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CURRICULUM, TRAINING AND ASSESSMENT GUIDE

Competency Unit   : Perform Industrial Audiometric Screening

TSC Title   : Perform Industrial Audiometric Screening

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Purpose of Guide

This Guide is designed for accredited Training Providers and Adult Educators who are responsible for the design and delivery WSQ Perform Industrial Audiometric Screening under the Generic Manufacturing Skills (GMS) WSQ Framework. This Guide aims to provide essential curriculum, training and assessment design advisory information, to guide developers, trainers and assessment in the interpretation and translation of competency standards into training and assessment programme. The Guide also contains training and assessment requirements stipulated by industry, and WSQ accreditation information for compliance. It is divided into 2 parts:

Part I - Details specific recommendations and advice for programme developers of "Perform Industrial Audiometric Screening".

Part II - Provides a broad spectrum of information about WSQ and related components relevant to the "Perform Industrial Audiometric Screening" programme.

PART I

WSQ
Perform Industrial Audiometric Screening

CHAPTER 1: WSQ PERFORM INDUSTRIAL AUDIOMETRIC SCREENING

1.1 Overview

On completion of this unit, learners will have knowledge and skills in performing pre-employment and periodic audiometric examinations on persons who are exposed to excessive noise in the workplace.

1.2 Key Features of WSQ Perform Industrial Audiometric Screening

The Performance Statements (PS) covered are:

PS1. Comprehend legal requirements on noise in the workplace
PS2. Obtain an occupational noise exposure history
PS3. Assess the degree and nature of hearing loss through basic audiometric tests based on international standard methods and procedures
PS4. Interpret an audiogram
PS5. Provide training and advice on use, maintenance and care of personal hearing protectors for persons exposed to excessive noise

Why this Course?

The "Perform Industrial Audiometric Screening" course aims to provide learners with the knowledge and skills in performing pre-employment and periodic audiometric examinations on persons who are exposed to excessive noise in the workplace.

1.4 Target Audience

1.4.1 The "Perform Industrial Audiometric Screening" is an approved training course for individuals who need to carry out pre-employment and periodic audiometric examinations on persons who are exposed to excessive noise in the workplace.

1.4.2 Learners are assumed to have:
- Employability Skills (ES) Workplace Literacy level 5 and above

- Be able to manipulate numbers at a proficiency level equivalent to ES Workplace Numeracy level 5 and above

1.5 Recommended Learning Hours (RLH)

- RLH = 14 Hours (Training Hours: 12, Assessment Hours 2)

- The RLH takes into account the time required for direct learning activities. Direct learning is broadly defined as trainer/assessor-directed and involves purposeful instructions given to trainees to complete as part of instructional design of a structured facilitated training and assessment programme.

Activity	Duration	Remarks
Facilitated Learning (Theory and practical)	12 hours	Theory and practical
Assessment	2 hours	Written: 1.25 hour Practical: 0.75 hours

- Facilitated training and assessment
- E-learning[1] and assessment

1.6 Recommended Class Size, and Learner-Trainer Ratio

- Recommended Class Size: 16
- Trainer-Learner ratio: 1: 16 (Class room) 1:4 (Practical)
- Attendance Requirements: 75% for classroom and practical sessions

1.7 Recommended Assessor to Candidate Ratio

- Written Assessment: 1 : 16 (Class size)
- Practical Performance: 1 : 4 (Class size)

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[1] For E-learning to be considered as "directed learning", the learning progress of trainees should be tracked via audit trail, progress reports, etc.

CHAPTER 2: TYPES OF PROGRAMME

2.1   Programme Structure

2.1.1   This unit covers the following underpinning knowledge item which could be taught in the classroom via a combination of lectures, discussions and case-studies.

UK1.   Safe work practices and regulatory requirement related to Noise Induced Deafness

UK2.   Basic ear anatomy, physiology and pathology and occupational noise history

UK3.   Audiometer, frequency and intensity concepts

UK4.   Audiometric testing methods and procedures

UK5.   Sources of error and their avoidance

UK6.   Interpretation of audiograms

UK7.   Hearing protection devices

UK8.   Counselling on use of hearing protection and prevention of noise induced deafness for persons exposed to excessive noise

2.1.2   The unit also covers the following Performance Statements: These would best be taught via a combination of **lecture, demonstrations and hands-on practice.**

PS1.   Comprehend legal requirements on noise in the workplace

PS2.   Obtain an occupational noise exposure history

PS3.   Assess the degree and nature of hearing loss through basic audiometric tests based on international standard methods and procedures

PS4.   Interpret an audiogram

PS5.   Provide training and advice on use, maintenance and care of personal hearing protectors for persons exposed to excessive noise

CHAPTER 3: KEY DELIVERY ADVICE

3.1   Content Coverage

In developing the programme for any "Perform Industrial Audiometric Screening" competency unit, TPs should always make cross references to the Performance Statements (PS), Underpinning Knowledge (UK), Range and Application and Evidence Sources sections as stipulated in the "Perform Industrial Audiometric Screening" National Competency Standard.

The components of the Competency Standard and the interpretations are briefly explained here.

For example,

The Range and Application and Evidence Sources reference to the Performance statements and/or Underpinning Knowledge is usually accompanied by the instructions "may include" or "must include":

"May include"
-   Indicates that training providers are required to cover some (to indicate percentage if relevant) of the suggested Range and Application items listed when developing the "Perform Industrial Audiometric Screening" programme.

-   The training provider may choose to add more Range and Application items related to the corresponding Performance Statements and/or Underpinning Knowledge as part of their "Perform Industrial Audiometric Screening" programme development.

"Must include"
- Indicates that training providers are required to cover all of Range and Application items listed when developing courseware.

-   The training provider may choose to add more Range and Application items related to the corresponding Performance Statements and/or Underpinning Knowledge as part of their "Perform Industrial Audiometric Screening" programme development.

3.2   Sequence of Coverage

The following sequence is recommended:

Lesson No.	Content	Instructional Mode	Duration (Hours)
1	PS1. Comprehend legal requirements on noise in the workplace UK1. Safe work practices and regulatory requirement related to Noise Induced Deafness • Prevalence of Noise Induced Deafness as an occupational disease • Workplace Safety and Health Act • Workplace Safety and Health (Noise) Regulations • Factories (Medical Examinations) Regulations • Workplace Safety and Health (*Risk Management) Regulations • Workplace Safety and Health (Incident Reporting) Regulations • Work Injury Compensation Act and relevant sections of GATOID (A Guide to the Assessment of Traumatic Injuries and Occupational Diseases for Workmen's Compensation) • MOM Guidelines on Hearing Conservation Programme • Technical Advisory on Work in Noisy Environment • Noise Induced Deafness Prevention Programme • SS 549: 2009 Code of Practice for Selection, Use, Care and Maintenance of Hearing protectors • International or national standards on audiometric testing, audiometer calibration and testing environment	Theory	1.5
2	PS2. Obtain an occupational noise exposure history UK2. Basic ear anatomy, physiology and pathology and occupational noise history • Anatomy of ear • Physiology of hearing • Pathology of noise-induced deafness • Introduction to different types of hearing loss • Noise and its health effects • Obtaining an occupational noise exposure history	Theory	2
3	PS3. Assess the degree and nature of hearing loss through basic audiometric tests based on international standard methods and procedures UK3. Audiometer, frequency and intensity concepts UK4. Audiometric testing methods and procedures	Theory and Practical	5.5

	UK5. Sources of error and their avoidance • Introduction to audiometers • Features • Functions • Test environment • Daily checks • Nature of sound as categorised by pitch (freq) and loudness (dB level) • The Decibel scale • Audiogram of common sounds • Audiogram familiarisation • Air/bone conduction symbols • Hearing loss levels • Definition of hearing threshold • Initial Client Interaction • Client Instructions • Transducer placement • Testing method for Air Conduction and Bone Conduction using national or internationally accepted standards on methodology and procedures • Principles of masking • Practical demonstration • Plotting and recording of audiograms		
4	PS4. Interpret an audiogram UK6. Interpretation of audiograms • Types of audiogram findings • Diagnostic criteria for noise induced deafness	Theory	1
5	PS5. Provide training and advice on use, maintenance and care of personal hearing protectors for persons exposed to excessive noise UK7. Hearing protection devices • Hearing protection in the context of the hearing conservation programme • Types of hearing protection devices and their limitations • Criteria in selection of hearing protection devices • Proper technique in use of hearing protectors • Care and maintenance of hearing protection • Encouraging proper and consistent use	Theory	1
6	UK8. Counselling on use of hearing protection and prevention of noise induced deafness for persons exposed to excessive noise • Counseling on use of hearing protection and prevention of noise induced deafness for persons exposed to excessive noise	Theory	1

	Written Assessment	Theory	1.25
7	Practical Assessment	Practical	0.75
		Total	**14**

*The Risk Assessment/Management process should consider the management of infectious disease outbreak, employees' health (including mental well-being) and terrorist threats. Training Provider should take reference from the 3rd revision of the Code of Practice on Risk Management.

3.3   Recommended Learning Strategies and Methods

3.3.1 Curriculum developers are recommended to adopt the following structure for thinking about and planning a learning strategy:

- Summarise the learning strategy

- In this learning strategy, what learning principles are being applied?

- What learning theories or learning design theories underpin this strategy?

- How will this strategy resolve the identified learning problems? What is it about the learning strategy that will cause people to change in a way that resolves the learning problem?

- How would you describe the experience that learners will go through? How will this experience support their learning?

- What methods or tactics are most likely to be used to support this strategy?

- How will interface and media support this strategy?

- How will this strategy engage learners' interests?

- How will this strategy assess learners' progress or increased competence?

(Extracted from www.networked-learning.com, accessed 19 Sep 2010)

3.3.2 An example of instructional strategy selection for cognitive, affective and psychomotor domains is given in **Annex A**.

3.3.3 A non-exhaustive list of recommended delivery methods is provided below.

- Classroom instruction

- Case studies

- Videos[2] and photographs, other e-resources and instructional media

3.3.4 Where relevant and appropriate, the learning activities for the unit should be designed to shape or cultivate the expected attitudes of the candidates and to prepare them for their role in the sector.

3.3.5 To enhance the transfer of learning, an andragogical or adult-learning

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[2] Include a suitable video to demonstrate the impact and consequences of not wearing a harness properly, as a consequence of a fall.

approach to learning is encouraged in the development and delivery of the Competency Unit. Andragogical instructional techniques are designed with these factors in mind:

- Adults are self-directed

- Adults have acquired knowledge and experience through the workplace that can be utilised as a resource for learning

- Adults show a greater readiness to learn tasks that are relevant to their work roles

- Adults are motivated to learn in order to solve problems and address needs

- Adults expect to be able to apply what they learn

- Adults need to be challenged with varied strategies that maintain interest

3.3.6 This unit may be delivered in a combination of simulated environment and off-the-job.

- Content relating to underpinning knowledge and principles may be delivered off-the-job. Off-the-job delivery can be face-to-face in the classroom in a training organisation, or at a workplace venue. Classroom delivery should be interactive and learner-centred, using a range of activities and instructional methods.

- The practical aspects of the Competency Unit, however, should be delivered in simulated workplace settings.

3.3.7 All training delivery should be related to the normal work process and every effort should be made to link the acquisition and application of the knowledge, skills and attitudes to the workplace.

3.3.8 Suggestions for delivery of this Competency Unit are given below:

Competency	Instructional Methods	Remarks
Underpinning Knowledge	Lectures, discussions, case studies, problem-based learning, videos, e- learning resources	The knowledge component of this course is primarily focused on the requirements of: • Workplace Safety and Health Act • Workplace Safety and Health (Risk Management) Regulations • Workplace Safety and Health (Noise) Regulations • Factories (Medical Examinations) Regulations • Workplace Safety and Health (Incident Reporting) Regulations • Work Injury Compensation Act and relevant sections of GATOID (A Guide to the Assessment of Traumatic Injuries and Occupational Diseases for Workmen's Compensation) • SS 549: 2009 Code of Practice for Selection, Use, Care and Maintenance of Hearing protectors • MOM Guidelines on Hearing Conservation Programme • Technical Advisory on Work in Noisy Environment • Noise Induced Deafness Prevention Programme • National or Internationally accepted standards on audiometric test methods, calibration of audiometers and testing environment

Performance Statements	Lectures, demonstrations, practice	The demonstration and practice may include the following key skills: • Comprehend legal requirements on noise in the workplace • Obtain an occupational noise exposure history • Assess the degree and nature of hearing loss through basic audiometric tests based on international standard methods and procedures • Interpret an audiogram • Provide training and advice on use, maintenance and care of personal hearing protectors for persons exposed to excessive noise
Attributes	Discussions, modelling, sharing	A competent employee must have a sense of "safety awareness" and is expected to take personal responsibility for his own safety as well as look out for the safety of his co-workers and clients. The trainee should exercise care not only with the use of the delicate instruments involved but also with the client's ears. This is a very sensitive area of the body and great care must be shown when carrying out the audiometric test.

3.4 Trainer's Guide and Learner's Guide and Handouts

3.4.1 The TP is required to prepare a trainer's guide for the course. The guide provides the trainer with information on the course including:

- Course aim
- Learning objectives
- Target audience
- Assumed skills and knowledge
- Course duration
- Class size and approved facilitator/learner ratio
- Lesson plan
- Course contents and instructional materials according to the course requirements
- Training methodologies
- Training resource requirements

- Course administration instruction

3.4.2 The TP shall also facilitate the learning process by providing each learner with a learners' workbook/handouts to summarise (with illustrations, where possible) key learning points of all the topics covered in the syllabus. This may be in the form of drawings/illustrations rather than words.

3.4.3 The TP is required to submit a cross reference matrix (see **Annex B**) to show that the courseware submitted is aligned to the requirements of the competency standard.

3.4.4 The TP is to ensure that materials used for the training does not infringe on patent, design, copyright and intellectual property rights.

3.4.5 The TP shall maintain a version control of updates made to the course materials for verification by the relevant authorities.

3.5 Training Resources

3.5.1 Training Requirements:

- Training videos
- Copy of Workplace Safety and Health Act and all relevant subsidiary legislation, for reference
- Noise measuring instruments
- Photos/slides/pictures pertaining to the course
- Case studies relating to exposure to noise hazards (including examples and photographs of noisy processes, situations and equipment)
- Hearing protection devices
- Audiometers (1 audiometer : 2 trainees)
- Evaluation forms

3.5.2 Training Provider Requirements

Training Providers are required to fulfill the following requirements:
- ISO 29993 certification;
- bizSAFE Level 3 certification;
- Blended learning
  - Have developed an SOP to conduct online training and assessment (with online proctoring for supervisor and above courses) when required to do so.
  - For each WSH course, the Training Provider must have at least:
    a. 1 full time Principal/Director;
    b. 1 full time WSH Approved Adult Educator/ Trainer/Facilitators for each WSH course1; and
    c. 2 approved full time/associate Adult Educator/ Trainer/Facilitators for each of the language.

Training Providers are to inform the WSH Council when they withdraw their training provider status for any WSH course(s), or have their status suspended or terminated by any authority.

Training Providers are to comply with the instruction by either (i) SkillsFuture Singapore (SSG), Ministry of Manpower (MOM) or the WSH Council to stop conducting any WSH Course(s) when an investigation is ongoing, or a non-compliance is being verified. Further actions would be taken when fraudulent acts or significant non-compliances are established.

3.5.3 Total WSH Presentation Slides

Total WSH presentation slides will be issued upon approval of the Training Provider. The materials are provided strictly for the explicit use and guidance of training providers for the conduct of this course. Any other use of the materials or parts thereof, reproduction, publication, distribution, transmission, re-transmission, or storage in a retrieval system in any form, electronic or otherwise, for purposes other than that expressly stated above without the express permission of WSH Council is strictly prohibited.

3.6   Training Venue Requirements

This training requires special equipment and facilities.

3.6.1   TP shall ensure that the classroom used for the training has adequate seating for a class of 16. In addition, there must be sufficient sound-proof facilities provided to conduct the demonstration and practice of the hearing test.

3.6.2.   Classrooms should be equipped with projectors, whiteboards, flipcharts and training equipment relevant to the conduct of the course.

3.6.3.   The classroom must have adequate lighting and ventilation. Emergency exit routes must be clearly marked out and briefed to the course participants at the start of the course.

3.6.4   Unless prior approval has been granted by the CB, which had certified its WSH courses, each TP shall maintain and conduct its WSH course at its primary Training Venue. In addition, the TP shall ensure that the following are not shared with any other TP:
a) Their approved Training Venue/s; and
b) Any other equipment or loads, which are used for the conduct of the WSH course.

3.6.5   In the event, where the TP wishes to conduct its WSH theory course(s) at a venue, other than the approved Training Venue, the TP must inform the CB, which had certified its WSH course(s) at the approved Training Venue/s, of its intent to effect such a change, and it must also demonstrate to the CB that:
a) It has an approved Training Venue at the registered address;
b) That the proposed venue is conducive for learning; and
c) That there are no safety and health concerns in relation to the proposed venue/s.

The TP may conduct its WSH theory course(s) at a venue other than the approved Training Venue/s only after obtaining the CB's approval.

3.6.6   The requirement stated at Para 3.6.5 shall apply to a TP for single and multiple usage.

3.6.7   Where the CB has granted approval to the TP to conduct the WSH theory course(s) at an alternate venue, the TP must ensure that:
a) All training and assessment records are kept by the TP, for courses conducted, at the alternate venue. Such records shall include the following documents:
i. Photographs of the alternate venue;
ii. Photographs of the WSH theory course(s) being conducted at the alternate venue;
iii. Layout plan of the alternate venue; and
iv. Leasing documents;
b) The records mentioned in sub-paragraph 3.6.8(a) above, are continually updated;
c) The alternate venue is only used for the conduct of WSH theory course(s).

No practical training/assessment shall be allowed at the alternate venue, unless approval has been granted by the Authorities; and

d) The alternate venue is not occupied and or used by another TP or WSH approved training provider at any time.

3.6.8 The TP must ensure that all Training Venues (including alternate venues) have been approved by the Urban Redevelopment Authority (URA) or the Housing & Development Board ("HDB"), either as a Commercial School (theory based only) or for Industrial Training (theory and practical), before it applies to be certified by the CB. Note: Tenancy agreement (e.g. from JTC Corporation or other Developers) does not constitute a URA approval. Only correspondence with letterheads bearing the office of the relevant government authorities granting the approval shall be recognized.

3.6.9 Paragraph 3.6.8 shall not apply to TP who is applying for a once–off use of the theory training premises.

3.6.10 The TP is to note that a CB's approval of any practical training venue is conditioned upon its safe and adequacy of the training facilities and equipment. The TP shall comply with all relevant legislations including but not limited to legislations involving land use, building, fire and safety.

CHAPTER 4: KEY ASSESSMENT ADVICE

This chapter describes the following components:

A description on the general guidelines and requirements for conducting assessment is given in the reference WSQ resource websites in Part II of this document.

4.1 Recommended Assessment Strategies and Methods

4.1.1 There shall be a 1.25 hour written and 0.75 hour practical assessment at the end of the course.

S/N	Assessment Activity	Method/Format	Duration
1	Written Assessment (Closed book) – individual Assessor to Learners Ratio: 1:16	5 Short Answer Questions and 20 MCQs	1.25 hour
2	Practical Assessment Assessor to Learners Ratio: 1:4	Practical assessment on • Obtaining an occupational noise exposure history • Procedures in conducting an audiometric examination • Correct technique in use of hearing protection • Counselling on use, maintenance and care of personal hearing protectors (Note – all the above are to be included in the practical assessment)	0.75 hour
		Total Assessment Time	**2 hours**

4.2 Industry Requirements

• The learner must pass **BOTH** parts of the assessment in order to be issued with the certificate of successful completion. Failure to pass either of the assessments shall render a ""Not Yet Competent" outcome for the Learner and he must then re-attempt the course and assessments.

• MOM/WSH Council officers shall conduct audits with or without notice on WSQ WSH TPs

• To facilitate marking of the assessment papers, TPs shall install the Automated Marking System (AMS) and its associated hardware.

• The TP personnel who is authorised to use the AMS to scan and mark the test via AMS must also ensure that the assessment results are updated in SSG's Skills Connect system.

- To facilitate uploading of the assessment results, TPs shall install the Automated Marking System (AMS) and its associated hardware.

- The TP personnel who is authorised to use the AMS must also ensure that the assessment results are updated in SSG's TPGateway.

- TPs are to upload the test results to MOM/ WSH Council no later than 5 calendar days after completion of the courses. All errors must be rectified within 24 hours for re-submission of the affected results to MOM/ WSH Council via WSH TRS. This is in addition to the uploading of assessment results to SSG via TPGateway

- Authorities (i.e. MOM/WSH Council) may request from TPs information on the course. TPs are to ensure that the information given to the Authorities are accurate and updated.

Note: For system(s) or requirement(s) administered by the relevant authorities, i.e. MOM/WSH Council, the TP shall fulfil the requirements and follow up with the agencies accordingly.

4.3   Assessment Instruments and Tools

4.3.1 Assessments instruments and tools will be required to conduct the assessment planned. Examples of such templates include:

- An Evidence Sources Checklist to serve as a reporting snapshot of the types of evidence gathering that may be used.

- A Verbal Assessment Checklist to record answers to questions concerning Underpinning Knowledge if this is used as an alternative to written exercise.

- Written Assessment Checklists as an instrument for the recording of answers to questions concerning the performance statements and underpinning knowledge.

- A Recording and Reporting Assessment Table Format as an instrument for the concise recording of competency and re-assessment information concerning the Competency Unit.

4.4   Assessment Plan

4.4.1 General Guidelines on Practical /Written Assessment

4.4.1.1 The aim of the assessment plan is to determine the competency of the trainee to conduct audiometric examinations to fulfil the requirements of the Factories (Medical Examinations) Regulations upon successful completion of the IAC course. TPs are advised to prepare an assessment plan for each course.

4.4.2.2   The assessment plan must be directly related to all the learning objectives determined in the course. It comprises four main parts:

- Overview of the assessment tools and its duration

- Instructions for the conduct of the assessment

- Instruments or tools of assessment (Question paper, checklist)

- Assessment summary record

4.4.2.3 The assessment plan is subject to review on an annual basis by the TP to ensure that trainees are constantly kept current and competent to perform up to the industrial requirements.

4.4.2 Principles of Assessment

The assessment plan should be valid, reliable, fair and flexible.

- Valid – Are the assessment methods and tools appropriate and effective? Are the evidence collected relevant to the training?

- Reliability – Are the results consistent from one assessment to another?

- Fair – Are the assessment criteria clear? Do all the trainees know what to expect from the assessment? Will the assessment disadvantage any trainee? Do the trainees have any recourse for appeals?

- Flexibility – Can the assessment be used for multiple assessments? Are the assessment tools and methods uniform across different approaches and drawing on a range of different methods? Can they be used appropriately to the context, task and individual under assessment?

4.5 Conduct of Assessment

4.5.1 Assessment must be conducted strictly in accordance with the assessment plan. In particular, each candidate must complete all the assessment requirements in the time allocated.

4.5.2 A judgment on the competency of the candidate must only be made based on the evidence gathered. The evidence for each of the assessment instrument is given in the suggested response to the WT and the checklist accompanying the PP, RP and CS.

4.5.3 Each Learner is expected to complete and pass ALL the assessment requirements within the stipulated assessment time allocated. The learner shall be assessed either "Competent" or "Not Yet Competent".

4.5.4 Trainer and Assessor cannot be the same person for the same course, not even as assistant trainer or assessor.

4.5.5 All training records must be kept by TP for period of no less than 2 years for audit purpose.

4.5.6   Written Assessment
TP must adhere to the following guideline for the written assessment:

- Must administer a 5 short question answer and 20 multiple choice question (MCQ) test in 1.25 hour

- A closed book assessment

- There shall be a minimum of 2 sets of assessment question papers

- Learners shall be given alternate set of assessment question paper if only 2 sets are available.

- Approved trainer for class is not allowed to be the assessor for the assessment (same class)

- Assessment papers are to be issued in accordance to the course language registered for only. No mixed language assessment is permitted

- A certificate of successful completion or safety pass/card shall be issued to each learner who passes the assessment, by the TP

- Passing mark for the written assessment is 60%.

- The number of attempts a candidate is allowed to be assessed in the written assessment is ONE. The candidate certified "NOT YET COMPETENT" after the assessment, the candidate must be re-coursed.

4.5.7   Practical performance (PP)

This method is highly recommended for skills assessment. It can be matched very closely to the actual task to be performed by the individual on the job. Learners shall be assessed on the following:

- Conduct an audiometric test

4.6   Briefing to Candidate

4.6.1   The briefing to candidate is to explain the purpose and context of assessment to ensure that there are no surprises during the conduct of assessment

4.6.2   The briefing to candidate shall include the following:

- The assessment requirements and process, including clear instructions on each of the assessment adopted
- Candidates' rights and the appeal process for assessment outcome

4.6.3   During the briefing, assessors are to establish any special needs and how such needs will be addressed during the assessment.

4.6.4   Assessor must seek feedback and ascertain candidates' understanding

of the assessment requirements before the commencement of the assessment

4.7 Recording and Reporting of Assessment Outcome

4.7.1 All assessment outcomes must be accurately recorded in the assessment summary record form (see **Annex B**).

4.7.2 Assessment outcome will be communicated to the candidate at the end of the assessment.

4.7.3 The TP shall maintain a record of the assessment results for 2 years for audit purposes.

4.8 Issuance of "Safety Pass" and the "Certificate of Successful Completion"

4.8.1 "Safety Pass/Card" is to be issued, in accordance with the format shown in Annex C, to candidate who is assessed "Competent" in this Competency Unit for the SOC.

4.8.2 "Certificate of Successful Completion" is to be issued, in accordance with the format shown in Annex D, to candidate who is assessed "Competent" in this Competency Unit.

4.8.3 The issuance of the "Certificate of Successful Completion" is optional for LSPs/TPs who have already issued the "Safety Pass" to candidate who is assessed "Competent" in this Competency Unit.

CHAPTER 5: ADULT EDUCATOR REQUIREMENTS

A developer / trainer / assessor for this module shall possess all of the following:

5.1   Trainer and Assessor Requirements

A trainer and assessor of this course should possess all the following:
- Degree holder in audiology or similar fields with at least 3 years' experience in industrial audiometry/audiology; and
- Advanced Certificate in Training and Assessment (ACTA) or Advanced Certificate in Learning and Performance (ACLP) or Diploma in Adult Continuing Education (DACE) or Diploma in Design and Development of Learning for Performance (DDDLP).
- Specialist Diploma in Workplace Safety & Health

All trainers/adult educators are required to attain 10 hours (minimum) annually by attending Continuing Professional and Development (CPD) courses conducted by appointed training providers. For more details, refer to Train-the-Trainer (T^3) Programme in WSH Council website (www.wshc.sg)

The trainer for the course is not permitted to be the assessor for the same course learners during the assessment.

5.2   Developer Requirements

In addition to the requirements for trainer and assessor above, the developer should possess all the following:

- WSQ curriculum developer pedagogic requirement: The developer must have attained a WSQ Advanced Certificate in Training and Assessment (ACTA)/ Advanced Certificate in Learning and Performance (ACLP) or its equivalent. With effect from 1 October 2015, a WSQ Diploma in Adult and Continuing Education (DACE) or Diploma in Design and Development of Learning for Performance (DDDLP) is required;

- WSQ curriculum developer experience: The developer should preferably possess a minimum of one year experience in WSQ-related courseware development; **AND**

- Language proficiency: WPL level 7 or equivalent.

A qualified and experienced developer can work with a Subject Matter Expert with relevant domain qualifications and work experience in developing the courseware.

CHAPTER 6: SUMMARY OF MANDATORY SECTIONS / INFORMATION

This chapter summarises all the mandatory sections and required information, for easy reference. TPs / Adult Educators are expected to note the information indicated in the following Sections and to comply with the stated requirements, where appropriate:

Section	Title
1.5	Recommended Learning Hours (RLH)
1.7	Recommended Class Size and Learner-Trainer Ratio
1.8	Recommended Assessor to Candidate Ratio
3.1	Content Coverage
	On percentage of items under Range and Application and Evidence Sources to be covered
3.5	Training Resources
3.6	Training Venue Requirements
4.2	Industry Requirements
4.4	Assessment Plan
5.1	Trainer and Assessor Requirements
5.2	Developer Requirements

CHAPTER 7: RESOURCE INFORMATION

This chapter indicates the various literatures, journals, articles and researched information on the competency unit "Perform Industrial Audiometric Screening".

Related WSH legislations, industrial code of practice and other references (list is not exhaustive)

- Workplace Safety and Health Act

- Workplace Safety and Health (Risk Management) Regulations

- Workplace Safety and Health (Noise) Regulations

- Factories (Medical Examinations) Regulations

- Workplace Safety and Health (Incident Reporting) Regulations

- Work Injury Compensation Act and relevant sections of GATOID (A Guide to the Assessment of Traumatic Injuries and Occupational Diseases for Workmen's Compensation)

- SS 549: 2009 Code of Practice for Selection, Use, Care and Maintenance of Hearing protectors

- MOM Guidelines on Hearing Conservation Programme

- Technical Advisory on Work in Noisy Environment

- Noise Induced Deafness Prevention Programme

- National or Internationally accepted standards on audiometric test methods, calibration of audiometers and testing environment

PART II

WSQ
&
Supporting Resources

Glossary of Terms

TP	TPs are training organisations accredited under the WSQ to offer training programmes and assessment services leading to WSQ certification
Assessment	A systematic process of collecting evidence and making judgements as to whether an individual has achieved a certain level of competency.
Assessment Criteria and marking scheme	Provides the context and conditions, under which the assessment will be conducted, what evidence the assessor must collect and the grading criteria used.
Assessment method	The process or technique used to gather evidence. (Bresciano & Fackler, 2005)
Assessment plan	A document which outlines when the evaluation will take place and how it will be conducted. An assessment plan includes the "programme mission or course/activity purpose, goals as appropriate, in/ended outcomes, methods for gathering, analysing data, and interpreting data for providing evidence to inform decision making." (Bresciano & Fackler, 2005)
Assessment process	The series of steps which a candidate undertakes within the enrolment, assessment, recording and reporting cycle of assessment.
Assessment tool	An instrument or resource used in association with a given assessment method. It may include a questionnaire, test paper, interview questions, structured report template and record sheet.
Assumed skills and knowledge	Assumed skills and knowledge are what learners ought to have and are assumed to have before they attend the training programme.
Competency	A competency is a measurable set of knowledge, skills and attitudes that drives and individual's performance to perform at his/her job effectively.
Competency category	A competency category refers to broad occupational or industry area or function, competency units (CU) that are inter-related are grouped by competency categories.
Competency elements	A competency element is the sub-division of a CU. Competency elements encompasses performance criteria, underpinning knowledge, range and context as well as evidence sources.
Competency level	The competency level reflects the level of complexity and depth of learning required by the competencies in the standard. It is outlined in the competency standards.
Competency Map (CM)	A document that captures the type of competencies needed in an industry. The competencies are expressed as CU and these are grouped into competency categories and pegged to occupational levels.
Competency Standards (CS)	A competency standard documents expected work performance outcomes, expected level of performance, knowledge that supports the delivery of work performance

	outcomes and work contexts under which the work performance outcomes are to be delivered.
Competency Unit (CU)	A CU describes a particular work role, duty or function, which forms the smallest group of skills, knowledge and abilities set able to be recognized separately for certification. The certification requirements of a CU are detailed in a CS.
Continuing Education and Training (CET)	Continuing Education and Training (CET) refers to educational programmes for adults, usually at the post-secondary level and offered as a part-time or short courses in occupational subject areas. Also see Pre-employment Training (PET).
Certification Body (CB)	A Certification Body (CB) is an organization accredited by the Singapore Accreditation Council (SAC) to assess and certify a WSH Training Provider's compliance to ISO 29993:2017 and MOM/WSH Council requirements.
Credit	A unit of measure assigned to courses or course of equivalent learning.
Curriculum, Training and Assessment Guide (CTAG)	The CTAG is a document that provides training and assessment advice to achieve effective training and assessment leading to WSQ certification of a CU.
Dimensions of competency	The dimensions of competency cover all aspects of work performance. The five dimensions of competency are: - TASK skills - TASK management skills - Contingency management skills - Job and role management skills - Transfer skills
Evidence sources	The evidence source section in a CS gives examples of tasks, observations, documents etc. that can be used as evidence for assessing the particular competency element or list of performance statements.
Learning outcomes	The work performance that a learner should be able to demonstrate as a result of having undertaken training and/or assessment. It must be measurable, clear and observable.
Performance criteria / statements (PC / PS)	Performance criteria or performance statements refer to the expected work performance or behaviours and expected level of performance to be demonstrated by a competent individual.
Pre-employment Training (PET)	Pre-employment Training (PET) refers to educational programmes that prepare individuals for entry into the workforce. This includes secondary, pre-university, polytechnic and university education.
Qualifications	Qualifications are formal certifications issued by a relevant approved body, in recognition that an individual has achieved learning outcomes identified by the industry.
Range and context	Range and context provides the type of situations under which the performance criteria / statements apply. Range and context cover items that are achievable or to be performed across by competent individuals, such as types of equipment, products and services, types of customers.

Underpinning knowledge	Underpinning knowledge states the knowledge that an individual needs to know and understand in order for him/her to perform competently at work.

Version Control Record

Version	Effective Date	Changes	Author	Approved By
1.0	31 Oct 2019	Initial version	SSG-MOM	SSG-MOM
2.0	21 Jan 2022	Update	WSH Council	WSH Council
3.0	1 Sep 2023	Updates	WSH Council	WSH Council

Annex A - Instructional Strategy Selection Chart

Instructional Strategy Selection Chart

Instructional Strategy	Cognitive Domain (Bloom, 1956)	Affective Domain (Krathwohl, Bloom, & Masia, 1973)	Psychomotor Domain (Simpson, 1972)
Lecture, reading, audio/visual, demonstration, or guided observations, question and answer period	1. Knowledge	1. Receiving phenomena	1. Perception 2. Set
Discussions, multimedia CBT, Socratic didactic method, reflection. Activities such as surveys, role playing, case studies, fishbowls, etc.	2. Comprehension 3. Application	2. Responding to phenomena	3. Guided response 4. Mechanism
On-the-Job-Training (OJT), practice by doing (some direction or coaching is required), simulated job settings (to include CBT simulations)	4. Analysis	3. Valuing	5. Complex response
Use in real situations. Also may be trained by using several high level activities coupled with OJT.	5. Synthesis	4. Organize values into priorities	6. Adaptation
Normally developed on own (informal learning) through self-study or learning through mistakes, but mentoring and coaching can speed the process.	6. Evaluation	5. Internalizing values	7. Origination

The chart does not cover all possibilities, but most activities should fit in.
For example, self-study could fall under reading, audio visual, and/or
activities, depending upon the type of program you design.

(Extracted from http://www.nwlink.com/~donclark/hrd/strategy.html, accessed19
Sep 2010)

Annex B - Cross Reference Matrix for WSQ Competency Unit

Cross Reference Matrix for WSQ Competency Unit

CE – PC	UK & Range & Context	Assessment Criteria *(State what is expected and required from the candidate)*	Oral Questioning	Written Assignment	Practical Performance	Assessment Instruments/Tools	Trainer's Guide	Learner's Guide	Slides
CE1 Identify the needs and expectations of customer populations to develop customer profiles.									
PC 1.1 Rese... of th... cust... with the organization's policies and procedures for collecting, accessing and managing customer information.	*UK 1.1 techniques for conducting customer* ... **Range & Context** **Research techniques may include:** ○ *interviews;* ○ *observations;* ○ *surveys;.* **Research may focus on areas which may include:** ○ *individual influences on customer behavior;* ○ *social influences on customer behavior; &* ○ *Lifestyle influences on customer behavior.* **Customers may include:** ○ *internal or external customers;* ○ *new or repeat customers;*	**Tell Me (Knowledge)** ○ *observations;* ○ *surveys;* ○ *questionnaires;* ○ *database analysis;* ○ *interpreting third party research output; and* ○ *Use of business excellence tools such as Voice of Customer, Quality Function Deployment (QFD).* Identify the needs and expectations of your customers. **Show Me (Process)** Research the demography of your customers by:	X		X	AA01OQ Q1, Q2 AA01PP R1	10 - 28	9 - 32	10 - 62

Sample Format for reference to develop the Cross Reference Matrix

	Customer information may include:
	  o *results of customer satisfaction surveys;*
	  o *statistical information from].*
	
	For the purposes of research, customer information might be sorted into discrete groups which may include:
	  o *individuals;*
	  o *businesses;*
	  o *households;*
	  o *geographically based groups;*
	  o *product specific customers; and*
	  o *Customer groups characterized by age, gender, cultural factors or purchasing power.*
		o Focusing on customer behavior.
		  o Defining your customers
		  o Sourcing customer information
		  o Sorting customer information into discrete (demographic) groups
		
		Show me (Product)
		Customer intelligence report identifying the needs and expectations of customer populations.
			X		AA05
					Q1A			

I. Overview of Assessment for the <u>Competency Unit</u>

Competency unit:

Purpose of assessment

Context of assessment	Details
Organisational requirement	
Operational environment	
Industry requirement	
Legal requirements	

Assessment venue:

Description of candidates: (at least four characteristics)
Special needs of candidates (at least one special need)

Any other special requirements :(at least one special requirement)

Stakeholders in AP development team and their role:

Title	Name	Support in Developing Assessment Plan

Competency Elements	Methods

Method	Duration	Ratio of assessor to candidate	Remarks
Total		--	--

II. Assessment Matrix

Mapping of Assessment Methods with Performance and Knowledge Requirements

Content	Lecture (Hour)	Practical (Hour)	Assessment Mode	Total (Hour)
Lesson 1				
Practical: PS1. Comprehend legal requirements on noise in the workplace **Theory:** UK1. Safe work practices and regulatory requirement related to Noise Induced Deafness	1.5			1.5
Lesson 2				
Practical: PS2. Obtain an occupational noise exposure history **Theory:** UK2. Basic ear anatomy, physiology and pathology and occupational noise history	2			2
Lesson 3				
Practical: PS3. Assess the degree & nature of hearing loss through basic audiometric tests based on international standard methods and procedures **Theory:** UK3. Audiometer, frequency and intensity concepts UK4. Audiometric testing methods and procedures UK5. Sources of error and their avoidance	5.5			5.5
Lesson 4				
Practical: PS4. Interpret an audiogram **Theory:** UK6. Interpretation of audiograms	1			1
Lesson 5				
Practical: PS5. Provide training and advice on use, maintenance and care of personal hearing protectors for persons exposed to excessive noise **Theory:** UK7. Hearing protection devices	1			1
Lesson 6				
Theory:		1		1

UK8. Counselling on use of hearing protection and prevention of noise induced deafness for persons exposed to excessive noise				
WRITTEN /PRACTICAL ASSESSMENT				
TOTAL (Hours) – Written Assessment				1.25
TOTAL (Hours) – Practical Assessment				0.75
			TOTAL (Hours)	**14**

WA = Written Assessment PA = Practical Assessment

III. Assessment Specifications for Practical Performance

These instructions concern the practical assessment for the Learner's competency.

Specification Item	Details on Specifications
Learning outcome	Fulfil the course learning objectives for all topics to be assssed
Duration	0.75 hour
Venue	Classroom
Set up	1. Classroom setup for 20 participants 2. Table & chair for individual seating 3. Noise monitoring instruments 4. Hearing protection devices 5. Audiometers (1 audiometer : 2 trainees) 6. Sound-proof facilities

IV. Assessment Specifications for Written Assessment

These instructions concern the written assessment of the Learner's competency.

Specification Item	Details on Specifications
Learning outcome	Fulfil the course learning objectives for all topics to be assessed
Duration	1.25 hour
Venue	Classroom
Set up	1. Classroom setup for 20 participants 2. Table & chair for individual seating 3. Projector & monitor 4. Whiteboard & markers of different colours 5. Whiteboard duster 6. Blue or black pens 7. A4 paper 8. Test papers 9. Answer sheet
Conduct of the Written Test	1. Brief participants to check if they have been given the right test paper 2. Inform participants on the time given for the test. 3. Remind them it is close book test. Candidates cannot refer to any workbook or discuss among them.

	4. Candidates are allowed to ask the Assessor to explain the question. 5. Brief Learners on the 60% passing mark requirement

V. Assessment Record for Practical Performance (PP)

Candidate's Name: _____ **End Time :** _____

ID Number   : _____ **Start Time :** _____

Assessor's Name: _____

PERFORMANCE CHECKLIST			
Performance Statement/Underpinning Knowledge	**Tick**		**Evidence of 'C' and 'NYC' must be recorded**
	C	**NYC**	
• Comprehend legal requirements on noise in the workplace • Obtain an occupational noise exposure history • Assess the degree and nature of hearing loss through basic audiometric tests based on international standard methods and procedures • Interpret an audiogram • Provide training and advice on use, maintenance and care of personal hearing protectors for persons exposed to excessive noise			

VI.   Assessment Record for Written Assessment

Candidate's Name: _____   **End Time :** _____

ID Number   : _____   **Start Time :** _____

Assessor's Name: _____

KNOWLEDGE CHECKLIST				
Underpinning Knowledge	**Assessment Criteria**	**Tick**		**Evidence of 'C' and 'NYC' must be recorded**
		C	**NYC**	
UK 1 …	• Sample Questions…….. • Suggested Answers…			
UK 2 …	• Sample Questions…….. • Suggested Answers…			
UK 3 …	• Sample Questions…….. • Suggested Answers…			
UK 4 …	• Sample Questions…….. • Suggested Answers…			

VII. SUMMARY ASSESSMENT RECORD

Assessment Centre :		
Competency Unit :		
Candidate Name :		
Candidate ID No. :		
Assessor Name :		
Assessment Method :	**Practical Performance (PP)**	**Written Assessment (WA)**
Assessment Date :		

Start Time :		
End Time :		

Summary

Performance Statement	Assessment Method		Result
	PP	**WA**	

This candidate has been assessed as:

❑   COMPETENT

❑   NOT YET COMPETENT

Assessor signature:_____

Candidate signature:_____

Feedback on outcome by assessor/feedback by candidate:

_____

_____

_____

_____

In the event of "NYC" result:

❑   Candidate does not wish to appeal

❑   Candidate wishes to appeal

Candidate signature:

_____

VIII. Assessment Tools Required and other Related Documents

- **Other <u>required</u> Assessment Tools for this assessment plan**
  e.g. case studies, role play scenarios, written test papers, logistics checklist

- **Pre-Assessment Briefing Checklist**

- **Appeal Process**

- **Version Control Record**

Version	Effective Date	Changes	Author
1.0		New release	

- **Other <u>required</u> Assessment Tools for this assessment plan**
  e.g. case studies, role play scenarios, written test papers, logistics checklist

CODE OF PRACTICE FOR ASSESSORS

Assessment specialists have developed an international code of ethics and practice (The National Council for Measurement in Education (NCME)). The Code of Practice below is based on the international standards.

1. The differing needs and requirements of the person(s) being assessed, the local enterprise(s) and/or industry are identified and handled with sensitivity.

2. Potential forms of conflict of interest in the assessment process and/or outcomes are identified and appropriate referrals are made, if necessary.

3. All forms of harassment are avoided throughout the planning, conduct, reviewing and reporting of the assessment outcomes.

4. The rights of the candidates (s) are protected during and after the assessment.

5. Personal or interpersonal factors that are not relevant to the assessment of competency must not influence the assessment outcomes.

6. The candidate(s) is made aware of rights and processes of appeal.

7. Evidence that is gathered during the assessment is verified for validity, reliability, authenticity, sufficiency and currency.

8. Assessment decisions are based on available evidence that can be produced and verified by another assessor.

9. Assessments are conducted within the boundaries of the assessment system policies and procedures.

10. Formal agreement is obtained from both the candidate(s) and the assessor that the assessment was carried out in accordance with agreed procedures.

11. Assessment tools, systems, and procedures are consistent with equal opportunity legislation.

12. The candidate(s) is informed of all assessment reporting processes prior to the assessment.

13. The candidate(s) is informed of all known potential consequences of decisions arising from an assessment, prior to the assessment.

14. Confidentiality is maintained regarding assessment result.

15. Results are only released with the written permission of the candidate(s).

16. The assessment results are used consistently with the purposes explained do the candidate.

17. Self-assessments are periodically conducted to ensure current competencies against the assessment and Workplace Training Competency Standards.

18. Professional development opportunities are identified and sought.

19. Opportunities for networking amongst assessors are created and maintained.

20. Opportunities are created for technical assistance in planning, conducting and reviewing assessment procedures and outcomes.
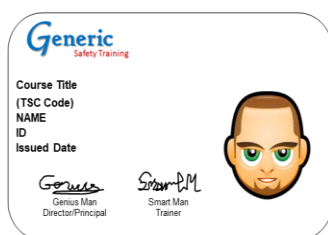
Annex C - Format of Safety Pass

Format of Safety Pass

Training Providers are to issue a Safety Pass to workers who have successfully completed and passed the course. Issue of Certificate of Course Completion is Optional.

Do note that the reference below is intended only to present the format of the pass, and should not be used as an actual template for direct printing.

Guidelines for the credit card size pass for MOM WSH courses by TPs

3 ⅜ × 2 ⅛ inch (85.60 × 53.98 mm)

Front view

Generic
Safety Training

Course Title
(TSC Code)
NAME
ID
Issued Date

Genius Man
Director/Principal

Smart Man
Trainer

Font Type: Arial
Font size (Course title): Recommended 8pt or larger
Font size (Others): Recommended 6pt or larger
Photo size: 3.1cm X 2.4cm

• Pass should contain no less than the information depicted in the guide
• TP may use their own reference format for serial number
• Course Title should be the title as indicated in the WSQ Framework(CS/CTAG). The Technical Skills and Competency (TSC) Code and Title, should also be printed in parentheses ( ) aligned to the title reflected in either the Competency Standards (CS) or TSC. However, it is not required to print the TSC Course name if it is the same as the SC/CTAG title
• ID should be FIN, NRIC Passport Number or any unique official identifier
• Course Venue should reflect address of training centre (not business office, etc) which pass holder attended
• Trainer signature should reflect the trainer that conducted the course

Back view

1. Use of card is governed by terms and conditions of < Name of Training Provider>
2. < Name of Training Providers> is a SkillsFuture Singapore Agency's Training Provider at the date of issuance of the pass
3. This card is not transferrable
4. The course is conducted @.< Course venue>
5. Holder of the card has been certified competent in the <**Course Title**> on the issued date as indicated in front.
6. This card will expire <xx> years from the date of issue.
7. This card is the property of < Name of Training Provider> and must be returned on request.
8. Card shall be retained if it has been tampered with, misused or replaced.
9. This card is issued by < Name of Training Provider>. If found, please return to < Name of Training Provider>. at <Address of < Name of Training Provider>..
10. For enquiries, please contact < Name of Training Provider. > at <hotline>

Font Type: Arial
Font size : Recommended 6pt or larger

Annex D - Certificate of Successful Completion

Certificate of Successful Completion

Training Providers are to issue a Safety Pass to workers who have successfully completed and passed the course. Issue of Certificate of Course Completion is Optional.

- Certificate should contain no less than the information depicted in the guide

- TP may use their own reference format for serial number

- ID should be FIN, NRIC Passport Number or any unique official identifier

- For TP Course, Course Title should be the corresponding title as indicated in WSQ System Framework(CS/CTAG). The Technical Skills and Competency (TSC) Code and Title should be printed in parentheses ( ) aligned to the title reflected in either the Competency Standards (CS) or TSC. However, it is not required to print the TSC course name if it is the same as the CS/CTAG Title

- Course Venue should reflect address of training centre (not business office, etc) which pass holder attended

- Certificate should indicate that <<Name of TP>> is a Training Provider (TP) approved by SkillsFuture Singapore for <<Course Title of corresponding course>>

- Trainer signature should reflect the trainer that conducted the course

- Management of safety certificate should be in accordance to the requirements under TP scheme