i. Sport fitness equipment & facilities condition and functionality assessed and explained according to equipment manual ii. Fitness equipment & facility serviced and repaired according to equipment servicing manual iii. Fitness equipment & facility default setting set iv. Fitness equipment & machine calibration arrangement organised and explained according equipment maintenance schedule

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Fitness equipment list v. Equipment and machine calibration <ul style="list-style-type: none"> • Type of machine • Type of equipment • Calibration method such as on-site, electrical, gas temperature and flow/torque/weight equipment calibration. vi. Fitness centre maintenance report content such as <ul style="list-style-type: none"> • Maintenance report template/ format • Compliance works procedure • Spare usage • Storage location Remarks 					<ul style="list-style-type: none"> v. Fitness maintenance record updated and submitted within time frame

Work Activities	Related knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Set up fitness centre facilities & equipment	i. Fitness centre set up <ul style="list-style-type: none"> • Type of fitness activities • Specification of fitness equipment • Type of facility related to fitness even ii. Fitness equipment and facilities set up plan such as <ul style="list-style-type: none"> • Cardio training arrangement • Free weighting arrangement • Athlete fitness endurance test equipment • Bench seating plan • Fix fitness facilities such as counter service, entertainment, PA system, changing room and storage locker • Safety precaution display plan iii. Safety regulation	i. Select fitness activities requirement ii. Execute fitness centre facilities & equipment set up iii. Hand over equipment's and facilities to user as per requirement iv. Inspect condition and position of facilities & equipment lay out v. Monitor misused of facilities & equipment handling vi. Monitor safety adherence of user during facilities & equipment utilization vii. Inspect facilities & equipment condition after usage for storage viii. Update facilities & equipment inventory record	<u>Attitude</u> <ol style="list-style-type: none"> i. Focus in inspecting surface level condition ii. Responsible in fitness centre room cleanliness <u>Safety</u> <ol style="list-style-type: none"> i. Follow safety rule in servicing and repairing of sport equipment ii. Adhere safety signage notification <u>Environmental</u> <ol style="list-style-type: none"> i. Maintains environment cleanliness 	38	Lecture 10 Demonstration & Observation 28	i. Fitness activities requirement identified and explained ii. Fitness centre facilities and equipment tallied and demonstrated according event requirement iii. Fitness centre facility equipment set up and functionality tested according event requirement iv. Fitness facilities & equipment handing over to user demonstrated as per user requirement v. Fitness centre facility equipment

Work Activities	Related knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	procedure such as <ul style="list-style-type: none"> • Fitness general application • Structural and technical measures • Prohibition approach procedure iv. Facilities & equipment condition such as <ul style="list-style-type: none"> • Inspection checklist • Event lay out plan • Equipment log book v. Storage equipment information such as <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Storage procedure vi. Inventory record content such as <ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger • Inventory procedure 					usages monitored and guided according to fitness centre rules and regulation vi. Safety adherence of user during facilities & equipment utilization monitored and explained vii. Facilities & equipment condition after usage inspected and stored according to storage procedure viii. Type, numbers and condition of returned facilities & equipment recorded.

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Fitness centre layout plan	1:5
2. Manual of facilities and equipment by Laws	1:1
3. Type of surface material (sample)	1:1
4. Maintenance schedule (sample)	1:1
5. Maintenance report (sample)	1:1
6. Maintenance kits	1:5
7. Cleaning materials	As required
8. Inspection checklist	1:1
9. Equipment makers manual specification	1:1
10. Ledger (sample)	1;5
11. Sport set up plan (sample)	1:1
12. PA system	1:1
13. Entertainment equipment	1:5
14. Manual equipment and facility by laws	1:5
15. Calibration tool	1:5

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5. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594
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CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	SWIMMING POOL FACILITIES & EQUIPMENT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to ensure that swimming pool and its water is safe and clean, pool event run smoothly and to prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare swimming pool facilities & equipment maintenance schedule • Perform pool cleaning works • Set up pool sport facilities & equipment based on sport event • Coordinate pool water circulation system maintenance • Coordinate electrical supply maintenance 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C07	LEVEL	3	TRAINING DURATION	160	SKILL CREDIT	16
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare swimming pool facilities & equipment maintenance schedule	i. The objective of swimming pool facilities & equipment maintenance ii. Types of swimming pool equipment such as <ul style="list-style-type: none"> • Swimming pool equipment 	i. Identify swimming pool equipment maintenance requirement ii. Identify numbers and type of maintenance facilities & equipment defect	<u>Attitude:</u> i. Resourceful in preparing swimming pool equipment and facilities maintenance schedule	32	Lecture 8 Demonstration & Observation 24	i. Type and scope of swimming pool facilities & equipment maintenance listed out and explained ii. Numbers and type of defect facilities &	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Diving spring board equipment • Synchronise swimming • Water polo equipment • Lane rope • Pool accessories • Starting block • Aquatic rescue equipment iii. Types of swimming pool facilities such as <ul style="list-style-type: none"> • Pool deck • Diving tower • Pool shower • Seating bench • Changing room iv. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) 	iii. Select facilities & equipment maintenance references and manual iv. Produce swimming pool facilities & equipment maintenance schedule	<u>Environmental:</u> i. Practice paperless documentation			equipment for maintenance selected and demonstrated according to iii. Swimming pool floor, floats lines, deck surface, lighting, pool shower and pool accessories condition assessed and demonstrated according to standard maintenance requirement iv. Equipment maintenance references and manual identified and selected for maintenance schedule preparation v. Type, frequency and location of equipment maintenance schedule produced

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	v. Facilities & equipment maintenance references and manual <ul style="list-style-type: none"> • Pool size standard specification • Servicing manual • Manufacturer operation manual • Maintenance logbook • Previous maintenance report vi. Facilities & equipment safety maintenance by laws vii. Swimming pool facilities & equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform pool cleaning works	i. Type of cleaning tools and material <ul style="list-style-type: none"> Manual cleaning tools Machine cleaning ii. Pool cleaning method <ul style="list-style-type: none"> Manual cleaning Machine cleaning handling Pool deck machine handling Water pressure Vacuum (educator) iii. Pump filtration <ul style="list-style-type: none"> Backwash handling Rinsing handling Waste handling iv. Pool water testing <ul style="list-style-type: none"> Water laboratory test sample Manual water testing (test kits) (onsite) such as Chlorine level and pH content value 	i. Identify pool cleaning work requirement ii. Prepare pool cleaning tools and material iii. Execute pool cleaning work iv. Check pool water circulating system v. Carry out filtration backwash and rinsing activities vi. Arrange pool water sample laboratory test	<u>Attitude</u> <ul style="list-style-type: none"> Focus in handling cleaning machine Responsible in area pool cleanliness <u>Safety</u> <ul style="list-style-type: none"> Ensure safety site and safety area signage Adhere to safety rules and regulations. <u>Environmental</u> <ul style="list-style-type: none"> Maintain cleanness of working areas 	32	Lecture 8 Demonstration & Observation 24	i. Cleaning activities listed and explained according actual pool condition and maintenance schedule ii. Cleaning material and tools prepared and demonstrated iii. Pool cleaned according actual pool condition and maintenance schedule iv. Cleaned pool condition assessed and demonstrated according pool standard guideline v. Pool water circulation assessed and explained according pool operation guideline vi. Pool water

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
						backwash and rinsing executed to clear blockage in water circulation vii. Water sample laboratory test arranged for testing viii. Pool water quality checked and maintained according to water quality standard level

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Set up pool sport facilities & equipment based on sport event	<p>i. Pool event set up</p> <ul style="list-style-type: none"> Type of pool event Specification of pool equipment Type of facilities related to pool event <p>ii. Pool equipment and facilities set up plan such as</p> <ul style="list-style-type: none"> Type of pool equipment Bench seating plan Fix pool facilities such as, buoy & mounting, fitting, pool life saver, lane rope, changing room and storage locker PA system Safety precaution display plan <p>iii. Safety regulation procedure such as</p> <ul style="list-style-type: none"> Swimming pool general application Structural and technical measures Prohibition approach procedure 	<p>i. Select pool sport event requirement</p> <p>ii. Execute pool facilities & equipment set up</p> <p>iii. Hand over equipment's and facilities to user as per requirement</p> <p>iv. Inspect condition and position of facilities & equipment lay out</p> <p>v. Monitor misused of facilities & equipment handling</p> <p>vi. Monitor safety adherence of user during facilities & equipment utilization</p> <p>vii. Inspect facilities & equipment condition after usage for storage</p> <p>viii. Update facilities & equipment inventory record</p>	<p><u>Attitude</u></p> <p>i. Focus in inspecting surface level condition</p> <p>ii. Responsible in field lines and spot marking cleanliness</p> <p><u>Safety</u></p> <p>i. Follow safety rule in servicing and repairing of sport equipment</p> <p>ii. Adhere safety signage notification</p> <p><u>Environmental</u></p> <p>i. Maintains environment cleanliness</p>	32	<p>Lecture 8</p> <p>Demonstration & Observation 24</p>	<p>i. Pool event listed and explained according to event requirement</p> <p>ii. Pool facilities and equipment listed and tallied according event requirement</p> <p>iii. Pool facilities equipment set up and functionality tested according event requirement</p> <p>iv. Pool facilities & equipment handed over to user as per user requirement</p> <p>v. Pool facilities equipment usages monitored and guided according to fitness centre rules and regulation</p> <p>vi. Safety</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	iv. Facilities & equipment handing over such as <ul style="list-style-type: none"> • Type of event equipment's • Type of facilities • event schedule • Handing over procedure • Installation checklist • Even lay out plan • Equipment log book v. Facilities & equipment handling by law vi. Storage equipment information such as <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Storage procedure vii. Inventory record content such as <ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger Inventory procedure.					adherence of user during facilities & equipment utilization monitored and explained vii. Facilities & equipment condition after usage inspected and stored according to storage procedure viii. Type, numbers and condition of returned facilities & equipment recorded according to inventory procedure

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Coordinate pool water circulation system maintenance	i. Water circulating maintenance content such as <ul style="list-style-type: none"> Pool construction plan Pool structure Pool drainage system Water pressure indicator Pump house ii. Water pump, circulating component and fitting condition such as <ul style="list-style-type: none"> Pipe line system Type water valve Fitting & jointing Pump filter Water valve system iii. Pool water circulation functionality such as <ul style="list-style-type: none"> Water pressure reading Noisy sound Pump alignment Water flow rate Filtration system iv. Pool water circulating maintenance services <ul style="list-style-type: none"> Type of maintenance Maintenance schedule 	i. Interpret swimming pool maintenance schedule ii. Visual checking pump circulating system functionality iii. Check water circulating component wear and tear iv. List out pool water circulating component servicing v. Arrange pool water system and component servicing	<u>Attitude:</u> i. Focus in checking of equipment specification data ii. Adhere to sport safety regulation compliance procedure <u>Safety:</u> i. Used safe side area signage before performing set up work <u>Environmental:</u> i. Maintains environment cleanliness	32	Lecture 8 Demonstration & Observation 24	i. Pool maintenance schedule interpreted and explained ii. Water pump circulating system and component functionality assessed and explained iii. Wear & tear condition of pipe line, fitting, coupling and pump filter assessed and explained iv. Required servicing of water circulation system proposed to superior for third party servicing v. Third party servicing arranged according to type of defect

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
5. Coordinate electrical supply maintenance	i. Electrical maintenance schedule content such as <ul style="list-style-type: none"> • Electrical supply equipment • Manpower utilization • Parts requirement • Tools and equipment maintenance ii. Electrical motor and component condition such as <ul style="list-style-type: none"> • Motor safety device • Motor RPM • Current test • Terminal <i>continuity check</i> • Earth reading iii. Electrical distribution power supply such as <ul style="list-style-type: none"> • Fuse • Switching • Cabling condition • Pool light and • Underwater light iv. Electrical supply system maintenance services such as <ul style="list-style-type: none"> • Type of electrical maintenance • Electrical maintenance schedule 	i. Access electrical maintenance schedule ii. Check electrical motor and component condition iii. List out pool water electrical component servicing iv. Arrange electrical supply maintenance services	<u>Attitude</u> iii Focus in equipment testing progress iv Responsible in sport equipment performance test <u>Safety</u> iii Ensure safety site and safety area signage preparation iv Adhere to safety rules and regulations at all time. <u>Environmental</u> ii Maintain cleanness of working areas	32	Lecture 8 Demonstration & Observation 24	i Electrical maintenance schedule interpreted and explained ii Electrical parts and component functionality assessed and demonstrated iii Required servicing of electrical supply system proposed to superior for third party servicing iv Third party servicing arranged according to type of defect

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Swimming pool layout plan	1:5
2. Maintenance schedule (sample)	1:1
3. Maintenance report (sample)	1:1
4. Work schedule (daily)	1:1
5. Clearance permit of contractor (sample)	1:1
6. Maintenance kits ,	1:1
7. Cleaning materials	1:1
8. Measuring tools	1:1
9. Inspection checklist	1:1
10. Makers specification data	1:1
11. Set up plan (sample)	1:5
12. Historical data of equipment and facilities	1:1
13. Polo Goal post	1:5
14. Buoy & mounting fitting	1:5
15. Electrical motor	1:5

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6. Philip Harold Perkins (1971), Swimming Pools: A treatise on the planning, layout, design and construction, including water treatment and other service, Elsevier, ISBN 0444200770, 9780444200778
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9. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594
10. Sawyer, Thomas (2005), facilities Design and Management for Health Fitness, Physical Activity, Recreation and Sports facilities Development, Sagamore Publishing, Champaign.

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	SCOREBOARD AND SPOT LIGHT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to ensure that equipment are kept in good condition, event information displayed in order and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare scoreboard and spot light maintenance schedule • Perform scoreboard system maintenance activities • Set up scoreboard system and component based on sport event • Coordinate spot light defective bulb replacement 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C08	LEVEL	3	TRAINING DURATION	130	SKILL CREDIT	13
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare scoreboard and spot light maintenance schedule	i. The objective of scoreboard and spot light equipment and facilities maintenance ii. Types of scoreboard and spot light equipment such as <ul style="list-style-type: none"> • Manual scoreboard • Fitted scoreboard • Spot lighting system 	i. Identify scoreboard and spot light equipment maintenance requirement ii. Identify numbers and type of maintenance equipment and facilities defect iii. Select equipment and	<u>Attitude:</u> i. Resourceful in preparation of maintenance schedule ii. Alert in scoreboard maintenance signage and risk information	26	Lecture 6 Demonstration & Observation 20	i. Type and scope of scoreboard and spot light maintenance listed out and explained ii. Numbers and type of defect scoreboard spot light	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	iii. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) iv. Maintenance references and manual <ul style="list-style-type: none"> • Pre-check equipment & system checklist • Servicing manual • Manufacturer operation manual • Logbook • Maintenance report v. Facilities equipment safety maintenance by laws vi. Scoreboard maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location 	facilities maintenance references and manual iv. Produce scoreboard equipment and facilities maintenance schedule	<u>Environmental:</u> i. Practice 3R concept (reused, recycle, reduce)			maintenance selected and demonstrated iii. Scoreboard component & fitting accessories condition assessed and demonstrated iv. Scoreboard system maintenance references and manual selected and explained for maintenance schedule preparation v. Type, frequency and location of scoreboard maintenance schedule produced according maintenance requirement.

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					
2. Perform scoreboard system maintenance activities	<p>i. Scoreboard component condition</p> <ul style="list-style-type: none"> • Manual component • Fitted system • Scoreboard accessories equipment <p>ii. Scoreboard event content such as</p> <ul style="list-style-type: none"> • Design template • Sport result data collection • Flash sport event progress result <p>iii. Scoreboard system default setting such as</p> <ul style="list-style-type: none"> • Scoreboard location • Component and accessories arrangement • Equipment and accessories list <p>iv. Scoreboard maintenance record</p> <ul style="list-style-type: none"> • Maintenance record 	<p>i. Inspect score board system and component</p> <p>ii. Service defect scoreboard component</p> <p>iii. Prepare scoreboard set system as per sport event</p> <p>iv. Carry out scoreboard default setting</p> <p>v. Update scoreboard maintenance record</p>	<p><u>Attitude:</u></p> <p>i. Focus in checking of equipment set up</p> <p>ii. Resourceful in material set up preparation</p> <p><u>Safety:</u></p> <p>i. Used safe side area signage before performing set up work</p> <p>ii. Adherence of safety signage and precaution in recovery room</p> <p><u>Environmental:</u></p> <p>i. Practice 3R concept (Reused, Recycle, Reduce)</p>	32	<p>Lecture 8</p> <p>Demonstration & Observation 24</p>	<p>i. Scoreboard component listed out and explained</p> <p>ii. Scoreboard component servicing and repairing assessed and demonstrated according to equipment servicing manual</p> <p>iii. Scoreboard component default setting set according to manufacturer setting</p> <p>iv. Scoreboard component maintenance record updated and submitted within time frame</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
	template/ format <ul style="list-style-type: none"> Spare usage Storage location Remarks 					
3. Set up scoreboard system and component based on sport event	i. Type of scoreboard for sport event such as <ul style="list-style-type: none"> Manual scoreboard Fitted scoreboard Scoreboard accessories Communication tools and equipment ii. Scoreboard system operation content such as <ul style="list-style-type: none"> Power supply condition Data collection method Displayed methods Flashing method iii. Equipment and facilities handling over such as <ul style="list-style-type: none"> Type of equipment's Type of facilities Game schedule Handing over procedure iv. Scoreboard condition	i. Select scoreboard sport event requirement ii. Execute scoreboard equipment and facilities set up iii. Hand over scoreboard equipment's and facilities to user as per requirement iv. Inspect equipment and facilities condition after usage for storage v. Update equipment and facilities inventory record	<u>Attitude</u> <ol style="list-style-type: none"> Focus in inspecting surface level condition Responsible in scoreboard setting up sport event <u>Safety</u> <ol style="list-style-type: none"> Follow safety rule in servicing and repairing of sport equipment Adhere safety signage notification <u>Environmental</u> <ol style="list-style-type: none"> Maintains environment cleanliness 	32	Lecture 8 Demonstration & Observation 24	i. Manual/ fitted scoreboard determined and selected according sport event ii. Scoreboard equipment set up and functionality tested according event requirement iii. Safety adherence of user during scoreboard system application monitored according event schedule iv. Equipment and facilities condition after usage inspected

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	inspection such as <ul style="list-style-type: none"> • Inspection checklist • Game lay out plan • Equipment log book v. Storage equipment information such as <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Storage procedure vi. Inventory record content such as <ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger • Inventory procedure 					and stored according to storage procedure v. Type, numbers and condition of returned equipment and facilities recorded according to inventory procedure

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Coordinate spot light defective bulb replacement	i. Defective bulb such as <ul style="list-style-type: none"> Type of bulb, Number of bulb Bulb location ii. Bulb replacement procedure <ul style="list-style-type: none"> Type transportation Crane arrangement Permit of work Transport clearance (gate pass) iii. Stair handling and high level safety working such as <ul style="list-style-type: none"> Height level safety compliance procedures Safety hardness Stair handling procedure iv. Spot light system condition such as <ul style="list-style-type: none"> Lighting stage Lux reading Current supply reading v. Inventory record content such as <ul style="list-style-type: none"> Type equipment 	i. Determined defective or malfunction sport light ii. Arrange spot light replacement bulb, iii. Monitor stair handling and high level safety working compliance procedures iv. Monitor replacement bulb unit v. Update spot light inventory record	<u>Attitude:</u> i. Adhere to Sport scoreboard maintenance regulation and compliance procedure i. Details in Sport scoreboard maintenance work deployment operation schedule ii. Alert in Sport scoreboard maintenance signage and risk information <u>Safety:</u> i. Used safe side area signage before performing daily work ii. Comply Sport scoreboard maintenance safety precaution <u>Environmental:</u> i. Practice paperless documentation ii. Practice 3R concept (reused,	40	Lecture 10 Demonstration & Observation 30	i. Defective bulb, number of bulb and location listed out and explained for replacement ii. Selection manpower and transportation arrangement explained for work clearance iii. Stair handling and height level safety working monitored and explained for compliance safety procedures iv. Replacement bulb unit functionality assessed and demonstrated v. Lighting stage, lux reading and current supply meter checked for spot light

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Numbers of equipment • Condition of equipment • Type of ledger • Inventory procedure 		recycle, reduce)			system set up vi. Spot light inventory record updated for inventory record

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Sport light	1:5
2. Inspection checklist	1:5
3. Makers manual	1:1
4. Safety Signage	1:1
5. Ledger (sample)	1:1
6. Set up plan (sample)	1:1
7. Sport light references and manual operation	1:1
8. Maintenance historical data	1:1
9. Bulb parts	1:1
10. Height level working procedure	1:1
11. Manual scoreboard	1:5

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1. Gil Fried Managing Sport Facilities - Human Kinetics Publishers. ISBN-13: 9780736082907
2. Scoreboard Installation and Service Manual (2000), Colorado Time Systems
3. Occupational Safety and Health Act 1994 (Act 514), Regulations & Orders, International Law Book Services, ISBN 967-89-1502
4. Richard F. Mull, Brent A. Beggs, Mick Renneisen (2009), Recreation Facility Management: Design, Development, Operations, and Utilization, Human Kinetics, ISBN 0736070028, 9780736070027
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CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	COMMUNICATION & PA SYSTEM MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency is to ensure that equipment are kept in good working order, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare communication & PA system maintenance schedule • Perform communication & PA system maintenance activities • Set up communication & PA system component based on sport event 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C09	LEVEL	3	TRAINING DURATION	90	SKILL CREDIT	9
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare communication & PA system maintenance schedule	i. The objective of communication & PA system equipment and facilities maintenance ii. Types of communication & PA system equipment such as <ul style="list-style-type: none"> • Type of communication equipment • Portable PA system 	i. Identify communication & PA system equipment maintenance requirement ii. Identify numbers and type of maintenance equipment and facilities defect iii. Select equipment and facilities maintenance	<u>Attitude:</u> i. Resourceful in preparation of maintenance schedule ii. Alert in communication & PA system maintenance signage and risk information	26	Lecture 6 Demonstration & Observation 20	i. Type and scope of communication & PA system maintenance listed out and explained ii. Numbers and type of defect communication and PA system maintenance selected and	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Fitted PA system iii. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) iv. Maintenance references and manual <ul style="list-style-type: none"> • Pre-check equipment & system checklist • Servicing manual • Manufacturer operation manual • Logbook • Maintenance report v. Facilities equipment safety maintenance by laws vi. Maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Servicing frequency 	references and manual iv. Produce scoreboard equipment and facilities maintenance schedule	<u>Environmental:</u> i. Practice 3R concept (reused, recycle, reduce)			explained iii. Communication and PA system component & fitting accessories condition assessed and demonstrated according to standard maintenance requirement iv. Communication and PA system equipment maintenance references and manual listed out and explained v. Type, frequency and location of communication and PA system maintenance schedule produced according maintenance requirement.

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Date of maintenance • Person in-charge • Remarks 					
2. Perform communication & PA system maintenance activities	<p>i. Communication component condition</p> <ul style="list-style-type: none"> • Manual component • Fitted system • communication accessories <p>ii. PA system component condition</p> <ul style="list-style-type: none"> • Manual component • Fitted system • PA system accessories • equipment <p>iii. Communication and PA system maintenance record</p> <ul style="list-style-type: none"> • Maintenance record template/ format • Spare usage • Storage location • Remarks 	<p>i. Inspect communication and PA system component</p> <p>ii. Service defect communication and PA system component</p> <p>iii. Prepare communication and PA system set system as per sport event</p> <p>iv. Update communication and PA system maintenance record</p>	<p><u>Attitude:</u></p> <p>i. Focus in checking of equipment set up</p> <p>ii. Resourceful in material set up preparation</p> <p><u>Safety:</u></p> <p>i. Used safe side area signage before performing set up work</p> <p>ii. Adherence of safety signage and precaution in recovery room</p> <p><u>Environmental:</u></p> <p>i. Practice 3R concept (Reused, Recycle, Reduce)</p>	32	<p>Lecture 8</p> <p>Demonstration & Observation 24</p>	<p>i. Sport complex communication and PA system component condition and functionality inspected according to equipment manual</p> <p>ii. Communication and PA system component serviced and repaired according to equipment servicing manual</p> <p>iii. Communication and PA system component maintenance record updated and submitted within time frame</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Set up communication & PA system component based on sport event	<p>i. Type of communication & PA system for sport event such as</p> <ul style="list-style-type: none"> • Manual scoreboard • Fitted scoreboard • Scoreboard accessories • Communication tools and equipment <p>ii. Communication & PA system operation content such as</p> <ul style="list-style-type: none"> • Power supply condition • Data collection method • Displayed methods • Flashing method <p>iii. Equipment and facilities handling over such as</p> <ul style="list-style-type: none"> • Type of equipment's • Type of facilities • Game schedule • Handing over procedure <p>iv. Communication & PA system condition inspection such as</p> <ul style="list-style-type: none"> • Inspection checklist 	<p>i. Select communication & PA system event requirement</p> <p>ii. Execute communication & PA system equipment and facilities set up</p> <p>iii. Hand over communication & PA system to user as per requirement</p> <p>iv. Inspect equipment and facilities condition after usage for storage</p> <p>v. Update equipment and facilities inventory record</p>	<p><u>Attitude</u></p> <p>i. Focus in inspecting surface level condition</p> <p>ii. Responsible in scoreboard setting up sport event</p> <p><u>Safety</u></p> <p>i. Follow safety rule in servicing and repairing of sport equipment</p> <p>ii. Adhere safety signage notification</p> <p><u>Environmental</u></p> <p>i. Maintains environment cleanliness</p>	32	<p>Lecture 8</p> <p>Demonstration & Observation 24</p>	<p>i. Manual/ fitted communication & PA system listed out and explained according sport event</p> <p>ii. Communication & PA system equipment set up and functionality tested</p> <p>iii. Safety adherence of user during scoreboard system application monitored</p> <p>iv. Communication & PA system component condition after usage inspected and stored according to storage procedure</p> <p>v. Type, numbers</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Game lay out plan • Equipment log book • Safety precaution iv. Storage equipment information such as <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Storage procedure v. Inventory record content such as <ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger • Inventory procedure 					<p>and condition of returned component recorded according to inventory procedure</p>

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Sport communication & PA system layout plan	1:5
2. Type of surface material (sample)	1:5
3. Maintenance report (sample)	1:1
4. Work schedule (daily)	1:1
5. Clearance permit of contractor (sample)	1:1
6. Maintenance kits ,	1:1
7. Cleaning materials	1:1
8. Inspection checklist	1:1
9. Makers specification data	1:1
10. Ledger (sample)	1:1
11. Set up plan (sample)	1:1
12. Manual score board	1:5
13. PA system	1:1
14. Communication equipment	1:5
15. Communication spare & parts	1:5

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1. Gil Fried Managing Sport Facilities - Human Kinetics Publishers. ISBN-13: 9780736082907
2. Scoreboard Installation and Service Manual (2000), Colorado Time Systems
3. Occupational Safety and Health Act 1994 (Act 514), Regulations & Orders, International Law Book Services, ISBN 967-89-1502
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5. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594
6. Sawyer, Thomas (2005), Facility Design and Management for Health Fitness, Physical Activity, Recreation and Sports Facility Development, Sagamore Publishing, Champaign.

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	RECOVERY CENTRE MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to the ability to ensure that recovery centre room is kept in good condition so that treatment and recovery from muscle soreness and/or fatigue of athletes can be carried out effectively in accordance with maintenance instruction manual and athlete's recovery operation procedure. Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare recovery centre facilities & equipment maintenance schedule • Service sauna facilities & equipment • Service SPA/Jacuzzi facilities & equipment • Service ice bath facilities & equipment • Perform recovery treatment room cleaning work 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-C10	LEVEL	3	TRAINING DURATION	160	SKILL CREDIT	16
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare recovery centre facilities & equipment maintenance schedule	i. The objective of recovery centre facilities & equipment maintenance ii. Types of recovery centre equipment such as <ul style="list-style-type: none"> • Sauna room 	i. Identify recovery centre equipment maintenance requirement ii. Identify numbers and type of maintenance facilities & equipment defect	<u>Attitude:</u> i. Resourceful in preparing recovery centre equipment and facility maintenance schedule	32	Lecture 8 Demonstration & Observation 24	i. Type and scope of recovery centre room facilities & equipment maintenance determined ii. Numbers and	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> equipment • SPA/Jacuzzi room equipment • Ice bath room equipment iii. Types of recovery centre facilities such as <ul style="list-style-type: none"> • Lighting system • Shower • Changing room • Safety locker • Seating bench • Safety Signage iv. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) v. Facilities & equipment maintenance references and manual <ul style="list-style-type: none"> • recovery room size standard 	iii. Select facilities & equipment maintenance references and manual iv. Produce recovery centre facilities & equipment maintenance schedule	<u>Environmental:</u> i. Practice paperless documentation			type of defect facilities & equipment for maintenance determined according to maintenance report iii. Recovery centre room condition checked and assessed according to standard maintenance requirement iv. Equipment maintenance references and manual identified and selected for maintenance schedule preparation v. Type, frequency and location of equipment maintenance schedule

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	specification <ul style="list-style-type: none"> • Servicing manual • Manufacturer operation manual • Maintenance logbook • Previous maintenance report • treatment guideline vi. Facilities equipment safety maintenance by laws vii. Recovery treatment facilities & equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					produced according maintenance requirement

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Service sauna facilities & equipment	i. Sauna heating material condition such as <ul style="list-style-type: none"> • Heat temperature setting • Heating element • Heating stone ii. Operating procedure electrical equipment iii. Ventilation supply system such as <ul style="list-style-type: none"> • Inlet • Out let iv. Facility support condition <ul style="list-style-type: none"> • Towel service, • Water supply, • Safety lock • Toilet • Changing room • Shower v. Sauna room facilities & equipment servicing method such as <ul style="list-style-type: none"> • Equipment cleaning services • Equipment functionality • Storage procedure vi. Sauna room default setting such as <ul style="list-style-type: none"> • Sauna room floor 	i. Inspect sauna facilities & equipment condition ii. Service defective sauna facilities & equipment iii. Carry out sauna equipment default setting iv. Prepare sauna room maintenance report	<u>Attitude:</u> <ol style="list-style-type: none"> Focus in checking of equipment set up Resourceful in material set up preparation <u>Safety:</u> <ol style="list-style-type: none"> Used safe side area signage before performing set up work Adherence of safety signage and precaution in recovery room <u>Environmental:</u> <ol style="list-style-type: none"> Practice 3R concept (Reused, Recycle, Reduce) 	32	Lecture 8 Demonstration & Observation 24	i. Sport sauna equipment & facilities condition and functionality inspected and explained ii. Sauna room equipment & facility servicing and repairing executed and demonstrated according to equipment servicing manual iii. Sauna room equipment & facility default setting set according to manufacturer setting iv. Sauna room facility and equipment assessed and demonstrated according sauna lay out plan v. Sauna room

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> plan • Sauna equipment lay out arrangement • Sauna facilities & equipment list vii. Sauna room maintenance report content such as <ul style="list-style-type: none"> • Maintenance report template/ format • Compliance works procedure • Spare usage • Storage location • Remarks 					facility equipment set up and functionality tested and explained vi. Sauna room facility equipment usages monitored and guided according to sauna centre rules and regulation vii. Safety adherence of user during facilities & equipment utilization monitored viii. Sauna room maintenance record updated and submitted within time frame.

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Service SPA/Jacuzzi facilities & equipment	i. Operating procedure electrical equipment ii. Pump and fitting condition <ul style="list-style-type: none"> • Pipe line system • Water valve system • Fitting & jointing • Coupling / belting condition • Type of pump iii. Jacuzzi water test such as <ul style="list-style-type: none"> • Pool water treatment procedure • Water temperature iv. Ventilation supply procedure <ul style="list-style-type: none"> • Pressure inlet • Pressure out let v. Facility support condition <ul style="list-style-type: none"> • Counter service • SPA service room • Jacuzzi pool • Rest bench • Safety locker • Safety signage • Changing room • Shower • Toilet • Emergency exit 	i. Inspect SPA/Jacuzzi facilities & equipment condition ii. Service defective SPA/Jacuzzi facilities & equipment iii. Carry out SPA/Jacuzzi equipment default setting iv. Prepare SPA/Jacuzzi maintenance report	<u>Attitude:</u> <ol style="list-style-type: none"> i. Focus in checking of equipment set up ii. Resourceful in material set up preparation <u>Safety:</u> <ol style="list-style-type: none"> i. Used safe side area signage before performing set up work ii. Adherence of safety signage and precaution in recovery room <u>Environmental:</u> <ol style="list-style-type: none"> i. Practice 3R concept (Reused, Recycle, Reduce) 	24	Lecture 6 Demonstration & Observation 18	i. SPA/Jacuzzi equipment & facilities condition and functionality inspected according to equipment manual ii. SPA/Jacuzzi room equipment & facility serviced and repaired according to equipment servicing manual iii. SPA/Jacuzzi equipment & facility default setting set according to manufacturer setting iv. SPA/Jacuzzi room facility and equipment checked and tallied according sauna lay out plan v. SPA/Jacuzzi

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Air condition unit vi. SPA/Jacuzzi room facilities & equipment servicing method such as <ul style="list-style-type: none"> • Equipment cleaning services • Equipment functionality • Storage procedure vii. SPA/Jacuzzi room default setting such as <ul style="list-style-type: none"> • Sauna room floor plan • Sauna equipment lay out arrangement • Sauna facilities & equipment list viii. SPA /Jacuzzi maintenance report content such as <ul style="list-style-type: none"> • Maintenance report template/ format • Compliance works procedure • Spare usage • Storage location • Remarks 					<ul style="list-style-type: none"> room facility equipment set up and functionality tested according sauna operation manual vi. SPA/Jacuzzi room facility equipment usages monitored and guided according to SPA/Jacuzzi operation rules and regulation vii. Safety adherence of user during facilities & equipment utilization monitored viii. SPA/Jacuzzi maintenance record updated and submitted within time frame.

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
4. Service ice bath facilities & equipment	i. Ice element such as <ul style="list-style-type: none"> • type of Ice • Water • Water chlorine rate • Salt material ii. Ice bath physical condition <ul style="list-style-type: none"> • Bath tab material • Pool size • Water supply system • Drainage system iii. Facility support condition <ul style="list-style-type: none"> • Toilet • Changing room • Shower • Emergency exit • Safety locker • Cleaning apparel iv. Air condition unit related to <ul style="list-style-type: none"> • Room temperature setting • Ventilation supply • filter mate • Safety devices procedure • Operating procedure electrical equipment 	i. Inspect ice treatment facilities & equipment condition ii. Service defective ice treatment facilities & equipment iii. Carry out ice treatment equipment default setting iv. Prepare ice treatment maintenance report	<u>Attitude:</u> i. Focus in checking of equipment set up ii. Resourceful in material set up preparation <u>Safety:</u> i. Used safe side area signage before performing set up work ii. Adherence of safety signage and precaution in recovery room <u>Environmental:</u> Practice 3R concept (Reused, Recycle, Reduce)	32	Lecture 8 Demonstration & Observation 24	i. Ice bath equipment & facilities condition and functionality inspected according to equipment manual ii. Ice bath equipment & facility servicing and repairing assessed and demonstrated iii. Ice bath equipment & facility default setting set and demonstrated iv. Ice bath room facility and equipment assessed and explained according room lay out plan v. Ice bath room facility equipment set up and functionality assessed and

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	v. Ice treatment room facilities & equipment servicing method such as <ul style="list-style-type: none"> • Equipment cleaning services • Equipment functionality • Storage procedure vi. Ice treatment room default setting such as <ul style="list-style-type: none"> • Sauna room floor plan • Sauna equipment lay out arrangement • Sauna facilities & equipment list vii. Ice treatment maintenance report <ul style="list-style-type: none"> • Maintenance report template/ format • Compliance works procedure • Spare usage • Storage location • Remarks 					demonstrated according sauna operation manual vi. Ice bath room facility equipment usages monitored and guided according to operation rules and regulation vii. Safety adherence of user during facilities & equipment utilization monitored viii. Ice bath room maintenance record updated and submitted within time frame

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
5. Perform recovery treatment room cleaning work	i. Cleaning work requirement <ul style="list-style-type: none"> • Cleaning location • Manual cleaning method • Machine cleaning method • Building floor plan ii. Cleaning tools and material such as <ul style="list-style-type: none"> • Type of solvent • Paint remover • Glass cleaner • Chemical cleaning • Manual cleaning tools • Machineries cleaning tool iii. Cleaning method such as <ul style="list-style-type: none"> • Wipe up pool surface • Mop up • Cleaning machineries handling procedure • Cleaning procedure. iv. Waste handling procedure	i. Identify recovery treatment room cleaning work requirement ii. Prepare recovery treatment room cleaning tools and material iii. Execute recovery treatment room cleaning work iv. Arrange recovery room waste handling	<u>Attitude:</u> <ol style="list-style-type: none"> Resourceful in preparing cleaning material Details in cleanliness inspection on room surface and facilities <u>Safety:</u> <ol style="list-style-type: none"> Used safe side area signage before performing daily work Comply room maintenance safety precaution <u>Environmental:</u> <ol style="list-style-type: none"> Practice 3R concept (reused, recycle, reduce) 	40	Lecture 10 Demonstration & Observation 30	i. Cleaning activities listed and explained ii. Cleaning material and tools selected and demonstrated iii. Recovery treatment room cleaning service assessed and demonstrated. iv. Cleaned recovery treatment room cleanliness assessed and explained according recovery room standard guideline v. waste handling activities assessed and explained

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Waste collection • Pack and throw method • Dustbin arrangement • 3R method (reuse, recycle and reduce) and compliance procedure 					

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Recovery centre room layout plan	1:5
2. Sauna room	1:25
3. Jacuzzi pool	1:25
4. Ice bath Tab	1:25
5. Safety Signage	1;5
6. Cleaning detergent	As required
7. Cleaning machine	As required
8. Cleaning tool	1:1
9. Ice bath material	1:1
10. Salt	As required
11. Maintenance schedule (sample)	As required
12. Maintenance report (sample)	1:1
13. Work schedule (daily)	1:1
14. Set up plan (sample)	1:5
15. Towel	1:1
16. Sauna stone	1:1
	As required

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1. Gil Fried Managing Sport Facilities - Human Kinetics Publishers. ISBN-13: 9780736082907
2. Occupational Safety and Health Act 1994 (Act 514), Regulations & Orders, International Law Book Services, ISBN 967-89-1502
3. Geraint John, Kit Campbell, Sport Council (Great Britain). Technical Unit for Support, (1996) Indoor Sports: Handbook of Sports and Recreational Building Design, ISBN 0750612940
4. Richard F. Mull, Brent A. Beggs, Mick Renneisen (2009), Recreation Facility Management: Design, Development, Operations, and Utilization, Human Kinetics, ISBN 0736070028, 9780736070027
5. Sawyer, Thomas (2005), Facility Design and Management for Health Fitness, Physical Activity, Recreation and Sports Facility Development, Sagamore Publishing, Champaign.

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	WATER SPORT FACILITIES & EQUIPMENT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to ensure that water sport platform are kept in good working order, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare water sport facilities & equipment maintenance schedule • Perform water sport equipment maintenance activities • Set up facilities and equipment based on water sport event 						
PRE-REQUISITE (if applicable)							
COMPETENCY UNIT ID	HT-093-3:2016-E01	LEVEL	3	TRAINING DURATION	110	SKILL CREDIT	11
Work Activities	Related Knowledge	Related Skills		Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
1. Prepare water sport facilities & equipment maintenance schedule	i. The objective of water sport facilities & equipment maintenance ii. Types of water sport equipment <ul style="list-style-type: none"> • Type of water sport manual equipment operation such as rowing, sailing, 	i. Identify water sport equipment maintenance requirement ii. Identify numbers and type of maintenance facilities & equipment defect iii. Select facilities & equipment		<u>Attitude:</u> i. Resourceful in preparing water sport facilities & equipment maintenance schedule <u>Environmental:</u> i. Practice paperless documentation	30	Lecture 8 Demonstration & Observation 22	i. Type and scope of water sport equipment maintenance determined ii. Numbers and type of defect equipment for maintenance determined

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>scuba diving, snorkelling, surfing, , wakeboarding, water-skiing and windsurfing event</p> <ul style="list-style-type: none"> • Type of water sport motorise operation such as boating and jet ski <p>iii. Types of water sport facilities such as</p> <ul style="list-style-type: none"> • Water sport platform • Sitting bench, • Boat house • Toilet • Changing room • Safety Signage <p>iv. Type maintenance such as</p> <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) 	<p>maintenance references and manual</p> <p>iv. Produce water sport facilities & equipment maintenance schedule</p>				<p>according to equipment maintenance report</p> <p>iii. Equipment maintenance references and manual identified and selected for maintenance schedule preparation</p> <p>iv. Maintenance type, frequency and location of equipment schedule produced according maintenance requirement</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	v. Facilities & equipment maintenance references and manual <ul style="list-style-type: none"> • Water sport standard guideline • Servicing manual • Manufacturer operation manual • Maintenance logbook • Previous maintenance report vi. Facilities equipment safety maintenance by laws vii. Water sport facilities & equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform water sport equipment maintenance activities	i. Platform condition such as <ul style="list-style-type: none"> Type of event location Equipment set up Facilities set up Safety precaution ii. Sport water equipment condition such as <ul style="list-style-type: none"> Type of water sport equipment Indoor water sport event equipment Outdoor water sport event equipment iii. Sport water facilities condition such as <ul style="list-style-type: none"> Type of water sport platform Indoor water sport event facilities Outdoor water sport event facilities Fitted water sport facilities iv. Water sport range maintenance record content such as <ul style="list-style-type: none"> Maintenance report template/ format 	i. Assess water sport platform maintenance work ii. Service water sport facilities & equipment iii. Arrange water sport facilities maintenance iv. Prepare water sport maintenance report	<u>Attitude</u> <ol style="list-style-type: none"> Focus in inspecting surface level condition Responsible in field lines and spot marking cleanliness <u>Safety</u> <ol style="list-style-type: none"> Follow safety rule in servicing and repairing of sport equipment Adhere safety signage notification <u>Environmental</u> <ol style="list-style-type: none"> Maintains environment cleanliness 	40	Lecture 10 Demonstration & Observation 30	i. Water sport platform condition inspected and assessed according to standard levelling specification ii. Water sport equipment and machine serviced and repaired according to equipment servicing manual iii. Water sport facilities support serviced and repaired according to equipment servicing manual iv. Water sport safety equipment and accessories checked and replaced according to water sport

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Compliance works procedure • Spare usage • Storage location Remarks					event and platform lay out plan v. Water sport maintenance record updated and submitted within time frame

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Set up facilities and equipment based on water sport event	<p>i. Water sport event set up plan such as</p> <ul style="list-style-type: none"> Type of water sport event equipment Specification of water sport event equipment Type of facilities related to water sport even Water sport event standard guideline <p>ii. Water sport platform facilities and safety signage placement such as</p> <ul style="list-style-type: none"> Bench seating Water sport accessories (e.g. tent, flags, net, ball, line rope and etc. Safety precaution display manual score board Type of PA system Transportation Storage requirement <p>iii. Water sport safety practice</p>	<p>i. Arrange sport water sport facilities and equipment event set up</p> <p>ii. Arrange bench seating and safety signage placement</p> <p>iii. Assessed water sport platform safety prevention preparation</p> <p>iv. Store water sport facilities & equipment</p> <p>v. Update water sport facilities & equipment inventory record</p>	<p><u>Attitude:</u></p> <p>i. Focus in checking of equipment set up</p> <p>ii. Resourceful in material set up preparation</p> <p><u>Safety:</u></p> <p>i. Used safe side area signage before performing set up work</p> <p>ii. Adherence of safety signage and precaution in water sport range platform</p> <p><u>Environmental:</u></p> <p>i. Practice 3R concept (Reused, Recycle, Reduce)</p>	40	<p>Lecture 10</p> <p>Demonstration & Observation 30</p>	<p>i. Water sport equipment and machine determined and properly arranged according event standard guideline</p> <p>ii. Water sport support facilities determined and properly arranged according event standard guideline</p> <p>iii. Water sport bench seating arranged and safety signage placed according to event standard guide line</p> <p>iv. Manual score board and PA system functionality tested and</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • General water sport application such as permit, insurance, licencing) • Equipment safety handling • Water sport platform regulation such as entering procedure, performing and exiting procedure iv. Storage equipment information such as <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Transportation requirement • Storage procedure v. Inventory record content such as <ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger Inventory procedure 					<p>placed according to event standard guide line and lay out plan</p> <p>v. Safety adherence on water sport facilities set up applied according to safety regulation procedure</p> <p>vi. Facilities & equipment condition after usage inspected and stored according to storage procedure</p> <p>vii. Type, numbers and condition of returned shooting facilities & equipment recorded</p>

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Water sport layout plan	1:5
2. Water sport equipment	1:5
3. Water sport facilities	1:5
4. Safety Signage	1:1
5. Maintenance schedule (sample)	1:1
6. Maintenance report (sample)	1:1
7. Work schedule (daily)	1:1
8. Clearance permit of contractor (sample)	1:1
9. Maintenance kits ,	1:1
10. Cleaning materials	1:1
11. Measuring tools	1:1
12. Inspection checklist	1:1
13. Makers specification data	1:1
14. Seating bench	1:5
15. Safety fence	1:5
16. Manual score board	1:5
17. PA system	1:5

REFERENCES

1. Gil Fried Managing Sport Facilities - Human Kinetics Publishers. ISBN-13: 9780736082907
2. Occupational Safety and Health Act 1994 (Act 514), Regulations & Orders, International Law Book Services, ISBN 967-89-1502
3. Richard F. Mull, Brent A. Beggs, Mick Renneisen (2009), Recreation Facilities Management: Design, Development, Operations, and Utilization, Human Kinetics, ISBN 0736070028, 9780736070027
4. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594
5. Sawyer, Thomas (2005), Facilities Design and Management for Health Fitness, Physical Activity, Recreation and Sports Facilities Development, Sagamore Publishing, Champaign.

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	AIR SPORT FACILITIES & EQUIPMENT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to ensure that air sport platform are kept in good working order, sport tournament or event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare air sport facilities & equipment maintenance schedule • Perform air sport facilities & equipment maintenance activities • Set up air sport facilities & equipment based on air sport event 						
PRE-REQUISITE (if applicable)							
COMPETENCY UNIT ID	HT-093-3:2016-E02	LEVEL	3	TRAINING DURATION	110	SKILL CREDIT	11
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare air sport facilities & equipment maintenance schedule	i. The objective of air sport facilities & equipment maintenance ii. Types of air sport equipment <ul style="list-style-type: none"> • Type of air sport manual equipment operation such as aerobatics, 	i. Identify air sport equipment maintenance requirement ii. Identify numbers and type of maintenance facilities & equipment defect iii. Select facilities & equipment	<u>Attitude:</u> i. Resourceful in preparing air sport facilities & equipment maintenance schedule <u>Environmental:</u> i. Practice paperless documentation	30	Lecture 8 Demonstration & Observation 22	i. Type and scope of air sport equipment maintenance determined ii. Numbers and type of defect equipment for maintenance determined	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	aeromodelling, ballooning, gliding, hang gliding, <ul style="list-style-type: none"> • Type of air sport motor operation such as human powered aircraft, parachuting and parasailing iii. Types of air sport facilities such as <ul style="list-style-type: none"> • Air sport platform • Seating bench, • Toilet • Changing room • Changing room • Safety Signage iv. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) v. Facilities & equipment	maintenance references and manual iv. Produce air sport facilities & equipment maintenance schedule				according to equipment maintenance report iii. Equipment maintenance references and manual identified and selected for maintenance schedule preparation iv. Maintenance type, frequency and location of equipment schedule produced according maintenance requirement

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	maintenance references and manual <ul style="list-style-type: none"> • Air sport standard guideline • Servicing manual • Manufacturer operation manual • Maintenance logbook • Maintenance report vi. Facilities equipment safety maintenance by laws vii. Air sport facilities & equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform air sport facilities & equipment maintenance activities	i. Platform condition such as <ul style="list-style-type: none"> Type of event location Equipment set up Facilities set up Safety precaution ii. Sport air equipment condition such as <ul style="list-style-type: none"> Indoor air sport event equipment Outdoor air sport event equipment iii. Sport air facilities condition such as <ul style="list-style-type: none"> Type of air sport platform Indoor event facilities Outdoor event facilities iv. Air sport range maintenance record content such as <ul style="list-style-type: none"> Template/ format Compliance works Spare usage Storage location Remarks 	i. Assess air sport platform maintenance work ii. Service air sport facilities & equipment iii. Arrange air sport facilities maintenance iv. Prepare air sport maintenance report	<u>Attitude</u> <ol style="list-style-type: none"> Focus in inspecting surface level condition Responsible in field lines and spot marking cleanliness <u>Safety</u> <ol style="list-style-type: none"> Follow safety rule in servicing and repairing of sport equipment Adhere safety signage notification <u>Environmental</u> <ol style="list-style-type: none"> Maintains environment cleanliness 	40	Lecture 10 Demonstration & Observation 30	i. Air sport platform condition inspected and assessed according to standard levelling specification ii. Air sport equipment and machine serviced and repaired according to equipment servicing manual iii. Air sport facilities support serviced and repaired iv. Air sport safety equipment and accessories checked and replaced v. Air sport maintenance record updated and submitted within time frame

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Set up air sport facilities & equipment based on air sport event	<p>i. Air sport event set up plan such as</p> <ul style="list-style-type: none"> Type of air sport event equipment Specification of air sport event equipment Type of facility related to air sport even Air sport event standard guideline <p>ii. Air sport platform facilities and safety signage placement such as</p> <ul style="list-style-type: none"> Bench seating Air sport accessories (e.g. tent, flags, net, ball, line rope and etc. Safety precaution display manual score board Type of PA system Transportation Storage requirement <p>iii. Air sport safety practice</p> <ul style="list-style-type: none"> General air sport 	<p>i. Arrange sport air sport facility and equipment event set up</p> <p>ii. Arrange bench seating and safety signage placement</p> <p>iii. Assessed air sport platform safety prevention preparation</p> <p>iv. Store air sport facilities & equipment</p> <p>v. Update air sport facilities & equipment inventory record</p>	<p><u>Attitude:</u></p> <p>i. Focus in checking of equipment set up</p> <p>ii. Resourceful in material set up preparation</p> <p><u>Safety:</u></p> <p>i. Used safe side area signage before performing set up work</p> <p>ii. Adherence of safety signage and precaution in air sport range platform</p> <p><u>Environmental:</u></p> <p>i. Practice 3R concept (Reused, Recycle, Reduce)</p>	40	<p>Lecture 10</p> <p>Demonstration & Observation 30</p>	<p>i. Air sport equipment and machine determined and properly arranged according event standard guideline</p> <p>ii. Air sport support facilities determined and properly arranged according event standard guideline</p> <p>iii. Air sport bench seating arranged and safety signage placed according to event standard guide line</p> <p>iv. Manual score board and PA system functionality tested and</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>application such as permit, insurance, licencing)</p> <ul style="list-style-type: none"> • Equipment safety handling • Air sport platform regulation such as entering procedure, performing and exiting procedure <p>iv. Storage equipment information such as</p> <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Transportation requirement • Storage procedure <p>v. Inventory record content such as</p> <ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger <p>Inventory procedure</p>					<p>placed according to event standard guide line and lay out plan</p> <p>v. Safety adherence on air sport facilities set up applied according to safety regulation procedure</p> <p>vi. Facilities & equipment condition after usage inspected and stored according to storage procedure</p> <p>vii. Type, numbers and condition of returned shooting facilities & equipment recorded</p>

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Air sport layout plan	1:5
2. Air sport equipment	1:5
3. Safety Signage	1:1
4. Maintenance schedule (sample)	1:1
5. Maintenance report (sample)	1:1
6. Work schedule (daily)	1:1
7. Clearance permit of contractor (sample)	1:1
8. Maintenance kits ,	1:1
9. Cleaning materials	1:1
10. Measuring tools	1:1
11. Inspection checklist	1:1
12. Makers specification data	1:1
13. Seating bench	1:1
14. Safety fence	1:5
15. Historical data of equipment and facility	1:5
16. Manual score board	1;5
17. PA system	1;5
18. spare & parts	As required

REFERENCES

1. Gil Fried Managing Sport Facilities - Human Kinetics Publishers. ISBN-13: 9780736082907
2. Occupational Safety and Health Act 1994 (Act 514), Regulations & Orders, International Law Book Services, ISBN 967-89-1502
3. Richard F. Mull, Brent A. Beggs, Mick Renneisen (2009), Recreation Facility Management: Design, Development, Operations, and Utilization, Human Kinetics, ISBN 0736070028, 9780736070027
4. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594
5. Sawyer, Thomas (2005), Facility Design and Management for Health Fitness, Physical Activity, Recreation and Sports Facility Development, Sagamore Publishing, Champaign.

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	EDUCATION & TRAINING						
SUB SECTOR	SPORT AND RECREATION						
JOB AREA	OUTDOOR AND INDOOR SPORT AND RECREATION						
NOSS TITLE	SPORT FACILITY MAINTENANCE SERVICES						
COMPETENCY UNIT TITLE	SHOOTING RANGE FACILITIES & EQUIPMENT MAINTENANCE SERVICES						
LEARNING OUTCOME	<p>The outcome of this competency to ensure that shooting range platform are kept in good condition, event run smoothly and prevent unplanned downtime in accordance with maintenance instruction manual and company's Standard Operating Procedure (SOP). Upon completion of this competency unit, trainees will be able to:-</p> <ul style="list-style-type: none"> • Prepare shooting range facilities and equipment maintenance schedule • Perform shooting range facilities and equipment maintenance activities • Set up shooting range platform facilities and equipment based on shooting event 						
PRE-REQUISITE (if applicable)	None						
COMPETENCY UNIT ID	HT-093-3:2016-E03	LEVEL	3	TRAINING DURATION	110	SKILL CREDIT	11
Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria	
1. Prepare shooting range facilities and equipment maintenance schedule	i. The objective of shooting range facilities and equipment maintenance ii. Types of shooting range equipment such as <ul style="list-style-type: none"> • Hand gun equipment • Shot gun equipment • Air gun equipment iii. Types of shooting range	i. Identify shooting range equipment and facilities maintenance requirement ii. Identify numbers and type of maintenance facilities and equipment defect iii. Select facilities and equipment maintenance	<u>Attitude:</u> i. Resourceful in preparation of maintenance schedule ii. Alert in shooting range maintenance signage and risk information	30	Lecture 8 Demonstration & Observation 22	i. Type and scope of shooting sport equipment and facilities maintenance determined ii. Numbers and type of defect equipment for maintenance determined	

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	facilities such as <ul style="list-style-type: none"> • Seating bench • Safety fence • Divider • Toilet and shower • Changing room • Safety Signage iv. Type maintenance such as <ul style="list-style-type: none"> • Reactive maintenance (corrective) • Preventive maintenance (scheduled) • Predictive maintenance (time based) v. Facilities and equipment maintenance references and manual <ul style="list-style-type: none"> • Shooting platform standard specification • Servicing manual • Manufacturer operation manual • Maintenance logbook 	references and manual <ul style="list-style-type: none"> iv. Produce shooting range facilities and equipment maintenance schedule 	<u>Environmental:</u> <ul style="list-style-type: none"> i. Paperless in preparing documentation 			<ul style="list-style-type: none"> according to equipment maintenance report iii. Equipment maintenance references and manual identified and selected for maintenance schedule preparation iv. Maintenance type, frequency and location of equipment schedule produced according maintenance requirement

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<ul style="list-style-type: none"> • Previous maintenance report vi. Facilities equipment safety maintenance by laws vii. Shooting range facilities and equipment maintenance schedule content such as <ul style="list-style-type: none"> • Equipment name • Location • Servicing frequency • Date of maintenance • Person in-charge • Remarks 					

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
2. Perform shooting range facilities and equipment maintenance activities	i. Platform condition such as <ul style="list-style-type: none"> • Type of event location • Equipment set up • Facilities set up • Safety precaution ii. Sport handgun equipment condition such as <ul style="list-style-type: none"> • Type of handgun • Indoor shooting event equipment • Outdoor shooting event equipment iii. Sport shotgun equipment condition such as <ul style="list-style-type: none"> • Type of shotgun • Indoor shooting event equipment • Outdoor shooting event equipment iv. Sport airgun equipment condition such as <ul style="list-style-type: none"> • Type of airgun • Indoor shooting event equipment • Outdoor shooting event equipment v. Shooting gun calibration	i. Assess shooting platform maintenance work ii. Check physical condition of sport handgun equipment for wear & tear iii. Check physical condition of sport shotgun equipment for wear & tear iv. Check physical condition of sport airgun equipment for wear & tear v. Arrange sport gun calibration servicing vi. Prepare shooting maintenance report	<u>Attitude</u> i. Details in shooting range maintenance work deployment operation ii. Responsible in shooting facilities and equipment for maintenance preparation <u>Safety</u> i. Adhere shooting safety signage notification ii. Comply shooting range maintenance safety precaution <u>Environmental</u> i. Maintains environment cleanliness	40	Lecture 10 Demonstration & Observation 30	i. Shooting platform condition assessed and explained according to standard levelling specification, ii. Handgun equipment and component serviced and functionality test according to equipment servicing manual iii. Shotgun equipment and component serviced and functionality test according to equipment servicing manual iv. Air gun equipment and component serviced and functionality test according to equipment

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>such as</p> <ul style="list-style-type: none"> • Type of gun • Gun calibration record • Serviceability certificate <p>vi. Shooting range maintenance report content such as</p> <ul style="list-style-type: none"> • Maintenance report template/ format • Compliance works procedure • Spare usage • Storage location <p>Remarks</p>					<p>servicing manual</p> <p>v. Required calibration of shooting gun proposed to superior for third party servicing</p> <p>vi. Third party calibration servicing coordinated according to type of shooting gun</p> <p>vii. Air sport facilities support serviced and repaired according to equipment servicing manual</p> <p>viii. Air sport maintenance record updated and submitted within time frame</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Set up shooting range platform facilities and equipment based on shooting event	<p>i. Shooting handgun event set up plan such as</p> <ul style="list-style-type: none"> Type of handgun event Specification of handgun event equipment Type of facilities related to handgun event Handgun event standard guideline <p>ii. Shooting shotgun event set up plan such as</p> <ul style="list-style-type: none"> Type of shotgun event Specification of shotgun event equipment Type of facilities related to shotgun event Jumping event standard guideline <p>iii. Shooting airgun event set up plan such as</p> <ul style="list-style-type: none"> Type of airgun event Specification of airgun event 	<p>i. Arrange sport shooting handgun facilities and equipment event set up</p> <p>ii. Arrange sport shooting airgun facilities and equipment event set up</p> <p>iii. Arrange sport shooting airgun facilities and equipment event set up</p> <p>iv. Arrange bench seating and safety signage placement</p> <p>v. Arrange score board and PA system installation</p> <p>vi. Assessed shooting range safety prevention preparation</p> <p>vii. Store shooting facilities and equipment</p> <p>viii. Update shooting facilities and equipment inventory record</p>	<p><u>Attitude:</u></p> <p>i. Focus in checking of equipment set up</p> <p>ii. Resourceful in material set up preparation</p> <p><u>Safety:</u></p> <p>i. Used safe side area signage before performing set up work</p> <p>ii. Adherence of safety signage and precaution in shooting range platform</p> <p><u>Environmental:</u></p> <p>i. Practice 3R concept (Reused, Recycle, Reduce)</p>	40	<p>Lecture 10</p> <p>Demonstration & Observation 30</p>	<p>i. Sport shooting handgun event identified according to event requirement</p> <p>ii. Sport shooting shotgun event identified according to event requirement</p> <p>iii. Sport shooting airgun event identified according to event requirement</p> <p>iv. Shooting range facilities and equipment checked and tallied according shooting event requirement</p> <p>v. Shooting platform facilities and equipment set up and</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	<p>equipment</p> <ul style="list-style-type: none"> • Type of facilities related to airgun even • Airgun event standard guideline <p>iv. Shooting range facilities and safety signage placement such as</p> <ul style="list-style-type: none"> • Bench seating • Fix shooting facilities (e.g. target points, shooting target, flags, and etc. • Safety precaution display • Score board operation handling such as • Type of PA system <p>v. Shooting range safety practice</p> <ul style="list-style-type: none"> • General shooting application such as permit, insurance, licencing) • Gun safety handling • Shooting platform regulation such as 					<p>functionality tested according event requirement</p> <p>vi. Safety adherence of user during facilities and equipment utilization assessed and demonstrated according safety regulation procedure</p> <p>vii. Facilities and equipment condition after usage inspected and stored according to storage procedure</p> <p>viii. Type, numbers and condition of returned shooting facilities and equipment recorded</p>

Work Activities	Related Knowledge	Related Skills	Attitude/Safety/ Environmental	Training Hours	Delivery Mode	Assessment Criteria
	entering procedure, performing and exiting procedure vi. Storage equipment information such as <ul style="list-style-type: none"> • Quantity item • Equipment specification data • Transportation requirement • Storage procedure vii. Inventory record content such as <ul style="list-style-type: none"> • Type equipment • Numbers of equipment • Condition of equipment • Type of ledger Inventory procedure 					according to inventory procedure

Employability Skills

Core Abilities	Social Skills
<p>01.01 Identify and gather information. 01.02 Document information procedures or processes. 01.03 Utilize basic IT applications. 02.01 Interpret and follow manuals, instructions and SOP's. 02.03 Communicate clearly. 02.04 Prepare brief reports and checklist using standard forms. 02.05 Read/Interpret flowcharts and pictorial information. 03.01 Apply cultural requirement to the workplace. 03.02 Demonstrate integrity and apply practical practices. 03.03 Accept responsibility for own work and work area. 03.04 Seek and act constructively upon feedback about work performance. 03.05 Demonstrate safety skills. 03.06 Respond appropriately to people and situations. 03.07 Resolve interpersonal conflicts. 06.01 Understand systems. 06.02 Comply with and follow chain of command. 06.03 Identify and highlight problems. 06.04 Adapt competencies to new situations/systems. 01.04 Analyse information. 03.08 Develop and maintain a cooperation within work group. 04.01 Organize own work activities. 04.02 Set and revise own objectives and goals. 04.03 Organize and maintain own workplace. 04.04 Apply problem solving strategies. 04.05 Demonstrate initiative and flexibility.</p>	<ol style="list-style-type: none"> 1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritising 7. Self-discipline 8. Teamwork

Tools, Equipment and Materials (TEM)

ITEMS	RATIO (TEM : Trainees)
1. Shooting range layout plan	1:5
2. Type of sport gun	1:5
3. Type is air pistol	1:5
4. Firing target	As required
5. Signal flag	1:1
6. Safety Signage	1:1
7. Maintenance report (sample)	1:1
8. Work schedule (daily)	1:1
9. Clearance permit of contractor (sample)	1:1
10. Cleaning materials	1:1
11. Calibration tool	1:5
12. Inspection checklist	1:5
13. Makers specification data	1:5
14. Ledger (sample)	1:5
15. Set up plan (sample)	1:5
16. Manual score board	1:1
17. PA system	1:5
18. Communication equipment	1:5

REFERENCES

1. Gil Fried Managing Sport Facilities - Human Kinetics Publishers. ISBN-13: 9780736082907
2. Shooting Range Coordinator, DNR Division of Enforcement (2003), Outdoor Shooting Ranges Best Practices
3. Occupational Safety and Health Act 1994 (Act 514), Regulations & Orders, International Law Book Services, ISBN 967-89-1502
4. Richard F. Mull, Brent A. Beggs, Mick Renneisen (2009), Recreation Facilities Management: Design, Development, Operations, and Utilization, Human Kinetics, ISBN 0736070028, 9780736070027
5. Amy R. Hurd, Denise M. Anderson (2010), The Park and Recreation Professional's Handbook, Human Kinetics, ISBN 073608259X, 9780736082594
6. Sawyer, Thomas (2005), Facilities Design and Management for Health Fitness, Physical Activity, Recreation and Sports Facilities Development, Sagamore Publishing, Champaign.

SUMMARY OF TRAINING DURATION FOR SPORT FACILITY MAINTENANCE SERVICES (LEVEL 3)

CU ID	COPETENCY UNIT TITLE	WORK ACTIVITIES	RELATED KNOWLEDGE	RELATED SKILLS	HOURS	TOTAL
			(A)	(B)	(A+B)	(HOURS)
1	Sport track & field facilities & equipment maintenance services	Prepare track & field facilities and equipment maintenance schedule	6	18	24	110
		Perform track & field facilities and equipment maintenance activities	6	18	24	
		Set up track & field facilities and equipment based on sport event	8	22	30	
		Inspect track & field event facilities and equipment utilization	8	24	32	
2	Sport natural grass field maintenance services	Prepare natural grass field maintenance schedule	6	20	26	130
		Perform natural grass field cutting work	8	24	32	
		Perform natural grass field fertilizing work	8	24	32	
		Perform field irrigation activities	10	30	40	
3	Sport synthetic/artificial grass field maintenance services	Prepare synthetic/artificial grass field maintenance schedule	6	20	26	130
		Perform synthetic/artificial grass field top dressing (granules)	10	30	40	
		Perform synthetic/artificial grass field replacement work	8	24	32	
		Maintain field water sprinkle system	8	24	32	
4	Sport equipment storage & maintenance services	Inspect sport facilities & equipment condition	6	18	24	120
		Perform sport facilities & equipment preservation	6	18	24	
		Propose sport facilities & equipment for disposal	8	24	32	
		Coordinate facilities & equipment storage	10	30	40	
5	Indoor/outdoor sport facilities & equipment maintenance services	Prepare indoor/outdoor facilities & equipment maintenance schedule	6	18	24	150
		Perform indoor facilities & equipment maintenance activities	6	18	24	
		Perform outdoor facilities & equipment maintenance activities	8	24	32	
		Set up indoor/outdoor sport facilities & equipment based on sport event	8	22	30	
		Inspect indoor/outdoor sport facilities & equipment utilization	10	30	40	
6	Fitness centre facilities & equipment maintenance services	Prepare fitness centre facilities & equipment maintenance schedule	6	16	22	90
		Perform fitness centre facilities & equipment maintenance activities	8	22	30	
		Set up fitness centre facilities & equipment	10	28	38	
7	Swimming pool facilities & equipment maintenance services	Prepare swimming pool facilities & equipment maintenance schedule	8	24	32	160
		Perform pool cleaning works	8	24	32	
		Set up pool sport facilities & equipment based on sport event	8	24	32	
		Coordinate pool water circulation system maintenance	8	24	32	
		Coordinate electrical supply maintenance	8	24	32	
8	Scoreboard and spot light maintenance services	Prepare scoreboard and spot light maintenance schedule	6	20	26	130
		Perform scoreboard system maintenance activities	8	24	32	
		Set up scoreboard system and component based on sport event	8	24	32	
		Coordinate spot light defective bulb replacement	10	30	40	

9	Communication & PA System maintenance services	Prepare communication & PA system maintenance schedule	6	20	26	90
		Perform communication & PA system maintenance activities	8	24	32	
		Set up communication & PA system component based on sport event	8	24	32	
10	Recovery centre maintenance services	Prepare recovery centre facilities & equipment maintenance schedule	8	24	32	160
		Service sauna facilities & equipment	8	24	32	
		Service SPA/Jacuzzi facilities & equipment	6	18	24	
		Service ice bath facilities & equipment	8	24	32	
		Perform recovery treatment room cleaning work	10	30	40	
TOTAL HOURS (Core Competencies)			318	952	1270	1270
E1	Water sport facilities & equipment Maintenance Services	Prepare water sport facilities & equipment maintenance schedule	8	22	30	110
		Perform water sport equipment maintenance activities	10	30	40	
		Set up facilities and equipment based on water sport event	10	30	40	
E2	Air sport facilities & equipment maintenance services	Prepare air sport facilities & equipment maintenance schedule	8	22	30	110
		Perform air sport facilities & equipment maintenance activities	10	30	40	
		Set up air sport facilities & equipment based on air sport event	10	30	40	
E3	Shooting range facilities & equipment maintenance services	Prepare shooting range facilities and equipment maintenance schedule	8	22	30	110
		Perform shooting range facilities and equipment maintenance activities	10	30	40	
		Set up shooting range platform facilities and equipment based on shooting event	10	30	40	
TOTAL HOURS (Elective Competencies)			84	246	330	330